OPPORTUNITY MV18 B.V.

Registered Address: Van Heuven Goedhartlaan 13D, 1181 LE Amstelveen, the Netherlands
Dutch Chamber of Commerce Registration No.: 34261495

Annex 05: Vessel Particulars – Complementary Information to Block 12 of the *Notification Document for Transboundary Movements/Shipments of Waste*

According to the instructions for filling out Block 12 of the Notification Document for Transboundary Movements/Shipments of Waste, OPPORTUNITY MV18 B.V. hereby provides the documents detailing the main particulars of FPSO CIDADE DE NITEROI MV18.

The annex consists of:

- Midship Section;
- Certificate of Registry;
- General Arrangement;
- Class Certificate;
- Trim and Stability Report.

OPPORTUNITY MV18 B.V.

_____
Name: Yu Nakaguchi
Title: Director

Annex 05

Vessel Particulars

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Rev	Status	Date	Origin.	Checker	LDE	EM	PM
0	IFC	22-Feb-07	YEE	YM FU	YM FU	AK	SD
B	IFD	21-Feb-07	YEE	YM FU	YM FU	AK	SD
A	IFR	17-Feb-07	YEE	YM FU	YM FU	AK	SD

Prepared: Verified: Approved: Acceptance Code:

Document Title:

MIDSHIP SECTION & TYPICAL TRANSVERSE BULKHEAD (EXISTING)

MODEC Project No.	Document No.	Page
WH201	WH201-MI20-30D1-0100	1 of 15

BR

FPSO Cidade de Niteroi MV18

MODEC

MODEC International LLC

HK—O 1 100.F.

CLASS:~

NIPPON KAIJI KYOKAI,

NS*,TANKER,OILS-FLASHPOINT,BELOW 61°C ,MNS *AND MO.B

PRINCIPAL DIMENSIONS:~

LENGTH	(B.P.)	303.50 M
LENGTH	(L.W.L.)	308.871 M
LENGTH	(0.97 L.W.L.)	299.605 M
LENGTH	(SCANTLING)	303.50 M
BREADTH	(MLD)	60.00 M
DEPTH	(MLD)	28.45 M
DRAFT	(DESIGNED,MLD)	19.25 M
DRAFT	(SCANTLING,MLD)	19.25 M
BLOCK COEFFICIENT	(BASED ON SCANTLING LENGTH & DRAFT)	0.805

ALLOWABLE STILL WATER BENDING MOMENT

HOG.	574 000	T-M
SAG.	612 000	T-M

2/15

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NOTES :

1. EACH SECTION SHOWS LOOKING FORWARD, DOWNWARD, OR TO PORT SIDE VIEW.
2. STRUCTURES ON PORT AND STARBOARD SIDES ARE TO BE SYMMETRICAL UNLESS OTHERWISE NOTED.
3. FILLER PLATES FOR SLOT TO BE OF THE SAME THICKNESS AS ADJACENT PLATES.
4. MATERIALS TO BE IN ACCORDANCE WITH REQUIREMENTS OF THE CLASSIFICATION SOCIETY. QUALITY OF MATERIAL IS INDICATED WITH THE MARKS AS FOLLOWS.

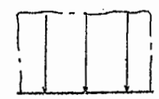
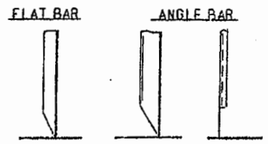
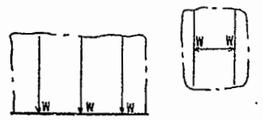
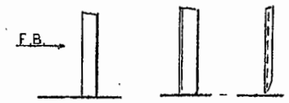
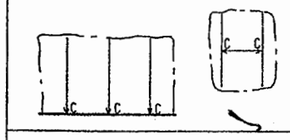
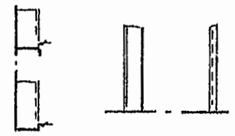
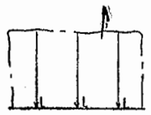
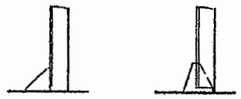
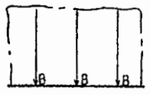
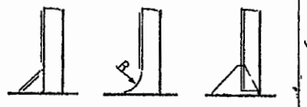
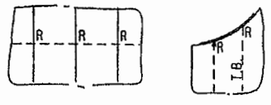
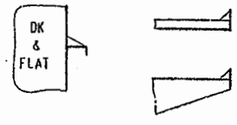
MARK	QUALITY	QUALITY
NOT MARKED	MILD STEEL GRADE "KA" RIMMED	THICKNESS ≦ 12.5
NOT MARKED	MILD STEEL GRADE "KA" SEMI-KILLED	THICKNESS > 12.5
AH	HIGHER TENSILE STEEL GRADE "KA32"	
DH	HIGHER TENSILE STEEL GRADE "KD32"	
EH	HIGHER TENSILE STEEL GRADE "KE32"	
AH36	HIGHER TENSILE STEEL GRADE "KA36"	

5. FOR DETAILS OF SLOTS, SNIP SHAPE ETC. NOT SHOWN ON THIS DRAWING, SEE " STRUCTURAL DETAIL (HS-00400F)"
6. FOR DETAILS OF WELDING, SEE " WELDING JOINT DETAIL (HS-90400) "
7. REFERENCE PLAN

   HK-03110F. CONSTRUCTION PROFILE & DECK PLAN
   HK-04110F. SHELL EXPANSION (AFT)
   HK-04120F. " (FORE)
   HS-11420F. TANK END SECTIONS

8. CORNER & BUTT SCALLOPS TO BE R50 UNLESS OTHERWISE NOTED.
9. SIZE OF LIGHTENING HOLES ARE 450 X 600 OR ø450 UNLESS OTHERWITH NOTED.

THE MARKS OF END ATTACHMENT OF STIFFENERS

MARK	REMARKS	
NOT MARKED 		END IS SNIPPED
"W" 		ONLY WEB PLATE IS WELDED
"C" 		BOTH FACE AND WEB PLATE ARE WELDED
"L" 		LUG PIECE TO BE FITTED
"B" 		BRACKET HAVING THE SIZE TO FULFIL THE RULE REQUIREMENT TO BE FITTED
"R" 		RIB

10. WELDING LEG LENGTH OF FILLET WELD SHALL BE IN ACCORDANCE WITH THE RULE REQUIREMENT EXCEPT AS FOLLOWS, IN TANK MIN. 5

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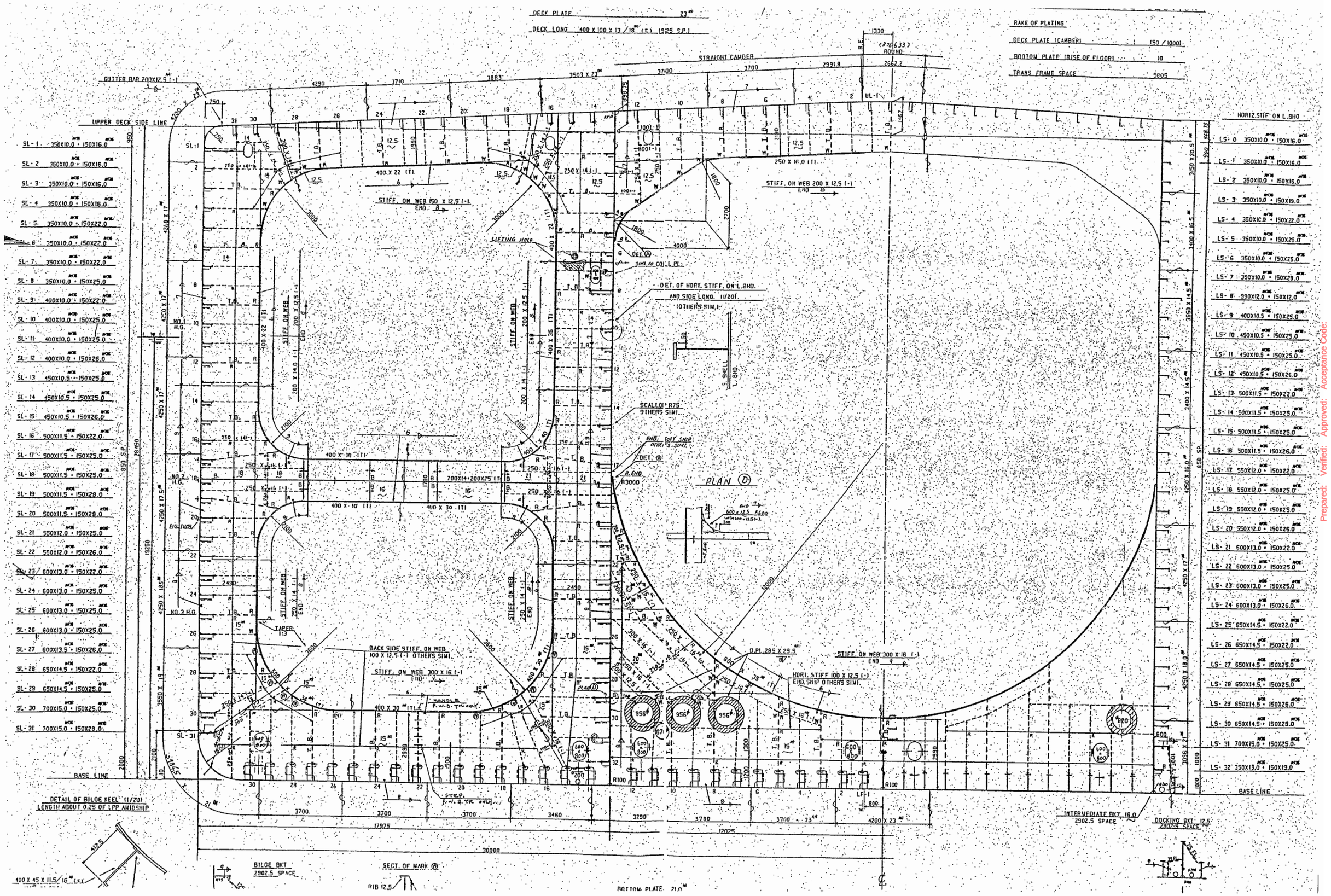

4/15

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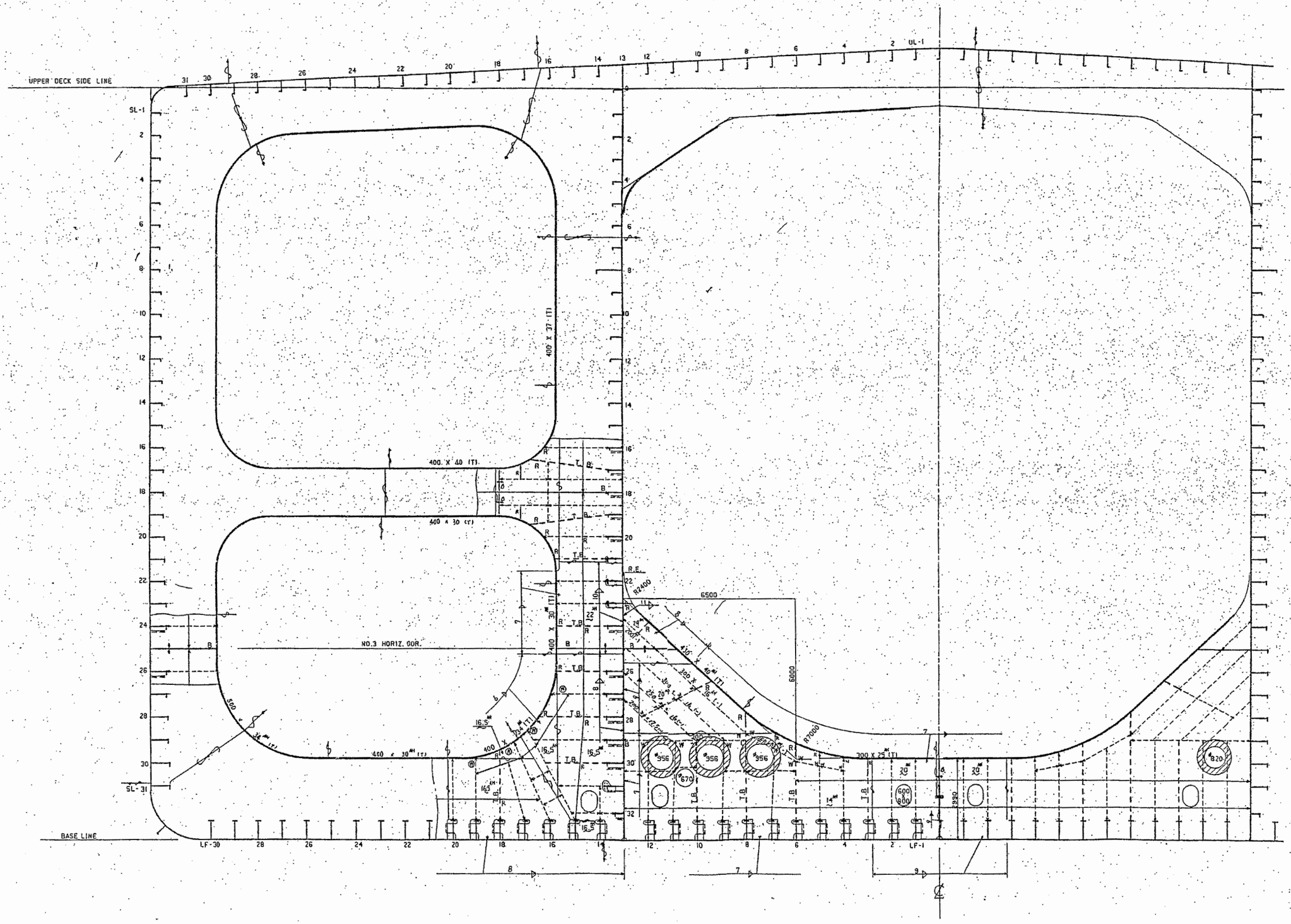
TRANS SECT. ADJACENT TO O.T.T. BHD. (AFT)

SIMILAR TO TYPICAL TRANSVERSE SECTION UNLESS OTHERWISE NOTED.



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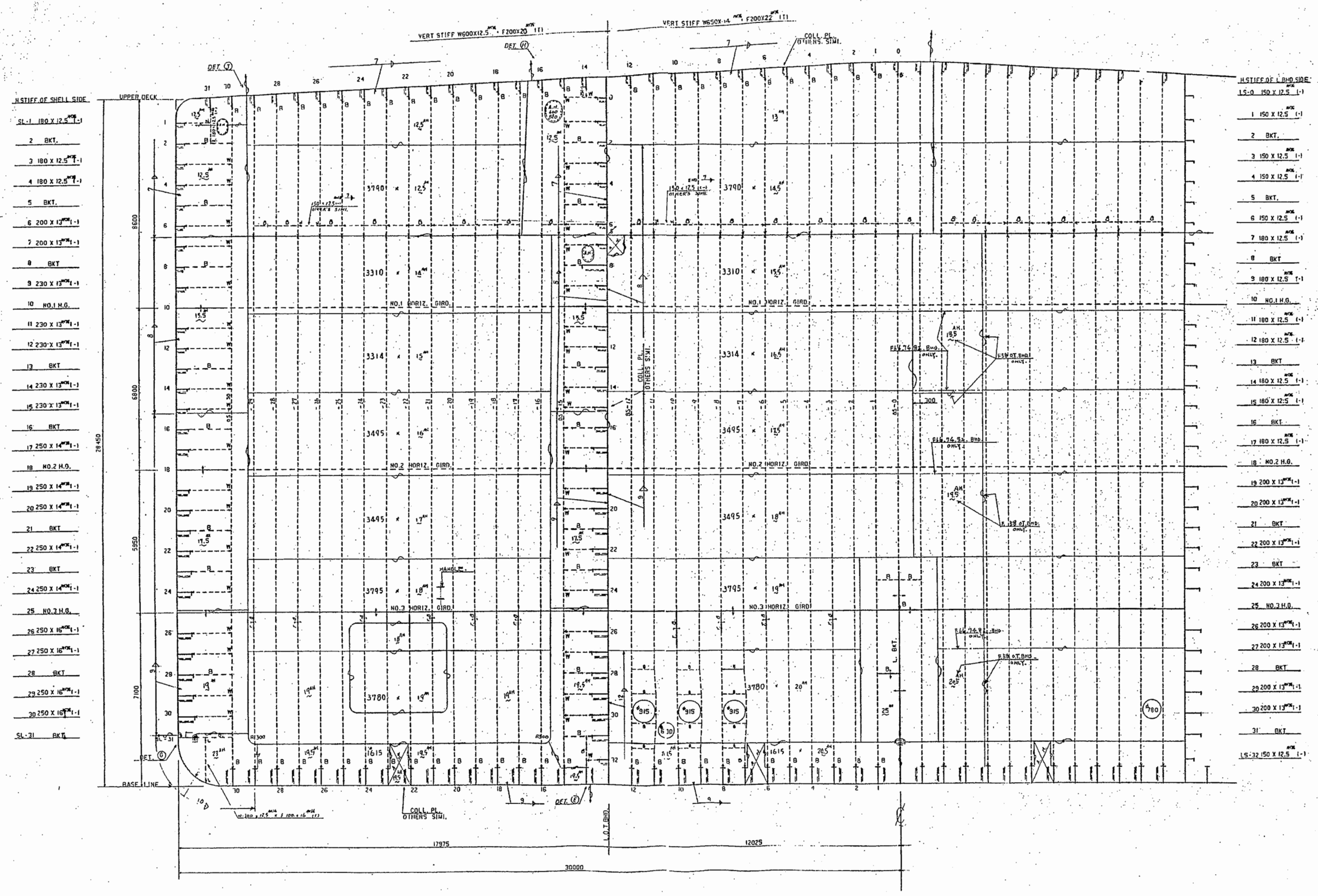
TYPICAL OIL TIGHT TRANSVERSE BULKHEAD



6/15

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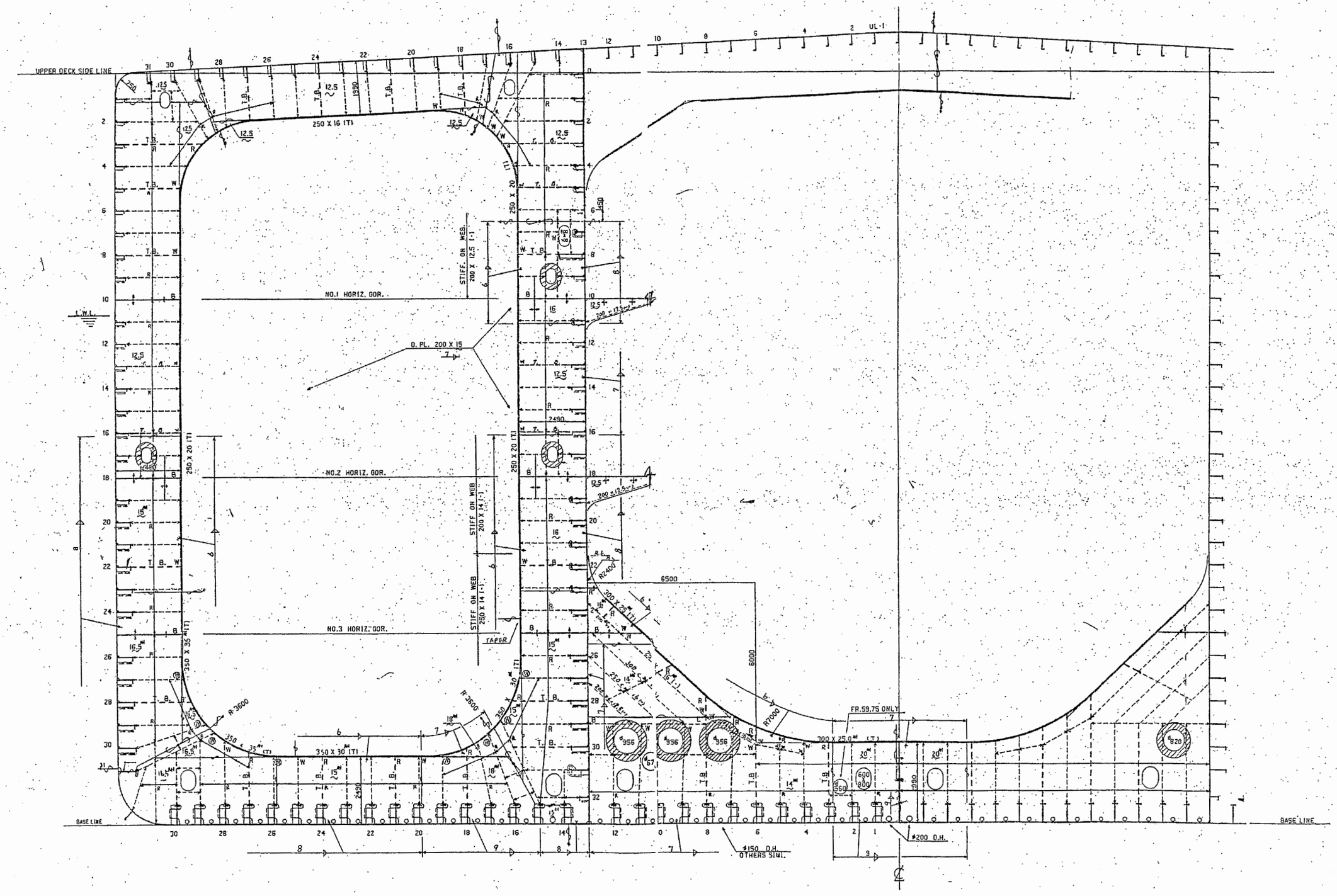
TRANS. SECT. ADJACENT TO O.T.T.BHD.(FORE)

SIMILAR TO TYPICAL TRANSVERSE SECTION UNLESS OTHERWISE NOTED.



7/15

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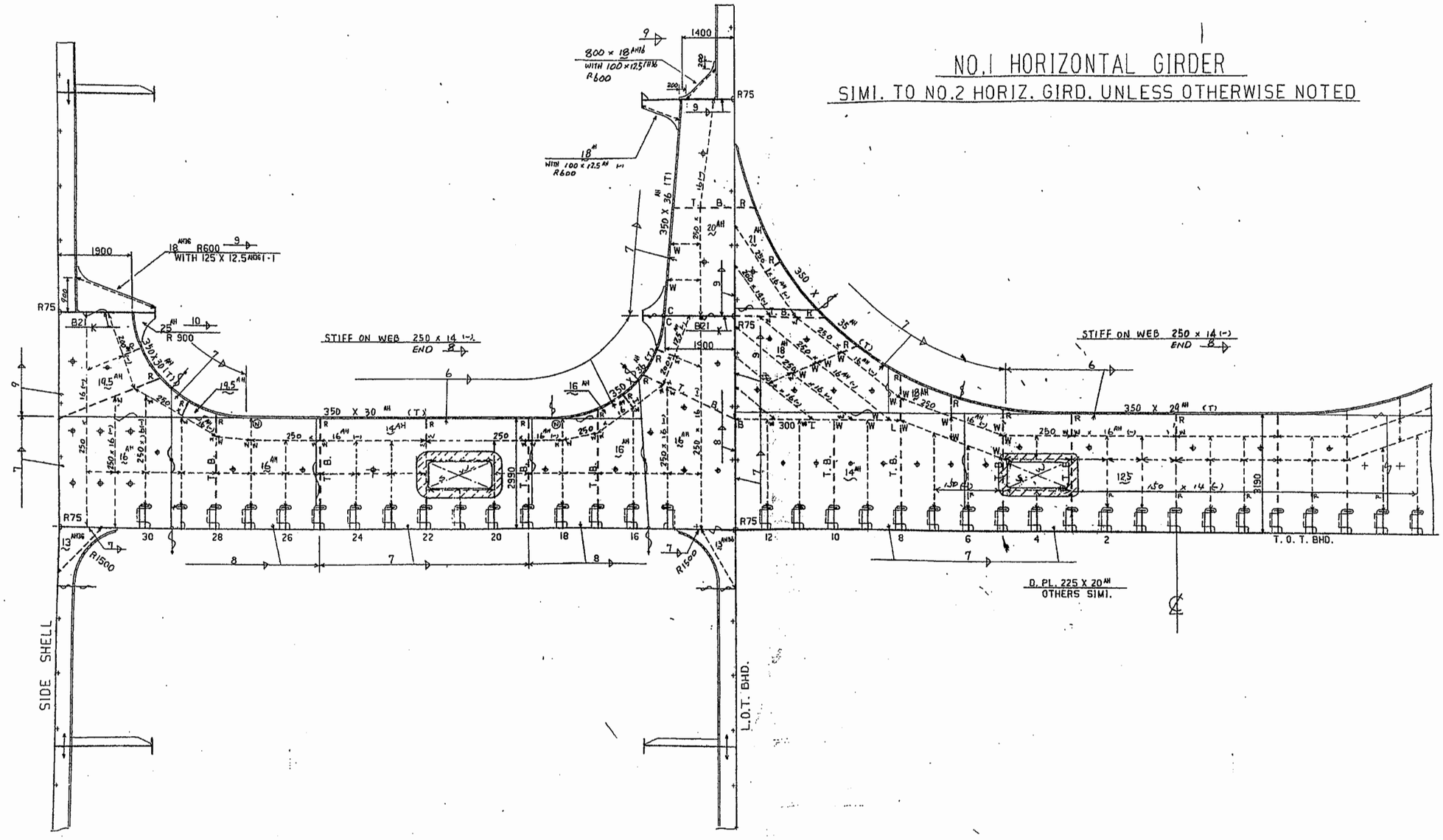
NO.1 HORIZONTAL GIRDER

SIMI. TO NO.2 HORIZ. GIRD. UNLESS OTHERWISE NOTED



S.NO. 1981 HK-0110O.F. 6/

8/15

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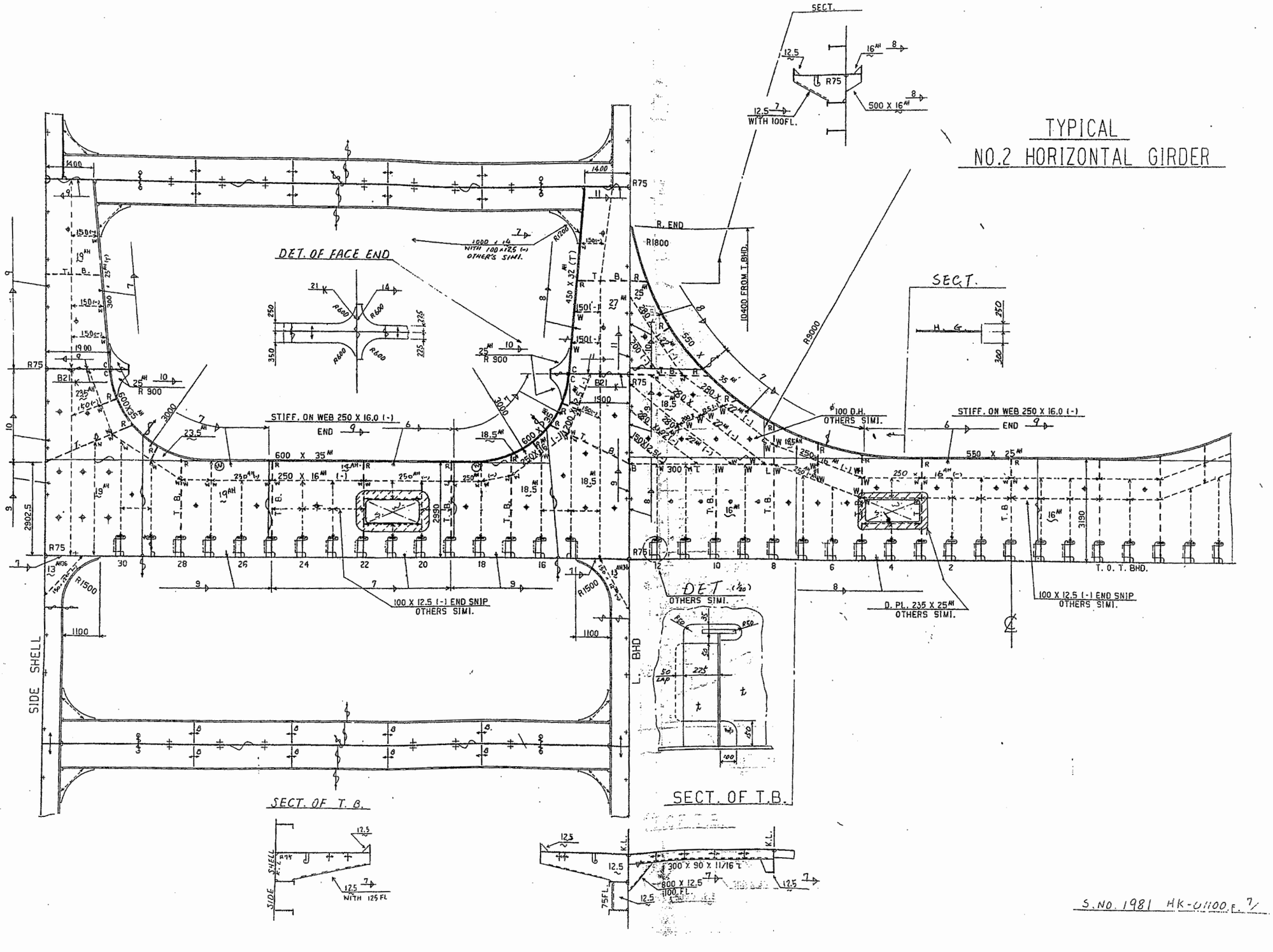

9/15

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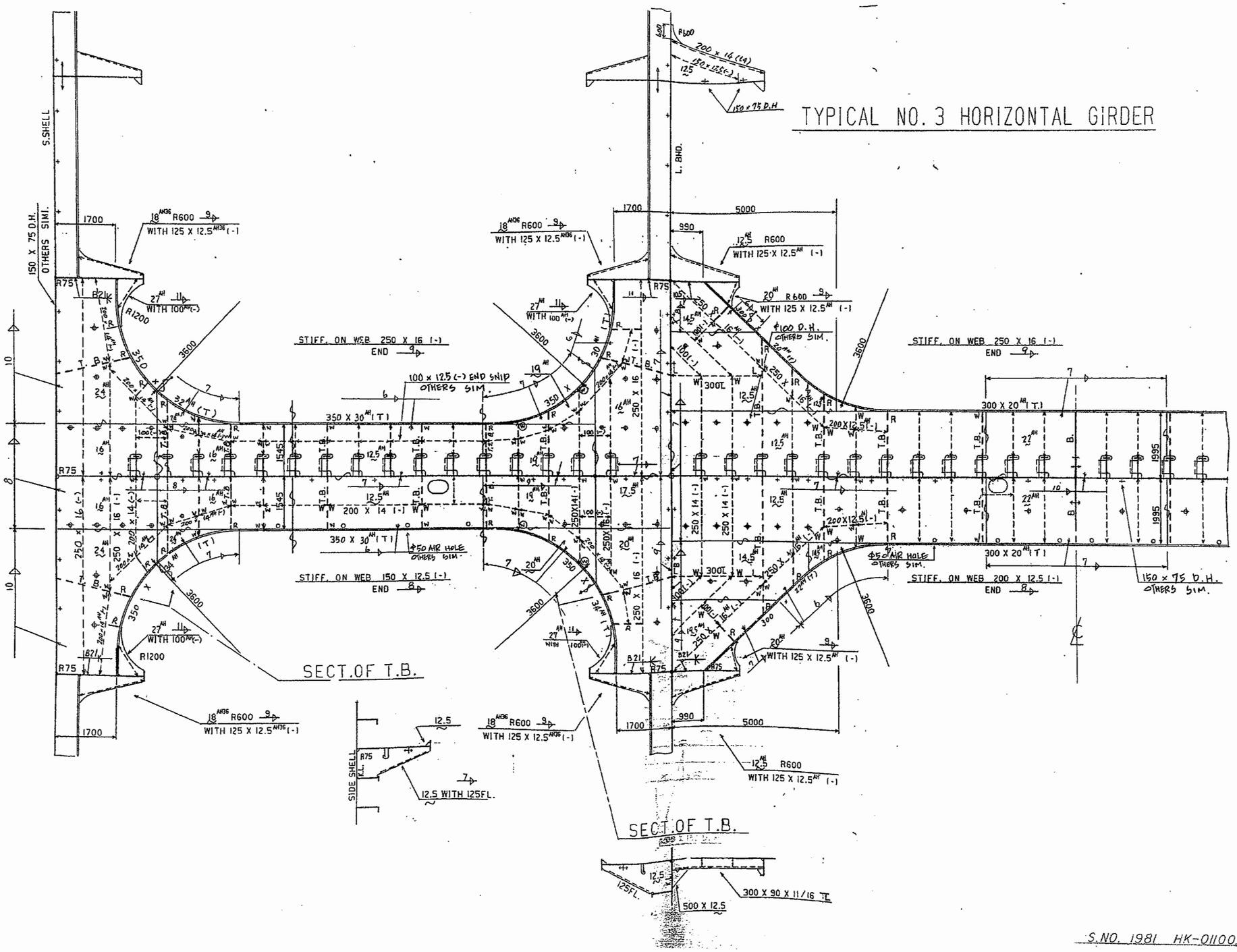

S.NO. 1981 HK-01100.E 8/

10/15

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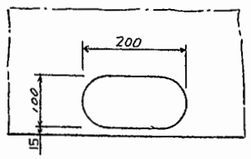
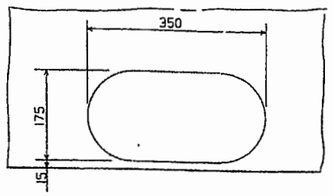
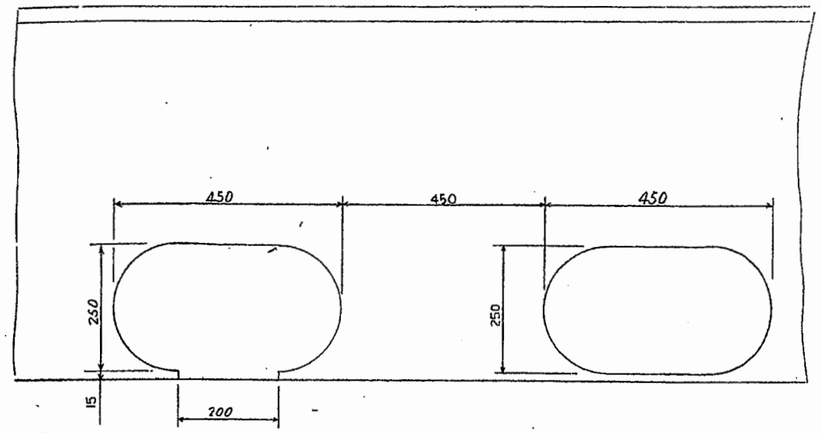
DET. (A)
200 X 100 D.H.
(1/10)



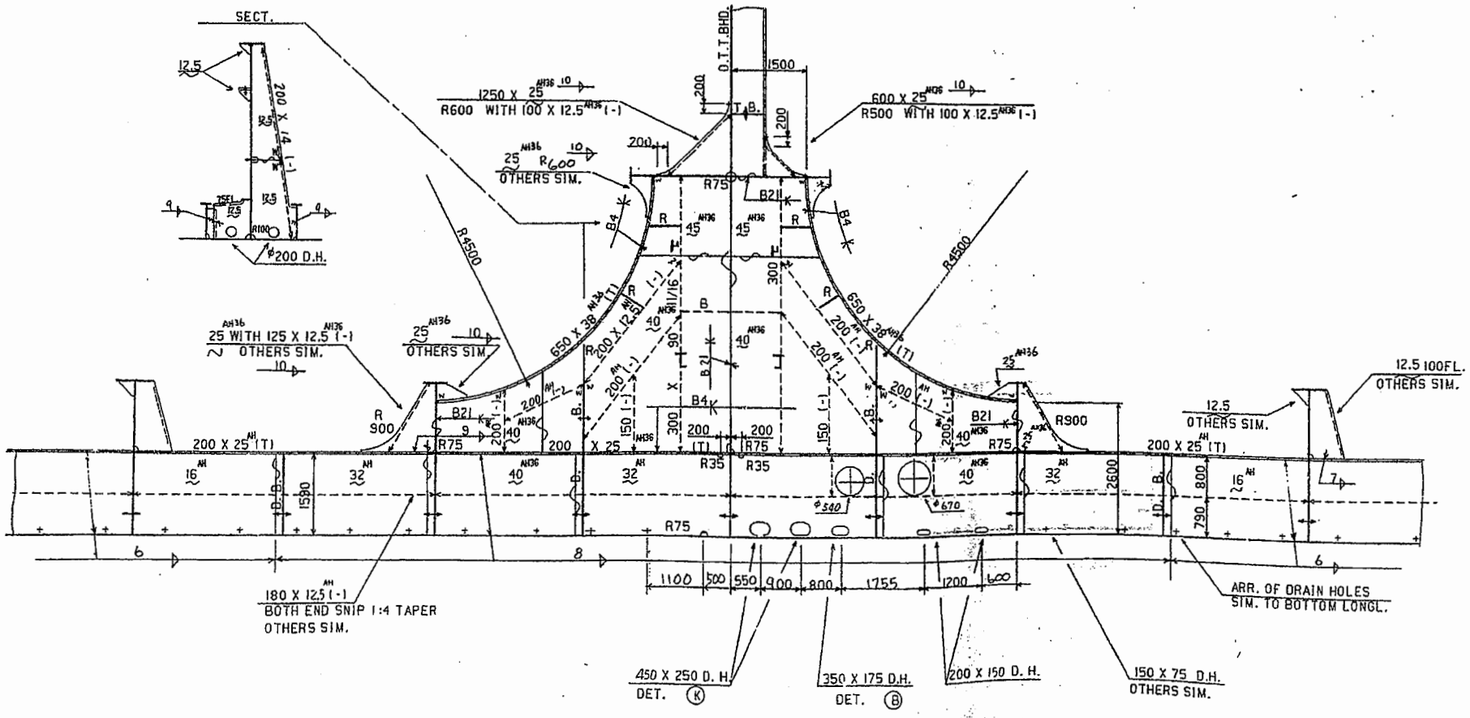
DET. (B)
350 X 175 D.H.
(1/10)



DET. (K)
450 X 250 D.H.
(1/10)



CENTER LINE SEC.



S NO. 1976 HK-01100 E 9/

11/15

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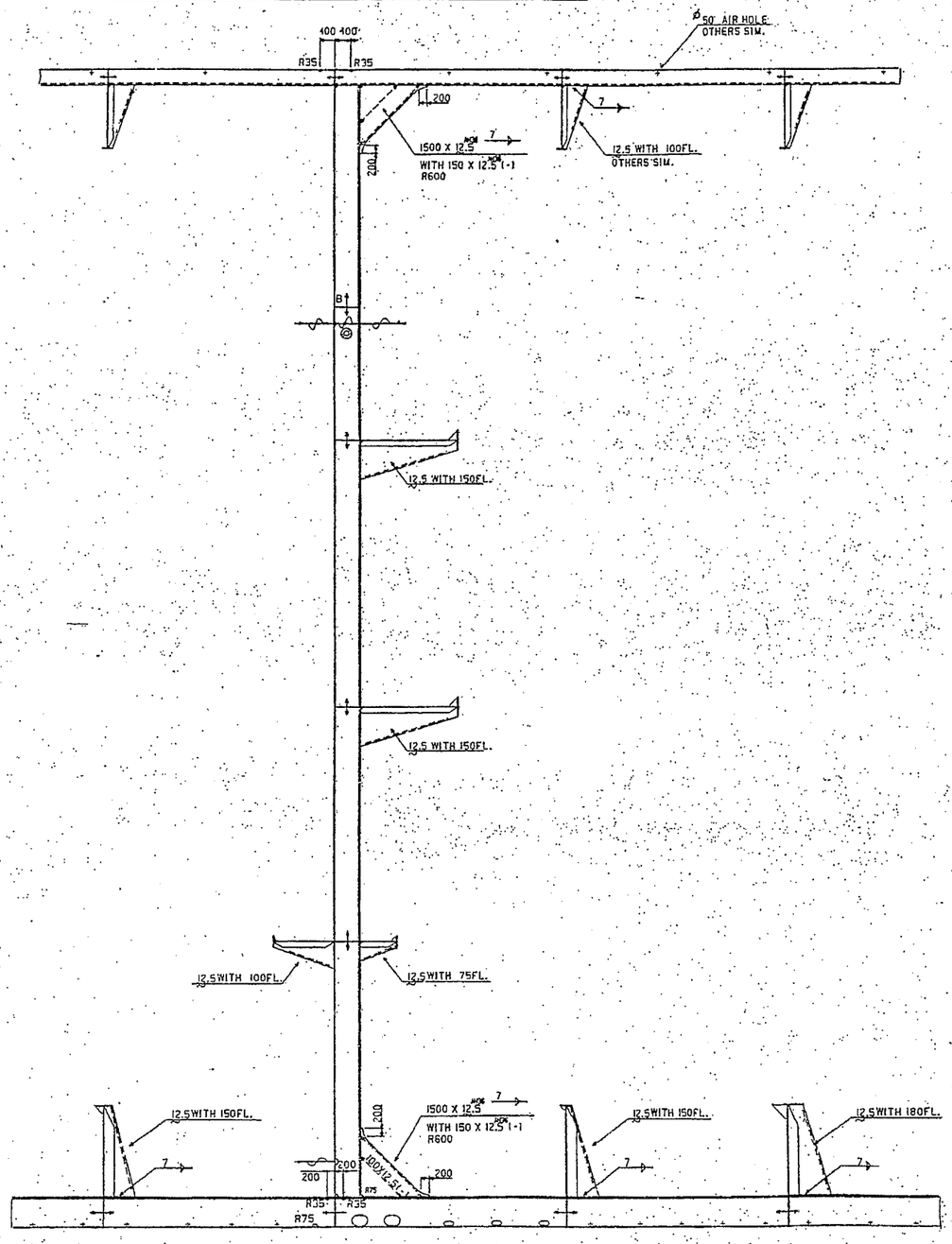
TYPICAL VERTICAL STIFFNNER

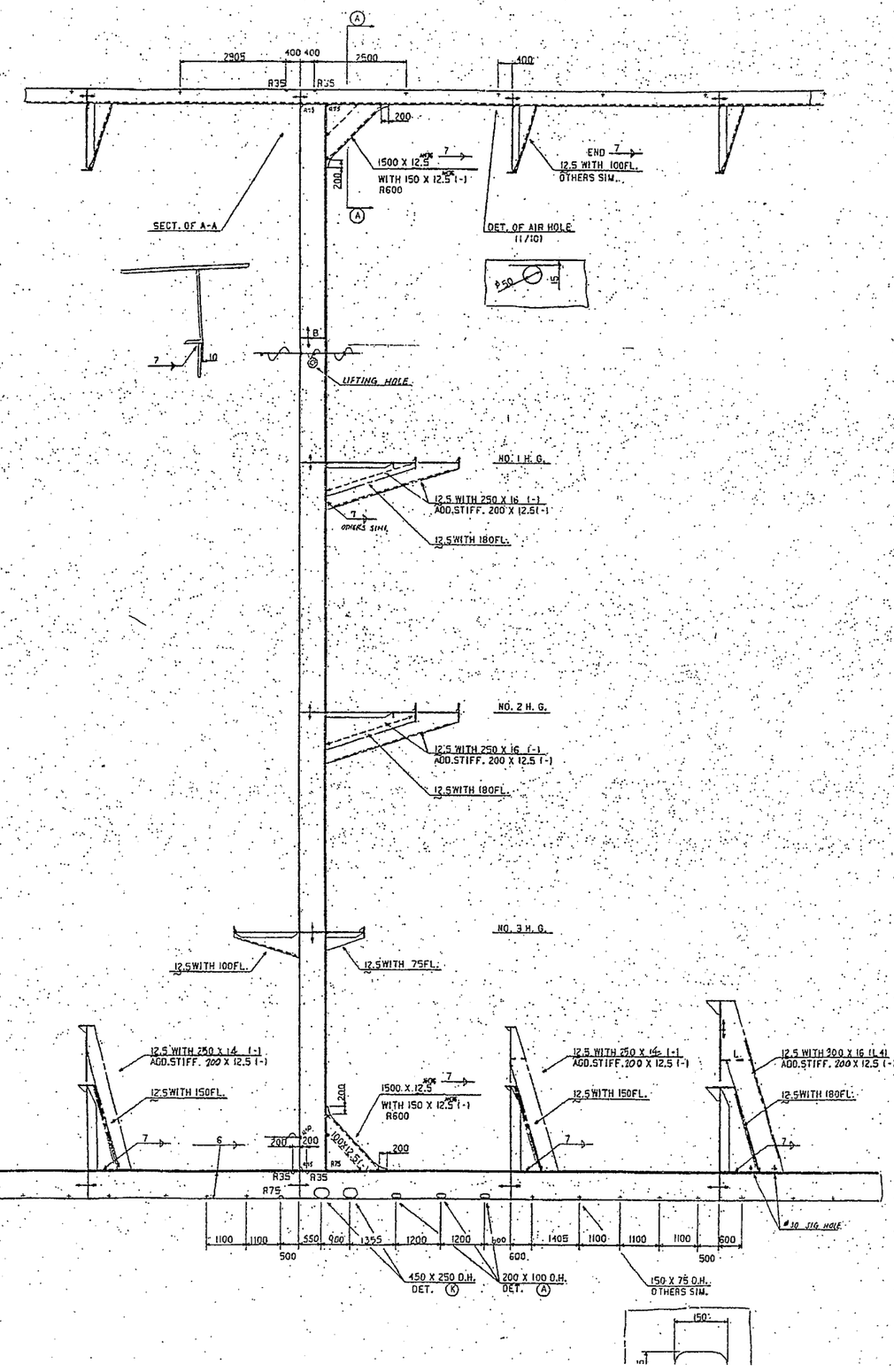
STIFFENER IN W. TANK

SIM.TO CENTER TK.UNLESS OTHERWISE NOTED.



TYPICAL VERTICAL STIFFENER

STIFFENER IN C. TANK



12/15

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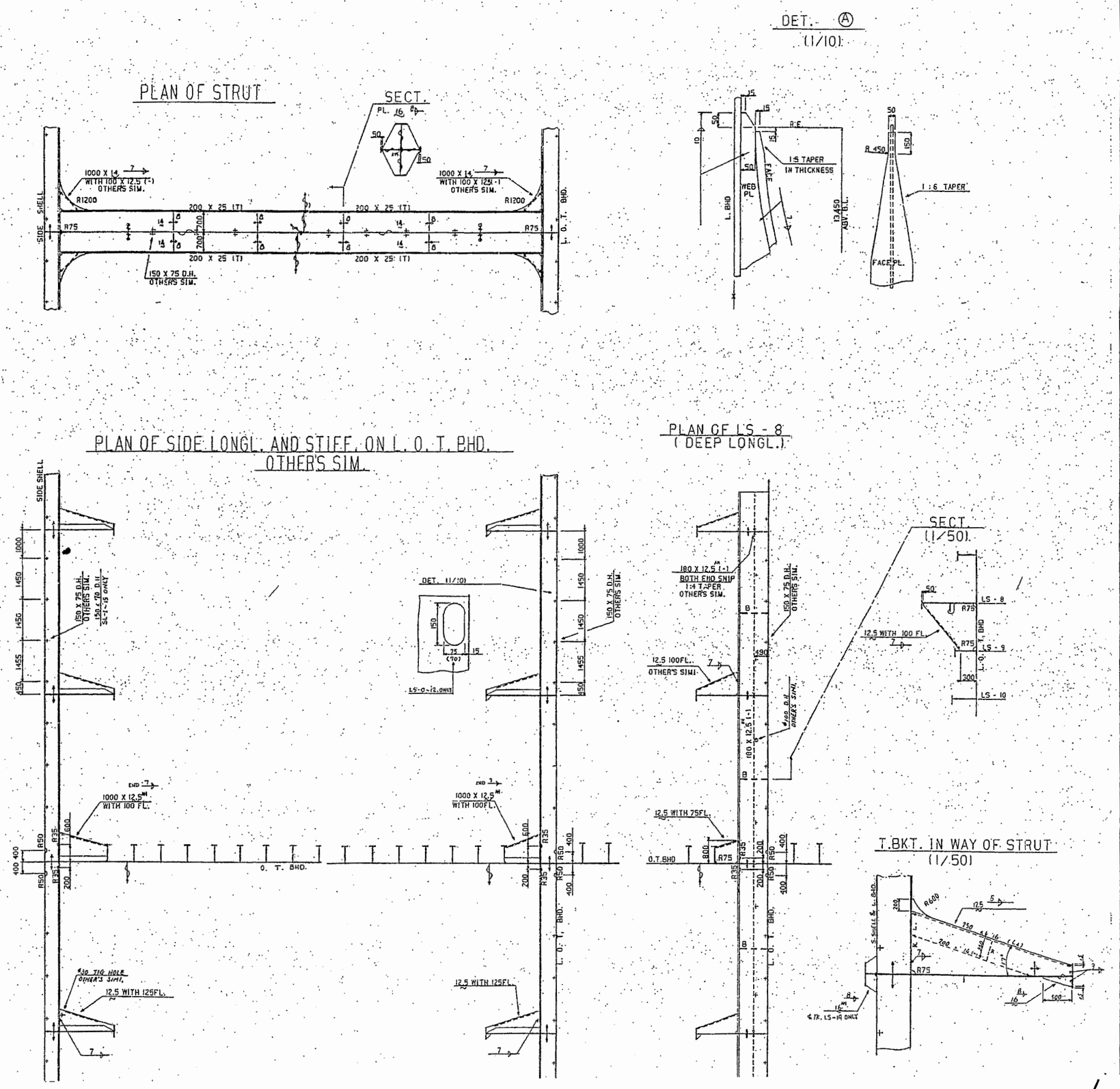
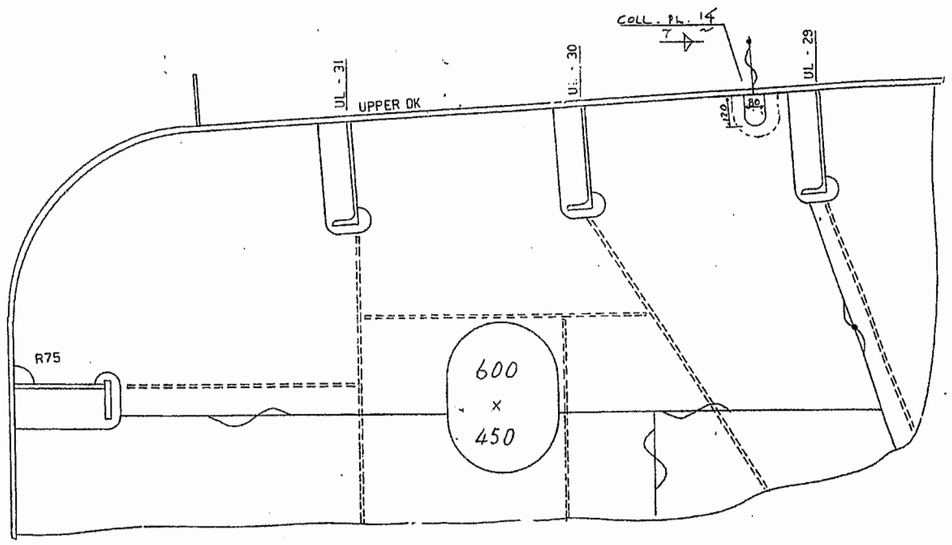


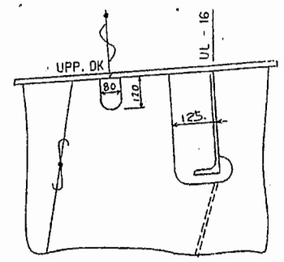
13/15

DET. OF SLOT AND FILLER PLATE

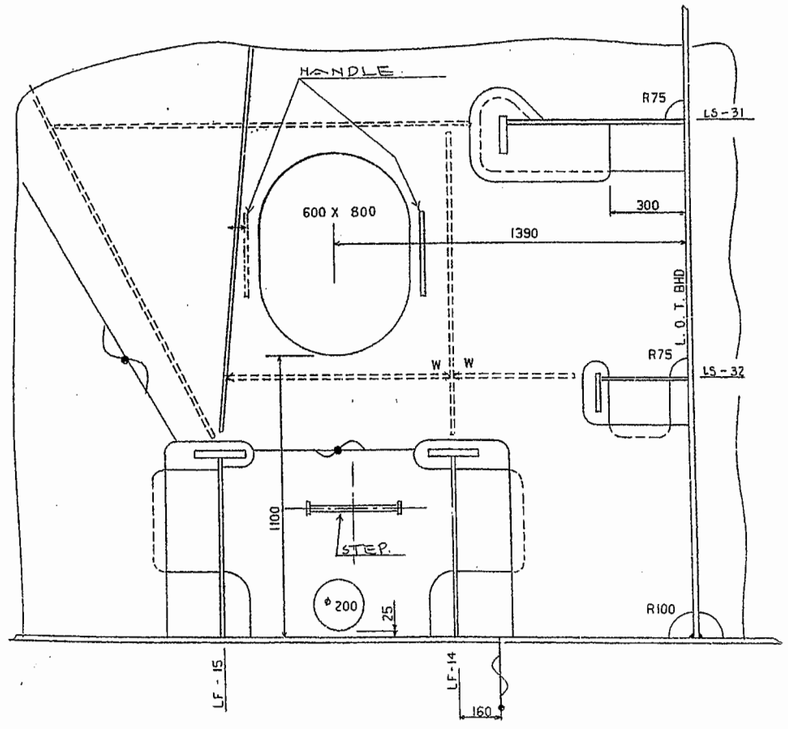
DET. OF UL - 30 , 31
(1/20)



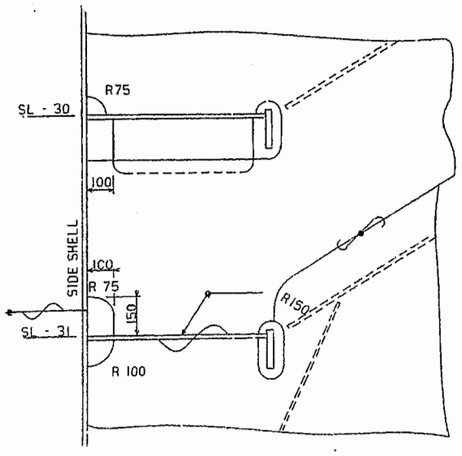
DET. OF UL - 16
(1/20)



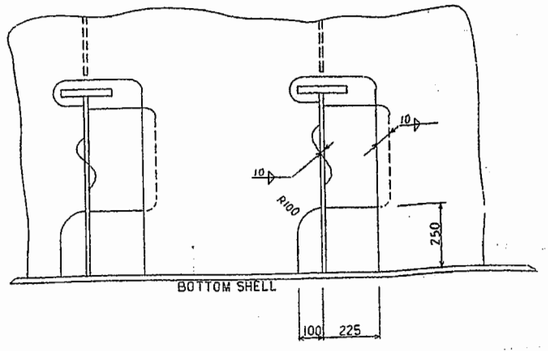
DET. OF LF - 14 & 15
(1/20)



DET. OF SL - 31
(1/20)



DET. OF SLOT FOR BOTTOM LONGI.
LF-1~12,14~30 TO BE SIM.
(1/20)



S.NO 1981 HK - 01100 F. 12/

14/15

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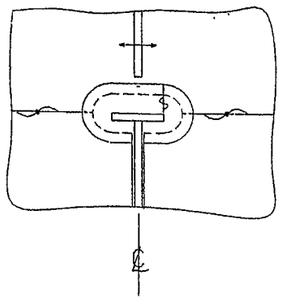
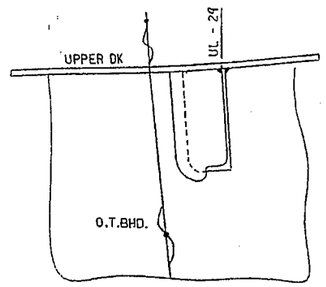
DET. OF COLLAR PLATE

FOR TIGHT BHD.

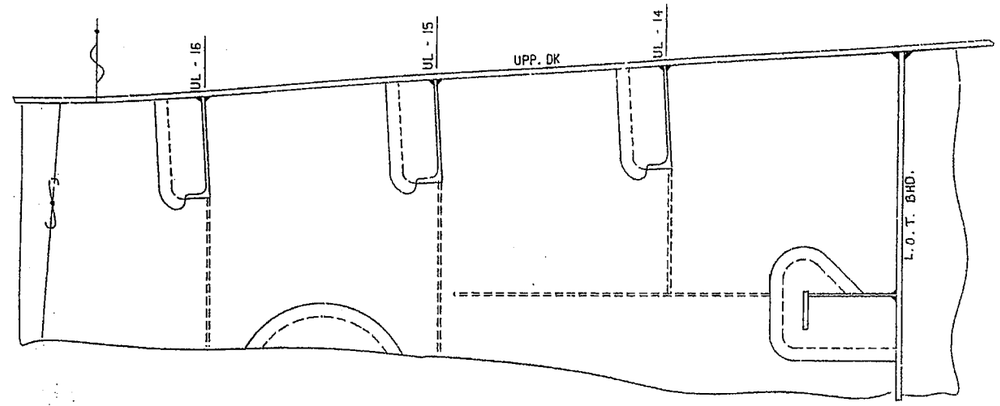
COLL. PL. OF ℄ GIRD.
(1/20)



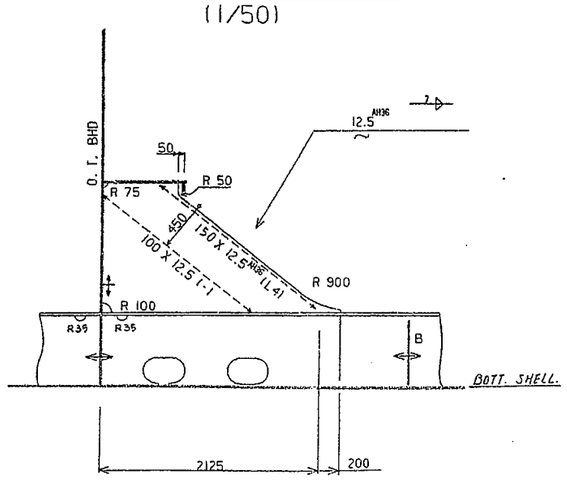
DET. Ⓙ
(1/20)



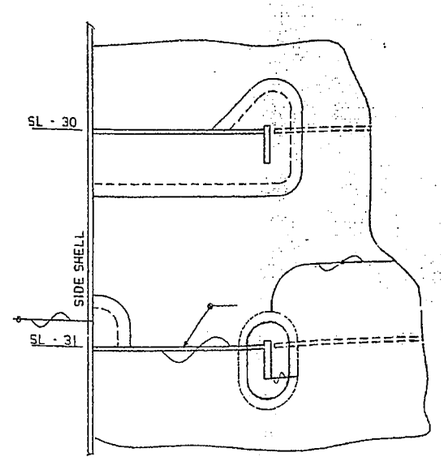
DET. Ⓗ
(1/20)



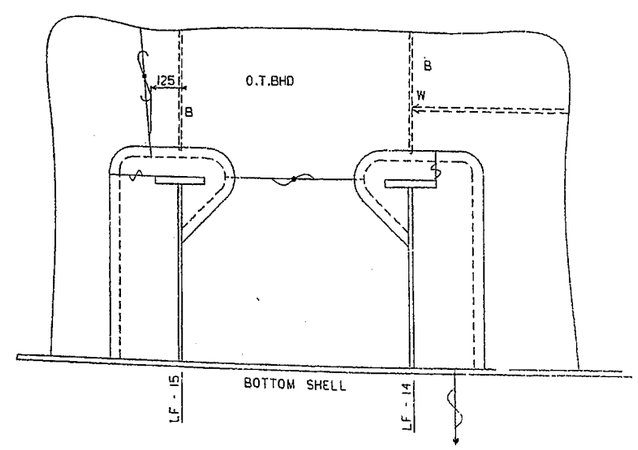
SECT.OF LF - 14
(1/50)



DET. Ⓖ
(1/20)



DET. Ⓔ
(1/20)



S.NO 1981 HK - 01100 F 13/13

15/15

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CERTIFICATE OF REGISTRY

Tracking Number
BMA-REG-15386-25

Issued by **The Bahamas Maritime Authority**, under the authority of the Government of **The Commonwealth of The Bahamas**.

Particulars of Ship	
Official Number: **9000260** Port of Registry: **Nassau** Year of Registry: **NY4/2009** Name of Ship: **FPSO CIDADE DE NITEROI MV18**	IMO Number: **8500123** MMSI Number: **311 304 000** Call Sign: **C6WW5**
Building Details	**Propulsion and Engine Details**
Where built: - town: **Nagasaki** - country: **Japan** Year built, remeasured or rebuilt: **1986**	Propulsion: **Non-Propelled** Type of Engines: **Non-Applicable** Total Power: **0 KW**
Vessel Type, Dimensions and Hull Materials	
Ship Type: **FPSO** Hull Material: **Steel**	Length: **305.23** metres Breadth: **60.00** metres Depth: **28.45** metres
Particulars of Tonnage	
The tonnages of this ship in accordance with her Tonnage Certificate* are:- GROSS TONNAGE: **144898** NET TONNAGE: **75911** A detailed summary of the tonnages for this ship is shown on the Tonnage Certificate*	

I, the undersigned, Registrar of Bahamian Ships at the Port of **Tokyo**, hereby certify that the ship, the description of which is prefixed to this my Certificate, has been duly surveyed, and that the above description is in accordance with the official register; and that the name, residence and description of the Owner(s), and the number of sixty-four shares held are as follows:-

Name, Residence and Occupation of the Owner	**Number of Sixty-Four Shares**
OPPORTUNITY MV18 B.V. **Van Heuven Goedhartlaan 13D** **Amstelveen** **1181 LE** **Netherlands**	**64**

Registrar of Bahamian Ships: **Juanita Butler**
Issued at **Tokyo** *on* **25 March 2025**

This document is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication can be obtained from **https://public.bahamasmaritime.com/verifycertificate** using the QR code or Unique Tracking Number shown at the top of this certificate.

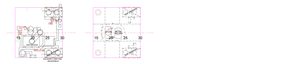
NOTE – A Certificate of Registry is not a document of title. It does not necessarily contain all changes of ownership, and in no case does it contain an official record of any mortgages affecting the ship.
In case of any change of ownership, it is important for the protection of the interests of all parties that such change be registered in accordance with the law. Therefore, any change should be notified to a Registrar immediately.
Should the vessel be lost, sold or broken up, notice thereof, together with the Certificate of Registry, if in existence, should immediately be given to a Registrar of Bahamian Ships.
*- Issued in accordance with the Merchant Shipping (Tonnage) Regulations 1982.

GENERAL ARRANGEMENT
FPSO Cidade de Niteroi MV18

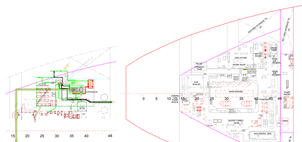
UPPER CENTRAL STORE (PROFILE)

UPPER CENTRAL STORE (PLAN)

ENGINE ROOM 2nd FLOOR

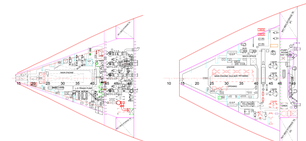


ENGINE CASING



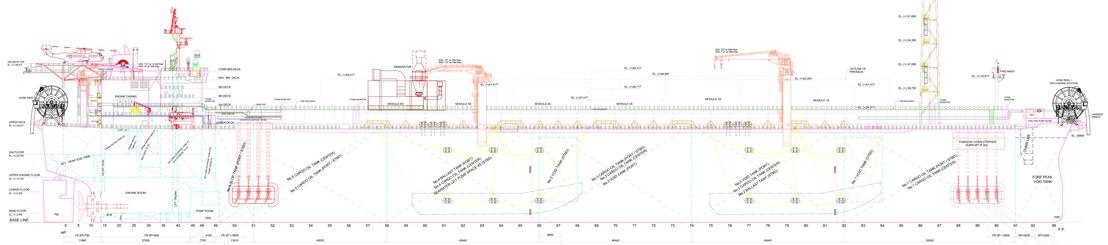
PLAN ABOVE ENG&ELECT WORKSHOP

UPPER ENGINE FLOOR

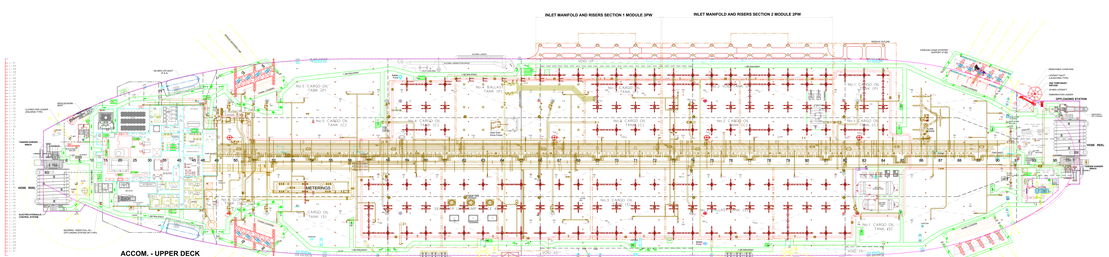


MAIN FLOOR

LOWER FLOOR

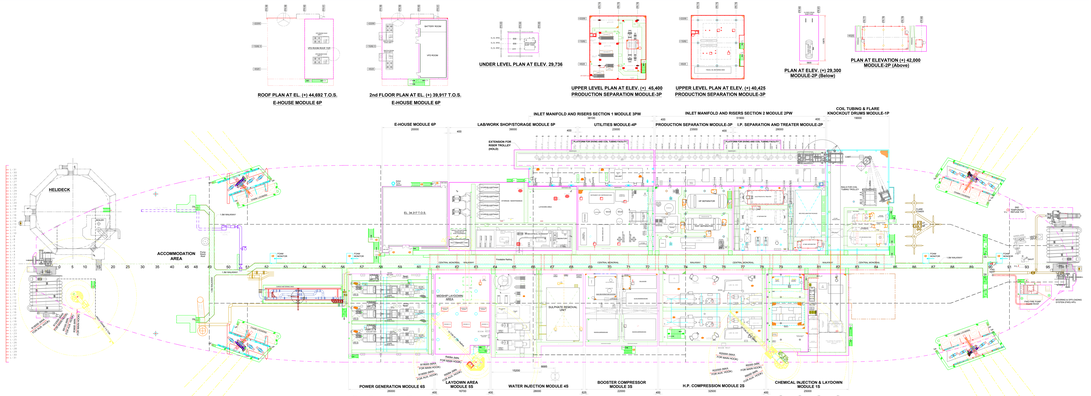


PROFILE VIEW



ACCOM. - UPPER DECK

UPPER DECK



ROOF PLAN AT EL. (+) 44,692 T.O.S.
E-HOUSE MODULE 6P

2nd FLOOR PLAN AT EL. (+) 39,917 T.O.S.
E-HOUSE MODULE 6P

UNDER LEVEL PLAN AT ELEV. 29,736

UPPER LEVEL PLAN AT ELEV. (+) 45,450
PRODUCTION SEPARATION MODULE-3P

UPPER LEVEL PLAN AT ELEV. (+) 45,425
PRODUCTION SEPARATION MODULE-5P

PLAN AT ELEV. (+) 29,300
MODULE-2P (Below)

PLAN AT ELEVATION (+) 42,000
MODULE-2P (Above)

INLET MANIFOLD AND RISERS SECTION 1 MODULE 2PW

INLET MANIFOLD AND RISERS SECTION 2 MODULE 2PW

COIL TUBING & FLARE KNOCKOUT DRUMS MODULE-1P

E-HOUSE MODULE 6P

LAB/WORK SHOP/STORAGE MODULE 5P

UTILITIES MODULE-4P

PRODUCTION SEPARATION MODULE-5P

LP SEPARATION AND TREATER MODULE-2P

HELIDECK

ACCOMMODATION AREA

POWER GENERATION MODULE 6S

LAYDOWN AREA MODULE 5S

WATER INJECTION MODULE 4S

BOOSTER COMPRESSOR MODULE 3S

H.P. COMPRESSION MODULE 2S

CHEMICAL INJECTION & LAYDOWN MODULE 1S

MODULE 1S

TOPSIDE PLAN

UPPER LEVEL PLAN AT ELEV. (+) 44,417
POWER GENERATION MODULE 6S

PLAN AT EL. (+) 38,360

PLAN AT EL. (+) 41,346

PLAN AT EL. (+) 44,250

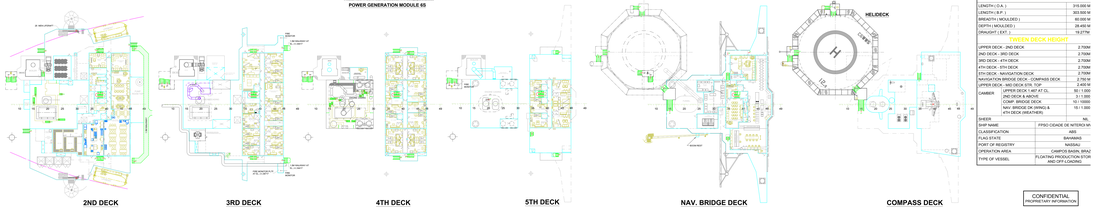
PLAN AT EL. (+) 46,750

PLAN AT ELEV. (+) 37,800 & 40,800

PLAN AT EL.(+)43,894

UPPER LEVEL PLAN AT ELEV. (+) 44,667
H.P COMPRESSION MODULE 2S

UPPER LEVEL PLAN AT ELEV. (+) 41,417
CHEMICAL INJECTION & LAYDOWN MODULE 1S



2ND DECK

3RD DECK

4TH DECK

5TH DECK

NAV. BRIDGE DECK

COMPASS DECK

HELIDECK

PRINCIPAL PARTICULARS

LENGTH (O.A.)	319.000 M
LENGTH (B.P.)	303.500 M
BREADTH (MOULDED)	60.000 M
DEPTH (MOULDED)	28.400 M
DRAUGHT (EXT.)	19.0TM

TWEEN DECK HEIGHT

UPPER DECK - 2ND DECK	3.700M
2ND DECK - 3RD DECK	3.700M
3RD DECK - 4TH DECK	2.700M
4TH DECK - 5TH DECK	2.700M
5TH DECK - NAVIGATION DECK	2.700M
NAVIGATION BRIDGE DECK - COMPASS DECK	2.750 M
UPPER DECK - MID DECK (5TB, TOP	2.400 M
CAMBER: UPPER DECK (AFT AT CL	50 / 1.000
CAMBER: MID DECK (AFT AT CL	50 / 1.000
CAMBER: COMP. BRIDGE DECK	10 / 1000
CAMBER: NAV. BRIDGE DK (WING & 5TH DECK BREATHER)	15 / 1.000

SHEER	0M
VESSEL NAME	FPSO CIDADE DE NITEROI MV
CLASSIFICATION	ABS
FLAG STATE	BAHAMAS
PORT OF REGISTRY	NASSAU
OPERATION AREA	CAMPOS BASIN, BRAZ
TYPE OF VESSEL	FLOATING PRODUCTION STOR AND OFFLOADING

CONFIDENTIAL
PROPRIETARY INFORMATION

CONFIDENTIAL AGREEMENT
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REV	DATE	DRAWN	CHKD	APPD	DESCRIPTION
0	2-2-2010	RC	AC	AC	IFR
1	2-2-2010	RC	AC	AC	IFR
2	2-2-2010	RC	AC	AC	IFR

MODEC

PETROBRAS

FPSO Cidade de Niteroi MV18

GENERAL ARRANGEMENT

DRAWN BY: RC | CHECKED BY: AC | APPROVED BY: AC

DATE: 02-02-10 | SCALE: 1:500 | SIZE: A0

ABS SHORT TERM CLASS CERTIFICATE

https://ABSeCert.Eagle.org

Name: FPSO CIDADE DE NITERÓI MV18

Class Number:	86187847	IMO Number:	8500123
Latitude:	S 022° 29' 75"	Longitude:	W 039° 56' 21"
	° ' "		° ' "

Builder: MITSUBISHI HEAVY IND. LTD, NAGASAKI SY&MACH WORKS

Builder ID: 1981

THIS IS TO CERTIFY THAT,

I have surveyed the above mentioned and, I have transmitted to the American Bureau of Shipping, a report stating that I consider the above to be fit for the service intended; and

Classed:

A1, Floating Production, Storage and Offloading System (FPSO), Floating Production, Storage and Offloading System (Ship-Type), LE (3) 2026, Marlon Leste Field, Offshore

Additional notations:

CRC(I), RRDA

OPERATING RESTRICTIONS

Unit under decommissioning process for site departure.
Oil Production is to be maintained permanently ceased.
COT 3S is to be maintained out of service, opened and empty until be credited by ABS.
Slop (P) is to be maintained out of service, opened and empty until be credited by ABS.

RECORD COMMENTS

This certificate is valid until 30 April 2025, Pending

Full Term Certificate valid to 04-Jan-2028, upon completion of of finding listed below. This Short Term Certificate has been issued as per ACS-O Office authorization dated 26-March-2025.

Rio de Janeiro, Brazil	28 March 2025	Electronically Signed By Da Silva Pacheco, Vinicius Martins, Rio de Janeiro Port - Offshore
Port of Issue:	Date	SURVEYOR

Note: This Certificate evidences compliance with one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. This Certificate is a representation only that the structure, item of material, equipment, machinery or any other item covered by this Certificate has met one or more of the Rules, guides, standards or other criteria of American Bureau of Shipping as of the date of issue. Parties are advised to review the Rules for the scope and conditions of classification and to review the survey records for a fuller description of any restrictions or limitation on the vessel's service or surveys. The validity, applicability and interpretation of this Certificate is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this Certificate or in any notation made in contemplation of this Certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied.

TERMS AND CONDITIONS

1. The issuance and interpretation of the certificate of classification is subject to the terms and conditions of the "Request for Classification and Agreement" (hereinafter "the Agreement") which are hereby incorporated by reference.

2. REPRESENTATIONS AS TO CLASSIFICATION

Classification is a representation by ABS as to the structural and mechanical fitness for a particular use or service in accordance with its Rules and standards. The Rules of American Bureau of Shipping are not meant as a substitute for the independent judgment of professional designers, naval architects and marine engineers nor as a substitute for the quality control procedures of shipbuilders, engine builders, steel makers suppliers, manufacturers and sellers of marine vessels, materials, machinery or equipment. ABS being a technical society can only act through Surveyors or others who are believed by it to be knowledgeable and competent.

ABS represents solely to the vessel Owner or other client (hereinafter "Client") of ABS that when assigning class it will use due diligence in the development of Rules, Guides and standards and in using normally applied testing standards, procedures and techniques as called for by the Rules, Guides, standards or other criteria of ABS for the purpose of assigning and maintaining class. ABS further represents to the Client of ABS that its certificates and reports evidence compliance only with one or more of the Rules, Guides, standards or other criteria of ABS in accordance with the terms of such certificate or report. Under no circumstances whatsoever are these representations to be deemed to relate to any third party.

3. RESPONSIBILITY AND LIABILITY

It is understood and agreed that the class certificate (hereinafter referred to as "certificate") issued as part of the services rendered under the Agreement is a representation only that the vessel, structure, item of material, equipment or machinery or any other item covered by a certificate has met one or more of the Rules or standards of American Bureau of Shipping and is issued solely for the use of ABS, its committees, clients or other authorized entities. The validity, applicability and interpretation of a certificate issued under the terms of or in contemplation of the Agreement is governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof. Nothing contained in this certificate or in any report issued in contemplation of this certificate shall be deemed to relieve any designer, builder, owner, manufacturer, seller, supplier, repairer, operator or other entity of any warranty express or implied nor to create any interest, right, claim or benefit in any third party. It is understood and agreed that nothing expressed herein is intended or shall be construed to give any person, firm or corporation, other than the parties hereto, any right, remedy or claim hereunder or under any provisions herein contained; all provisions hereof are for the sole and exclusive benefit of the parities hereto.

4. SUSPENSION AND CANCELLATION OF CLASS

The continuance of the Classification of any vessel is conditional upon the Rule requirements for periodical, damage and other surveys being duly carried out. The Committee reserves the right to reconsider, withhold, suspend, or cancel the class of any vessel or any part of the machinery for noncompliance with the Rules, for defects or damages which are not reported to ABS, for defects reported by the Surveyors which have not been rectified in accordance with their recommendations, or for nonpayment of fees which are due on account of Classification, Statutory and Cargo Gear Surveys. Suspension or cancellation of class may take effect immediately or after a specified period of time.

5. LIMITATION

ABS makes no representations beyond those contained herein and in the provisions of the Request for Classification regarding its reports, statements, plan review, surveys, certificates or other services.

6. HOLD HARMLESS

THE PARTY TO WHOM THIS CERTIFICATE IS ISSUED, OR HIS ASSIGNEE OR SUCCESSOR IN INTEREST, AGREES TO RELEASE ABS AND TO INDEMNIFY AND HOLD HARMLESS ABS FROM AND AGAINST ANY AND ALL CLAIMS, DEMANDS, LAWSUITS, OR ACTIONS FOR DAMAGES, INCLUDING LEGAL FEES, TO PERSONS OR OTHER LEGAL ENTITIES AND/OR PROPERTY, TANGIBLE, INTANGIBLE OR OTHERWISE WHICH MAY BE BROUGHT AGAINST ABS INCIDENTAL TO, ARISING OUT OF OR IN CONNECTION WITH THE WORK DONE, SERVICES PERFORMED OR MATERIAL TO BE FURNISHED UNDER THIS CERTIFICATE, EXCEPT FOR THOSE CLAIMS CAUSED SOLELY AND COMPLETELY BY THE NEGLIGENCE OF ABS, ITS AGENTS, EMPLOYEES, OFFICERS, DIRECTORS OR SUBCONTRACTORS.

ANY OTHER INDIVIDUAL OR PARTY WHO CLAIMS A RIGHT HEREUNDER OR WHO CLAIMS TO BE A BENEFICIARY OR ANY PORTION OF THE SERVICES RENDERED IN CONTEMPLATION OF THIS CERTIFICATE SHALL ALSO RELEASE ABS AND SHALL INDEMNIFY AND HOLD ABS HARMLESS FROM AND AGAINST ALL CLAIMS, DEMANDS, LAWSUITS OR ACTIONS FOR DAMAGES, INCLUDING LEGAL FEES, TO PERSONS AND/OR PROPERTY, TANGIBLE, INTANGIBLE OR OTHERWISE WHICH MAY BE BROUGHT AGAINST ABS BY ANY PERSON OR ENTITY AS A RESULT OF THE SERVICES PERFORMED IN CONTEMPLATION OF THIS CERTIFICATE, EXCEPT FOR THOSE CLAIMS CAUSED SOLELY AND COMPLETELY BY THE NEGLIGENCE OF ABS, ITS AGENTS, EMPLOYEES, OFFICERS, DIRECTORS, OR SUBCONTRACTORS.

7. LIMITATION OF LIABILITY

THE COMBINED LIABILITY OF AMERICAN BUREAU OF SHIPPING, ITS COMMITTEES, OFFICERS, EMPLOYEES, AGENTS OR SUB-CONTRACTORS FOR ANY LOSS, CLAIM OR DAMAGE ARISING FROM ITS NEGLIGENT PERFORMANCE OR NONPERFORMANCE OF ANY OF ITS SERVICES OR FROM BREACH OF ANY IMPLIED OR EXPRESS WARRANTY OF WORKMANLIKE PERFORMANCE IN CONNECTION WITH THOSE SERVICES, OR FROM ANY OTHER REASON, TO ANY PERSON, CORPORATION, PARTNERSHIP, BUSINESS ENTITY, SOVEREIGN, COUNTRY OR NATION, WILL BE LIMITED TO THE GREATER OF A) $100,000 OR B) AN AMOUNT EQUAL TO TEN TIMES THE SUM ACTUALLY PAID FOR THE SERVICES ALLEGED TO BE DEFICIENT. THE LIMITATION OF LIABILITY MAY BE INCREASED UP TO AN AMOUNT TWENTY-FIVE (25) TIMES THAT SUM PAID FOR SERVICES UPON RECEIPT OF CLIENT'S WRITTEN REQUEST AT OR BEFORE THE TIME OF PERFORMANCE OF SERVICES AND UPON PAYMENT BY CLIENT OF AN ADDITIONAL FEE OF $10.00 FOR EVERY $1,000.00 INCREASE IN THE LIMITATION.

8. ARBITRATION

Any and all differences and disputes of whatsoever nature arising out of this certificate, or the services performed in contemplation of this certificate, shall be put to arbitration in the City of New York pursuant to the laws relating to arbitration there in force, before a board of three persons, consisting of one arbitrator to be appointed by ABS, one by the Client, and one by the two so chosen. The decision of any two of the three on any point or points shall be final. Until such time as the arbitrators finally close the hearings either party shall have the right by written notice served **on the arbitrators and on an officer of the other party to specify further disputes or differences under this certificate for hearing and determination. The arbitration is to be conducted in accordance with the rules of the Society of Maritime Arbitrators, Inc. in the English language. The governing law shall be the law of the State of New York, U.S.A. The arbitrators may grant any relief other than punitive damages which they, or a majority of them, deem within the scope of the agreement of the parties, including, but not limited to, specific performance.**

Client shall be required to notify ABS within thirty (30) days of the commencement of any arbitration or any other legal proceeding between it and third parties which may concern ABS's work in connection with this certificate and shall afford ABS an opportunity, at ABS's sole option, to participate in the arbitration.

9. In the event of any breach of U.S., UK, EU, or UN sanctions on the part of the Client, the Owner, the Vessels' Operators, or Managers, ABS shall have the right to terminate this Agreement with immediate effect, without liability for any damages.

- CoC 2154 - MAIN HULL (3P Void)
- CoC 2179 - Cargo Pump Turbine No.03
- CoC 2184 - No.1 Void (S)
- CoC 2192 – Mooring System
- CoC 2212 - Cetco Equipment
- CoC 2215 - No.3 C.O.T (S)
- CoC 2239 – Periodic inspection of flare fracture
- CoC 2262 – Temporary Power Generation
- CoC 2269 – Repairs of No.3 Void (P)
- CoC 2270 – Composite repairs
- CoC 2366 – Repairs of pipe rack
- CoC 2382 – Sea valves
- CoC 2385 – Repair of bilge pump
- CoC 2407 - No.4 C.O.T (C)
- CoC 2411 - No.1 Void (S)
- CoC 2412 - No.3 Void (S)
- CoC 2426 - No.2 W.B.T (S)
- CoC 2470 - Decommissioning plan
- CoC 2471 - Decommissioned steering gear equipment
- CoC 2472 - Discharge valve of COPT condenser circulating pump HBG-48102-ERSC
- CoC 2473 - No.5 C.O.T (P) was loaded with ballast water
- CoC 2474 - No.5 C.O.T (S) was loaded with ballast water
- CoC 2475 - Closing appliances
- CoC 2482 - Bilge pump no. 2
- CoC 2484 - Slop (P)
- CoC 2490 - No.2 C.O.T (C)
- CoC 2491 - Jockey pump

Following tanks were extended as below:
- COT 3S until 30 April 2025.
- Slop (P) until 30 April 2025.
- Slop (S) until 15 May 2025.
- No.2 C.O.T (C) until 15 May 2025.

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Rev	Status	Date	Origin	Checker	LDE	EM	PM
E	Re-IFD	19 NOV 08	AC LP	LP LP	FYM HZ	MW	SD
D	Re-IFD	12 NOV 08	AC	LP	FYM	MW	SD
C	Re-IFD	06 AUG 08	AC	LP	FYM	MW	SD
B	IFD	26 MAY 08	AC	LP	FYM	MW	SD
A	IFR	20 MAY 08	AC	LP	FYM	MW	SD

Document Title:

LOADING MANUAL TRIM AND STABILITY CALCULATION AND DAMAGE STABILITY CALCULATION

MODEC Project No.	Document No.	Page
0201	0201-MI20-1004-0301	1 of 1872

BR

FPSO Cidade de Niteroi MV18

MODEC

RECEIVED 19 NOV 2008
TO: ABS EIT-

Prepared: Verified: Approved: Acceptance Code:

UNCONTROLLED WHEN PRINTED

Date: 11 September 2008

Name: **FPSO Cidade de Niteroi MV18**
Builder: Mitsubishi H. I. Hull: 1981

INSERT FOR TRIM & STABILITY BOOKLET

Subdivision and Damage Stability

A. The booklet (see note A, below) has been prepared for compliance with
- ABS "Guide for Building & Classing Floating Production Installations, 2007"
- ABS "Rules for Building & Classing Offshore Mobile Drilling Units, 2006"
- IMO Resolution A649(16), "Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989" (As amended).
- Regulation 28, Annex I of MARPOL 73/78 as interpreted by IMO Res. MEPC 139(53).

B. The watertight integrity of the subdivision bulkheads of the following compartments shall be maintained at all times:-
- Cargo Oil Tanks (C) – No.1, 2, 3, 4 & 5
- Wing Cargo Oil Tanks (P&S) – No. 1, 3 & 5
- Slop Tanks (P&S)
- Wing Void Tanks – No.2P & 4S
- Wing Water Ballast Tanks – No. 2S & 4P
- F O Tanks (P&S) – No. 1 & 2
- D O Tank (S)
- Drinking Water Tanks (P&S) & Fresh Water Tank (P)
- Engine Room (C)
- Pump Room (C)

C. Penetrations through the above-mentioned bulkheads shall be watertight; doors or other openings are not permitted in these bulkheads unless authorized in writing by the load line assigning authority.

D. The valves to piping systems, such as cargo, bilge, ballast, fuel oil, etc., serving all spaces bounded by the bulkheads listed in paragraph B above, shall be kept closed at all times except when actually being used to drain or fill a compartment, in order to prevent progressive flooding through a piping system from a damaged compartment to an intact compartment.

E. In reviewing the subdivision of this vessel, the means for closing as well as the heights and locations of openings to spaces below the freeboard deck or to enclosed superstructures as listed on ABS Load Line Form LL 11 may have been a factor in determining the eligibility of the vessel for the assigned freeboard. Therefore, no modifications shall be made to any of these openings without prior written approval of the load line assigning authority.

F. The Master of the vessel is to be provided with a copy of the Loading Manual prepared in accordance with Reg. 25(5) of the International Loadline Convention, 1966.

G. The vessel is to be provided with an "Oil Record Book" in accordance with Regulation 17, Annex I of MARPOL 73/78.

Note A

Drawing No.:	WH201-MI20-1004-0301 Rev C	Date:	11 September 2008
Title:	Loading Manual Trim and Stability Calculation And Damage Stability Calculation		
Prepared by:	MODEC Offshore Production Systems		

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

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Prepared: Verified: Approved: Acceptance Code:
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APPENDIX – H LOADING SEQUENCE 443
APPENDIX – I DAMAGE STABILITY 637

Vessel Not to Sail or Operate in the Sea Under Lightship Condition

Prepared: Verified: Approved: Acceptance Code:
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1.0 GENERAL

1.1 PREFACE

This instruction booklet has been compiled to assist the Master of this vessel in maintaining this vessel in allowable condition regarding stability and strength.

The Master should try to load the vessel according to the typical loading conditions. However for other loading conditions, the Master should verify the stability and strength, using data and calculation procedures shown in this Booklet.

It should be stressed that this instruction booklet is for guidance only. It is the sole responsibility of the Master to keep this vessel in good stability and strength condition at all times.

1.2 GENERAL PRECAUTIONS AGAINST CAPSIZING

Compliance with the required minimum stability criteria does not insure immunity against capsizing, regardless of the circumstances, or absolve the Master from his responsibilities. Master should therefore exercise prudence and good seamanship, having regard to the season of the year, weather forecasts, the navigational zone, and should take appropriate action as to speed and course warranted by the prevailing circumstances.

Care should be taken to ensure that cargo, allocated to the ship is capable of being stowed, so that compliance with the stablility criteria can be achieved. If necessary, the amount of cargo should be limited to the extent that ballast weight may be required.

In determining the sequence of tanks from which oil fuel and freshwater is to be consumed and those into which water ballast may be admitted during the voyage or on site the Master must ensure, pior to departure, that the required minimum stability criteria will be maintained throughout the voyage after making due allowance for free surface effects as may appropriate.

Masters should note that stability can be adversely affected by such influences as beam wind on ships with large windage area, water trapped on deck and in deck cargo, rolling characteristics and following seas.

1.3 HULL PARTICULAR

SHIP NAME	Original	APOLLO SHOJU
	Converted	PETROBRAS FPSO CIDADE DE NITEROI MV18
OWNER	Original	
	Converted	MODEC International
BUILDER/HULL NO	Original	MITSUBISHI HEAVY INDUSTRIES LTD, JAPAN/ Hull #1981
	Converted	
YEAR OF BUILD	Original	1986
	Converted	2008
CLASSIFICATION	Original	NK
	Converted	American Bureau of Shipping

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1.4 PRINCIPAL DIMENSION

Particular	Value
Length Overall	315.00 meters
Length Between Perpendiculars	303.50 meters
Breadth Molded	60.00
Depth Molded	28.45
Full Displacement	289,879 tonnes
Summer Loaded Draft	19.250 m (molded) 19.273 m (extreme)
Block Coefficient	

1.5 TONNAGE

	GROSS	NET
REGISTER TONNAGE		

1.6 TABLE FOR FREEBOARD AND DEADWEIGHT

		FREEBOARD	DRAFT EXT	DISPL.	DEAD WEIGHT
Tropic Fresh Water	TF	5.714 m	20.109 m	296,431 t	Note
Tropic	T	6.149 m	19.674 m	296,561 t	Note
Fresh Water	F	6.115 m	19.708 m	289,881 t	Note
Summer	S	6.550 m	19.273 m	289,878 t	Note
Winter	W	6.951 m	18.872 m	283,218 t	Note

Note: To be confirmed by Deadweight Survey or Inclining Test

2.0 VESSEL DATA

2.1 GENERAL ARRANGEMENT

General Arrangement of Converted FPSO are as per drawing WH201-MI20-10D1-0100

2.2 HYDROSTATICS TABLE

Converted FPSO's hydrostatics table are calculated as per

APPENDIX – A FPSO Cidade de Niterio MV18 HYDROSTATIC TABLE

2.3 CROSS CURVE TABLE

Converted FPSO's cross curve table & down flooding curve can be obtained from

APPENDIX – B FPSO Cidade de Niterio MV18 CROSS CURVE TABLE

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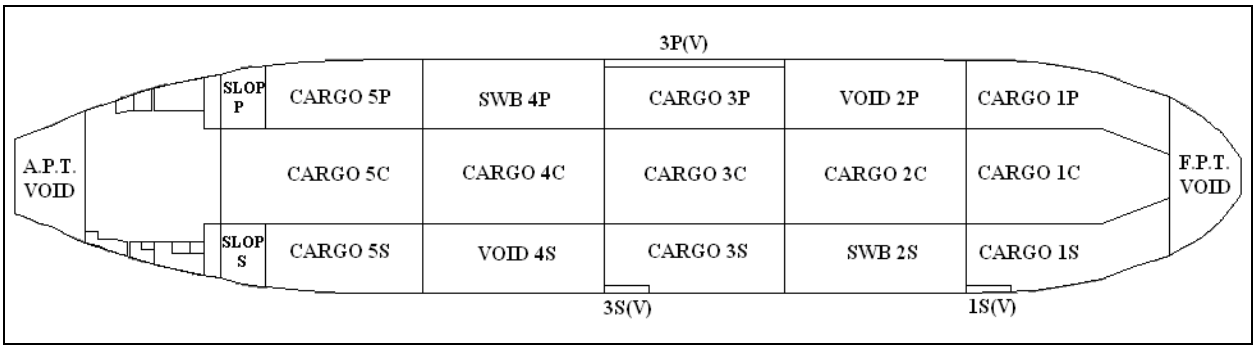
2.4 TANK ARRANGEMENT

Converted FPSO's tank arrangement is shown below:



2.5 TANK CAPACITY

FPSO's Tank Capacities are listed as per:

APPENDIX – C FPSO Cidade de Niterio MV18 TANK CAPACITY

2.6 DESIGN SPECIFIC GRAVITY OF LIQUID

	DESCRIPTION	SPECIFIC GRAVITY (MT/m^3)
1	CARGO OIL	0.890
2	FUEL OIL	0.970
3	DIESEL OIL	0.900
4	PORTABLE WATER	1.000
5	SEA WATER	1.025

2.7 LIGHTSHIP WEIGHT DISTRIBUTION

Summary of Lightship weight and center of gravity of the FPSO alter conversión is as follows:

Lightship of Original Tanker: 31,841 MT

Lightship of Conversion FPSO: 48,446.8 MT

L.C.G. : 145.67 m-AP

V.C.G. : 21.00 m-B.L.

T.C.G. : 1.082 m-CL, Port

Lightship weight distribution can be obtained from:

APPENDIX – D FPSO Cidade de Niterio MV18 LIGHTSHIP WEIGHT DISTRIBUTION

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2.8 DESIGN ALLOWABLE STILL WATER BENDING MOMENT AND SHEARING FORCE

The FPSO Stillwater loading allowable values for vertical bending and shear are derived from original tanker loading manual and are revised according to FPSO installation site environment. The new allowable values are shown as below:

Frame #	Long (m-AP)	Allowable BM (MT-m)		Allowable SF (MT)	
49	31.500F	574,000H	597,000S	9,059	-9,059
51	56.450F	574,000H	612,000S	13,488	-13,386
54.5	78.310F	574,000H	612,000S	16,535	-16,166
58	66.450F	574,000H	612,000S	20,141	-19,875
62	121.850F	574,000H	612,000S	16,793	-16,753
66	86.450F	574,000H	612,000S	12,500	-12,500
70	168.260F	574,000H	612,000S	18,722	-18,722
74	116.450F	574,000H	612,000S	22,500	-22,500
78	214.730F	574,000H	612,000S	15,225	-15,626
82	237.945F	574,000H	612,000S	21,673	-21,989
86.5	264.070F	574,000H	612,000S	16,267	-16,673
91	290.190F	574,000H	597,000S	11,595	-11,595

The Transit Stillwater allowables for voyages are as follows:

Frame #	Long (m-AP)	Allowable BM (MT-m)		Allowable SF (MT)	
49	31.500F	513,475H	483,301S	9,059	-9,059
51	56.450F	574,000H	599,683S	12,826	-12,265
54.5	78.310F	574,000H	612,000S	13,497	-12,874
58	66.450F	574,000H	612,000S	20,490	-19,967
62	121.850F	511,340H	434,505S	14,289	-14,248
66	86.450F	516,094H	439,259S	13,858	-13,858
70	168.260F	519,744H	442,909S	16,216	-16,216
74	116.450F	565,969H	489,134S	24,743	-24,919
78	214.730F	570892H	506,679S	11,644	-12,321
82	237.945F	574,000H	612,000S	21,554	-22,231
86.5	264.070F	574,000H	612,000S	13,153	-13,798
91	290.190F	572,033H	562,403S	10,725	-10,925

It is our recommendation that the captain use good judgment and seek to minimize the still water loads in the hull when extreme weather is present at the operating site. In particular, the captain should minimize the amount of torsion that is present in the hull due to asymmetric tank loadings while the hull girder loads are approaching the vertical shear force allowable.

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An example of an unrealistic load case that exceeds the local strength of the longitudinal bulkhead is shown in the Hull FEA Strength Assessment report. This condition maximized the following load parameters:

1. Hull girder vertical shear force in way of transverse bulkhead 66,
2. Hull girder torsion load due to full ballast tanks 2S and 4P,
3. Maximum pressure on the long bulkhead in way of ballast tank.

More information on this specific unrealistic and loading condition to be avoided is shown in the Hull FEA Strength Assessment report.

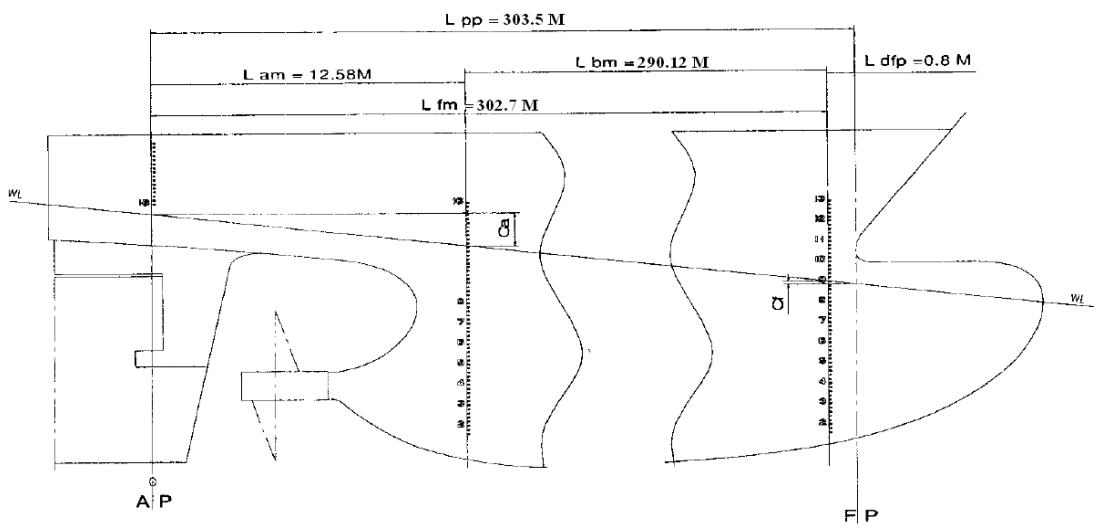
3.0 CALCULATION BASIC

3.1 CALCULATE THE DRAFT AT PERPENDICULAR

A. Draft Mark Correction

All the data from tirm and stability calculation are based on drafts at the fore and aft perpendiculars in this manual. Therefore, the draft at the perpendicular will define the ship condition.

The drafts measured at draft marks in trimmed conditions need to be corrected to determine the drafts at FP and AP.



Correction of draft at draft marks:

Distance between perpendiculars,	Lpp = 303.50 m
Distance from AP To Aft draft mark,	Lam = 12.58 m
Distance from AP to For. Draft mark,	Lfm = 302.7 m
Distance between Aft & Forl Draft mark,	Lbm = 290.12

Assume:

Trim between draft mark = Tdm

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For. Corr, Cf = (Tdm/Lbm)*(Lfm-Lpp)

Aft. Corr, Ca = (Tdm/Lbm)*(Lam)

DF (Corrected draft at F.P.) = d_{fm}(at draft mark) + C_f

DA (Corrected draft at A.P.) = d_{am} (at draft mark) + C_a

Trim (Between AP & FP) = DA – DF

Calculated trim correction Cf and Ca table can be obtained from:

APPENDIX – E "DRAFT MARK CORRECTION TABLE"

Note: 1. When trim by bow, it is necessary to change (+) to (-) sign

2. When after draft is more than 16m, aft draft mark is located at AP therefore no correction for Aft draft mark required.

3.2 PROPELLER IMMERSION

DA = Draft Aft at A.P.

C = Distance from bottom of keel to center of shaft

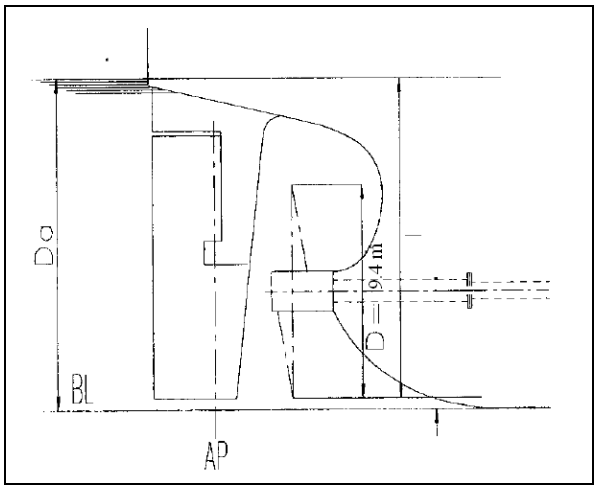
= 4.98 m

D_p = diameter of propeller = 9.4 m

P = Distance of lowest point of prop. Above B.L.

P = C – D_p/2 = 4.98 – (9.4 / 2) = 0.28 m

$$\% \text{ immersion} = \frac{Da - P}{D} \times 100$$



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3.3 DISPLACEMENT CALCULATION FROM DRAFT

When drafts at draft marks are available, following procedure can be followed to find out the displacement of the vessel.

Drafts of sides at fore, midship, after and specific gravity of sea water should be measured.

	ITEM	CALCULATION METHOD	AFT	MIDSHIP	FORE
1	Apparent drafts at draft marks (m)	Port; Dp (m)	12.5	10.3	8.5
		Starboard; Ds (m)	12.5	10.3	8.5
		Mean =D(p+s)$_m$ = $\frac{Dp + Ds}{2}$ (m)	12.5	$D(ms)_m$ 10.3	8.5
2	Correction of fore and aft drafts on to perpendicular; Dcorr(dm) (m)	See draft correction table (Appendix E)	0.173		-0.011
3	Draft at AP (DA) and FP (DF) (m)	D(p+s)m +Dcorr(dm)	(DA) 12.673		(DF) 8.489
4	Mean draft (m)	Dm = $\frac{(DA)+(DF)}{2}$	(12.673+8.489)/2 = 10.581		
5	Trim + by the stern - by the bow (m)	$(DA)-(DF)$	12.673-8.489 = 4.184		
6	Deflection - : hogging + : sagging	d = Dms - Dm	10.3 – 10.581 = -0.281		
7	Draft correction for deflection; Dcorr(d) (m)	$\frac{3}{4} \times d$	¾ x -0.281 = -0.211		
8	LCF (m)	From hydrostatic table	164.085 fwd of AP		
9	Draft correction for trim; Dcorr(t) (m)	$\left(\left(\frac{Lpp}{2}\right) - LCF\right) \times Trim/Lpp$	(151.75-164.085)x(4.184/303.5)=-0.17		
10	Draft of vessel (m)	Dm – Dcorr(d) + Dcorr(t)	10.581-(-0.211)+(-0.17) = 10.622		
11	Displacement at specific gravity of 1.025 (m)	From hydrostatic table at vessel draft (Dc) - Disp	153506.1		
12	Actual Displacement (m)	$\frac{Disp. \times ActualSG}{1.025}$	153506.1x(1.023/1.025) = 153,206.6 Assume: SG = 1.023		

3.4 INFORMATION FOR THE MASTER, OFFICER AND ALL OTHER USING THE STABILITY DATA

1. At all times, tanks must be completle empty or full, where possible, to minimize the effects of free surface.

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2. When maintaining adequate stability during operation condition, it becomes necessary to fill ballast tanks, care must be taken that the tank filling operation is carried out while the vessel still has adequate stability to withstand the free surface effects of the partly filled (or slack) ballast tanks.
3. In making up loading conditions, it is to be noted that free surface effects must be allowed for the maximum of tanks which might be slack or could shortly become slack in the loading condition.
4. When a loading condition other than the standard condition is required, it must be confirmed the GM of the condition is within the limits of GM curve (Appendix G).

3.5 GM CORRECTION FOR FREE SURFACE

If a tank is completely filled with liquid, no movement of the liquid is possible and the effect on ship's stability is precisely the same as if the tank contained solid material.

When a quantity of liquid is withdrawn from the tank, the situation changes and the stability of the ship is adversely affected by what is known as the "Free Surface Effect". When the ship inclines the liquid in slack tanks shifts to the low side. This is an adverse effect on the stability and is refered to as a "loss in GM" or as a "Virtual Rise in VCG" and calculated as follows:

$$\text{Loss in GM (in meters)} = \frac{FreeSurfaceMoment(tonnes - meters)}{Displacement}$$

The "Free Surface Moment" is tabulated for each tank in the Tank Tables for various depths. The FSM vaires of the liquid in the tank. In case the tank is filled with a new liquid other than that was originally meant for, the loss in GM due to Free Surface Effects =

$$Los\sin GM(m) = \frac{FreesurfaceMoment}{Displacement} * \frac{S.G.(new)}{S.G.(original)}$$

3.6 CALCULATION OF WEIGHT & C.O.G. FOR THE LOADING CONDITION

NOTE: A, B, D &G can be derived from APPENDIX C TANK CAPACITY table.

Description	Total Volume	Actual Volume	Weight (Mt) **(A)**	LCG (m) **(B)**	Long. Moment (Mt-m) **(C) = A*B**	VCG (m) **(D)**	Vertical Moment (Mt-m) **(E) = A*C**	F. SUR. (Mt-m) **(F)**	TCG (m) **(G)**	Tran. Moment (Mt-m) **(H) = A*G**
Cargo Oil TK	(98% Full)									
COT 1C	33112.02									
COT 2C	32351.56									
COT 3C	32351.52									
COT 4C	32351.54									
COT 5C	35988.81									

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COT 1P	22470.62									
COT 1S	22096.21									
COT 3P	20715.13									
COT 3S	23012.96									
COT 5P	17103.33									
COT 5S	17103.33									
SUM										
SLOP TANKS	(100% Full)									
SLOP P	3,383.04									
SLOP S	3,383.04									
SUM										
VOID TK	(100% Full)									
FOREPEAK	7,654.74									
NO. 1 VOID S WING	382.03									
VOID 2P	23,924.79									
NO. 3 VOID P WING	2,607.98									
NO. 3 VOID S WING	453.48									
Description	Total Volume		Weight (Mt) **(A)**	LCG (m) **(B)**	Long. Moment (Mt-m) **(C) = A*B**	VCG (m) **(D)**	Vertical Moment (Mt-m) **(E) = A*C**	F. SUR. (Mt-m) **(F)**	TCG (m) **(G)**	Tran. Moment (Mt-m) **(H) = A*G**
VOID 4S	23,667.97									
AFT. PEAK	3,597.20									
SUM										
W. BALLAST TANKS	(100% Full)									
BALLAST 2S	23,924.79									
BALLAST 4P	23,667.50									
SUM										

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FRESH WATER TK	(100% Full)									
FRWATERP	177.9									
DRINKING P	229.09									
DRINKING S	330.7									
SUM										
DIESEL OIL TK	(100% Full)									
DIESEL OIL TK. (S)	387.88									
D.O. SERV. T. (S)	32.6									
SUM										
FUEL OIL TK	(100% Full)									
No.1 F.O.T. (S)	958.5									
No.1 F.O.T. (P)	958.5									
No.2 F.O.T. (S)	1,286.10									
No.2 F.O.T. (P)	1,380.20									
H.F.O. SETT.T. (S)	52.2									
Description	Total Volume		Weight (Mt) **(A)**	LCG (m) **(B)**	Long. Moment (Mt-m) **(C) = A*B**	VCG (m) **(D)**	Vertical Moment (Mt-m) **(E) = A*C**	F. SUR. (Mt-m) **(F)**	TCG (m) **(G)**	Tran. Moment (Mt-m) **(H) = A*G**
H.F.O. SERV. T. (S)	41.8									
SUM										
TOPSIDE LIQUID			1,929	176.756		37.389				
FWD MOORING LINEs			1,176	278.580		0				
AFT MOORING			1,121	57.990		0				

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LINEs										
RISER PORCH			4,708	188.603		14.75				
PROVISION STORE										
MACHY STORES										
DECK STORES										
TOPSIDE STORES										
PAINT STORE										
PERSONNEL & EFFECTS										
CATERING STORES										
DEAD WEIGHT **(I)**										
LIGHT WEIGHT **(J)**			46,872	148.526		20.413				
DISPLACEMENT **(K)**	( )		( )	( )	( )	( )	( )	( )	( )	( )
			= (∑I)+J	= (∑C) / K		= (∑E) / K			= (∑H) / K	

3.7 REQUIRED GM CURVE

The Master may also use the Required GM curve to determine compliance with the stability criteria. The Required GM curve developed for this vessel satisfies the requirements listed below:

a) IMO A.749 (18) 3.1.2 Genenral Intact Stability Criteria for All Ship

b) IMO A.749 (18) 3.2.2 Weather Criterion

c) IMO A.749 (18) 4.6.4 MODU Intact Stability Criterion

d) Regulation 27, Annex 1, MARPOL 73/78

The calculated GM that is obtained after correction for freee surfaces effect is plotted on to the graph. For the loading condition to complie with the stability criteria, the GM obtained should fall in the safe zone. The MARPOL Max KG for a range of drafts is shown in Appendix F.

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Require GM Corresponding to draft is calculated and shown in :

Appendix – F Required GM Curve

3.8 INTACT STABILITY CRITERIA

1 Stability Criteria

(A) General Stability Criteria for All Ships

As all loading conditions are required to comply with recommendation of IMO resolution. It is important to ensure that in any sailing condition the stability complies at least with the following minimum criteria:

I. for every loading condition, withch is to be shown in the Trim & Stability booklet, the righting arm curves (GZ Curve) should be plotted using the KG corrected for the free surface effects of liquid in tanks.

II. The area under the righting lever curve (GZ curves) should not be less than 0.055 meter-radians (10.34 ft-degree) up to 30 degrees angle of heel and not less than 0.09 meter-radians (16.9 ft-degrees) up to 40 degrees or down flooding angle whichever is less and the area between 30 and 40 degrees or down flooding angle whichever is less should not be less than 0.03 meter-radians (5.64 ft-degree)

III. The righting lever GZ should be at least 0.20 meter (0.66 ft) at an angle of heel equal to or greater than 30 degrees.

IV. The maximum righting arm should occur at an angle of heel preferably exceeding 30 degrees but not less than 25 degrees.

V. The initial metracentric height GM should not be less than 0.15 meter (0.49 ft)

(B) Severe Wind and Rolling Criterion (Weather Criterion)

Recommendation on a severe wind and rolling criterion (weather criterion) for the intact stability of passenger and cargo ships of 24 meters in length and over.

I. The stability of a ship to withstand the combined effects of beam wind and rolling should be demonstrated for each standard condition of loading, with reference to the figure as follows:

II. The ship is subjected to a steady wind pressure acting perpendicular to the ship's centerline which results in a steady wind heeling lever (lw 1).

III. From the resultant angle of equilibrium (θ_0), the ship is assumed to roll owing to wave action to an angle of roll (θ_1) to windward. Attention should be paid to the effect of steady wind so that excessive resultant angles of heel are avoided.

IV. The ship is then subjected to a gust wind pressure which results in adjust wind heeling lever (lw2).

V. Under these circumstances, area "b" should be equal to or greater than area "a".

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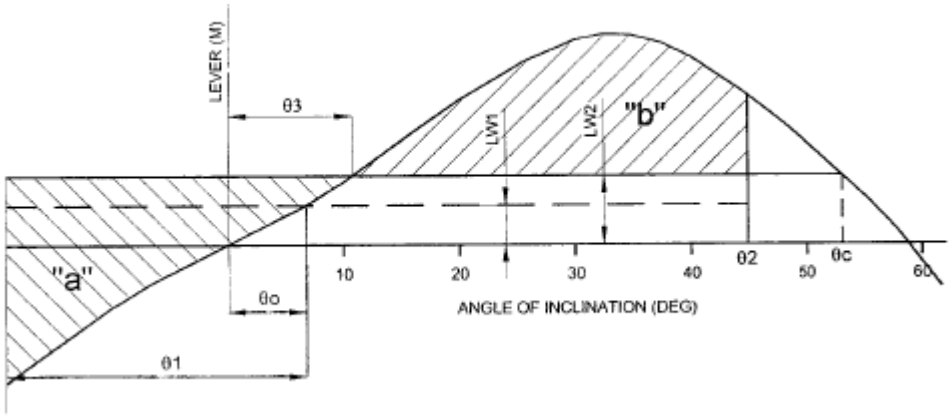
VI. Free surface effects should be accounted for in the standard conditions of loading.



The angles in the previous figure are defined as follows:

θ_0 = angle of heel under action of steady wind (see II and footnote)

θ_1 = angle of roll to windward due to wave action

θ_2 = angle of downflooding (θ_f) or 50° or θ_c whichever is lesser.

Where:

θ_f = angle of heel at which openings in hull, superstructures or deckhouses which can not be closed weathertight. In applying this criterion, small openings through which progressive flooding can not take place need not be considered as open.

θ_3 = angle of first intercept between wind heeling lever lw2 and GZ curves.

θ_c = angle of second intercept between wind heeling lw2 and GZ curves.

Calculation Method of Weather Criterion

The wind heeling levers lw 1 and lw 2 referred to in I. and II. are constant values at all angles of inclination and should be calculated as follows.

1w 1 = (P x A x Z) / Δ (m)

1w 2 = 1.5 x lw 1 (m)

Where:

P = 0.0514 (MT/m^2)

A = projected lateral area of the protion of the ship and deck cargo above the waterline (m^2)

Z = vertical distance from the center of A to the center of underwater lateral area or approximately to a point at one half the draft (m)

Δ = displacement (MT)

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The angle of θ_1 referred to in II. should be calculated as follows:

$\theta_1 = \log K*X1*X2*\sqrt{(R*S)}$ (degrees)

where:

X1 = factor as shown in Table 1.

X2 = factor as shown in Table 2.

K = factor as follows:

K = 1.0 for round-bilged ship having no bilge of bar keels;

K = 0.7 for a ship having sharp bilges;

K = as shown in table 3 for ship having bilge keels, a bar keel or both

R = 0.73± (0.6*OG/D)

With OG = distance between the center of gravity and the waterline (meters) (+ if center of gravity is above waterline, - if it is below)

D = mean moulded draught of ship (m)

S = factor as shown in table 4

TABLE 1
values of X1

B/D	X1
<=2.4	1
2.5	0.98
2.6	0.96
2.7	0.95
2.8	0.93
2.9	0.91
3	0.9
3.1	0.88
3.2	0.86
3.3	0.84
3.4	0.82
>=3.5	0.8

TABLE 2
values of X2

Cb	X2
<=0.45	0.75
0.5	0.82
0.55	0.89
0.6	0.95
0.65	0.97
>=0.70	1

TABLE 3
values of K

Y	K
0	1
1	0.98
1.5	0.95
2	0.88
2.5	0.79
3	0.74
3.5	0.72
>=4.0	0.7

TABLE 4
values of S

T	S
>=6	0.1
7	0.098
8	0.093
12	0.065
14	0.053
16	0.044
18	0.038
>=20	0.035

NOTES:
(Intermediate values in tables 1-4 should be obtained by liner interpolation.)

Rolling period $T = (2*C*B) / \sqrt{(GoM)}$ (s)

where: $C = 0.373+0.023 * (B/D)-0.043*(L/100)$

The symbol in the above tables and formula for the rolling period area defined as follows:

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L = waterline length of the ship (m)

B = moulded breadth of the ship (m)

D = mean moulded draught of the ship (m)

Cb = block coefficient

Y = (Ak * 100) / (L*B)

where:

Ak = total overall area of bilge keels, or area of the lateral projection of the bar keel, or sum of theses areas (m^2)

GoM = metacentric height corrected for free surface affect (m)

ABS MODU Rules per Part 3 Chapter 3

3.9 EXAMPLE SHOWING USE OF CROSS CURVE TABLE

1. Calculation for Statical Stability

Righting lever GZ = Assumed G'Z' + (KG' – KG) x Sin θ

Where Assumed:

G'Z' = Cross Curve Coordinate and Obtained from "Cross Curve Table"

KG = Center of Gravity above base line (Corrected for free surface effects)

KG'= Assumed center of gravity above baseline (KG' = 0.0 m)

θ = Heeling angle (degree)

Example:

Assumed In One Calculation Condition:

Displacement = 220151.04 mt

KG = 7.68 m

ΔG = KG – KG'= 7.68 - 0 = 7.68 m

Assumed GZ at 220,151 MT	θ(degree)	sinθ	$G_0Z = G'Z'+\Delta G\sin\theta$
0	0	0.000	0.000
2.312	5	0.087	1.644
4.643	10	0.174	3.307
7.015	15	0.259	5.026
9.438	20	0.342	6.8114
14.132	30	0.500	10.292
16.836	40	0.643	11.898

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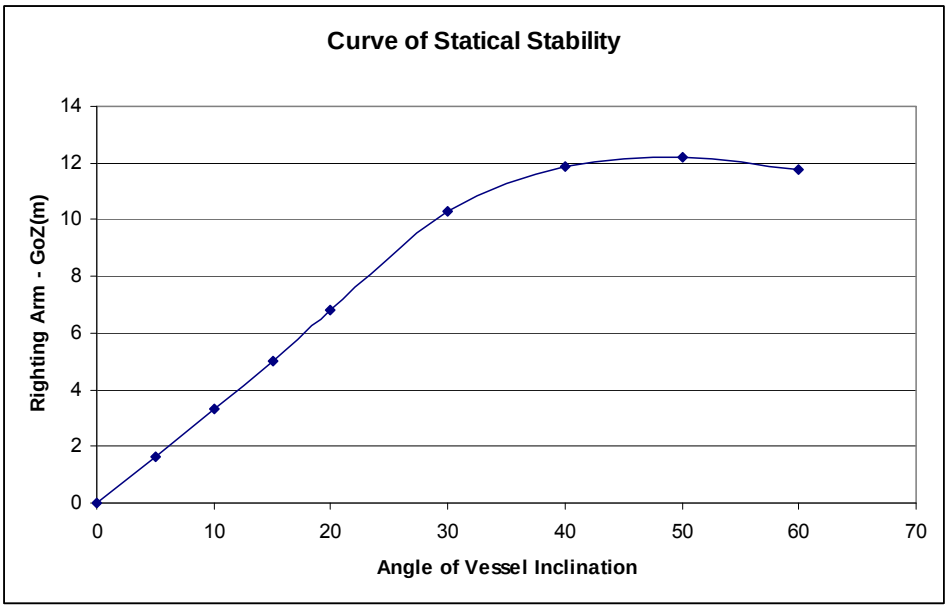
18.103	50	0.766	12.220
18.405	60	0.866	11.754



3.10 INTACT TRIM AND STABILITY WITH STANDARD LOADING CASES

As per Appendix – G Intact Trim & Stability Booklet

3.11 DAMAGE STABILITY

Damage Stability results are discussed as per Appendix – I

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APPENDIX – A HYDROSTATIC TABLE

FPSO Cidade de Niterio MV18 HYDROSTATIC TABLE

Legend for the ítems listed in the table:

Draft Keel	:	Draught measured from the bottom of the keel plate
Disp.	:	Displacement
TPC	:	Tons per cm immersion
LCB	:	Longitudinal center of buoyancy
KB	:	Vertical center of buoyancy above base line
KMt	:	Transverse metacenter above base line
LCF	:	Center of floatation from midship
MTC	:	Moment to change trim per cm
Water Plane Area	:	Water Plane Area
Wetted Surface	:	Wetted Surface Area
Cb	:	Block Coeffient
Cp	:	Prismatic Coeffient
Cm	:	Max sectional area coefficient
Cwp	:	Water plane area coefficient

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
2	26,155.46	137.6	171.728F	1.009	131.393	170.602F	2,139	13,421.85	13,946.06	0.705	0.713	0.989	0.737
2.01	26,293.76	137.6	171.722F	1.014	130.752	170.593F	2,141	13,425.17	13,953.62	0.705	0.713	0.989	0.737
2.02	26,432.09	137.6	171.716F	1.019	130.117	170.583F	2,142	13,428.44	13,961.15	0.705	0.713	0.989	0.737
2.03	26,570.46	137.7	171.710F	1.024	129.488	170.574F	2,143	13,431.71	13,968.68	0.705	0.713	0.989	0.738
2.04	26,708.86	137.7	171.704F	1.03	128.866	170.565F	2,145	13,434.98	13,976.21	0.706	0.714	0.989	0.738
2.05	26,847.30	137.7	171.698F	1.035	128.25	170.556F	2,146	13,438.24	13,983.72	0.706	0.714	0.989	0.738
2.06	26,985.77	137.8	171.692F	1.04	127.639	170.546F	2,147	13,441.40	13,991.16	0.706	0.714	0.989	0.738
2.07	27,124.27	137.8	171.687F	1.045	127.031	170.538F	2,149	13,444.47	13,998.54	0.706	0.714	0.989	0.738
2.08	27,262.80	137.8	171.681F	1.05	126.43	170.529F	2,150	13,447.54	14,005.92	0.706	0.714	0.989	0.738
2.09	27,401.37	137.9	171.675F	1.055	125.834	170.520F	2,151	13,450.62	14,013.30	0.706	0.714	0.989	0.739
2.1	27,539.97	137.9	171.669F	1.06	125.245	170.511F	2,153	13,453.69	14,020.67	0.707	0.714	0.989	0.739
2.11	27,678.60	137.9	171.664F	1.065	124.662	170.502F	2,154	13,456.76	14,028.05	0.707	0.714	0.989	0.739
2.12	27,817.26	138	171.658F	1.071	124.084	170.493F	2,155	13,459.83	14,035.43	0.707	0.715	0.989	0.739
2.13	27,955.95	138	171.652F	1.076	123.512	170.484F	2,156	13,462.91	14,042.81	0.707	0.715	0.989	0.739
2.14	28,094.68	138	171.646F	1.081	122.943	170.475F	2,158	13,465.91	14,050.14	0.707	0.715	0.989	0.739
2.15	28,233.43	138.1	171.641F	1.086	122.38	170.467F	2,159	13,468.89	14,057.46	0.707	0.715	0.989	0.74
2.16	28,372.22	138.1	171.635F	1.091	121.822	170.459F	2,160	13,471.88	14,064.77	0.707	0.715	0.989	0.74
2.17	28,511.04	138.1	171.629F	1.096	121.278	170.449F	2,162	13,475.13	14,072.22	0.708	0.715	0.989	0.74
2.18	28,649.89	138.2	171.624F	1.101	120.742	170.439F	2,163	13,478.45	14,079.70	0.708	0.715	0.989	0.74
2.19	28,788.78	138.2	171.618F	1.106	120.21	170.429F	2,164	13,481.78	14,087.19	0.708	0.715	0.99	0.74
2.2	28,927.70	138.2	171.612F	1.112	119.684	170.420F	2,166	13,485.10	14,094.67	0.708	0.716	0.99	0.741
2.21	29,066.66	138.3	171.607F	1.117	119.162	170.410F	2,167	13,488.42	14,102.15	0.708	0.716	0.99	0.741
2.22	29,205.65	138.3	171.601F	1.122	118.646	170.400F	2,168	13,491.74	14,109.63	0.708	0.716	0.99	0.741
2.23	29,344.67	138.3	171.595F	1.127	118.134	170.390F	2,169	13,495.07	14,117.12	0.708	0.716	0.99	0.741
2.24	29,483.73	138.4	171.590F	1.132	117.627	170.380F	2,171	13,498.39	14,124.60	0.709	0.716	0.99	0.741
2.25	29,622.83	138.4	171.584F	1.137	117.125	170.371F	2,172	13,501.71	14,132.08	0.709	0.716	0.99	0.741
2.26	29,761.96	138.4	171.578F	1.142	116.628	170.361F	2,173	13,505.04	14,139.57	0.709	0.716	0.99	0.742
2.27	29,901.12	138.5	171.573F	1.147	116.135	170.351F	2,175	13,508.32	14,147.03	0.709	0.716	0.99	0.742
2.28	30,040.32	138.5	171.567F	1.153	115.646	170.341F	2,176	13,511.60	14,154.48	0.709	0.716	0.99	0.742
2.29	30,179.55	138.5	171.562F	1.158	115.162	170.330F	2,177	13,514.88	14,161.93	0.709	0.717	0.99	0.742
2.3	30,318.81	138.6	171.556F	1.163	114.682	170.320F	2,179	13,518.15	14,169.38	0.71	0.717	0.99	0.742
2.31	30,458.11	138.6	171.550F	1.168	114.207	170.310F	2,180	13,521.43	14,176.84	0.71	0.717	0.99	0.743
2.32	30,597.45	138.6	171.545F	1.173	113.736	170.300F	2,181	13,524.71	14,184.29	0.71	0.717	0.99	0.743
2.33	30,736.81	138.7	171.539F	1.178	113.27	170.290F	2,182	13,527.98	14,191.74	0.71	0.717	0.99	0.743
2.34	30,876.22	138.7	171.534F	1.183	112.807	170.280F	2,184	13,531.26	14,199.20	0.71	0.717	0.99	0.743
2.35	31,015.65	138.7	171.528F	1.188	112.349	170.269F	2,185	13,534.54	14,206.65	0.71	0.717	0.99	0.743
2.36	31,155.12	138.8	171.523F	1.193	111.894	170.259F	2,186	13,537.82	14,214.10	0.71	0.717	0.99	0.743
2.37	31,294.62	138.8	171.517F	1.199	111.444	170.249F	2,188	13,541.09	14,221.56	0.711	0.717	0.99	0.744
2.38	31,434.16	138.8	171.511F	1.204	110.998	170.239F	2,189	13,544.37	14,229.01	0.711	0.718	0.99	0.744
2.39	31,573.73	138.9	171.506F	1.209	110.556	170.229F	2,190	13,547.64	14,236.46	0.711	0.718	0.99	0.744
2.4	31,713.34	138.9	171.500F	1.214	110.117	170.219F	2,191	13,550.92	14,243.92	0.711	0.718	0.99	0.744
2.41	31,852.98	138.9	171.495F	1.219	109.682	170.209F	2,193	13,554.19	14,251.37	0.711	0.718	0.99	0.744
2.42	31,992.65	139	171.489F	1.224	109.252	170.198F	2,194	13,557.47	14,258.82	0.711	0.718	0.991	0.745
2.43	32,132.36	139	171.484F	1.229	108.824	170.188F	2,195	13,560.74	14,266.28	0.711	0.718	0.991	0.745
2.44	32,272.10	139	171.478F	1.234	108.401	170.178F	2,197	13,564.01	14,273.73	0.711	0.718	0.991	0.745
2.45	32,411.87	139.1	171.472F	1.24	107.981	170.168F	2,198	13,567.29	14,281.18	0.712	0.718	0.991	0.745
2.46	32,551.68	139.1	171.467F	1.245	107.565	170.158F	2,199	13,570.56	14,288.64	0.712	0.718	0.991	0.745
2.47	32,691.53	139.1	171.461F	1.25	107.152	170.148F	2,201	13,573.84	14,296.09	0.712	0.719	0.991	0.745
2.48	32,831.40	139.2	171.456F	1.255	106.743	170.138F	2,202	13,577.11	14,303.55	0.712	0.719	0.991	0.746
2.49	32,971.32	139.2	171.450F	1.26	106.337	170.128F	2,203	13,580.39	14,311.00	0.712	0.719	0.991	0.746
2.5	33,111.26	139.2	171.445F	1.265	105.935	170.117F	2,204	13,583.66	14,318.45	0.712	0.719	0.991	0.746
2.51	33,251.24	139.3	171.439F	1.27	105.536	170.107F	2,206	13,586.94	14,325.91	0.712	0.719	0.991	0.746
2.52	33,391.25	139.3	171.434F	1.275	105.14	170.097F	2,207	13,590.21	14,333.36	0.713	0.719	0.991	0.746
2.53	33,531.30	139.3	171.428F	1.281	104.748	170.087F	2,208	13,593.49	14,340.82	0.713	0.719	0.991	0.746
2.54	33,671.38	139.4	171.423F	1.286	104.359	170.077F	2,210	13,596.76	14,348.28	0.713	0.719	0.991	0.747
2.55	33,811.50	139.4	171.417F	1.291	103.973	170.067F	2,211	13,600.04	14,355.73	0.713	0.719	0.991	0.747
2.56	33,951.65	139.4	171.412F	1.296	103.59	170.057F	2,212	13,603.32	14,363.19	0.713	0.72	0.991	0.747
2.57	34,091.83	139.5	171.406F	1.301	103.21	170.047F	2,213	13,606.52	14,370.58	0.713	0.72	0.991	0.747
2.58	34,232.05	139.5	171.401F	1.306	102.83	170.038F	2,215	13,609.62	14,377.89	0.713	0.72	0.991	0.747
2.59	34,372.29	139.5	171.395F	1.311	102.454	170.030F	2,216	13,612.72	14,385.20	0.714	0.72	0.991	0.748
2.6	34,512.57	139.6	171.390F	1.316	102.081	170.021F	2,217	13,615.82	14,392.50	0.714	0.72	0.991	0.748
2.61	34,652.89	139.6	171.384F	1.322	101.711	170.012F	2,218	13,618.91	14,399.81	0.714	0.72	0.991	0.748
2.62	34,793.23	139.6	171.379F	1.327	101.344	170.003F	2,220	13,622.01	14,407.11	0.714	0.72	0.991	0.748
2.63	34,933.61	139.7	171.373F	1.332	100.979	169.995F	2,221	13,625.01	14,414.34	0.714	0.72	0.991	0.748

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
2.64	35,074.02	139.7	171.368F	1.337	100.616	169.986F	2,222	13,627.93	14,421.50	0.714	0.72	0.991	0.748
2.65	35,214.45	139.7	171.363F	1.342	100.256	169.978F	2,223	13,630.83	14,428.65	0.714	0.721	0.991	0.749
2.66	35,354.92	139.7	171.357F	1.347	99.899	169.969F	2,224	13,633.74	14,435.80	0.714	0.721	0.991	0.749
2.67	35,495.42	139.8	171.352F	1.352	99.544	169.961F	2,225	13,636.64	14,442.95	0.715	0.721	0.991	0.749
2.68	35,635.95	139.8	171.346F	1.357	99.192	169.952F	2,227	13,639.55	14,450.11	0.715	0.721	0.991	0.749
2.69	35,776.50	139.8	171.341F	1.363	98.843	169.943F	2,228	13,642.44	14,457.25	0.715	0.721	0.991	0.749
2.7	35,917.09	139.9	171.335F	1.368	98.497	169.935F	2,229	13,645.33	14,464.40	0.715	0.721	0.992	0.749
2.71	36,057.71	139.9	171.330F	1.373	98.154	169.927F	2,230	13,648.23	14,471.54	0.715	0.721	0.992	0.749
2.72	36,198.36	139.9	171.325F	1.378	97.813	169.918F	2,231	13,651.11	14,478.68	0.715	0.721	0.992	0.75
2.73	36,339.04	140	171.319F	1.383	97.474	169.909F	2,232	13,653.99	14,485.81	0.715	0.721	0.992	0.75
2.74	36,479.74	140	171.314F	1.388	97.139	169.901F	2,234	13,656.84	14,492.94	0.715	0.722	0.992	0.75
2.75	36,620.48	140	171.309F	1.393	96.805	169.892F	2,235	13,659.70	14,500.06	0.716	0.722	0.992	0.75
2.76	36,761.25	140	171.303F	1.399	96.474	169.884F	2,236	13,662.47	14,507.13	0.716	0.722	0.992	0.75
2.77	36,902.04	140.1	171.298F	1.404	96.145	169.876F	2,237	13,665.22	14,514.17	0.716	0.722	0.992	0.75
2.78	37,042.87	140.1	171.293F	1.409	95.819	169.868F	2,238	13,667.98	14,521.22	0.716	0.722	0.992	0.751
2.79	37,183.72	140.1	171.287F	1.414	95.495	169.860F	2,239	13,670.73	14,528.26	0.716	0.722	0.992	0.751
2.8	37,324.60	140.2	171.282F	1.419	95.174	169.852F	2,240	13,673.49	14,535.31	0.716	0.722	0.992	0.751
2.81	37,465.51	140.2	171.277F	1.424	94.855	169.844F	2,241	13,676.22	14,542.34	0.716	0.722	0.992	0.751
2.82	37,606.45	140.2	171.271F	1.429	94.538	169.836F	2,242	13,678.95	14,549.38	0.716	0.722	0.992	0.751
2.83	37,747.42	140.2	171.266F	1.434	94.224	169.829F	2,243	13,681.67	14,556.40	0.717	0.722	0.992	0.751
2.84	37,888.41	140.3	171.261F	1.44	93.912	169.821F	2,244	13,684.35	14,563.41	0.717	0.723	0.992	0.751
2.85	38,029.43	140.3	171.256F	1.445	93.602	169.814F	2,245	13,686.99	14,570.40	0.717	0.723	0.992	0.752
2.86	38,170.48	140.3	171.250F	1.45	93.295	169.807F	2,246	13,689.63	14,577.38	0.717	0.723	0.992	0.752
2.87	38,311.56	140.3	171.245F	1.455	92.989	169.799F	2,247	13,692.27	14,584.36	0.717	0.723	0.992	0.752
2.88	38,452.67	140.4	171.240F	1.46	92.686	169.792F	2,249	13,694.91	14,591.35	0.717	0.723	0.992	0.752
2.89	38,593.80	140.4	171.235F	1.465	92.383	169.785F	2,250	13,697.44	14,598.25	0.717	0.723	0.992	0.752
2.9	38,734.96	140.4	171.230F	1.47	92.082	169.778F	2,251	13,699.96	14,605.15	0.717	0.723	0.992	0.752
2.91	38,876.14	140.5	171.224F	1.475	91.784	169.771F	2,251	13,702.47	14,612.04	0.718	0.723	0.992	0.752
2.92	39,017.35	140.5	171.219F	1.481	91.487	169.765F	2,252	13,704.98	14,618.93	0.718	0.723	0.992	0.753
2.93	39,158.59	140.5	171.214F	1.486	91.193	169.758F	2,253	13,707.48	14,625.81	0.718	0.724	0.992	0.753
2.94	39,299.85	140.5	171.209F	1.491	90.9	169.751F	2,254	13,709.96	14,632.68	0.718	0.724	0.992	0.753
2.95	39,441.14	140.6	171.204F	1.496	90.61	169.745F	2,255	13,712.43	14,639.54	0.718	0.724	0.992	0.753
2.96	39,582.45	140.6	171.199F	1.501	90.322	169.738F	2,256	13,714.89	14,646.40	0.718	0.724	0.992	0.753
2.97	39,723.77	140.6	171.194F	1.506	90.036	169.732F	2,257	13,717.35	14,653.26	0.718	0.724	0.992	0.753
2.98	39,865.09	140.6	171.188F	1.511	89.752	169.725F	2,258	13,719.79	14,660.11	0.718	0.724	0.992	0.753
2.99	40,006.44	140.7	171.183F	1.516	89.47	169.718F	2,259	13,722.23	14,666.95	0.719	0.724	0.992	0.754
3	40,147.82	140.7	171.178F	1.522	89.19	169.712F	2,260	13,724.68	14,673.80	0.719	0.724	0.992	0.754
3.01	40,289.22	140.7	171.173F	1.527	88.912	169.705F	2,261	13,727.12	14,680.65	0.719	0.724	0.992	0.754
3.02	40,430.65	140.7	171.168F	1.532	88.635	169.698F	2,262	13,729.57	14,687.50	0.719	0.724	0.992	0.754
3.03	40,572.10	140.8	171.162F	1.537	88.361	169.691F	2,263	13,732.01	14,694.35	0.719	0.725	0.992	0.754
3.04	40,713.57	140.8	171.157F	1.542	88.089	169.685F	2,264	13,734.45	14,701.19	0.719	0.725	0.992	0.754
3.05	40,855.08	140.8	171.152F	1.547	87.819	169.678F	2,265	13,736.90	14,708.04	0.719	0.725	0.992	0.754
3.06	40,996.60	140.8	171.147F	1.552	87.55	169.671F	2,266	13,739.34	14,714.89	0.719	0.725	0.993	0.754
3.07	41,138.16	140.9	171.142F	1.557	87.283	169.665F	2,267	13,741.79	14,721.74	0.72	0.725	0.993	0.755
3.08	41,279.73	140.9	171.137F	1.563	87.019	169.658F	2,268	13,744.23	14,728.59	0.72	0.725	0.993	0.755
3.09	41,421.34	140.9	171.132F	1.568	86.756	169.651F	2,269	13,746.67	14,735.44	0.72	0.725	0.993	0.755
3.1	41,562.97	140.9	171.127F	1.573	86.494	169.645F	2,270	13,749.12	14,742.28	0.72	0.725	0.993	0.755
3.11	41,704.62	141	171.121F	1.578	86.235	169.638F	2,271	13,751.56	14,749.13	0.72	0.725	0.993	0.755
3.12	41,846.30	141	171.116F	1.583	85.977	169.631F	2,272	13,754.01	14,755.98	0.72	0.725	0.993	0.755
3.13	41,988.00	141	171.111F	1.588	85.721	169.625F	2,273	13,756.45	14,762.83	0.72	0.725	0.993	0.755
3.14	42,129.73	141	171.106F	1.593	85.467	169.618F	2,274	13,758.89	14,769.68	0.72	0.726	0.993	0.756
3.15	42,271.48	141.1	171.101F	1.599	85.215	169.612F	2,274	13,761.31	14,776.51	0.72	0.726	0.993	0.756
3.16	42,413.26	141.1	171.096F	1.604	84.964	169.605F	2,275	13,763.73	14,783.34	0.721	0.726	0.993	0.756
3.17	42,555.07	141.1	171.091F	1.609	84.715	169.599F	2,276	13,766.14	14,790.17	0.721	0.726	0.993	0.756
3.18	42,696.90	141.1	171.086F	1.614	84.467	169.592F	2,277	13,768.56	14,796.99	0.721	0.726	0.993	0.756
3.19	42,838.75	141.2	171.081F	1.619	84.221	169.586F	2,278	13,770.97	14,803.82	0.721	0.726	0.993	0.756
3.2	42,980.63	141.2	171.076F	1.624	83.975	169.579F	2,279	13,773.32	14,810.63	0.721	0.726	0.993	0.756
3.21	43,122.53	141.2	171.071F	1.629	83.731	169.572F	2,280	13,775.65	14,817.43	0.721	0.726	0.993	0.756
3.22	43,264.46	141.2	171.066F	1.634	83.488	169.566F	2,281	13,777.98	14,824.24	0.721	0.726	0.993	0.757
3.23	43,406.41	141.2	171.061F	1.64	83.247	169.559F	2,282	13,780.31	14,831.04	0.721	0.726	0.993	0.757
3.24	43,548.38	141.3	171.056F	1.645	83.008	169.552F	2,283	13,782.65	14,837.85	0.721	0.727	0.993	0.757
3.25	43,690.38	141.3	171.052F	1.65	82.77	169.545F	2,284	13,784.98	14,844.65	0.722	0.727	0.993	0.757
3.26	43,832.40	141.3	171.047F	1.655	82.534	169.538F	2,285	13,787.31	14,851.45	0.722	0.727	0.993	0.757
3.27	43,974.45	141.3	171.042F	1.66	82.299	169.531F	2,286	13,789.64	14,858.26	0.722	0.727	0.993	0.757

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
3.29	44,258.61	141.4	171.032F	1.67	81.834	169.518F	2,287	13,794.31	14,871.87	0.722	0.727	0.993	0.758
3.3	44,400.73	141.4	171.027F	1.675	81.603	169.511F	2,288	13,796.64	14,878.67	0.722	0.727	0.993	0.758
3.31	44,542.88	141.4	171.022F	1.681	81.374	169.504F	2,289	13,798.97	14,885.48	0.722	0.727	0.993	0.758
3.32	44,685.04	141.5	171.017F	1.686	81.147	169.497F	2,290	13,801.30	14,892.28	0.722	0.727	0.993	0.758
3.33	44,827.23	141.5	171.012F	1.691	80.921	169.491F	2,291	13,803.63	14,899.08	0.722	0.727	0.993	0.758
3.34	44,969.45	141.5	171.008F	1.696	80.696	169.484F	2,292	13,805.97	14,905.89	0.723	0.727	0.993	0.758
3.35	45,111.69	141.5	171.003F	1.701	80.473	169.477F	2,293	13,808.30	14,912.69	0.723	0.728	0.993	0.758
3.36	45,253.95	141.6	170.998F	1.706	80.252	169.470F	2,294	13,810.63	14,919.50	0.723	0.728	0.993	0.758
3.37	45,396.24	141.6	170.993F	1.711	80.031	169.463F	2,295	13,812.96	14,926.30	0.723	0.728	0.993	0.759
3.38	45,538.55	141.6	170.988F	1.716	79.812	169.456F	2,296	13,815.26	14,933.10	0.723	0.728	0.993	0.759
3.39	45,680.89	141.6	170.983F	1.722	79.594	169.449F	2,297	13,817.55	14,939.89	0.723	0.728	0.993	0.759
3.4	45,823.24	141.7	170.979F	1.727	79.377	169.442F	2,297	13,819.85	14,946.68	0.723	0.728	0.993	0.759
3.41	45,965.63	141.7	170.974F	1.732	79.161	169.435F	2,298	13,822.10	14,953.45	0.723	0.728	0.993	0.759
3.42	46,108.03	141.7	170.969F	1.737	78.946	169.427F	2,299	13,824.34	14,960.21	0.723	0.728	0.993	0.759
3.43	46,250.46	141.7	170.964F	1.742	78.732	169.420F	2,300	13,826.57	14,966.97	0.723	0.728	0.993	0.759
3.44	46,392.91	141.7	170.959F	1.747	78.52	169.412F	2,301	13,828.80	14,973.73	0.724	0.728	0.993	0.759
3.45	46,535.38	141.8	170.955F	1.752	78.309	169.405F	2,302	13,831.03	14,980.49	0.724	0.729	0.993	0.76
3.46	46,677.88	141.8	170.950F	1.757	78.099	169.398F	2,303	13,833.26	14,987.25	0.724	0.729	0.993	0.76
3.47	46,820.40	141.8	170.945F	1.763	77.891	169.390F	2,304	13,835.49	14,994.01	0.724	0.729	0.993	0.76
3.48	46,962.95	141.8	170.940F	1.768	77.684	169.383F	2,305	13,837.73	15,000.77	0.724	0.729	0.993	0.76
3.49	47,105.51	141.9	170.936F	1.773	77.478	169.375F	2,305	13,839.96	15,007.53	0.724	0.729	0.993	0.76
3.5	47,248.10	141.9	170.931F	1.778	77.273	169.368F	2,306	13,842.19	15,014.28	0.724	0.729	0.993	0.76
3.51	47,390.71	141.9	170.926F	1.783	77.07	169.360F	2,307	13,844.42	15,021.04	0.724	0.729	0.993	0.76
3.52	47,533.35	141.9	170.921F	1.788	76.868	169.353F	2,308	13,846.65	15,027.80	0.724	0.729	0.994	0.76
3.53	47,676.01	142	170.917F	1.793	76.667	169.345F	2,309	13,848.89	15,034.56	0.725	0.729	0.994	0.761
3.54	47,818.69	142	170.912F	1.799	76.467	169.338F	2,310	13,851.12	15,041.32	0.725	0.729	0.994	0.761
3.55	47,961.39	142	170.907F	1.804	76.269	169.330F	2,311	13,853.35	15,048.08	0.725	0.729	0.994	0.761
3.56	48,104.12	142	170.902F	1.809	76.071	169.323F	2,312	13,855.58	15,054.84	0.725	0.729	0.994	0.761
3.57	48,246.87	142	170.898F	1.814	75.875	169.315F	2,313	13,857.81	15,061.60	0.725	0.73	0.994	0.761
3.58	48,389.64	142.1	170.893F	1.819	75.68	169.308F	2,313	13,860.05	15,068.36	0.725	0.73	0.994	0.761
3.59	48,532.44	142.1	170.888F	1.824	75.486	169.301F	2,314	13,862.28	15,075.12	0.725	0.73	0.994	0.761
3.6	48,675.26	142.1	170.884F	1.829	75.294	169.293F	2,315	13,864.51	15,081.88	0.725	0.73	0.994	0.761
3.61	48,818.10	142.1	170.879F	1.834	75.102	169.286F	2,316	13,866.74	15,088.64	0.725	0.73	0.994	0.761
3.62	48,960.97	142.2	170.874F	1.84	74.912	169.278F	2,317	13,868.97	15,095.40	0.725	0.73	0.994	0.762
3.63	49,103.86	142.2	170.870F	1.845	74.723	169.271F	2,318	13,871.20	15,102.16	0.726	0.73	0.994	0.762
3.64	49,246.77	142.2	170.865F	1.85	74.534	169.263F	2,319	13,873.43	15,108.92	0.726	0.73	0.994	0.762
3.65	49,389.70	142.2	170.860F	1.855	74.347	169.256F	2,320	13,875.65	15,115.68	0.726	0.73	0.994	0.762
3.66	49,532.66	142.2	170.856F	1.86	74.161	169.248F	2,320	13,877.88	15,122.44	0.726	0.73	0.994	0.762
3.67	49,675.64	142.3	170.851F	1.865	73.977	169.241F	2,321	13,880.11	15,129.20	0.726	0.73	0.994	0.762
3.68	49,818.65	142.3	170.846F	1.87	73.792	169.233F	2,322	13,882.31	15,135.94	0.726	0.731	0.994	0.762
3.69	49,961.67	142.3	170.842F	1.875	73.609	169.226F	2,323	13,884.48	15,142.68	0.726	0.731	0.994	0.762
3.7	50,104.72	142.3	170.837F	1.881	73.426	169.219F	2,324	13,886.62	15,149.40	0.726	0.731	0.994	0.763
3.71	50,247.79	142.4	170.832F	1.886	73.244	169.211F	2,325	13,888.77	15,156.11	0.726	0.731	0.994	0.763
3.72	50,390.88	142.4	170.828F	1.891	73.063	169.204F	2,326	13,890.91	15,162.83	0.726	0.731	0.994	0.763
3.73	50,534.00	142.4	170.823F	1.896	72.883	169.197F	2,327	13,893.05	15,169.55	0.727	0.731	0.994	0.763
3.74	50,677.14	142.4	170.818F	1.901	72.704	169.189F	2,327	13,895.19	15,176.27	0.727	0.731	0.994	0.763
3.75	50,820.29	142.4	170.814F	1.906	72.527	169.182F	2,328	13,897.34	15,182.98	0.727	0.731	0.994	0.763
3.76	50,963.48	142.5	170.809F	1.911	72.35	169.174F	2,329	13,899.48	15,189.70	0.727	0.731	0.994	0.763
3.77	51,106.68	142.5	170.804F	1.916	72.174	169.167F	2,330	13,901.62	15,196.42	0.727	0.731	0.994	0.763
3.78	51,249.90	142.5	170.800F	1.922	71.999	169.160F	2,331	13,903.76	15,203.14	0.727	0.731	0.994	0.764
3.79	51,393.15	142.5	170.795F	1.927	71.826	169.152F	2,332	13,905.91	15,209.86	0.727	0.732	0.994	0.764
3.8	51,536.42	142.6	170.791F	1.932	71.653	169.145F	2,333	13,908.05	15,216.57	0.727	0.732	0.994	0.764
3.81	51,679.71	142.6	170.786F	1.937	71.481	169.138F	2,334	13,910.19	15,223.29	0.727	0.732	0.994	0.764
3.82	51,823.02	142.6	170.781F	1.942	71.31	169.130F	2,334	13,912.32	15,230.00	0.727	0.732	0.994	0.764
3.83	51,966.36	142.6	170.777F	1.947	71.14	169.123F	2,335	13,914.46	15,236.71	0.727	0.732	0.994	0.764
3.84	52,109.72	142.6	170.772F	1.952	70.971	169.116F	2,336	13,916.59	15,243.43	0.728	0.732	0.994	0.764
3.85	52,253.10	142.7	170.768F	1.958	70.803	169.108F	2,337	13,918.72	15,250.14	0.728	0.732	0.994	0.764
3.86	52,396.50	142.7	170.763F	1.963	70.636	169.101F	2,338	13,920.86	15,256.85	0.728	0.732	0.994	0.764
3.87	52,539.92	142.7	170.758F	1.968	70.47	169.094F	2,339	13,922.99	15,263.56	0.728	0.732	0.994	0.765
3.88	52,683.37	142.7	170.754F	1.973	70.305	169.086F	2,340	13,925.12	15,270.27	0.728	0.732	0.994	0.765
3.89	52,826.84	142.8	170.749F	1.978	70.14	169.079F	2,340	13,927.26	15,276.99	0.728	0.732	0.994	0.765
3.9	52,970.33	142.8	170.745F	1.983	69.977	169.072F	2,341	13,929.39	15,283.70	0.728	0.732	0.994	0.765
3.91	53,113.84	142.8	170.740F	1.988	69.814	169.065F	2,342	13,931.53	15,290.41	0.728	0.733	0.994	0.765
3.92	53,257.37	142.8	170.736F	1.993	69.653	169.057F	2,343	13,933.66	15,297.12	0.728	0.733	0.994	0.765

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
3.93	53,400.93	142.8	170.731F	1.999	69.492	169.050F	2,344	13,935.79	15,303.84	0.728	0.733	0.994	0.765
3.94	53,544.50	142.9	170.727F	2.004	69.332	169.043F	2,345	13,937.93	15,310.55	0.729	0.733	0.994	0.765
3.95	53,688.10	142.9	170.722F	2.009	69.173	169.035F	2,346	13,940.06	15,317.26	0.729	0.733	0.994	0.766
3.96	53,831.73	142.9	170.717F	2.014	69.015	169.028F	2,346	13,942.19	15,323.98	0.729	0.733	0.994	0.766
3.97	53,975.37	142.9	170.713F	2.019	68.857	169.021F	2,347	13,944.27	15,330.65	0.729	0.733	0.994	0.766
3.98	54,119.03	142.9	170.708F	2.024	68.699	169.014F	2,348	13,946.30	15,337.30	0.729	0.733	0.994	0.766
3.99	54,262.72	143	170.704F	2.029	68.542	169.008F	2,349	13,948.33	15,343.94	0.729	0.733	0.994	0.766
4	54,406.43	143	170.699F	2.034	68.386	169.001F	2,350	13,950.36	15,350.59	0.729	0.733	0.994	0.766
4.01	54,550.15	143	170.695F	2.04	68.23	168.994F	2,351	13,952.38	15,357.23	0.729	0.733	0.994	0.766
4.02	54,693.90	143	170.690F	2.045	68.076	168.988F	2,351	13,954.41	15,363.88	0.729	0.733	0.994	0.766
4.03	54,837.67	143.1	170.686F	2.05	67.922	168.981F	2,352	13,956.44	15,370.52	0.729	0.734	0.994	0.766
4.04	54,981.46	143.1	170.681F	2.055	67.769	168.974F	2,353	13,958.47	15,377.17	0.729	0.734	0.994	0.767
4.05	55,125.27	143.1	170.677F	2.06	67.617	168.968F	2,354	13,960.49	15,383.81	0.73	0.734	0.994	0.767
4.06	55,269.11	143.1	170.672F	2.065	67.466	168.961F	2,355	13,962.52	15,390.46	0.73	0.734	0.994	0.767
4.07	55,412.96	143.1	170.668F	2.07	67.315	168.954F	2,356	13,964.55	15,397.10	0.73	0.734	0.994	0.767
4.08	55,556.83	143.2	170.663F	2.076	67.165	168.947F	2,357	13,966.57	15,403.75	0.73	0.734	0.994	0.767
4.09	55,700.73	143.2	170.659F	2.081	67.016	168.941F	2,357	13,968.58	15,410.38	0.73	0.734	0.994	0.767
4.1	55,844.64	143.2	170.654F	2.086	66.868	168.934F	2,358	13,970.59	15,417.02	0.73	0.734	0.994	0.767
4.11	55,988.58	143.2	170.650F	2.091	66.72	168.927F	2,359	13,972.59	15,423.66	0.73	0.734	0.994	0.767
4.12	56,132.54	143.2	170.645F	2.096	66.574	168.920F	2,360	13,974.59	15,430.29	0.73	0.734	0.994	0.767
4.13	56,276.51	143.3	170.641F	2.101	66.428	168.913F	2,361	13,976.58	15,436.92	0.73	0.734	0.994	0.768
4.14	56,420.51	143.3	170.637F	2.106	66.282	168.906F	2,361	13,978.57	15,443.55	0.73	0.734	0.994	0.768
4.15	56,564.53	143.3	170.632F	2.111	66.138	168.899F	2,362	13,980.57	15,450.18	0.73	0.735	0.994	0.768
4.16	56,708.57	143.3	170.628F	2.117	65.994	168.892F	2,363	13,982.55	15,456.81	0.731	0.735	0.995	0.768
4.17	56,852.63	143.3	170.623F	2.122	65.851	168.885F	2,364	13,984.53	15,463.43	0.731	0.735	0.995	0.768
4.18	56,996.71	143.4	170.619F	2.127	65.709	168.878F	2,365	13,986.52	15,470.06	0.731	0.735	0.995	0.768
4.19	57,140.81	143.4	170.614F	2.132	65.567	168.871F	2,366	13,988.50	15,476.69	0.731	0.735	0.995	0.768
4.2	57,284.93	143.4	170.610F	2.137	65.427	168.864F	2,366	13,990.48	15,483.32	0.731	0.735	0.995	0.768
4.21	57,429.07	143.4	170.606F	2.142	65.287	168.857F	2,367	13,992.47	15,489.94	0.731	0.735	0.995	0.768
4.22	57,573.23	143.4	170.601F	2.147	65.147	168.850F	2,368	13,994.45	15,496.57	0.731	0.735	0.995	0.769
4.23	57,717.41	143.5	170.597F	2.153	65.009	168.843F	2,369	13,996.43	15,503.20	0.731	0.735	0.995	0.769
4.24	57,861.62	143.5	170.592F	2.158	64.871	168.836F	2,370	13,998.41	15,509.83	0.731	0.735	0.995	0.769
4.25	58,005.84	143.5	170.588F	2.163	64.733	168.829F	2,370	14,000.38	15,516.45	0.731	0.735	0.995	0.769
4.26	58,150.08	143.5	170.583F	2.168	64.597	168.821F	2,371	14,002.35	15,523.08	0.731	0.735	0.995	0.769
4.27	58,294.35	143.5	170.579F	2.173	64.461	168.814F	2,372	14,004.32	15,529.70	0.732	0.735	0.995	0.769
4.28	58,438.63	143.6	170.575F	2.178	64.326	168.807F	2,373	14,006.29	15,536.32	0.732	0.736	0.995	0.769
4.29	58,582.94	143.6	170.570F	2.183	64.191	168.800F	2,374	14,008.26	15,542.95	0.732	0.736	0.995	0.769
4.3	58,727.26	143.6	170.566F	2.188	64.057	168.793F	2,375	14,010.23	15,549.57	0.732	0.736	0.995	0.769
4.31	58,871.61	143.6	170.562F	2.194	63.924	168.786F	2,375	14,012.20	15,556.19	0.732	0.736	0.995	0.769
4.32	59,015.97	143.6	170.557F	2.199	63.792	168.779F	2,376	14,014.17	15,562.82	0.732	0.736	0.995	0.77
4.33	59,160.36	143.7	170.553F	2.204	63.66	168.771F	2,377	14,016.14	15,569.44	0.732	0.736	0.995	0.77
4.34	59,304.76	143.7	170.548F	2.209	63.528	168.764F	2,378	14,018.06	15,576.03	0.732	0.736	0.995	0.77
4.35	59,449.19	143.7	170.544F	2.214	63.397	168.758F	2,378	14,019.88	15,582.54	0.732	0.736	0.995	0.77
4.36	59,593.63	143.7	170.540F	2.219	63.266	168.752F	2,379	14,021.70	15,589.06	0.732	0.736	0.995	0.77
4.37	59,738.10	143.7	170.535F	2.224	63.135	168.745F	2,380	14,023.52	15,595.58	0.732	0.736	0.995	0.77
4.38	59,882.58	143.8	170.531F	2.23	63.006	168.739F	2,381	14,025.34	15,602.09	0.733	0.736	0.995	0.77
4.39	60,027.08	143.8	170.527F	2.235	62.877	168.733F	2,382	14,027.16	15,608.61	0.733	0.736	0.995	0.77
4.4	60,171.60	143.8	170.522F	2.24	62.748	168.726F	2,382	14,028.98	15,615.13	0.733	0.737	0.995	0.77
4.41	60,316.13	143.8	170.518F	2.245	62.62	168.720F	2,383	14,030.80	15,621.64	0.733	0.737	0.995	0.771
4.42	60,460.69	143.8	170.514F	2.25	62.493	168.713F	2,384	14,032.61	15,628.16	0.733	0.737	0.995	0.771
4.43	60,605.27	143.9	170.509F	2.255	62.367	168.707F	2,385	14,034.43	15,634.67	0.733	0.737	0.995	0.771
4.44	60,749.86	143.9	170.505F	2.26	62.241	168.701F	2,385	14,036.25	15,641.19	0.733	0.737	0.995	0.771
4.45	60,894.47	143.9	170.501F	2.265	62.115	168.694F	2,386	14,038.06	15,647.71	0.733	0.737	0.995	0.771
4.46	61,039.11	143.9	170.496F	2.271	61.991	168.688F	2,387	14,039.88	15,654.22	0.733	0.737	0.995	0.771
4.47	61,183.76	143.9	170.492F	2.276	61.867	168.682F	2,388	14,041.70	15,660.74	0.733	0.737	0.995	0.771
4.48	61,328.42	143.9	170.488F	2.281	61.743	168.676F	2,388	14,043.51	15,667.26	0.733	0.737	0.995	0.771
4.49	61,473.11	144	170.483F	2.286	61.62	168.669F	2,389	14,045.33	15,673.77	0.733	0.737	0.995	0.771
4.5	61,617.82	144	170.479F	2.291	61.498	168.663F	2,390	14,047.15	15,680.29	0.734	0.737	0.995	0.771
4.51	61,762.54	144	170.475F	2.296	61.376	168.657F	2,391	14,048.96	15,686.81	0.734	0.737	0.995	0.771
4.52	61,907.29	144	170.470F	2.301	61.255	168.650F	2,391	14,050.76	15,693.31	0.734	0.737	0.995	0.772
4.53	62,052.05	144	170.466F	2.307	61.134	168.644F	2,392	14,052.56	15,699.82	0.734	0.738	0.995	0.772
4.54	62,196.83	144.1	170.462F	2.312	61.014	168.638F	2,393	14,054.35	15,706.32	0.734	0.738	0.995	0.772
4.55	62,341.63	144.1	170.458F	2.317	60.894	168.632F	2,394	14,056.14	15,712.83	0.734	0.738	0.995	0.772
4.56	62,486.45	144.1	170.453F	2.322	60.775	168.625F	2,394	14,057.94	15,719.33	0.734	0.738	0.995	0.772

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
4.57	62,631.29	144.1	170.449F	2.327	60.656	168.619F	2,395	14,059.73	15,725.84	0.734	0.738	0.995	0.772
4.58	62,776.14	144.1	170.445F	2.332	60.538	168.613F	2,396	14,061.53	15,732.35	0.734	0.738	0.995	0.772
4.59	62,921.02	144.1	170.440F	2.337	60.421	168.607F	2,397	14,063.32	15,738.85	0.734	0.738	0.995	0.772
4.6	63,065.91	144.2	170.436F	2.342	60.304	168.601F	2,397	14,065.12	15,745.36	0.734	0.738	0.995	0.772
4.61	63,210.82	144.2	170.432F	2.348	60.189	168.594F	2,398	14,067.05	15,751.88	0.734	0.738	0.995	0.772
4.62	63,355.75	144.2	170.428F	2.353	60.076	168.587F	2,399	14,069.03	15,758.42	0.735	0.738	0.995	0.773
4.63	63,500.70	144.2	170.423F	2.358	59.964	168.580F	2,400	14,071.00	15,764.95	0.735	0.738	0.995	0.773
4.64	63,645.68	144.2	170.419F	2.363	59.851	168.573F	2,400	14,072.98	15,771.48	0.735	0.738	0.995	0.773
4.65	63,790.67	144.3	170.415F	2.368	59.74	168.566F	2,401	14,074.95	15,778.01	0.735	0.738	0.995	0.773
4.66	63,935.68	144.3	170.411F	2.373	59.629	168.560F	2,402	14,076.93	15,784.55	0.735	0.738	0.995	0.773
4.67	64,080.72	144.3	170.407F	2.378	59.518	168.553F	2,403	14,078.90	15,791.08	0.735	0.739	0.995	0.773
4.68	64,225.77	144.3	170.402F	2.384	59.408	168.546F	2,403	14,080.87	15,797.61	0.735	0.739	0.995	0.773
4.69	64,370.84	144.3	170.398F	2.389	59.299	168.539F	2,404	14,082.85	15,804.14	0.735	0.739	0.995	0.773
4.7	64,515.94	144.4	170.394F	2.394	59.19	168.532F	2,405	14,084.82	15,810.67	0.735	0.739	0.995	0.773
4.71	64,661.05	144.4	170.390F	2.399	59.081	168.525F	2,406	14,086.78	15,817.20	0.735	0.739	0.995	0.774
4.72	64,806.19	144.4	170.385F	2.404	58.973	168.519F	2,406	14,088.75	15,823.73	0.735	0.739	0.995	0.774
4.73	64,951.35	144.4	170.381F	2.409	58.866	168.512F	2,407	14,090.72	15,830.26	0.735	0.739	0.995	0.774
4.74	65,096.52	144.5	170.377F	2.414	58.759	168.505F	2,408	14,092.69	15,836.79	0.736	0.739	0.995	0.774
4.75	65,241.72	144.5	170.373F	2.419	58.652	168.498F	2,409	14,094.65	15,843.32	0.736	0.739	0.995	0.774
4.76	65,386.93	144.5	170.369F	2.425	58.546	168.492F	2,409	14,096.62	15,849.85	0.736	0.739	0.995	0.774
4.77	65,532.17	144.5	170.364F	2.43	58.44	168.485F	2,410	14,098.59	15,856.39	0.736	0.739	0.995	0.774
4.78	65,677.43	144.5	170.360F	2.435	58.335	168.478F	2,411	14,100.52	15,862.91	0.736	0.739	0.995	0.774
4.79	65,822.70	144.5	170.356F	2.44	58.23	168.471F	2,412	14,102.44	15,869.43	0.736	0.739	0.995	0.774
4.8	65,968.00	144.6	170.352F	2.445	58.125	168.464F	2,412	14,104.36	15,875.95	0.736	0.74	0.995	0.775
4.81	66,113.32	144.6	170.348F	2.45	58.021	168.457F	2,413	14,106.28	15,882.48	0.736	0.74	0.995	0.775
4.82	66,258.65	144.6	170.343F	2.455	57.917	168.450F	2,414	14,108.20	15,889.00	0.736	0.74	0.995	0.775
4.83	66,404.01	144.6	170.339F	2.461	57.813	168.443F	2,415	14,110.12	15,895.52	0.736	0.74	0.995	0.775
4.84	66,549.39	144.6	170.335F	2.466	57.71	168.436F	2,415	14,112.02	15,902.03	0.736	0.74	0.995	0.775
4.85	66,694.78	144.7	170.331F	2.471	57.607	168.429F	2,416	14,113.86	15,908.50	0.736	0.74	0.995	0.775
4.86	66,840.20	144.7	170.327F	2.476	57.505	168.423F	2,417	14,115.70	15,914.97	0.737	0.74	0.995	0.775
4.87	66,985.63	144.7	170.323F	2.481	57.402	168.416F	2,418	14,117.54	15,921.43	0.737	0.74	0.995	0.775
4.88	67,131.08	144.7	170.318F	2.486	57.3	168.410F	2,418	14,119.38	15,927.90	0.737	0.74	0.995	0.775
4.89	67,276.55	144.7	170.314F	2.491	57.199	168.403F	2,419	14,121.22	15,934.37	0.737	0.74	0.995	0.775
4.9	67,422.04	144.8	170.310F	2.497	57.098	168.396F	2,420	14,123.06	15,940.84	0.737	0.74	0.995	0.776
4.91	67,567.55	144.8	170.306F	2.502	56.998	168.390F	2,421	14,124.90	15,947.31	0.737	0.74	0.995	0.776
4.92	67,713.08	144.8	170.302F	2.507	56.898	168.383F	2,421	14,126.74	15,953.78	0.737	0.74	0.995	0.776
4.93	67,858.63	144.8	170.298F	2.512	56.798	168.377F	2,422	14,128.58	15,960.25	0.737	0.74	0.995	0.776
4.94	68,004.19	144.8	170.293F	2.517	56.699	168.370F	2,423	14,130.40	15,966.72	0.737	0.741	0.995	0.776
4.95	68,149.78	144.9	170.289F	2.522	56.6	168.364F	2,423	14,132.20	15,973.18	0.737	0.741	0.995	0.776
4.96	68,295.38	144.9	170.285F	2.527	56.501	168.357F	2,424	14,134.01	15,979.64	0.737	0.741	0.995	0.776
4.97	68,441.00	144.9	170.281F	2.532	56.403	168.350F	2,425	14,135.82	15,986.11	0.737	0.741	0.995	0.776
4.98	68,586.64	144.9	170.277F	2.538	56.305	168.344F	2,426	14,137.63	15,992.57	0.737	0.741	0.995	0.776
4.99	68,732.30	144.9	170.273F	2.543	56.208	168.337F	2,426	14,139.42	15,999.03	0.738	0.741	0.995	0.776
5	68,877.98	144.9	170.269F	2.548	56.111	168.330F	2,427	14,141.21	16,005.48	0.738	0.741	0.995	0.777
5.01	69,023.68	145	170.264F	2.553	56.014	168.324F	2,428	14,142.99	16,011.93	0.738	0.741	0.995	0.777
5.02	69,169.39	145	170.260F	2.558	55.918	168.317F	2,428	14,144.75	16,018.38	0.738	0.741	0.995	0.777
5.03	69,315.12	145	170.256F	2.563	55.822	168.310F	2,429	14,146.49	16,024.82	0.738	0.741	0.995	0.777
5.04	69,460.87	145	170.252F	2.568	55.726	168.303F	2,430	14,148.23	16,031.26	0.738	0.741	0.995	0.777
5.05	69,606.64	145	170.248F	2.574	55.631	168.296F	2,431	14,149.98	16,037.70	0.738	0.741	0.995	0.777
5.06	69,752.43	145.1	170.244F	2.579	55.536	168.289F	2,431	14,151.72	16,044.14	0.738	0.741	0.995	0.777
5.07	69,898.23	145.1	170.240F	2.584	55.441	168.282F	2,432	14,153.47	16,050.58	0.738	0.741	0.995	0.777
5.08	70,044.06	145.1	170.236F	2.589	55.347	168.275F	2,433	14,155.21	16,057.02	0.738	0.742	0.996	0.777
5.09	70,189.90	145.1	170.231F	2.594	55.253	168.267F	2,433	14,156.96	16,063.46	0.738	0.742	0.996	0.777
5.1	70,335.76	145.1	170.227F	2.599	55.16	168.260F	2,434	14,158.70	16,069.90	0.738	0.742	0.996	0.778
5.11	70,481.63	145.1	170.223F	2.604	55.067	168.253F	2,435	14,160.45	16,076.34	0.738	0.742	0.996	0.778
5.12	70,627.53	145.2	170.219F	2.61	54.975	168.246F	2,435	14,162.19	16,082.78	0.739	0.742	0.996	0.778
5.13	70,773.44	145.2	170.215F	2.615	54.882	168.239F	2,436	14,163.94	16,089.22	0.739	0.742	0.996	0.778
5.14	70,919.37	145.2	170.211F	2.62	54.791	168.232F	2,437	14,165.68	16,095.67	0.739	0.742	0.996	0.778
5.15	71,065.32	145.2	170.207F	2.625	54.699	168.225F	2,437	14,167.43	16,102.11	0.739	0.742	0.996	0.778
5.16	71,211.29	145.2	170.203F	2.63	54.609	168.218F	2,438	14,169.17	16,108.55	0.739	0.742	0.996	0.778
5.17	71,357.27	145.3	170.199F	2.635	54.518	168.211F	2,439	14,170.92	16,114.99	0.739	0.742	0.996	0.778
5.18	71,503.27	145.3	170.194F	2.64	54.428	168.204F	2,440	14,172.66	16,121.43	0.739	0.742	0.996	0.778
5.19	71,649.29	145.3	170.190F	2.645	54.338	168.197F	2,440	14,174.41	16,127.87	0.739	0.742	0.996	0.778
5.2	71,795.33	145.3	170.186F	2.651	54.249	168.190F	2,441	14,176.15	16,134.31	0.739	0.742	0.996	0.778

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
5.21	71,941.39	145.3	170.182F	2.656	54.16	168.183F	2,442	14,177.90	16,140.76	0.739	0.742	0.996	0.779
5.22	72,087.47	145.3	170.178F	2.661	54.071	168.176F	2,442	14,179.64	16,147.20	0.739	0.743	0.996	0.779
5.23	72,233.56	145.4	170.174F	2.666	53.983	168.169F	2,443	14,181.39	16,153.64	0.739	0.743	0.996	0.779
5.24	72,379.67	145.4	170.170F	2.671	53.895	168.162F	2,444	14,183.13	16,160.08	0.739	0.743	0.996	0.779
5.25	72,525.80	145.4	170.166F	2.676	53.807	168.155F	2,444	14,184.88	16,166.52	0.74	0.743	0.996	0.779
5.26	72,671.94	145.4	170.162F	2.681	53.72	168.148F	2,445	14,186.62	16,172.97	0.74	0.743	0.996	0.779
5.27	72,818.11	145.4	170.158F	2.687	53.633	168.141F	2,446	14,188.37	16,179.41	0.74	0.743	0.996	0.779
5.28	72,964.29	145.4	170.154F	2.692	53.547	168.134F	2,446	14,190.11	16,185.85	0.74	0.743	0.996	0.779
5.29	73,110.49	145.5	170.149F	2.697	53.461	168.127F	2,447	14,191.86	16,192.29	0.74	0.743	0.996	0.779
5.3	73,256.71	145.5	170.145F	2.702	53.375	168.120F	2,448	14,193.60	16,198.73	0.74	0.743	0.996	0.779
5.31	73,402.95	145.5	170.141F	2.707	53.29	168.113F	2,449	14,195.35	16,205.18	0.74	0.743	0.996	0.78
5.32	73,549.20	145.5	170.137F	2.712	53.205	168.106F	2,449	14,197.09	16,211.62	0.74	0.743	0.996	0.78
5.33	73,695.48	145.5	170.133F	2.717	53.12	168.099F	2,450	14,198.84	16,218.06	0.74	0.743	0.996	0.78
5.34	73,841.77	145.6	170.129F	2.723	53.036	168.092F	2,451	14,200.58	16,224.50	0.74	0.743	0.996	0.78
5.35	73,988.08	145.6	170.125F	2.728	52.952	168.085F	2,451	14,202.33	16,230.95	0.74	0.743	0.996	0.78
5.36	74,134.41	145.6	170.121F	2.733	52.868	168.078F	2,452	14,204.06	16,237.39	0.74	0.744	0.996	0.78
5.37	74,280.75	145.6	170.117F	2.738	52.784	168.072F	2,453	14,205.77	16,243.82	0.74	0.744	0.996	0.78
5.38	74,427.11	145.6	170.113F	2.743	52.701	168.065F	2,453	14,207.48	16,250.26	0.741	0.744	0.996	0.78
5.39	74,573.49	145.6	170.109F	2.748	52.618	168.058F	2,454	14,209.18	16,256.70	0.741	0.744	0.996	0.78
5.4	74,719.89	145.7	170.105F	2.753	52.535	168.051F	2,455	14,210.88	16,263.13	0.741	0.744	0.996	0.78
5.41	74,866.31	145.7	170.101F	2.759	52.453	168.044F	2,455	14,212.59	16,269.57	0.741	0.744	0.996	0.78
5.42	75,012.74	145.7	170.097F	2.764	52.371	168.037F	2,456	14,214.29	16,276.00	0.741	0.744	0.996	0.781
5.43	75,159.19	145.7	170.093F	2.769	52.289	168.031F	2,457	14,216.00	16,282.44	0.741	0.744	0.996	0.781
5.44	75,305.66	145.7	170.089F	2.774	52.208	168.024F	2,457	14,217.70	16,288.88	0.741	0.744	0.996	0.781
5.45	75,452.12	145.7	170.084F	2.779	52.098	168.068F	2,456	14,212.86	16,301.87	0.741	0.744	0.996	0.78
5.46	75,598.55	145.7	170.081F	2.784	52.013	168.070F	2,456	14,213.36	16,309.54	0.741	0.744	0.996	0.781
5.47	75,744.99	145.7	170.077F	2.789	51.931	168.065F	2,456	14,214.75	16,316.41	0.741	0.744	0.996	0.781
5.48	75,891.45	145.7	170.073F	2.795	51.85	168.061F	2,457	14,216.12	16,323.27	0.741	0.744	0.996	0.781
5.49	76,037.91	145.7	170.069F	2.8	51.768	168.057F	2,457	14,217.44	16,330.10	0.741	0.744	0.996	0.781
5.5	76,184.39	145.7	170.065F	2.805	51.687	168.052F	2,458	14,218.83	16,336.90	0.741	0.744	0.996	0.781
5.51	76,330.89	145.8	170.061F	2.81	51.607	168.046F	2,459	14,220.36	16,343.61	0.741	0.745	0.996	0.781
5.52	76,477.40	145.8	170.057F	2.815	51.528	168.041F	2,459	14,221.90	16,350.33	0.742	0.745	0.996	0.781
5.53	76,623.93	145.8	170.053F	2.82	51.448	168.035F	2,460	14,223.44	16,357.04	0.742	0.745	0.996	0.781
5.54	76,770.48	145.8	170.049F	2.825	51.369	168.029F	2,460	14,224.97	16,363.76	0.742	0.745	0.996	0.781
5.55	76,917.04	145.8	170.045F	2.83	51.291	168.023F	2,461	14,226.54	16,370.47	0.742	0.745	0.996	0.781
5.56	77,063.61	145.8	170.042F	2.836	51.213	168.017F	2,462	14,228.16	16,377.17	0.742	0.745	0.996	0.781
5.57	77,210.21	145.9	170.038F	2.841	51.135	168.010F	2,462	14,229.78	16,383.88	0.742	0.745	0.996	0.781
5.58	77,356.82	145.9	170.034F	2.846	51.058	168.004F	2,463	14,231.40	16,390.58	0.742	0.745	0.996	0.782
5.59	77,503.44	145.9	170.030F	2.851	50.981	167.997F	2,464	14,233.02	16,397.28	0.742	0.745	0.996	0.782
5.6	77,650.09	145.9	170.026F	2.856	50.904	167.991F	2,464	14,234.64	16,403.99	0.742	0.745	0.996	0.782
5.61	77,796.75	145.9	170.022F	2.861	50.828	167.984F	2,465	14,236.26	16,410.69	0.742	0.745	0.996	0.782
5.62	77,943.42	145.9	170.018F	2.866	50.752	167.978F	2,466	14,237.88	16,417.40	0.742	0.745	0.996	0.782
5.63	78,090.12	146	170.014F	2.872	50.676	167.972F	2,466	14,239.50	16,424.10	0.742	0.745	0.996	0.782
5.64	78,236.83	146	170.010F	2.877	50.6	167.965F	2,467	14,241.12	16,430.81	0.742	0.745	0.996	0.782
5.65	78,383.56	146	170.007F	2.882	50.525	167.959F	2,468	14,242.74	16,437.51	0.742	0.745	0.996	0.782
5.66	78,530.30	146	170.003F	2.887	50.45	167.952F	2,468	14,244.36	16,444.22	0.743	0.746	0.996	0.782
5.67	78,677.06	146	169.999F	2.892	50.375	167.946F	2,469	14,245.98	16,450.92	0.743	0.746	0.996	0.782
5.68	78,823.84	146	169.995F	2.897	50.301	167.939F	2,470	14,247.59	16,457.62	0.743	0.746	0.996	0.782
5.69	78,970.63	146.1	169.991F	2.902	50.227	167.933F	2,470	14,249.20	16,464.32	0.743	0.746	0.996	0.782
5.7	79,117.44	146.1	169.987F	2.908	50.153	167.926F	2,471	14,250.80	16,471.03	0.743	0.746	0.996	0.783
5.71	79,264.27	146.1	169.983F	2.913	50.08	167.920F	2,472	14,252.41	16,477.73	0.743	0.746	0.996	0.783
5.72	79,411.10	146.1	169.980F	2.918	49.998	167.903F	2,472	14,252.65	16,485.90	0.743	0.746	0.996	0.783
5.73	79,557.94	146.1	169.976F	2.923	49.921	167.889F	2,472	14,253.30	16,493.79	0.743	0.746	0.996	0.783
5.74	79,704.80	146.1	169.972F	2.928	49.846	167.879F	2,472	14,254.48	16,501.26	0.743	0.746	0.996	0.783
5.75	79,851.41	145.3	169.968F	2.933	49.311	167.421F	2,440	14,175.84	16,588.22	0.743	0.746	0.996	0.778
5.76	79,997.46	145.3	169.963F	2.938	49.236	167.412F	2,440	14,176.71	16,594.72	0.743	0.746	0.996	0.779
5.77	80,143.52	145.3	169.958F	2.943	49.162	167.402F	2,440	14,177.60	16,601.24	0.743	0.746	0.996	0.779
5.78	80,289.59	145.3	169.954F	2.949	49.088	167.392F	2,441	14,178.48	16,607.77	0.743	0.746	0.996	0.779
5.79	80,435.67	145.3	169.949F	2.954	49.014	167.381F	2,441	14,179.36	16,614.28	0.743	0.746	0.996	0.779
5.8	80,581.76	145.3	169.944F	2.959	48.941	167.371F	2,442	14,180.29	16,620.76	0.743	0.746	0.996	0.779
5.81	80,727.86	145.4	169.939F	2.964	48.868	167.362F	2,442	14,181.26	16,627.19	0.744	0.746	0.996	0.779
5.82	80,873.97	145.4	169.935F	2.969	48.795	167.354F	2,442	14,182.09	16,633.78	0.744	0.747	0.996	0.779
5.83	81,020.08	145.4	169.930F	2.974	48.722	167.348F	2,443	14,182.77	16,640.56	0.744	0.747	0.996	0.779
5.84	81,166.20	145.4	169.925F	2.979	48.649	167.343F	2,443	14,183.35	16,647.44	0.744	0.747	0.996	0.779

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
5.85	81,312.33	145.4	169.921F	2.984	48.577	167.335F	2,443	14,184.17	16,654.03	0.744	0.747	0.996	0.779
5.86	81,458.47	145.4	169.916F	2.989	48.505	167.328F	2,443	14,185.00	16,660.60	0.744	0.747	0.996	0.779
5.87	81,604.60	145.4	169.911F	2.994	48.411	167.353F	2,442	14,181.48	16,671.50	0.744	0.747	0.996	0.779
5.88	81,750.71	145.4	169.907F	3	48.34	167.346F	2,442	14,182.32	16,677.92	0.744	0.747	0.996	0.779
5.89	81,896.75	145.3	169.902F	3.005	48.239	167.416F	2,439	14,173.82	16,693.57	0.744	0.747	0.996	0.778
5.9	82,042.78	145.3	169.898F	3.01	48.168	167.409F	2,439	14,174.70	16,699.82	0.744	0.747	0.996	0.778
5.91	82,188.82	145.3	169.893F	3.015	48.098	167.403F	2,439	14,175.54	16,706.10	0.744	0.747	0.996	0.778
5.92	82,334.87	145.3	169.889F	3.02	48.029	167.398F	2,440	14,176.36	16,712.40	0.744	0.747	0.996	0.778
5.93	82,480.92	145.3	169.884F	3.025	47.959	167.392F	2,440	14,177.21	16,718.69	0.744	0.747	0.996	0.779
5.94	82,626.99	145.3	169.880F	3.03	47.89	167.386F	2,440	14,178.12	16,724.94	0.744	0.747	0.996	0.779
5.95	82,773.07	145.3	169.876F	3.035	47.822	167.380F	2,441	14,179.06	16,731.19	0.744	0.747	0.996	0.779
5.96	82,919.15	145.3	169.871F	3.04	47.754	167.375F	2,441	14,180.04	16,737.43	0.744	0.747	0.996	0.779
5.97	83,065.25	145.4	169.867F	3.046	47.686	167.369F	2,441	14,181.05	16,743.65	0.744	0.747	0.996	0.779
5.98	83,211.35	145.4	169.862F	3.051	47.618	167.363F	2,442	14,182.09	16,749.88	0.745	0.747	0.996	0.779
5.99	83,357.47	145.4	169.858F	3.056	47.551	167.357F	2,442	14,183.15	16,756.10	0.745	0.747	0.996	0.779
6	83,503.60	145.4	169.853F	3.061	47.485	167.351F	2,443	14,184.21	16,762.33	0.745	0.747	0.996	0.779
6.01	83,649.74	145.4	169.849F	3.066	47.418	167.345F	2,443	14,185.29	16,768.54	0.745	0.748	0.996	0.779
6.02	83,795.89	145.4	169.845F	3.071	47.352	167.338F	2,443	14,186.38	16,774.76	0.745	0.748	0.996	0.779
6.03	83,942.05	145.4	169.840F	3.076	47.286	167.331F	2,444	14,187.56	16,781.01	0.745	0.748	0.996	0.779
6.04	84,088.23	145.4	169.836F	3.081	47.221	167.324F	2,444	14,188.77	16,787.28	0.745	0.748	0.996	0.779
6.05	84,234.42	145.4	169.831F	3.086	47.156	167.317F	2,445	14,189.99	16,793.55	0.745	0.748	0.996	0.779
6.06	84,380.62	145.5	169.827F	3.091	47.092	167.309F	2,445	14,191.29	16,799.89	0.745	0.748	0.996	0.779
6.07	84,526.83	145.5	169.823F	3.097	47.029	167.298F	2,446	14,192.91	16,806.52	0.745	0.748	0.996	0.779
6.08	84,673.08	145.5	169.818F	3.102	46.97	167.279F	2,447	14,195.65	16,814.35	0.745	0.748	0.996	0.78
6.09	84,819.34	145.5	169.814F	3.107	46.906	167.273F	2,447	14,196.73	16,820.56	0.745	0.748	0.996	0.78
6.1	84,965.60	145.5	169.809F	3.112	46.841	167.267F	2,448	14,197.82	16,826.76	0.745	0.748	0.996	0.78
6.11	85,111.89	145.5	169.805F	3.117	46.777	167.260F	2,448	14,198.90	16,832.96	0.745	0.748	0.996	0.78
6.12	85,258.18	145.5	169.800F	3.122	46.713	167.254F	2,449	14,199.98	16,839.17	0.745	0.748	0.996	0.78
6.13	85,404.48	145.6	169.796F	3.127	46.65	167.248F	2,449	14,201.07	16,845.37	0.745	0.748	0.996	0.78
6.14	85,550.79	145.6	169.792F	3.132	46.586	167.241F	2,450	14,202.16	16,851.58	0.745	0.748	0.996	0.78
6.15	85,697.12	145.6	169.787F	3.137	46.523	167.235F	2,450	14,203.25	16,857.79	0.746	0.748	0.996	0.78
6.16	85,843.46	145.6	169.783F	3.142	46.46	167.229F	2,450	14,204.34	16,863.99	0.746	0.748	0.996	0.78
6.17	85,989.80	145.6	169.779F	3.148	46.397	167.222F	2,451	14,205.42	16,870.20	0.746	0.748	0.996	0.78
6.18	86,136.16	145.6	169.774F	3.153	46.335	167.216F	2,451	14,206.51	16,876.40	0.746	0.748	0.996	0.78
6.19	86,282.53	145.6	169.770F	3.158	46.273	167.210F	2,452	14,207.60	16,882.61	0.746	0.748	0.996	0.78
6.2	86,428.91	145.6	169.765F	3.163	46.211	167.203F	2,452	14,208.68	16,888.82	0.746	0.749	0.996	0.78
6.21	86,575.31	145.7	169.761F	3.168	46.149	167.197F	2,453	14,209.77	16,895.02	0.746	0.749	0.996	0.78
6.22	86,721.71	145.7	169.757F	3.173	46.087	167.191F	2,453	14,210.86	16,901.23	0.746	0.749	0.996	0.78
6.23	86,868.13	145.7	169.752F	3.178	46.026	167.184F	2,453	14,211.95	16,907.44	0.746	0.749	0.996	0.78
6.24	87,014.55	145.7	169.748F	3.183	45.965	167.178F	2,454	14,213.03	16,913.64	0.746	0.749	0.996	0.781
6.25	87,160.99	145.7	169.744F	3.188	45.904	167.172F	2,454	14,214.12	16,919.85	0.746	0.749	0.996	0.781
6.26	87,307.44	145.7	169.739F	3.193	45.843	167.165F	2,455	14,215.21	16,926.05	0.746	0.749	0.996	0.781
6.27	87,453.90	145.7	169.735F	3.199	45.783	167.159F	2,455	14,216.29	16,932.26	0.746	0.749	0.996	0.781
6.28	87,600.37	145.7	169.730F	3.204	45.723	167.153F	2,456	14,217.38	16,938.47	0.746	0.749	0.996	0.781
6.29	87,746.85	145.7	169.726F	3.209	45.662	167.146F	2,456	14,218.47	16,944.67	0.746	0.749	0.996	0.781
6.3	87,893.35	145.8	169.722F	3.214	45.603	167.140F	2,456	14,219.56	16,950.88	0.746	0.749	0.996	0.781
6.31	88,039.85	145.8	169.717F	3.219	45.543	167.134F	2,457	14,220.64	16,957.09	0.746	0.749	0.996	0.781
6.32	88,186.37	145.8	169.713F	3.224	45.484	167.127F	2,457	14,221.73	16,963.29	0.746	0.749	0.996	0.781
6.33	88,332.90	145.8	169.709F	3.229	45.424	167.121F	2,458	14,222.82	16,969.50	0.747	0.749	0.996	0.781
6.34	88,479.44	145.8	169.704F	3.234	45.365	167.115F	2,458	14,223.90	16,975.71	0.747	0.749	0.996	0.781
6.35	88,625.99	145.8	169.700F	3.239	45.307	167.108F	2,459	14,224.99	16,981.92	0.747	0.749	0.996	0.781
6.36	88,772.55	145.8	169.696F	3.245	45.248	167.102F	2,459	14,226.08	16,988.12	0.747	0.749	0.996	0.781
6.37	88,919.12	145.8	169.691F	3.25	45.19	167.096F	2,459	14,227.16	16,994.33	0.747	0.749	0.996	0.781
6.38	89,065.71	145.8	169.687F	3.255	45.132	167.089F	2,460	14,228.25	17,000.54	0.747	0.749	0.996	0.781
6.39	89,212.30	145.9	169.683F	3.26	45.074	167.083F	2,460	14,229.34	17,006.74	0.747	0.75	0.996	0.781
6.4	89,358.91	145.9	169.679F	3.265	45.016	167.077F	2,461	14,230.43	17,012.95	0.747	0.75	0.996	0.781
6.41	89,505.53	145.9	169.674F	3.27	44.958	167.070F	2,461	14,231.51	17,019.16	0.747	0.75	0.996	0.782
6.42	89,652.15	145.9	169.670F	3.275	44.901	167.064F	2,462	14,232.60	17,025.37	0.747	0.75	0.996	0.782
6.43	89,798.79	145.9	169.666F	3.28	44.844	167.058F	2,462	14,233.69	17,031.57	0.747	0.75	0.996	0.782
6.44	89,945.45	145.9	169.661F	3.285	44.787	167.051F	2,462	14,234.77	17,037.78	0.747	0.75	0.996	0.782
6.45	90,092.11	145.9	169.657F	3.29	44.73	167.045F	2,463	14,235.86	17,043.99	0.747	0.75	0.996	0.782
6.46	90,238.78	145.9	169.653F	3.296	44.674	167.039F	2,463	14,236.95	17,050.20	0.747	0.75	0.996	0.782
6.47	90,385.47	145.9	169.649F	3.301	44.617	167.033F	2,464	14,238.04	17,056.41	0.747	0.75	0.996	0.782
6.48	90,532.16	146	169.644F	3.306	44.561	167.026F	2,464	14,239.12	17,062.61	0.747	0.75	0.996	0.782

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
6.49	90,678.87	146	169.640F	3.311	44.505	167.020F	2,465	14,240.21	17,068.82	0.747	0.75	0.996	0.782
6.5	90,825.59	146	169.636F	3.316	44.45	167.014F	2,465	14,241.30	17,075.03	0.747	0.75	0.996	0.782
6.51	90,972.32	146	169.631F	3.321	44.394	167.007F	2,465	14,242.39	17,081.24	0.747	0.75	0.996	0.782
6.52	91,119.06	146	169.627F	3.326	44.339	167.001F	2,466	14,243.47	17,087.45	0.748	0.75	0.997	0.782
6.53	91,265.81	146	169.623F	3.331	44.284	166.995F	2,466	14,244.56	17,093.65	0.748	0.75	0.997	0.782
6.54	91,412.58	146	169.619F	3.336	44.229	166.988F	2,467	14,245.65	17,099.86	0.748	0.75	0.997	0.782
6.55	91,559.35	146	169.614F	3.342	44.174	166.982F	2,467	14,246.73	17,106.07	0.748	0.75	0.997	0.782
6.56	91,706.14	146	169.610F	3.347	44.119	166.976F	2,468	14,247.82	17,112.28	0.748	0.75	0.997	0.782
6.57	91,852.94	146.1	169.606F	3.352	44.065	166.969F	2,468	14,248.91	17,118.49	0.748	0.75	0.997	0.782
6.58	91,999.75	146.1	169.602F	3.357	44.011	166.963F	2,468	14,250.00	17,124.70	0.748	0.75	0.997	0.783
6.59	92,146.57	146.1	169.597F	3.362	43.957	166.957F	2,469	14,251.08	17,130.91	0.748	0.751	0.997	0.783
6.6	92,293.40	146.1	169.593F	3.367	43.903	166.951F	2,469	14,252.16	17,137.11	0.748	0.751	0.997	0.783
6.61	92,440.24	146.1	169.589F	3.372	43.849	166.944F	2,470	14,253.25	17,143.32	0.748	0.751	0.997	0.783
6.62	92,587.09	146.1	169.585F	3.377	43.796	166.938F	2,470	14,254.33	17,149.53	0.748	0.751	0.997	0.783
6.63	92,733.96	146.1	169.580F	3.382	43.742	166.931F	2,471	14,255.41	17,155.74	0.748	0.751	0.997	0.783
6.64	92,880.84	146.1	169.576F	3.387	43.689	166.925F	2,471	14,256.49	17,161.95	0.748	0.751	0.997	0.783
6.65	93,027.72	146.1	169.572F	3.393	43.636	166.919F	2,471	14,257.57	17,168.16	0.748	0.751	0.997	0.783
6.66	93,174.62	146.2	169.568F	3.398	43.583	166.912F	2,472	14,258.65	17,174.37	0.748	0.751	0.997	0.783
6.67	93,321.53	146.2	169.563F	3.403	43.531	166.906F	2,472	14,259.73	17,180.57	0.748	0.751	0.997	0.783
6.68	93,468.45	146.2	169.559F	3.408	43.478	166.900F	2,473	14,260.81	17,186.78	0.748	0.751	0.997	0.783
6.69	93,615.38	146.2	169.555F	3.413	43.426	166.893F	2,473	14,261.89	17,192.99	0.748	0.751	0.997	0.783
6.7	93,762.33	146.2	169.551F	3.418	43.374	166.887F	2,474	14,262.97	17,199.20	0.748	0.751	0.997	0.783
6.71	93,909.28	146.2	169.547F	3.423	43.322	166.881F	2,474	14,264.06	17,205.41	0.749	0.751	0.997	0.783
6.72	94,056.25	146.2	169.542F	3.428	43.27	166.874F	2,474	14,265.15	17,211.62	0.749	0.751	0.997	0.783
6.73	94,203.03	146	169.538F	3.433	43.129	166.703F	2,466	14,245.19	17,238.75	0.749	0.751	0.997	0.782
6.74	94,349.79	146	169.534F	3.438	43.077	166.693F	2,466	14,245.86	17,245.26	0.749	0.751	0.997	0.782
6.75	94,496.57	146	169.529F	3.444	43.024	166.684F	2,466	14,246.64	17,251.67	0.749	0.751	0.997	0.782
6.76	94,643.36	146	169.525F	3.449	42.973	166.676F	2,467	14,247.50	17,258.02	0.749	0.751	0.997	0.782
6.77	94,790.15	146	169.520F	3.454	42.921	166.667F	2,467	14,248.39	17,264.35	0.749	0.751	0.997	0.782
6.78	94,936.95	146.1	169.516F	3.459	42.87	166.659F	2,468	14,249.32	17,270.65	0.749	0.751	0.997	0.783
6.79	95,083.77	146.1	169.511F	3.464	42.819	166.651F	2,468	14,250.27	17,276.94	0.749	0.751	0.997	0.783
6.8	95,230.59	146.1	169.507F	3.469	42.768	166.644F	2,468	14,251.24	17,283.22	0.749	0.752	0.997	0.783
6.81	95,377.42	146.1	169.502F	3.474	42.718	166.636F	2,469	14,252.22	17,289.48	0.749	0.752	0.997	0.783
6.82	95,524.21	146	169.498F	3.479	42.647	166.683F	2,466	14,246.04	17,302.94	0.749	0.752	0.997	0.782
6.83	95,670.99	146	169.494F	3.484	42.596	166.681F	2,466	14,246.41	17,309.97	0.749	0.752	0.997	0.782
6.84	95,817.77	146	169.489F	3.489	42.546	166.675F	2,467	14,247.27	17,316.59	0.749	0.752	0.997	0.782
6.85	95,964.56	146	169.485F	3.495	42.496	166.669F	2,467	14,248.15	17,323.20	0.749	0.752	0.997	0.782
6.86	96,111.36	146.1	169.481F	3.5	42.446	166.663F	2,467	14,249.03	17,329.81	0.749	0.752	0.997	0.782
6.87	96,258.17	146.1	169.476F	3.505	42.396	166.657F	2,468	14,249.89	17,336.42	0.749	0.752	0.997	0.783
6.88	96,404.99	146.1	169.472F	3.51	42.347	166.652F	2,468	14,250.75	17,343.02	0.749	0.752	0.997	0.783
6.89	96,551.82	146.1	169.468F	3.515	42.298	166.646F	2,468	14,251.61	17,349.63	0.749	0.752	0.997	0.783
6.9	96,698.66	146.1	169.463F	3.52	42.249	166.641F	2,469	14,252.49	17,356.23	0.749	0.752	0.997	0.783
6.91	96,845.50	146.1	169.459F	3.525	42.2	166.635F	2,469	14,253.37	17,362.84	0.75	0.752	0.997	0.783
6.92	96,992.36	146.1	169.455F	3.53	42.151	166.629F	2,470	14,254.41	17,369.38	0.75	0.752	0.997	0.783
6.93	97,139.23	146.1	169.450F	3.535	42.104	166.622F	2,470	14,255.50	17,375.91	0.75	0.752	0.997	0.783
6.94	97,286.11	146.1	169.446F	3.54	42.056	166.615F	2,470	14,256.60	17,382.44	0.75	0.752	0.997	0.783
6.95	97,433.00	146.1	169.442F	3.546	42.008	166.609F	2,471	14,257.70	17,388.97	0.75	0.752	0.997	0.783
6.96	97,579.90	146.2	169.437F	3.551	41.961	166.602F	2,471	14,258.80	17,395.50	0.75	0.752	0.997	0.783
6.97	97,726.81	146.2	169.433F	3.556	41.914	166.595F	2,472	14,259.91	17,402.03	0.75	0.752	0.997	0.783
6.98	97,873.73	146.2	169.429F	3.561	41.867	166.589F	2,472	14,261.03	17,408.57	0.75	0.752	0.997	0.783
6.99	98,020.67	146.2	169.424F	3.566	41.82	166.582F	2,473	14,262.15	17,415.10	0.75	0.752	0.997	0.783
7	98,167.62	146.2	169.420F	3.571	41.773	166.576F	2,473	14,263.28	17,421.63	0.75	0.752	0.997	0.783
7.01	98,314.58	146.2	169.416F	3.576	41.727	166.570F	2,473	14,264.42	17,428.17	0.75	0.752	0.997	0.783
7.02	98,461.55	146.2	169.412F	3.581	41.68	166.563F	2,474	14,265.56	17,434.71	0.75	0.753	0.997	0.783
7.03	98,608.53	146.2	169.407F	3.586	41.634	166.557F	2,474	14,266.72	17,441.25	0.75	0.753	0.997	0.783
7.04	98,755.53	146.2	169.403F	3.591	41.588	166.551F	2,475	14,267.88	17,447.79	0.75	0.753	0.997	0.784
7.05	98,902.53	146.3	169.399F	3.596	41.542	166.545F	2,475	14,269.05	17,454.34	0.75	0.753	0.997	0.784
7.06	99,049.55	146.3	169.394F	3.602	41.495	166.543F	2,476	14,269.68	17,461.37	0.75	0.753	0.997	0.784
7.07	99,196.56	146.3	169.390F	3.607	41.443	166.539F	2,475	14,268.86	17,469.83	0.75	0.753	0.997	0.784
7.08	99,343.58	146.3	169.386F	3.612	41.395	166.534F	2,475	14,269.04	17,477.47	0.75	0.753	0.997	0.784
7.09	99,490.59	146.3	169.382F	3.617	41.348	166.529F	2,475	14,269.64	17,484.76	0.75	0.753	0.997	0.784
7.1	99,637.61	146.3	169.377F	3.622	41.301	166.524F	2,476	14,270.37	17,491.94	0.75	0.753	0.997	0.784
7.11	99,784.50	145.8	169.373F	3.627	41.099	166.577F	2,457	14,224.40	17,545.71	0.75	0.753	0.997	0.781
7.12	99,931.06	145.8	169.369F	3.632	41.054	166.572F	2,457	14,225.52	17,551.96	0.751	0.753	0.997	0.781

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
7.13	100,077.63	145.8	169.365F	3.637	41.009	166.568F	2,458	14,226.59	17,558.18	0.751	0.753	0.997	0.781
7.14	100,224.21	145.8	169.361F	3.642	40.962	166.563F	2,458	14,227.24	17,564.56	0.751	0.753	0.997	0.781
7.15	100,370.79	145.8	169.357F	3.647	40.914	166.556F	2,458	14,227.50	17,570.98	0.751	0.753	0.997	0.781
7.16	100,517.38	145.8	169.353F	3.652	40.866	166.549F	2,458	14,227.85	17,577.35	0.751	0.753	0.997	0.781
7.17	100,663.97	145.8	169.348F	3.658	40.819	166.542F	2,459	14,228.28	17,583.64	0.751	0.753	0.997	0.781
7.18	100,810.57	145.8	169.344F	3.663	40.772	166.535F	2,459	14,228.75	17,589.91	0.751	0.753	0.997	0.781
7.19	100,957.17	145.8	169.340F	3.668	40.726	166.529F	2,459	14,229.25	17,596.15	0.751	0.753	0.997	0.781
7.2	101,103.78	145.9	169.336F	3.673	40.679	166.522F	2,459	14,229.81	17,602.36	0.751	0.753	0.997	0.781
7.21	101,250.39	145.9	169.332F	3.678	40.633	166.516F	2,460	14,230.40	17,608.55	0.751	0.753	0.997	0.781
7.22	101,397.01	145.9	169.328F	3.683	40.588	166.510F	2,460	14,231.02	17,614.73	0.751	0.753	0.997	0.781
7.23	101,543.63	145.9	169.324F	3.688	40.542	166.504F	2,460	14,231.68	17,620.89	0.751	0.753	0.997	0.782
7.24	101,690.27	145.9	169.320F	3.693	40.497	166.498F	2,460	14,232.36	17,627.04	0.751	0.753	0.997	0.782
7.25	101,836.90	145.9	169.315F	3.698	40.452	166.492F	2,461	14,233.06	17,633.19	0.751	0.753	0.997	0.782
7.26	101,983.55	145.9	169.311F	3.703	40.407	166.486F	2,461	14,233.79	17,639.33	0.751	0.753	0.997	0.782
7.27	102,130.21	145.9	169.307F	3.708	40.362	166.480F	2,461	14,234.55	17,645.46	0.751	0.754	0.997	0.782
7.28	102,276.87	145.9	169.303F	3.713	40.318	166.474F	2,462	14,235.33	17,651.59	0.751	0.754	0.997	0.782
7.29	102,423.54	145.9	169.299F	3.718	40.273	166.469F	2,462	14,236.13	17,657.72	0.751	0.754	0.997	0.782
7.3	102,570.22	145.9	169.295F	3.724	40.229	166.463F	2,463	14,236.95	17,663.84	0.751	0.754	0.997	0.782
7.31	102,716.91	145.9	169.291F	3.729	40.186	166.458F	2,463	14,237.79	17,669.97	0.751	0.754	0.997	0.782
7.32	102,863.60	145.9	169.287F	3.734	40.142	166.452F	2,463	14,238.65	17,676.09	0.751	0.754	0.997	0.782
7.33	103,010.31	146	169.283F	3.739	40.098	166.447F	2,464	14,239.50	17,682.21	0.751	0.754	0.997	0.782
7.34	103,157.02	146	169.279F	3.744	40.055	166.441F	2,464	14,240.36	17,688.34	0.751	0.754	0.997	0.782
7.35	103,303.75	146	169.275F	3.749	40.012	166.435F	2,464	14,241.26	17,694.47	0.752	0.754	0.997	0.782
7.36	103,450.48	146	169.271F	3.754	39.969	166.430F	2,465	14,242.15	17,700.60	0.752	0.754	0.997	0.782
7.37	103,597.22	146	169.266F	3.759	39.926	166.424F	2,465	14,243.04	17,706.73	0.752	0.754	0.997	0.782
7.38	103,743.97	146	169.262F	3.764	39.883	166.418F	2,466	14,243.93	17,712.86	0.752	0.754	0.997	0.782
7.39	103,890.73	146	169.258F	3.769	39.841	166.412F	2,466	14,244.86	17,719.01	0.752	0.754	0.997	0.782
7.4	104,037.50	146	169.254F	3.774	39.799	166.405F	2,467	14,245.87	17,725.19	0.752	0.754	0.997	0.782
7.41	104,184.28	146	169.250F	3.779	39.757	166.398F	2,467	14,246.88	17,731.38	0.752	0.754	0.997	0.782
7.42	104,331.07	146	169.246F	3.785	39.715	166.392F	2,467	14,247.88	17,737.57	0.752	0.754	0.997	0.782
7.43	104,477.88	146.1	169.242F	3.79	39.673	166.383F	2,468	14,249.16	17,744.00	0.752	0.754	0.997	0.782
7.44	104,624.70	146.1	169.238F	3.795	39.636	166.363F	2,469	14,251.97	17,751.99	0.752	0.754	0.997	0.783
7.45	104,771.54	146.1	169.234F	3.8	39.594	166.357F	2,470	14,252.83	17,758.12	0.752	0.754	0.997	0.783
7.46	104,918.39	146.1	169.230F	3.805	39.553	166.352F	2,470	14,253.68	17,764.24	0.752	0.754	0.997	0.783
7.47	105,065.26	146.1	169.226F	3.81	39.511	166.346F	2,470	14,254.53	17,770.37	0.752	0.754	0.997	0.783
7.48	105,212.13	146.1	169.222F	3.815	39.469	166.341F	2,471	14,255.38	17,776.49	0.752	0.754	0.997	0.783
7.49	105,359.00	146.1	169.218F	3.82	39.428	166.335F	2,471	14,256.24	17,782.62	0.752	0.754	0.997	0.783
7.5	105,505.89	146.1	169.214F	3.825	39.387	166.330F	2,471	14,257.09	17,788.74	0.752	0.754	0.997	0.783
7.51	105,652.79	146.1	169.210F	3.83	39.345	166.324F	2,472	14,257.92	17,794.87	0.752	0.754	0.997	0.783
7.52	105,799.69	146.2	169.206F	3.835	39.304	166.318F	2,472	14,258.75	17,800.99	0.752	0.754	0.997	0.783
7.53	105,946.61	146.2	169.202F	3.84	39.263	166.312F	2,473	14,259.56	17,807.11	0.752	0.755	0.997	0.783
7.54	106,093.53	146.2	169.197F	3.845	39.222	166.307F	2,473	14,260.38	17,813.24	0.752	0.755	0.997	0.783
7.55	106,240.46	146.2	169.193F	3.851	39.181	166.301F	2,473	14,261.19	17,819.36	0.752	0.755	0.997	0.783
7.56	106,387.40	146.2	169.189F	3.856	39.141	166.295F	2,474	14,262.00	17,825.48	0.752	0.755	0.997	0.783
7.57	106,534.34	146.2	169.185F	3.861	39.1	166.289F	2,474	14,262.82	17,831.60	0.752	0.755	0.997	0.783
7.58	106,681.30	146.2	169.181F	3.866	39.06	166.283F	2,474	14,263.63	17,837.72	0.752	0.755	0.997	0.783
7.59	106,828.26	146.2	169.177F	3.871	39.019	166.278F	2,475	14,264.44	17,843.84	0.752	0.755	0.997	0.783
7.6	106,975.23	146.2	169.173F	3.876	38.979	166.272F	2,475	14,265.26	17,849.97	0.753	0.755	0.997	0.783
7.61	107,122.21	146.2	169.169F	3.881	38.939	166.266F	2,475	14,266.07	17,856.09	0.753	0.755	0.997	0.783
7.62	107,269.20	146.2	169.165F	3.886	38.899	166.260F	2,476	14,266.88	17,862.21	0.753	0.755	0.997	0.783
7.63	107,416.20	146.2	169.161F	3.891	38.859	166.254F	2,476	14,267.70	17,868.33	0.753	0.755	0.997	0.784
7.64	107,563.21	146.3	169.157F	3.896	38.819	166.249F	2,477	14,268.51	17,874.46	0.753	0.755	0.997	0.784
7.65	107,710.22	146.3	169.153F	3.901	38.78	166.243F	2,477	14,269.32	17,880.58	0.753	0.755	0.997	0.784
7.66	107,857.24	146.3	169.149F	3.906	38.74	166.237F	2,477	14,270.14	17,886.70	0.753	0.755	0.997	0.784
7.67	108,004.28	146.3	169.145F	3.912	38.701	166.231F	2,478	14,270.95	17,892.82	0.753	0.755	0.997	0.784
7.68	108,151.32	146.3	169.141F	3.917	38.662	166.225F	2,478	14,271.77	17,898.95	0.753	0.755	0.997	0.784
7.69	108,298.36	146.3	169.137F	3.922	38.623	166.220F	2,478	14,272.58	17,905.07	0.753	0.755	0.997	0.784
7.7	108,445.42	146.3	169.133F	3.927	38.584	166.214F	2,479	14,273.39	17,911.19	0.753	0.755	0.997	0.784
7.71	108,592.49	146.3	169.129F	3.932	38.545	166.208F	2,479	14,274.21	17,917.31	0.753	0.755	0.997	0.784
7.72	108,739.56	146.3	169.125F	3.937	38.506	166.202F	2,479	14,275.02	17,923.44	0.753	0.755	0.997	0.784
7.73	108,886.64	146.3	169.121F	3.942	38.467	166.196F	2,480	14,275.83	17,929.56	0.753	0.755	0.997	0.784
7.74	109,033.73	146.3	169.117F	3.947	38.429	166.191F	2,480	14,276.65	17,935.68	0.753	0.755	0.997	0.784
7.75	109,180.83	146.3	169.113F	3.952	38.39	166.185F	2,481	14,277.46	17,941.81	0.753	0.755	0.997	0.784
7.76	109,327.94	146.4	169.109F	3.957	38.352	166.179F	2,481	14,278.27	17,947.93	0.753	0.755	0.997	0.784

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Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
7.77	109,475.05	146.4	169.105F	3.962	38.314	166.173F	2,481	14,279.09	17,954.05	0.753	0.755	0.997	0.784
7.78	109,622.18	146.4	169.101F	3.967	38.276	166.167F	2,482	14,279.89	17,960.18	0.753	0.755	0.997	0.784
7.79	109,769.31	146.4	169.097F	3.973	38.238	166.161F	2,482	14,280.70	17,966.30	0.753	0.756	0.997	0.784
7.8	109,916.45	146.4	169.093F	3.978	38.2	166.156F	2,482	14,281.50	17,972.42	0.753	0.756	0.997	0.784
7.81	110,063.60	146.4	169.089F	3.983	38.162	166.150F	2,483	14,282.31	17,978.55	0.753	0.756	0.997	0.784
7.82	110,210.76	146.4	169.085F	3.988	38.124	166.144F	2,483	14,283.11	17,984.67	0.753	0.756	0.997	0.784
7.83	110,357.92	146.4	169.081F	3.993	38.087	166.138F	2,484	14,283.92	17,990.79	0.753	0.756	0.997	0.784
7.84	110,505.10	146.4	169.077F	3.998	38.049	166.132F	2,484	14,284.72	17,996.92	0.754	0.756	0.997	0.784
7.85	110,652.28	146.4	169.073F	4.003	38.012	166.126F	2,484	14,285.53	18,003.04	0.754	0.756	0.997	0.784
7.86	110,799.47	146.4	169.070F	4.008	37.975	166.120F	2,485	14,286.33	18,009.16	0.754	0.756	0.997	0.785
7.87	110,946.67	146.4	169.066F	4.013	37.938	166.115F	2,485	14,287.13	18,015.29	0.754	0.756	0.997	0.785
7.88	111,093.87	146.5	169.062F	4.018	37.901	166.109F	2,485	14,287.94	18,021.41	0.754	0.756	0.997	0.785
7.89	111,241.09	146.5	169.058F	4.023	37.864	166.103F	2,486	14,288.74	18,027.53	0.754	0.756	0.997	0.785
7.9	111,388.31	146.5	169.054F	4.028	37.827	166.097F	2,486	14,289.54	18,033.66	0.754	0.756	0.997	0.785
7.91	111,535.55	146.5	169.050F	4.034	37.79	166.091F	2,486	14,290.35	18,039.78	0.754	0.756	0.997	0.785
7.92	111,682.79	146.5	169.046F	4.039	37.754	166.085F	2,487	14,291.15	18,045.91	0.754	0.756	0.997	0.785
7.93	111,830.04	146.5	169.042F	4.044	37.717	166.079F	2,487	14,291.95	18,052.03	0.754	0.756	0.997	0.785
7.94	111,977.29	146.5	169.038F	4.049	37.681	166.074F	2,487	14,292.76	18,058.15	0.754	0.756	0.997	0.785
7.95	112,124.56	146.5	169.034F	4.054	37.645	166.068F	2,488	14,293.56	18,064.28	0.754	0.756	0.997	0.785
7.96	112,271.83	146.5	169.030F	4.059	37.608	166.062F	2,488	14,294.37	18,070.40	0.754	0.756	0.997	0.785
7.97	112,419.12	146.5	169.026F	4.064	37.572	166.056F	2,489	14,295.17	18,076.53	0.754	0.756	0.997	0.785
7.98	112,566.41	146.5	169.022F	4.069	37.536	166.050F	2,489	14,295.97	18,082.65	0.754	0.756	0.997	0.785
7.99	112,713.71	146.5	169.018F	4.074	37.501	166.044F	2,489	14,296.78	18,088.77	0.754	0.756	0.997	0.785
8	112,861.01	146.6	169.014F	4.079	37.465	166.038F	2,490	14,297.58	18,094.90	0.754	0.756	0.997	0.785
8.01	113,008.33	146.6	169.010F	4.084	37.429	166.033F	2,490	14,298.38	18,101.02	0.754	0.756	0.997	0.785
8.02	113,155.65	146.6	169.007F	4.089	37.394	166.027F	2,490	14,299.19	18,107.15	0.754	0.756	0.997	0.785
8.03	113,302.98	146.6	169.003F	4.095	37.358	166.021F	2,491	14,299.99	18,113.27	0.754	0.756	0.997	0.785
8.04	113,450.33	146.6	168.999F	4.1	37.323	166.015F	2,491	14,300.79	18,119.40	0.754	0.756	0.997	0.785
8.05	113,597.67	146.6	168.995F	4.105	37.288	166.009F	2,491	14,301.60	18,125.52	0.754	0.756	0.997	0.785
8.06	113,745.03	146.6	168.991F	4.11	37.253	166.003F	2,492	14,302.40	18,131.65	0.754	0.757	0.997	0.785
8.07	113,892.40	146.6	168.987F	4.115	37.218	165.997F	2,492	14,303.20	18,137.77	0.754	0.757	0.997	0.785
8.08	114,039.77	146.6	168.983F	4.12	37.183	165.992F	2,493	14,304.01	18,143.90	0.754	0.757	0.997	0.786
8.09	114,187.15	146.6	168.979F	4.125	37.148	165.986F	2,493	14,304.81	18,150.02	0.754	0.757	0.997	0.786
8.1	114,334.54	146.6	168.975F	4.13	37.113	165.980F	2,493	14,305.62	18,156.15	0.755	0.757	0.997	0.786
8.11	114,481.94	146.6	168.971F	4.135	37.079	165.974F	2,494	14,306.42	18,162.27	0.755	0.757	0.997	0.786
8.12	114,629.35	146.6	168.967F	4.14	37.044	165.968F	2,494	14,307.22	18,168.40	0.755	0.757	0.997	0.786
8.13	114,776.77	146.7	168.964F	4.145	37.01	165.962F	2,494	14,308.03	18,174.52	0.755	0.757	0.997	0.786
8.14	114,924.19	146.7	168.960F	4.151	36.976	165.956F	2,495	14,308.83	18,180.65	0.755	0.757	0.997	0.786
8.15	115,071.62	146.7	168.956F	4.156	36.941	165.951F	2,495	14,309.64	18,186.77	0.755	0.757	0.997	0.786
8.16	115,219.06	146.7	168.952F	4.161	36.907	165.945F	2,495	14,310.44	18,192.90	0.755	0.757	0.997	0.786
8.17	115,366.51	146.7	168.948F	4.166	36.873	165.939F	2,496	14,311.24	18,199.03	0.755	0.757	0.997	0.786
8.18	115,513.97	146.7	168.944F	4.171	36.84	165.933F	2,496	14,312.05	18,205.15	0.755	0.757	0.997	0.786
8.19	115,661.43	146.7	168.940F	4.176	36.806	165.927F	2,497	14,312.85	18,211.28	0.755	0.757	0.997	0.786
8.2	115,808.91	146.7	168.936F	4.181	36.772	165.921F	2,497	14,313.65	18,217.40	0.755	0.757	0.997	0.786
8.21	115,956.39	146.7	168.932F	4.186	36.738	165.916F	2,497	14,314.46	18,223.53	0.755	0.757	0.997	0.786
8.22	116,103.88	146.7	168.929F	4.191	36.705	165.910F	2,498	14,315.26	18,229.66	0.755	0.757	0.997	0.786
8.23	116,251.38	146.7	168.925F	4.196	36.672	165.904F	2,498	14,316.07	18,235.78	0.755	0.757	0.997	0.786
8.24	116,398.89	146.7	168.921F	4.201	36.638	165.898F	2,498	14,316.87	18,241.91	0.755	0.757	0.997	0.786
8.25	116,546.40	146.8	168.917F	4.206	36.605	165.892F	2,499	14,317.67	18,248.03	0.755	0.757	0.997	0.786
8.26	116,693.93	146.8	168.913F	4.212	36.572	165.886F	2,499	14,318.48	18,254.16	0.755	0.757	0.997	0.786
8.27	116,841.46	146.8	168.909F	4.217	36.539	165.880F	2,499	14,319.28	18,260.29	0.755	0.757	0.997	0.786
8.28	116,989.00	146.8	168.905F	4.222	36.506	165.875F	2,500	14,320.09	18,266.41	0.755	0.757	0.997	0.786
8.29	117,136.55	146.8	168.902F	4.227	36.473	165.869F	2,500	14,320.89	18,272.54	0.755	0.757	0.997	0.786
8.3	117,284.11	146.8	168.898F	4.232	36.44	165.863F	2,501	14,321.69	18,278.67	0.755	0.757	0.997	0.786
8.31	117,431.67	146.8	168.894F	4.237	36.408	165.857F	2,501	14,322.50	18,284.79	0.755	0.757	0.997	0.787
8.32	117,579.25	146.8	168.890F	4.242	36.375	165.851F	2,501	14,323.30	18,290.92	0.755	0.757	0.997	0.787
8.33	117,726.83	146.8	168.886F	4.247	36.343	165.845F	2,502	14,324.11	18,297.05	0.755	0.757	0.997	0.787
8.34	117,874.42	146.8	168.882F	4.252	36.31	165.840F	2,502	14,324.91	18,303.17	0.755	0.758	0.997	0.787
8.35	118,022.02	146.8	168.878F	4.257	36.278	165.834F	2,502	14,325.71	18,309.30	0.755	0.758	0.997	0.787
8.36	118,169.63	146.8	168.875F	4.262	36.246	165.828F	2,503	14,326.51	18,315.43	0.756	0.758	0.997	0.787
8.37	118,317.24	146.9	168.871F	4.267	36.214	165.822F	2,503	14,327.30	18,321.56	0.756	0.758	0.997	0.787
8.38	118,464.87	146.9	168.867F	4.273	36.182	165.816F	2,503	14,328.10	18,327.68	0.756	0.758	0.997	0.787
8.39	118,612.50	146.9	168.863F	4.278	36.15	165.810F	2,504	14,328.90	18,333.81	0.756	0.758	0.997	0.787
8.4	118,760.14	146.9	168.859F	4.283	36.118	165.804F	2,504	14,329.69	18,339.94	0.756	0.758	0.997	0.787

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
8.41	118,907.79	146.9	168.855F	4.288	36.087	165.798F	2,504	14,330.49	18,346.07	0.756	0.758	0.997	0.787
8.42	119,055.44	146.9	168.851F	4.293	36.055	165.792F	2,505	14,331.28	18,352.20	0.756	0.758	0.997	0.787
8.43	119,203.11	146.9	168.848F	4.298	36.023	165.786F	2,505	14,332.08	18,358.33	0.756	0.758	0.997	0.787
8.44	119,350.78	146.9	168.844F	4.303	35.992	165.780F	2,506	14,332.88	18,364.45	0.756	0.758	0.997	0.787
8.45	119,498.46	146.9	168.840F	4.308	35.961	165.775F	2,506	14,333.67	18,370.58	0.756	0.758	0.997	0.787
8.46	119,646.15	146.9	168.836F	4.313	35.929	165.769F	2,506	14,334.47	18,376.71	0.756	0.758	0.997	0.787
8.47	119,793.85	146.9	168.832F	4.318	35.898	165.763F	2,507	14,335.27	18,382.84	0.756	0.758	0.997	0.787
8.48	119,941.56	146.9	168.829F	4.323	35.867	165.757F	2,507	14,336.07	18,388.97	0.756	0.758	0.997	0.787
8.49	120,089.27	147	168.825F	4.329	35.836	165.751F	2,507	14,336.86	18,395.10	0.756	0.758	0.997	0.787
8.5	120,237.00	147	168.821F	4.334	35.805	165.745F	2,508	14,337.66	18,401.23	0.756	0.758	0.997	0.787
8.51	120,384.73	147	168.817F	4.339	35.774	165.739F	2,508	14,338.46	18,407.35	0.756	0.758	0.997	0.787
8.52	120,532.47	147	168.813F	4.344	35.744	165.733F	2,508	14,339.25	18,413.48	0.756	0.758	0.997	0.787
8.53	120,680.21	147	168.809F	4.349	35.713	165.727F	2,509	14,340.05	18,419.61	0.756	0.758	0.997	0.787
8.54	120,827.97	147	168.806F	4.354	35.682	165.721F	2,509	14,340.85	18,425.74	0.756	0.758	0.997	0.788
8.55	120,975.73	147	168.802F	4.359	35.652	165.715F	2,509	14,341.64	18,431.87	0.756	0.758	0.997	0.788
8.56	121,123.51	147	168.798F	4.364	35.622	165.710F	2,510	14,342.44	18,438.00	0.756	0.758	0.997	0.788
8.57	121,271.29	147	168.794F	4.369	35.591	165.704F	2,510	14,343.24	18,444.13	0.756	0.758	0.997	0.788
8.58	121,419.08	147	168.790F	4.374	35.561	165.698F	2,511	14,344.03	18,450.26	0.756	0.758	0.997	0.788
8.59	121,566.87	147	168.787F	4.379	35.531	165.692F	2,511	14,344.83	18,456.39	0.756	0.758	0.997	0.788
8.6	121,714.68	147	168.783F	4.384	35.501	165.686F	2,511	14,345.63	18,462.52	0.756	0.758	0.997	0.788
8.61	121,862.49	147.1	168.779F	4.39	35.471	165.680F	2,512	14,346.42	18,468.65	0.756	0.758	0.997	0.788
8.62	122,010.32	147.1	168.775F	4.395	35.441	165.674F	2,512	14,347.22	18,474.78	0.756	0.758	0.997	0.788
8.63	122,158.15	147.1	168.771F	4.4	35.411	165.668F	2,512	14,348.02	18,480.91	0.757	0.759	0.997	0.788
8.64	122,305.98	147.1	168.768F	4.405	35.382	165.662F	2,513	14,348.81	18,487.04	0.757	0.759	0.997	0.788
8.65	122,453.83	147.1	168.764F	4.41	35.352	165.656F	2,513	14,349.61	18,493.17	0.757	0.759	0.997	0.788
8.66	122,601.69	147.1	168.760F	4.415	35.322	165.651F	2,513	14,350.41	18,499.30	0.757	0.759	0.997	0.788
8.67	122,749.55	147.1	168.756F	4.42	35.293	165.645F	2,514	14,351.20	18,505.43	0.757	0.759	0.997	0.788
8.68	122,897.42	147.1	168.752F	4.425	35.263	165.639F	2,514	14,351.99	18,511.56	0.757	0.759	0.997	0.788
8.69	123,045.30	147.1	168.749F	4.43	35.234	165.633F	2,514	14,352.78	18,517.69	0.757	0.759	0.997	0.788
8.7	123,193.19	147.1	168.745F	4.435	35.205	165.627F	2,515	14,353.58	18,523.82	0.757	0.759	0.997	0.788
8.71	123,341.09	147.1	168.741F	4.44	35.176	165.621F	2,515	14,354.37	18,529.95	0.757	0.759	0.997	0.788
8.72	123,488.99	147.1	168.737F	4.446	35.147	165.615F	2,516	14,355.16	18,536.08	0.757	0.759	0.997	0.788
8.73	123,636.90	147.1	168.733F	4.451	35.118	165.609F	2,516	14,355.96	18,542.21	0.757	0.759	0.997	0.788
8.74	123,784.82	147.2	168.730F	4.456	35.089	165.603F	2,516	14,356.75	18,548.34	0.757	0.759	0.997	0.788
8.75	123,932.75	147.2	168.726F	4.461	35.06	165.597F	2,517	14,357.54	18,554.47	0.757	0.759	0.997	0.788
8.76	124,080.69	147.2	168.722F	4.466	35.031	165.591F	2,517	14,358.34	18,560.60	0.757	0.759	0.997	0.788
8.77	124,228.64	147.2	168.718F	4.471	35.002	165.585F	2,517	14,359.13	18,566.73	0.757	0.759	0.997	0.789
8.78	124,376.59	147.2	168.715F	4.476	34.974	165.579F	2,518	14,359.92	18,572.86	0.757	0.759	0.997	0.789
8.79	124,524.55	147.2	168.711F	4.481	34.945	165.574F	2,518	14,360.71	18,578.99	0.757	0.759	0.997	0.789
8.8	124,672.52	147.2	168.707F	4.486	34.917	165.567F	2,518	14,361.52	18,585.13	0.757	0.759	0.997	0.789
8.81	124,820.50	147.2	168.703F	4.491	34.888	165.561F	2,519	14,362.32	18,591.27	0.757	0.759	0.997	0.789
8.82	124,968.49	147.2	168.700F	4.496	34.86	165.555F	2,519	14,363.13	18,597.41	0.757	0.759	0.997	0.789
8.83	125,116.48	147.2	168.696F	4.502	34.832	165.549F	2,519	14,363.94	18,603.55	0.757	0.759	0.997	0.789
8.84	125,264.49	147.2	168.692F	4.507	34.804	165.543F	2,520	14,364.75	18,609.68	0.757	0.759	0.997	0.789
8.85	125,412.50	147.2	168.688F	4.512	34.776	165.537F	2,520	14,365.56	18,615.82	0.757	0.759	0.997	0.789
8.86	125,560.52	147.3	168.684F	4.517	34.748	165.531F	2,521	14,366.37	18,621.96	0.757	0.759	0.997	0.789
8.87	125,708.55	147.3	168.681F	4.522	34.72	165.525F	2,521	14,367.18	18,628.10	0.757	0.759	0.997	0.789
8.88	125,856.59	147.3	168.677F	4.527	34.692	165.519F	2,521	14,367.98	18,634.24	0.757	0.759	0.997	0.789
8.89	126,004.63	147.3	168.673F	4.532	34.664	165.513F	2,522	14,368.79	18,640.38	0.757	0.759	0.997	0.789
8.9	126,152.69	147.3	168.669F	4.537	34.637	165.507F	2,522	14,369.60	18,646.52	0.758	0.759	0.997	0.789
8.91	126,300.75	147.3	168.666F	4.542	34.609	165.500F	2,522	14,370.41	18,652.66	0.758	0.759	0.997	0.789
8.92	126,448.82	147.3	168.662F	4.547	34.582	165.494F	2,523	14,371.22	18,658.80	0.758	0.76	0.997	0.789
8.93	126,596.90	147.3	168.658F	4.552	34.554	165.488F	2,523	14,372.03	18,664.94	0.758	0.76	0.997	0.789
8.94	126,744.99	147.3	168.654F	4.558	34.527	165.482F	2,523	14,372.84	18,671.08	0.758	0.76	0.997	0.789
8.95	126,893.07	147.3	168.651F	4.563	34.5	165.473F	2,524	14,373.97	18,677.54	0.758	0.76	0.997	0.789
8.96	127,041.14	147.3	168.647F	4.568	34.473	165.466F	2,524	14,374.79	18,683.68	0.758	0.76	0.997	0.789
8.97	127,189.22	147.3	168.643F	4.573	34.446	165.460F	2,525	14,375.60	18,689.83	0.758	0.76	0.997	0.789
8.98	127,337.31	147.4	168.640F	4.579	34.419	165.454F	2,525	14,376.42	18,695.97	0.758	0.76	0.997	0.789
8.99	127,485.41	147.4	168.636F	4.584	34.392	165.448F	2,526	14,377.24	18,702.11	0.758	0.76	0.997	0.79
9	127,633.52	147.4	168.632F	4.589	34.365	165.442F	2,526	14,378.06	18,708.26	0.758	0.76	0.997	0.79
9.01	127,781.64	147.4	168.629F	4.594	34.338	165.436F	2,526	14,378.87	18,714.40	0.758	0.76	0.997	0.79
9.02	127,929.76	147.4	168.625F	4.599	34.312	165.429F	2,527	14,379.69	18,720.55	0.758	0.76	0.997	0.79
9.03	128,077.90	147.4	168.621F	4.604	34.285	165.423F	2,527	14,380.51	18,726.69	0.758	0.76	0.997	0.79
9.04	128,226.04	147.4	168.617F	4.609	34.258	165.417F	2,527	14,381.33	18,732.84	0.758	0.76	0.997	0.79

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
9.05	128,374.19	147.4	168.614F	4.614	34.232	165.411F	2,528	14,382.15	18,738.98	0.758	0.76	0.997	0.79
9.06	128,522.35	147.4	168.610F	4.619	34.205	165.405F	2,528	14,382.97	18,745.13	0.758	0.76	0.997	0.79
9.07	128,670.51	147.4	168.606F	4.624	34.179	165.398F	2,529	14,383.78	18,751.27	0.758	0.76	0.997	0.79
9.08	128,818.69	147.4	168.603F	4.63	34.153	165.392F	2,529	14,384.60	18,757.42	0.758	0.76	0.997	0.79
9.09	128,966.87	147.5	168.599F	4.635	34.126	165.386F	2,529	14,385.42	18,763.57	0.758	0.76	0.997	0.79
9.1	129,115.06	147.5	168.595F	4.64	34.1	165.380F	2,530	14,386.24	18,769.71	0.758	0.76	0.997	0.79
9.11	129,263.26	147.5	168.592F	4.645	34.073	165.376F	2,530	14,386.70	18,776.17	0.758	0.76	0.997	0.79
9.12	129,411.46	147.5	168.588F	4.65	34.045	165.379F	2,530	14,386.33	18,783.37	0.758	0.76	0.998	0.79
9.13	129,559.66	147.5	168.584F	4.655	34.018	165.374F	2,530	14,386.94	18,789.62	0.758	0.76	0.998	0.79
9.14	129,707.87	147.5	168.581F	4.66	33.992	165.370F	2,530	14,387.55	18,795.87	0.758	0.76	0.998	0.79
9.15	129,856.09	147.5	168.577F	4.665	33.966	165.365F	2,531	14,388.16	18,802.13	0.758	0.76	0.998	0.79
9.16	130,004.30	147.5	168.573F	4.67	33.94	165.360F	2,531	14,388.80	18,808.36	0.758	0.76	0.998	0.79
9.17	130,152.53	147.5	168.570F	4.675	33.914	165.355F	2,531	14,389.50	18,814.55	0.758	0.76	0.998	0.79
9.18	130,300.77	147.5	168.566F	4.68	33.888	165.350F	2,532	14,390.21	18,820.74	0.758	0.76	0.998	0.79
9.19	130,449.01	147.5	168.562F	4.686	33.862	165.344F	2,532	14,390.91	18,826.92	0.759	0.76	0.998	0.79
9.2	130,597.26	147.5	168.559F	4.691	33.837	165.339F	2,532	14,391.62	18,833.11	0.759	0.76	0.998	0.79
9.21	130,745.51	147.5	168.555F	4.696	33.811	165.333F	2,533	14,392.36	18,839.30	0.759	0.76	0.998	0.79
9.22	130,893.78	147.5	168.551F	4.701	33.786	165.327F	2,533	14,393.19	18,845.45	0.759	0.761	0.998	0.79
9.23	131,042.05	147.5	168.548F	4.706	33.76	165.321F	2,533	14,394.01	18,851.61	0.759	0.761	0.998	0.79
9.24	131,190.33	147.5	168.544F	4.711	33.735	165.314F	2,534	14,394.83	18,857.76	0.759	0.761	0.998	0.79
9.25	131,338.62	147.6	168.540F	4.716	33.71	165.308F	2,534	14,395.67	18,863.92	0.759	0.761	0.998	0.791
9.26	131,486.92	147.6	168.537F	4.721	33.685	165.302F	2,535	14,396.52	18,870.08	0.759	0.761	0.998	0.791
9.27	131,635.23	147.6	168.533F	4.726	33.66	165.295F	2,535	14,397.41	18,876.24	0.759	0.761	0.998	0.791
9.28	131,783.54	147.6	168.529F	4.731	33.636	165.289F	2,535	14,398.31	18,882.41	0.759	0.761	0.998	0.791
9.29	131,931.87	147.6	168.526F	4.736	33.611	165.283F	2,536	14,399.23	18,888.59	0.759	0.761	0.998	0.791
9.3	132,080.20	147.6	168.522F	4.742	33.586	165.277F	2,536	14,400.20	18,894.78	0.759	0.761	0.998	0.791
9.31	132,228.55	147.6	168.518F	4.747	33.562	165.270F	2,537	14,401.24	18,900.99	0.759	0.761	0.998	0.791
9.32	132,376.91	147.6	168.515F	4.752	33.538	165.264F	2,537	14,402.31	18,907.23	0.759	0.761	0.998	0.791
9.33	132,525.28	147.6	168.511F	4.757	33.514	165.257F	2,538	14,403.45	18,913.49	0.759	0.761	0.998	0.791
9.34	132,673.66	147.6	168.507F	4.762	33.49	165.250F	2,538	14,404.63	18,919.77	0.759	0.761	0.998	0.791
9.35	132,822.05	147.7	168.504F	4.767	33.466	165.244F	2,539	14,405.85	18,926.08	0.759	0.761	0.998	0.791
9.36	132,970.46	147.7	168.500F	4.772	33.443	165.237F	2,539	14,407.10	18,932.40	0.759	0.761	0.998	0.791
9.37	133,118.87	147.7	168.497F	4.777	33.419	165.231F	2,540	14,408.42	18,938.77	0.759	0.761	0.998	0.791
9.38	133,267.31	147.7	168.493F	4.782	33.396	165.224F	2,541	14,409.81	18,945.19	0.759	0.761	0.998	0.791
9.39	133,415.76	147.7	168.489F	4.787	33.373	165.218F	2,541	14,411.25	18,951.64	0.759	0.761	0.998	0.791
9.4	133,564.22	147.7	168.486F	4.792	33.351	165.213F	2,542	14,412.77	18,958.15	0.759	0.761	0.998	0.791
9.41	133,712.70	147.7	168.482F	4.798	33.327	165.205F	2,543	14,413.92	18,964.51	0.759	0.761	0.998	0.792
9.42	133,861.18	147.8	168.478F	4.803	33.303	165.198F	2,543	14,414.86	18,970.73	0.759	0.761	0.998	0.792
9.43	134,009.68	147.8	168.475F	4.808	33.279	165.190F	2,544	14,415.86	18,976.96	0.759	0.761	0.998	0.792
9.44	134,159.61	149.5	168.470F	4.813	33.73	164.506F	2,614	14,589.32	19,156.38	0.759	0.761	0.998	0.801
9.45	134,309.91	149.6	168.466F	4.818	33.707	164.499F	2,614	14,590.83	19,163.92	0.759	0.761	0.998	0.801
9.46	134,460.22	149.6	168.462F	4.823	33.684	164.493F	2,615	14,592.53	19,171.58	0.759	0.761	0.998	0.801
9.47	134,610.55	149.6	168.457F	4.828	33.663	164.486F	2,616	14,594.86	19,179.70	0.76	0.761	0.998	0.801
9.48	134,760.92	149.6	168.453F	4.834	33.645	164.483F	2,618	14,598.31	19,188.73	0.76	0.761	0.998	0.802
9.49	134,911.31	149.7	168.448F	4.839	33.624	164.480F	2,618	14,600.28	19,196.28	0.76	0.761	0.998	0.802
9.5	135,053.22	149.7	168.454F	4.844	33.601	164.474F	2,619	14,601.06	19,197.36	0.76	0.761	0.998	0.802
9.51	135,203.65	149.7	168.449F	4.849	33.577	164.467F	2,619	14,601.99	19,203.90	0.76	0.761	0.998	0.802
9.52	135,354.09	149.7	168.445F	4.854	33.552	164.459F	2,620	14,602.92	19,210.45	0.76	0.762	0.998	0.802
9.53	135,504.54	149.7	168.441F	4.859	33.528	164.452F	2,620	14,603.85	19,216.99	0.76	0.762	0.998	0.802
9.54	135,655.00	149.7	168.436F	4.864	33.504	164.444F	2,621	14,604.79	19,223.54	0.76	0.762	0.998	0.802
9.55	135,805.47	149.7	168.432F	4.869	33.48	164.437F	2,621	14,605.72	19,230.08	0.76	0.762	0.998	0.802
9.56	135,955.95	149.7	168.427F	4.874	33.456	164.429F	2,621	14,606.65	19,236.63	0.76	0.762	0.998	0.802
9.57	136,106.44	149.7	168.423F	4.88	33.432	164.422F	2,622	14,607.59	19,243.17	0.76	0.762	0.998	0.802
9.58	136,256.93	149.7	168.418F	4.885	33.408	164.414F	2,622	14,608.52	19,249.72	0.76	0.762	0.998	0.802
9.59	136,407.44	149.7	168.414F	4.89	33.384	164.407F	2,623	14,609.41	19,256.25	0.76	0.762	0.998	0.802
9.6	136,557.95	149.8	168.409F	4.895	33.36	164.400F	2,623	14,610.27	19,262.78	0.76	0.762	0.998	0.802
9.61	136,708.48	149.8	168.405F	4.9	33.336	164.392F	2,624	14,611.13	19,269.31	0.76	0.762	0.998	0.802
9.62	136,859.01	149.8	168.401F	4.905	33.312	164.385F	2,624	14,611.99	19,275.84	0.76	0.762	0.998	0.802
9.63	137,009.55	149.8	168.396F	4.911	33.288	164.378F	2,625	14,612.85	19,282.37	0.76	0.762	0.998	0.802
9.64	137,160.10	149.8	168.392F	4.916	33.264	164.371F	2,625	14,613.79	19,288.91	0.76	0.762	0.998	0.803
9.65	137,310.66	149.8	168.387F	4.921	33.24	164.363F	2,625	14,614.73	19,295.45	0.76	0.762	0.998	0.803
9.66	137,461.23	149.8	168.383F	4.926	33.217	164.355F	2,626	14,615.68	19,301.99	0.76	0.762	0.998	0.803
9.67	137,611.80	149.8	168.378F	4.931	33.193	164.347F	2,626	14,616.63	19,308.54	0.76	0.762	0.998	0.803
9.68	137,762.39	149.8	168.374F	4.936	33.17	164.339F	2,627	14,617.58	19,315.08	0.76	0.762	0.998	0.803

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
9.69	137,912.99	149.8	168.370F	4.942	33.147	164.330F	2,627	14,618.71	19,321.71	0.76	0.762	0.998	0.803
9.7	138,063.60	149.9	168.365F	4.947	33.124	164.321F	2,628	14,619.89	19,328.37	0.76	0.762	0.998	0.803
9.71	138,214.22	149.9	168.361F	4.952	33.101	164.311F	2,629	14,621.07	19,335.03	0.761	0.762	0.998	0.803
9.72	138,364.85	149.9	168.356F	4.957	33.078	164.301F	2,629	14,622.33	19,341.77	0.761	0.762	0.998	0.803
9.73	138,515.50	149.9	168.352F	4.962	33.057	164.285F	2,630	14,624.38	19,349.22	0.761	0.762	0.998	0.803
9.74	138,666.22	150	168.347F	4.967	33.046	164.232F	2,633	14,631.68	19,361.88	0.761	0.762	0.998	0.803
9.75	138,816.96	150	168.343F	4.972	33.023	164.224F	2,633	14,632.54	19,368.11	0.761	0.762	0.998	0.804
9.76	138,967.71	150	168.338F	4.978	33	164.217F	2,634	14,633.40	19,374.33	0.761	0.763	0.998	0.804
9.77	139,118.46	150	168.334F	4.983	32.977	164.210F	2,634	14,634.26	19,380.55	0.761	0.763	0.998	0.804
9.78	139,269.23	150	168.330F	4.988	32.953	164.203F	2,635	14,635.13	19,386.77	0.761	0.763	0.998	0.804
9.79	139,420.00	150	168.325F	4.993	32.93	164.196F	2,635	14,635.99	19,393.00	0.761	0.763	0.998	0.804
9.8	139,570.78	150	168.321F	4.998	32.907	164.189F	2,636	14,636.83	19,399.21	0.761	0.763	0.998	0.804
9.81	139,721.58	150	168.316F	5.003	32.884	164.182F	2,636	14,637.64	19,405.41	0.761	0.763	0.998	0.804
9.82	139,872.37	150	168.312F	5.009	32.861	164.175F	2,636	14,638.45	19,411.61	0.761	0.763	0.998	0.804
9.83	140,023.18	150.1	168.307F	5.014	32.838	164.168F	2,637	14,639.26	19,417.80	0.761	0.763	0.998	0.804
9.84	140,173.99	150.1	168.303F	5.019	32.815	164.161F	2,637	14,640.07	19,424.00	0.761	0.763	0.998	0.804
9.85	140,324.82	150.1	168.298F	5.024	32.792	164.154F	2,638	14,640.88	19,430.20	0.761	0.763	0.998	0.804
9.86	140,475.65	150.1	168.294F	5.029	32.769	164.148F	2,638	14,641.69	19,436.40	0.761	0.763	0.998	0.804
9.87	140,626.49	150.1	168.289F	5.034	32.746	164.141F	2,638	14,642.50	19,442.60	0.761	0.763	0.998	0.804
9.88	140,777.33	150.1	168.285F	5.04	32.723	164.134F	2,639	14,643.31	19,448.80	0.761	0.763	0.998	0.804
9.89	140,928.19	150.1	168.280F	5.045	32.701	164.127F	2,639	14,644.12	19,455.00	0.761	0.763	0.998	0.804
9.9	141,079.05	150.1	168.276F	5.05	32.678	164.120F	2,640	14,644.93	19,461.19	0.761	0.763	0.998	0.804
9.91	141,229.92	150.1	168.271F	5.055	32.655	164.113F	2,640	14,645.74	19,467.39	0.761	0.763	0.998	0.804
9.92	141,380.80	150.1	168.267F	5.06	32.633	164.106F	2,641	14,646.54	19,473.60	0.761	0.763	0.998	0.804
9.93	141,531.68	150.1	168.263F	5.065	32.61	164.099F	2,641	14,647.34	19,479.80	0.761	0.763	0.998	0.804
9.94	141,682.58	150.1	168.258F	5.071	32.588	164.092F	2,641	14,648.14	19,486.00	0.762	0.763	0.998	0.804
9.95	141,833.48	150.2	168.254F	5.076	32.565	164.085F	2,642	14,648.94	19,492.20	0.762	0.763	0.998	0.804
9.96	141,984.39	150.2	168.249F	5.081	32.543	164.079F	2,642	14,649.74	19,498.40	0.762	0.763	0.998	0.804
9.97	142,135.31	150.2	168.245F	5.086	32.521	164.072F	2,643	14,650.54	19,504.60	0.762	0.763	0.998	0.805
9.98	142,286.23	150.2	168.240F	5.091	32.499	164.065F	2,643	14,651.35	19,510.81	0.762	0.763	0.998	0.805
9.99	142,437.17	150.2	168.236F	5.096	32.476	164.058F	2,644	14,652.15	19,517.01	0.762	0.763	0.998	0.805
10	142,588.11	150.2	168.232F	5.102	32.454	164.051F	2,644	14,652.95	19,523.21	0.762	0.764	0.998	0.805
10.01	142,739.06	150.2	168.227F	5.107	32.432	164.044F	2,644	14,653.75	19,529.41	0.762	0.764	0.998	0.805
10.02	142,890.02	150.2	168.223F	5.112	32.41	164.037F	2,645	14,654.55	19,535.61	0.762	0.764	0.998	0.805
10.03	143,040.98	150.2	168.218F	5.117	32.388	164.030F	2,645	14,655.36	19,541.81	0.762	0.764	0.998	0.805
10.04	143,191.96	150.2	168.214F	5.122	32.366	164.023F	2,646	14,656.16	19,548.02	0.762	0.764	0.998	0.805
10.05	143,342.94	150.2	168.209F	5.127	32.345	164.016F	2,646	14,656.96	19,554.22	0.762	0.764	0.998	0.805
10.06	143,493.93	150.2	168.205F	5.132	32.323	164.009F	2,646	14,657.76	19,560.42	0.762	0.764	0.998	0.805
10.07	143,644.92	150.3	168.201F	5.138	32.301	164.002F	2,647	14,658.57	19,566.62	0.762	0.764	0.998	0.805
10.08	143,795.93	150.3	168.196F	5.143	32.28	163.995F	2,647	14,659.37	19,572.83	0.762	0.764	0.998	0.805
10.09	143,946.94	150.3	168.192F	5.148	32.258	163.988F	2,648	14,660.17	19,579.03	0.762	0.764	0.998	0.805
10.1	144,097.96	150.3	168.187F	5.153	32.236	163.981F	2,648	14,660.98	19,585.23	0.762	0.764	0.998	0.805
10.11	144,248.99	150.3	168.183F	5.158	32.215	163.974F	2,649	14,661.78	19,591.43	0.762	0.764	0.998	0.805
10.12	144,400.03	150.3	168.179F	5.163	32.194	163.967F	2,649	14,662.58	19,597.63	0.762	0.764	0.998	0.805
10.13	144,551.07	150.3	168.174F	5.169	32.172	163.960F	2,649	14,663.39	19,603.84	0.762	0.764	0.998	0.805
10.14	144,702.12	150.3	168.170F	5.174	32.151	163.953F	2,650	14,664.19	19,610.04	0.762	0.764	0.998	0.805
10.15	144,853.18	150.3	168.165F	5.179	32.13	163.946F	2,650	14,664.99	19,616.24	0.762	0.764	0.998	0.805
10.16	145,004.25	150.3	168.161F	5.184	32.108	163.939F	2,651	14,665.80	19,622.44	0.762	0.764	0.998	0.805
10.17	145,155.33	150.3	168.157F	5.189	32.087	163.932F	2,651	14,666.60	19,628.65	0.763	0.764	0.998	0.805
10.18	145,306.41	150.3	168.152F	5.194	32.066	163.925F	2,651	14,667.41	19,634.85	0.763	0.764	0.998	0.805
10.19	145,457.50	150.3	168.148F	5.2	32.045	163.919F	2,652	14,668.21	19,641.05	0.763	0.764	0.998	0.806
10.2	145,608.60	150.4	168.143F	5.205	32.024	163.912F	2,652	14,669.02	19,647.26	0.763	0.764	0.998	0.806
10.21	145,759.71	150.4	168.139F	5.21	32.003	163.905F	2,653	14,669.82	19,653.46	0.763	0.764	0.998	0.806
10.22	145,910.83	150.4	168.135F	5.215	31.982	163.898F	2,653	14,670.63	19,659.66	0.763	0.764	0.998	0.806
10.23	146,061.95	150.4	168.130F	5.22	31.961	163.891F	2,654	14,671.43	19,665.86	0.763	0.764	0.998	0.806
10.24	146,213.08	150.4	168.126F	5.225	31.941	163.884F	2,654	14,672.24	19,672.07	0.763	0.765	0.998	0.806
10.25	146,364.22	150.4	168.122F	5.23	31.92	163.877F	2,654	14,673.05	19,678.27	0.763	0.765	0.998	0.806
10.26	146,515.37	150.4	168.117F	5.236	31.899	163.870F	2,655	14,673.85	19,684.47	0.763	0.765	0.998	0.806
10.27	146,666.53	150.4	168.113F	5.241	31.879	163.863F	2,655	14,674.66	19,690.68	0.763	0.765	0.998	0.806
10.28	146,817.69	150.4	168.108F	5.246	31.858	163.856F	2,656	14,675.46	19,696.88	0.763	0.765	0.998	0.806
10.29	146,968.86	150.4	168.104F	5.251	31.838	163.849F	2,656	14,676.27	19,703.08	0.763	0.765	0.998	0.806
10.3	147,120.04	150.4	168.100F	5.256	31.817	163.842F	2,656	14,677.10	19,709.29	0.763	0.765	0.998	0.806
10.31	147,271.23	150.4	168.095F	5.261	31.797	163.835F	2,657	14,677.92	19,715.50	0.763	0.765	0.998	0.806
10.32	147,422.42	150.5	168.091F	5.267	31.776	163.828F	2,657	14,678.74	19,721.71	0.763	0.765	0.998	0.806

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Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
10.33	147,573.63	150.5	168.087F	5.272	31.756	163.820F	2,658	14,679.56	19,727.92	0.763	0.765	0.998	0.806
10.34	147,724.84	150.5	168.082F	5.277	31.736	163.813F	2,658	14,680.38	19,734.13	0.763	0.765	0.998	0.806
10.35	147,876.06	150.5	168.078F	5.282	31.716	163.806F	2,659	14,681.20	19,740.34	0.763	0.765	0.998	0.806
10.36	148,027.29	150.5	168.073F	5.287	31.696	163.799F	2,659	14,682.02	19,746.55	0.763	0.765	0.998	0.806
10.37	148,178.52	150.5	168.069F	5.292	31.675	163.792F	2,659	14,682.84	19,752.76	0.763	0.765	0.998	0.806
10.38	148,329.77	150.5	168.065F	5.298	31.655	163.785F	2,660	14,683.67	19,758.97	0.763	0.765	0.998	0.806
10.39	148,481.02	150.5	168.060F	5.303	31.635	163.778F	2,660	14,684.49	19,765.18	0.763	0.765	0.998	0.806
10.4	148,632.28	150.5	168.056F	5.308	31.616	163.771F	2,661	14,685.31	19,771.39	0.763	0.765	0.998	0.806
10.41	148,783.55	150.5	168.052F	5.313	31.596	163.763F	2,661	14,686.13	19,777.60	0.764	0.765	0.998	0.806
10.42	148,934.82	150.5	168.047F	5.318	31.576	163.756F	2,662	14,686.95	19,783.81	0.764	0.765	0.998	0.807
10.43	149,086.11	150.5	168.043F	5.323	31.556	163.749F	2,662	14,687.78	19,790.02	0.764	0.765	0.998	0.807
10.44	149,237.40	150.6	168.039F	5.328	31.536	163.742F	2,663	14,688.60	19,796.23	0.764	0.765	0.998	0.807
10.45	149,388.70	150.6	168.034F	5.334	31.517	163.735F	2,663	14,689.42	19,802.44	0.764	0.765	0.998	0.807
10.46	149,540.01	150.6	168.030F	5.339	31.497	163.728F	2,663	14,690.25	19,808.66	0.764	0.765	0.998	0.807
10.47	149,691.33	150.6	168.026F	5.344	31.477	163.721F	2,664	14,691.07	19,814.87	0.764	0.765	0.998	0.807
10.48	149,842.65	150.6	168.021F	5.349	31.458	163.714F	2,664	14,691.89	19,821.08	0.764	0.765	0.998	0.807
10.49	149,993.98	150.6	168.017F	5.354	31.438	163.706F	2,665	14,692.72	19,827.29	0.764	0.766	0.998	0.807
10.5	150,145.33	150.6	168.013F	5.359	31.419	163.699F	2,665	14,693.54	19,833.50	0.764	0.766	0.998	0.807
10.51	150,296.67	150.6	168.008F	5.365	31.399	163.692F	2,666	14,694.36	19,839.71	0.764	0.766	0.998	0.807
10.52	150,448.03	150.6	168.004F	5.37	31.38	163.685F	2,666	14,695.19	19,845.92	0.764	0.766	0.998	0.807
10.53	150,599.40	150.6	168.000F	5.375	31.361	163.678F	2,666	14,696.01	19,852.13	0.764	0.766	0.998	0.807
10.54	150,750.77	150.6	167.995F	5.38	31.342	163.671F	2,667	14,696.83	19,858.34	0.764	0.766	0.998	0.807
10.55	150,902.15	150.7	167.991F	5.385	31.322	163.664F	2,667	14,697.66	19,864.55	0.764	0.766	0.998	0.807
10.56	151,053.54	150.7	167.987F	5.39	31.303	163.656F	2,668	14,698.48	19,870.76	0.764	0.766	0.998	0.807
10.57	151,204.94	150.7	167.982F	5.396	31.284	163.649F	2,668	14,699.31	19,876.97	0.764	0.766	0.998	0.807
10.58	151,356.35	150.7	167.978F	5.401	31.265	163.642F	2,669	14,700.13	19,883.18	0.764	0.766	0.998	0.807
10.59	151,507.76	150.7	167.974F	5.406	31.246	163.635F	2,669	14,700.96	19,889.40	0.764	0.766	0.998	0.807
10.6	151,659.18	150.7	167.969F	5.411	31.227	163.628F	2,669	14,701.78	19,895.61	0.764	0.766	0.998	0.807
10.61	151,810.61	150.7	167.965F	5.416	31.208	163.621F	2,670	14,702.61	19,901.82	0.764	0.766	0.998	0.807
10.62	151,962.05	150.7	167.961F	5.421	31.189	163.614F	2,670	14,703.43	19,908.03	0.764	0.766	0.998	0.807
10.63	152,113.50	150.7	167.957F	5.426	31.171	163.607F	2,671	14,704.26	19,914.24	0.764	0.766	0.998	0.807
10.64	152,264.95	150.7	167.952F	5.432	31.152	163.599F	2,671	14,705.08	19,920.45	0.764	0.766	0.998	0.808
10.65	152,416.42	150.7	167.948F	5.437	31.133	163.592F	2,672	14,705.91	19,926.66	0.765	0.766	0.998	0.808
10.66	152,567.89	150.7	167.944F	5.442	31.114	163.585F	2,672	14,706.76	19,932.89	0.765	0.766	0.998	0.808
10.67	152,719.37	150.8	167.939F	5.447	31.096	163.577F	2,672	14,707.61	19,939.12	0.765	0.766	0.998	0.808
10.68	152,870.85	150.8	167.935F	5.452	31.077	163.570F	2,673	14,708.47	19,945.35	0.765	0.766	0.998	0.808
10.69	153,022.35	150.8	167.931F	5.457	31.059	163.563F	2,673	14,709.32	19,951.58	0.765	0.766	0.998	0.808
10.7	153,173.85	150.8	167.926F	5.463	31.04	163.555F	2,674	14,710.17	19,957.81	0.765	0.766	0.998	0.808
10.71	153,325.37	150.8	167.922F	5.468	31.022	163.547F	2,674	14,711.01	19,964.05	0.765	0.766	0.998	0.808
10.72	153,476.89	150.8	167.918F	5.473	31.003	163.540F	2,675	14,711.87	19,970.30	0.765	0.766	0.998	0.808
10.73	153,628.40	150.8	167.914F	5.478	30.979	163.546F	2,674	14,710.70	19,978.46	0.765	0.766	0.998	0.808
10.74	153,779.92	150.8	167.909F	5.483	30.96	163.541F	2,675	14,711.19	19,984.96	0.765	0.766	0.998	0.808
10.75	153,931.44	150.8	167.905F	5.488	30.941	163.535F	2,675	14,711.91	19,991.27	0.765	0.767	0.998	0.808
10.76	154,082.97	150.8	167.901F	5.494	30.922	163.528F	2,676	14,712.63	19,997.57	0.765	0.767	0.998	0.808
10.77	154,234.50	150.8	167.896F	5.499	30.904	163.521F	2,676	14,713.35	20,003.87	0.765	0.767	0.998	0.808
10.78	154,386.04	150.8	167.892F	5.504	30.885	163.514F	2,676	14,714.16	20,010.13	0.765	0.767	0.998	0.808
10.79	154,537.60	150.8	167.888F	5.509	30.867	163.506F	2,677	14,715.04	20,016.40	0.765	0.767	0.998	0.808
10.8	154,689.16	150.8	167.884F	5.514	30.849	163.499F	2,677	14,715.94	20,022.67	0.765	0.767	0.998	0.808
10.81	154,840.72	150.8	167.879F	5.519	30.832	163.491F	2,678	14,716.84	20,028.94	0.765	0.767	0.998	0.808
10.82	154,992.30	150.9	167.875F	5.524	30.814	163.483F	2,678	14,717.74	20,035.21	0.765	0.767	0.998	0.808
10.83	155,143.89	150.9	167.871F	5.53	30.796	163.475F	2,679	14,718.68	20,041.47	0.765	0.767	0.998	0.808
10.84	155,295.48	150.9	167.867F	5.535	30.779	163.467F	2,679	14,719.64	20,047.74	0.765	0.767	0.998	0.808
10.85	155,447.09	150.9	167.862F	5.54	30.761	163.459F	2,680	14,720.64	20,054.03	0.765	0.767	0.998	0.808
10.86	155,598.71	150.9	167.858F	5.545	30.744	163.451F	2,680	14,721.68	20,060.32	0.765	0.767	0.998	0.808
10.87	155,750.33	150.9	167.854F	5.55	30.727	163.443F	2,681	14,722.73	20,066.62	0.765	0.767	0.998	0.808
10.88	155,901.97	150.9	167.849F	5.555	30.71	163.434F	2,681	14,723.85	20,072.97	0.765	0.767	0.998	0.809
10.89	156,053.62	150.9	167.845F	5.561	30.693	163.426F	2,682	14,724.98	20,079.32	0.765	0.767	0.998	0.809
10.9	156,205.28	150.9	167.841F	5.566	30.676	163.418F	2,683	14,726.05	20,085.64	0.766	0.767	0.998	0.809
10.91	156,356.95	151	167.837F	5.571	30.659	163.411F	2,683	14,727.05	20,091.92	0.766	0.767	0.998	0.809
10.92	156,508.71	151.1	167.832F	5.576	30.673	163.318F	2,688	14,739.54	20,109.74	0.766	0.767	0.998	0.809
10.93	156,660.53	151.1	167.828F	5.581	30.671	163.285F	2,690	14,744.47	20,120.01	0.766	0.767	0.998	0.81
10.94	156,812.39	151.1	167.824F	5.586	30.654	163.277F	2,691	14,745.69	20,126.59	0.766	0.767	0.998	0.81
10.95	156,964.26	151.2	167.819F	5.592	30.638	163.268F	2,691	14,747.04	20,133.23	0.766	0.767	0.998	0.81
10.96	157,116.14	151.2	167.815F	5.597	30.623	163.259F	2,692	14,748.57	20,140.01	0.766	0.767	0.998	0.81

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Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
10.97	157,268.05	151.2	167.811F	5.602	30.608	163.249F	2,693	14,750.26	20,146.89	0.766	0.767	0.998	0.81
10.98	157,419.96	151.2	167.806F	5.607	30.592	163.242F	2,694	14,751.72	20,153.51	0.766	0.767	0.998	0.81
10.99	157,571.90	151.2	167.802F	5.612	30.576	163.236F	2,694	14,752.96	20,159.89	0.766	0.767	0.998	0.81
11	157,723.84	151.2	167.797F	5.617	30.56	163.230F	2,695	14,754.23	20,166.29	0.766	0.767	0.998	0.81
11.01	157,875.80	151.2	167.793F	5.622	30.544	163.224F	2,696	14,755.53	20,172.71	0.766	0.768	0.998	0.81
11.02	158,027.77	151.3	167.789F	5.628	30.528	163.219F	2,696	14,756.80	20,179.13	0.766	0.768	0.998	0.81
11.03	158,179.75	151.3	167.784F	5.633	30.511	163.210F	2,697	14,757.74	20,185.40	0.766	0.768	0.998	0.81
11.04	158,331.74	151.3	167.780F	5.638	30.495	163.202F	2,697	14,758.74	20,191.68	0.766	0.768	0.998	0.81
11.05	158,484.09	152.5	167.776F	5.643	30.835	163.797F	2,748	14,873.96	20,312.36	0.766	0.768	0.998	0.817
11.06	158,637.28	152.5	167.772F	5.648	30.819	163.790F	2,748	14,875.34	20,319.68	0.766	0.768	0.998	0.817
11.07	158,790.49	152.5	167.768F	5.654	30.804	163.784F	2,749	14,876.89	20,327.09	0.766	0.768	0.998	0.817
11.08	158,943.71	152.5	167.764F	5.659	30.789	163.780F	2,750	14,878.68	20,334.66	0.766	0.768	0.998	0.817
11.09	159,096.95	152.5	167.761F	5.664	30.777	163.783F	2,751	14,881.38	20,343.04	0.766	0.768	0.998	0.817
11.1	159,250.21	152.6	167.757F	5.669	30.762	163.780F	2,752	14,883.15	20,350.37	0.766	0.768	0.998	0.817
11.11	159,403.49	152.6	167.753F	5.674	30.745	163.770F	2,753	14,884.25	20,356.99	0.766	0.768	0.998	0.817
11.12	159,556.79	152.6	167.749F	5.68	30.729	163.761F	2,753	14,885.34	20,363.62	0.766	0.768	0.998	0.817
11.13	159,710.09	152.6	167.745F	5.685	30.712	163.752F	2,754	14,886.43	20,370.25	0.766	0.768	0.998	0.817
11.14	159,863.40	152.6	167.742F	5.69	30.696	163.743F	2,754	14,887.52	20,376.88	0.767	0.768	0.998	0.818
11.15	160,016.72	152.6	167.738F	5.695	30.679	163.734F	2,755	14,888.61	20,383.51	0.767	0.768	0.998	0.818
11.16	160,170.06	152.6	167.734F	5.7	30.663	163.724F	2,755	14,889.71	20,390.13	0.767	0.768	0.998	0.818
11.17	160,323.40	152.6	167.730F	5.706	30.646	163.715F	2,756	14,890.80	20,396.76	0.767	0.768	0.998	0.818
11.18	160,476.76	152.6	167.726F	5.711	30.63	163.706F	2,757	14,891.89	20,403.39	0.767	0.768	0.998	0.818
11.19	160,630.13	152.7	167.723F	5.716	30.614	163.697F	2,757	14,892.98	20,410.02	0.767	0.768	0.998	0.818
11.2	160,783.50	152.7	167.719F	5.721	30.598	163.687F	2,758	14,894.07	20,416.66	0.767	0.768	0.998	0.818
11.21	160,936.89	152.7	167.715F	5.726	30.581	163.678F	2,758	14,895.18	20,423.29	0.767	0.768	0.998	0.818
11.22	161,090.29	152.7	167.711F	5.732	30.565	163.669F	2,759	14,896.30	20,429.93	0.767	0.768	0.998	0.818
11.23	161,243.70	152.7	167.707F	5.737	30.549	163.660F	2,759	14,897.41	20,436.56	0.767	0.768	0.998	0.818
11.24	161,397.13	152.7	167.704F	5.742	30.533	163.650F	2,760	14,898.52	20,443.20	0.767	0.769	0.998	0.818
11.25	161,550.56	152.7	167.700F	5.747	30.517	163.641F	2,761	14,899.67	20,449.84	0.767	0.769	0.998	0.818
11.26	161,704.00	152.7	167.696F	5.752	30.502	163.631F	2,761	14,900.90	20,456.49	0.767	0.769	0.998	0.818
11.27	161,857.46	152.7	167.692F	5.758	30.486	163.621F	2,762	14,902.11	20,463.15	0.767	0.769	0.998	0.818
11.28	162,010.93	152.8	167.688F	5.763	30.47	163.612F	2,762	14,903.21	20,469.80	0.767	0.769	0.998	0.818
11.29	162,164.41	152.8	167.684F	5.768	30.454	163.603F	2,763	14,904.30	20,476.45	0.767	0.769	0.998	0.818
11.3	162,317.90	152.8	167.681F	5.773	30.439	163.592F	2,764	14,905.65	20,483.18	0.767	0.769	0.998	0.819
11.31	162,471.41	152.8	167.677F	5.778	30.424	163.581F	2,764	14,907.07	20,489.94	0.767	0.769	0.998	0.819
11.32	162,624.92	152.8	167.673F	5.784	30.409	163.569F	2,765	14,908.52	20,496.72	0.767	0.769	0.998	0.819
11.33	162,778.46	152.8	167.669F	5.789	30.395	163.557F	2,766	14,910.03	20,503.54	0.767	0.769	0.998	0.819
11.34	162,932.01	152.8	167.665F	5.794	30.381	163.542F	2,767	14,911.91	20,510.70	0.767	0.769	0.998	0.819
11.35	163,085.60	152.9	167.661F	5.799	30.386	163.482F	2,770	14,920.22	20,524.23	0.767	0.769	0.998	0.819
11.36	163,239.25	152.9	167.658F	5.804	30.371	163.472F	2,771	14,921.37	20,530.58	0.768	0.769	0.998	0.819
11.37	163,392.92	153	167.654F	5.81	30.355	163.462F	2,771	14,922.53	20,536.94	0.768	0.769	0.998	0.819
11.38	163,546.59	153	167.650F	5.815	30.34	163.453F	2,772	14,923.68	20,543.29	0.768	0.769	0.998	0.82
11.39	163,700.28	153	167.646F	5.82	30.324	163.443F	2,772	14,924.84	20,549.64	0.768	0.769	0.998	0.82
11.4	163,853.98	153	167.642F	5.825	30.309	163.433F	2,773	14,925.99	20,555.99	0.768	0.769	0.998	0.82
11.41	164,007.69	153	167.638F	5.831	30.293	163.424F	2,774	14,927.15	20,562.35	0.768	0.769	0.998	0.82
11.42	164,161.41	153	167.634F	5.836	30.278	163.414F	2,774	14,928.31	20,568.70	0.768	0.769	0.998	0.82
11.43	164,315.14	153	167.630F	5.841	30.262	163.404F	2,775	14,929.46	20,575.05	0.768	0.769	0.998	0.82
11.44	164,468.88	153	167.626F	5.846	30.247	163.395F	2,775	14,930.62	20,581.40	0.768	0.769	0.998	0.82
11.45	164,622.64	153.1	167.622F	5.851	30.232	163.385F	2,776	14,931.78	20,587.76	0.768	0.769	0.998	0.82
11.46	164,776.41	153.1	167.619F	5.857	30.217	163.375F	2,777	14,932.93	20,594.11	0.768	0.77	0.998	0.82
11.47	164,930.19	153.1	167.615F	5.862	30.201	163.366F	2,777	14,934.09	20,600.46	0.768	0.77	0.998	0.82
11.48	165,083.98	153.1	167.611F	5.867	30.186	163.355F	2,778	14,935.33	20,606.87	0.768	0.77	0.998	0.82
11.49	165,237.78	153.1	167.607F	5.872	30.171	163.345F	2,779	14,936.58	20,613.29	0.768	0.77	0.998	0.82
11.5	165,391.59	153.1	167.603F	5.877	30.156	163.334F	2,779	14,937.83	20,619.70	0.768	0.77	0.998	0.82
11.51	165,545.42	153.1	167.599F	5.883	30.141	163.324F	2,780	14,939.09	20,626.12	0.768	0.77	0.998	0.82
11.52	165,699.26	153.1	167.595F	5.888	30.126	163.313F	2,781	14,940.35	20,632.54	0.768	0.77	0.998	0.82
11.53	165,853.12	153.2	167.591F	5.893	30.111	163.302F	2,781	14,941.62	20,638.97	0.768	0.77	0.998	0.821
11.54	166,006.98	153.2	167.587F	5.898	30.096	163.292F	2,782	14,942.88	20,645.39	0.768	0.77	0.998	0.821
11.55	166,160.86	153.2	167.583F	5.903	30.081	163.281F	2,783	14,944.15	20,651.82	0.768	0.77	0.998	0.821
11.56	166,314.75	153.2	167.579F	5.909	30.067	163.270F	2,783	14,945.41	20,658.25	0.768	0.77	0.998	0.821
11.57	166,468.65	153.2	167.575F	5.914	30.052	163.259F	2,784	14,946.68	20,664.67	0.768	0.77	0.998	0.821
11.58	166,622.57	153.2	167.571F	5.919	30.037	163.249F	2,785	14,947.95	20,671.10	0.769	0.77	0.998	0.821
11.59	166,776.50	153.2	167.568F	5.924	30.022	163.238F	2,785	14,949.21	20,677.52	0.769	0.77	0.998	0.821
11.6	166,930.44	153.2	167.564F	5.929	30.008	163.227F	2,786	14,950.48	20,683.95	0.769	0.77	0.998	0.821

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
11.61	167,084.40	153.3	167.560F	5.935	29.993	163.217F	2,787	14,951.75	20,690.38	0.769	0.77	0.998	0.821
11.62	167,238.36	153.3	167.556F	5.94	29.978	163.206F	2,787	14,953.02	20,696.80	0.769	0.77	0.998	0.821
11.63	167,392.34	153.3	167.552F	5.945	29.964	163.195F	2,788	14,954.31	20,703.24	0.769	0.77	0.998	0.821
11.64	167,546.33	153.3	167.548F	5.95	29.949	163.184F	2,789	14,955.61	20,709.69	0.769	0.77	0.998	0.821
11.65	167,700.34	153.3	167.544F	5.956	29.935	163.173F	2,789	14,956.91	20,716.14	0.769	0.77	0.998	0.821
11.66	167,854.36	153.3	167.540F	5.961	29.92	163.162F	2,790	14,958.20	20,722.59	0.769	0.77	0.998	0.821
11.67	168,008.39	153.3	167.536F	5.966	29.906	163.151F	2,791	14,959.50	20,729.03	0.769	0.77	0.998	0.822
11.68	168,162.43	153.3	167.532F	5.971	29.892	163.140F	2,792	14,960.80	20,735.48	0.769	0.77	0.998	0.822
11.69	168,316.49	153.4	167.528F	5.976	29.877	163.129F	2,792	14,962.10	20,741.93	0.769	0.771	0.998	0.822
11.7	168,470.56	153.4	167.524F	5.982	29.863	163.118F	2,793	14,963.40	20,748.38	0.769	0.771	0.998	0.822
11.71	168,624.65	153.4	167.520F	5.987	29.849	163.107F	2,794	14,964.70	20,754.82	0.769	0.771	0.998	0.822
11.72	168,778.74	153.4	167.516F	5.992	29.835	163.096F	2,794	14,966.00	20,761.27	0.769	0.771	0.998	0.822
11.73	168,932.85	153.4	167.512F	5.997	29.82	163.085F	2,795	14,967.30	20,767.72	0.769	0.771	0.998	0.822
11.74	169,086.97	153.4	167.508F	6.002	29.806	163.074F	2,796	14,968.60	20,774.17	0.769	0.771	0.998	0.822
11.75	169,241.11	153.4	167.504F	6.008	29.792	163.063F	2,797	14,969.90	20,780.62	0.769	0.771	0.998	0.822
11.76	169,395.26	153.5	167.500F	6.013	29.778	163.052F	2,797	14,971.21	20,787.06	0.769	0.771	0.998	0.822
11.77	169,549.42	153.5	167.496F	6.018	29.764	163.041F	2,798	14,972.51	20,793.51	0.769	0.771	0.998	0.822
11.78	169,703.59	153.5	167.492F	6.023	29.75	163.030F	2,799	14,973.81	20,799.96	0.769	0.771	0.998	0.822
11.79	169,857.78	153.5	167.488F	6.028	29.736	163.019F	2,799	14,975.11	20,806.41	0.769	0.771	0.998	0.822
11.8	170,011.98	153.5	167.484F	6.034	29.722	163.008F	2,800	14,976.41	20,812.86	0.77	0.771	0.998	0.822
11.81	170,166.20	153.5	167.480F	6.039	29.708	162.997F	2,801	14,977.72	20,819.31	0.77	0.771	0.998	0.823
11.82	170,320.42	153.5	167.476F	6.044	29.694	162.986F	2,801	14,979.02	20,825.76	0.77	0.771	0.998	0.823
11.83	170,474.66	153.5	167.472F	6.049	29.68	162.975F	2,802	14,980.33	20,832.21	0.77	0.771	0.998	0.823
11.84	170,628.91	153.6	167.468F	6.055	29.667	162.964F	2,803	14,981.63	20,838.66	0.77	0.771	0.998	0.823
11.85	170,783.18	153.6	167.464F	6.06	29.653	162.953F	2,804	14,982.93	20,845.11	0.77	0.771	0.998	0.823
11.86	170,937.46	153.6	167.460F	6.065	29.639	162.942F	2,804	14,984.24	20,851.56	0.77	0.771	0.998	0.823
11.87	171,091.75	153.6	167.456F	6.07	29.625	162.931F	2,805	14,985.55	20,858.01	0.77	0.771	0.998	0.823
11.88	171,246.06	153.6	167.452F	6.075	29.612	162.920F	2,806	14,986.85	20,864.46	0.77	0.771	0.998	0.823
11.89	171,400.37	153.6	167.448F	6.081	29.598	162.909F	2,806	14,988.16	20,870.91	0.77	0.771	0.998	0.823
11.9	171,554.70	153.6	167.444F	6.086	29.584	162.898F	2,807	14,989.46	20,877.36	0.77	0.771	0.998	0.823
11.91	171,709.05	153.7	167.440F	6.091	29.571	162.887F	2,808	14,990.77	20,883.81	0.77	0.771	0.998	0.823
11.92	171,863.41	153.7	167.436F	6.096	29.557	162.876F	2,809	14,992.08	20,890.26	0.77	0.772	0.998	0.823
11.93	172,017.78	153.7	167.432F	6.101	29.544	162.865F	2,809	14,993.39	20,896.71	0.77	0.772	0.998	0.823
11.94	172,172.16	153.7	167.428F	6.107	29.53	162.854F	2,810	14,994.69	20,903.16	0.77	0.772	0.998	0.823
11.95	172,326.56	153.7	167.424F	6.112	29.517	162.843F	2,811	14,996.00	20,909.61	0.77	0.772	0.998	0.824
11.96	172,480.96	153.7	167.420F	6.117	29.503	162.832F	2,811	14,997.31	20,916.06	0.77	0.772	0.998	0.824
11.97	172,635.39	153.7	167.416F	6.122	29.49	162.821F	2,812	14,998.62	20,922.51	0.77	0.772	0.998	0.824
11.98	172,789.82	153.7	167.412F	6.127	29.477	162.810F	2,813	14,999.93	20,928.96	0.77	0.772	0.998	0.824
11.99	172,944.27	153.8	167.408F	6.133	29.463	162.799F	2,814	15,001.24	20,935.41	0.77	0.772	0.998	0.824
12	173,098.73	153.8	167.404F	6.138	29.45	162.788F	2,814	15,002.55	20,941.86	0.77	0.772	0.998	0.824
12.01	173,253.21	153.8	167.400F	6.143	29.437	162.777F	2,815	15,003.86	20,948.31	0.77	0.772	0.998	0.824
12.02	173,407.70	153.8	167.396F	6.148	29.424	162.766F	2,816	15,005.17	20,954.77	0.77	0.772	0.998	0.824
12.03	173,562.20	153.8	167.391F	6.154	29.411	162.755F	2,816	15,006.48	20,961.22	0.771	0.772	0.998	0.824
12.04	173,716.71	153.8	167.387F	6.159	29.397	162.744F	2,817	15,007.79	20,967.67	0.771	0.772	0.998	0.824
12.05	173,871.24	153.8	167.383F	6.164	29.384	162.733F	2,818	15,009.10	20,974.12	0.771	0.772	0.998	0.824
12.06	174,025.78	153.9	167.379F	6.169	29.371	162.722F	2,818	15,010.41	20,980.57	0.771	0.772	0.998	0.824
12.07	174,180.33	153.9	167.375F	6.174	29.358	162.711F	2,819	15,011.73	20,987.02	0.771	0.772	0.998	0.824
12.08	174,334.90	153.9	167.371F	6.18	29.345	162.700F	2,820	15,013.04	20,993.48	0.771	0.772	0.998	0.824
12.09	174,489.48	153.9	167.367F	6.185	29.332	162.689F	2,821	15,014.35	20,999.93	0.771	0.772	0.998	0.825
12.1	174,644.07	153.9	167.363F	6.19	29.319	162.678F	2,821	15,015.64	21,006.37	0.771	0.772	0.998	0.825
12.11	174,798.68	153.9	167.359F	6.195	29.306	162.667F	2,822	15,016.93	21,012.82	0.771	0.772	0.998	0.825
12.12	174,953.30	153.9	167.355F	6.2	29.293	162.656F	2,823	15,018.21	21,019.27	0.771	0.772	0.998	0.825
12.13	175,107.93	153.9	167.351F	6.206	29.28	162.645F	2,823	15,019.49	21,025.71	0.771	0.772	0.998	0.825
12.14	175,262.57	154	167.347F	6.211	29.267	162.634F	2,824	15,020.77	21,032.16	0.771	0.772	0.998	0.825
12.15	175,417.23	154	167.343F	6.216	29.254	162.624F	2,825	15,022.05	21,038.60	0.771	0.773	0.998	0.825
12.16	175,571.90	154	167.338F	6.221	29.241	162.613F	2,826	15,023.33	21,045.05	0.771	0.773	0.998	0.825
12.17	175,726.58	154	167.334F	6.227	29.228	162.602F	2,826	15,024.62	21,051.49	0.771	0.773	0.998	0.825
12.18	175,881.28	154	167.330F	6.232	29.215	162.591F	2,827	15,025.90	21,057.94	0.771	0.773	0.998	0.825
12.19	176,035.99	154	167.326F	6.237	29.203	162.580F	2,828	15,027.18	21,064.39	0.771	0.773	0.998	0.825
12.2	176,190.71	154	167.322F	6.242	29.19	162.569F	2,828	15,028.47	21,070.84	0.771	0.773	0.998	0.825
12.21	176,345.44	154.1	167.318F	6.247	29.177	162.557F	2,829	15,029.81	21,077.33	0.771	0.773	0.998	0.825
12.22	176,500.19	154.1	167.314F	6.253	29.164	162.546F	2,830	15,031.15	21,083.82	0.771	0.773	0.998	0.825
12.23	176,654.95	154.1	167.310F	6.258	29.152	162.534F	2,831	15,032.49	21,090.31	0.771	0.773	0.998	0.826
12.24	176,809.73	154.1	167.306F	6.263	29.139	162.523F	2,831	15,033.83	21,096.80	0.771	0.773	0.998	0.826

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
12.25	176,964.52	154.1	167.301F	6.268	29.126	162.511F	2,832	15,035.18	21,103.30	0.771	0.773	0.998	0.826
12.26	177,119.32	154.1	167.297F	6.273	29.114	162.500F	2,833	15,036.53	21,109.80	0.772	0.773	0.998	0.826
12.27	177,274.13	154.1	167.293F	6.279	29.101	162.488F	2,834	15,037.88	21,116.30	0.772	0.773	0.998	0.826
12.28	177,429.03	154.2	167.289F	6.284	29.089	162.458F	2,836	15,040.99	21,124.59	0.772	0.773	0.998	0.826
12.29	177,583.97	154.2	167.285F	6.289	29.076	162.446F	2,837	15,042.38	21,131.18	0.772	0.773	0.998	0.826
12.3	177,738.94	154.2	167.281F	6.294	29.064	162.434F	2,837	15,043.77	21,137.77	0.772	0.773	0.998	0.826
12.31	177,893.91	154.2	167.276F	6.3	29.051	162.422F	2,838	15,045.16	21,144.37	0.772	0.773	0.998	0.826
12.32	178,048.91	154.2	167.272F	6.305	29.039	162.410F	2,839	15,046.55	21,150.96	0.772	0.773	0.998	0.826
12.33	178,203.91	154.2	167.268F	6.31	29.026	162.398F	2,840	15,047.94	21,157.56	0.772	0.773	0.998	0.826
12.34	178,358.93	154.3	167.264F	6.315	29.014	162.386F	2,841	15,049.33	21,164.15	0.772	0.773	0.998	0.826
12.35	178,513.97	154.3	167.259F	6.32	29.002	162.374F	2,841	15,050.72	21,170.75	0.772	0.773	0.998	0.827
12.36	178,669.02	154.3	167.255F	6.326	28.989	162.362F	2,842	15,052.11	21,177.35	0.772	0.773	0.998	0.827
12.37	178,824.08	154.3	167.251F	6.331	28.977	162.350F	2,843	15,053.51	21,183.95	0.772	0.773	0.998	0.827
12.38	178,979.16	154.3	167.247F	6.336	28.965	162.338F	2,844	15,054.90	21,190.55	0.772	0.773	0.998	0.827
12.39	179,134.26	154.3	167.242F	6.341	28.953	162.326F	2,845	15,056.30	21,197.15	0.772	0.774	0.998	0.827
12.4	179,289.37	154.3	167.238F	6.346	28.941	162.314F	2,845	15,057.70	21,203.75	0.772	0.774	0.998	0.827
12.41	179,444.49	154.4	167.234F	6.352	28.928	162.302F	2,846	15,059.09	21,210.36	0.772	0.774	0.998	0.827
12.42	179,599.63	154.4	167.230F	6.357	28.916	162.290F	2,847	15,060.49	21,216.96	0.772	0.774	0.998	0.827
12.43	179,754.78	154.4	167.225F	6.362	28.904	162.278F	2,848	15,061.89	21,223.57	0.772	0.774	0.998	0.827
12.44	179,909.95	154.4	167.221F	6.367	28.892	162.266F	2,849	15,063.29	21,230.18	0.772	0.774	0.998	0.827
12.45	180,065.13	154.4	167.217F	6.373	28.88	162.254F	2,849	15,064.69	21,236.79	0.772	0.774	0.998	0.827
12.46	180,220.33	154.4	167.213F	6.378	28.868	162.242F	2,850	15,066.09	21,243.40	0.772	0.774	0.998	0.827
12.47	180,375.54	154.4	167.208F	6.383	28.856	162.230F	2,851	15,067.49	21,250.01	0.772	0.774	0.998	0.827
12.48	180,530.76	154.5	167.204F	6.388	28.844	162.217F	2,852	15,068.90	21,256.62	0.773	0.774	0.998	0.828
12.49	180,686.00	154.5	167.200F	6.393	28.832	162.205F	2,853	15,070.30	21,263.23	0.773	0.774	0.998	0.828
12.5	180,841.26	154.5	167.195F	6.399	28.821	162.193F	2,853	15,071.71	21,269.85	0.773	0.774	0.998	0.828
12.51	180,996.53	154.5	167.191F	6.404	28.809	162.181F	2,854	15,073.11	21,276.46	0.773	0.774	0.998	0.828
12.52	181,151.82	154.5	167.187F	6.409	28.797	162.169F	2,855	15,074.52	21,283.08	0.773	0.774	0.998	0.828
12.53	181,307.12	154.5	167.182F	6.414	28.785	162.157F	2,856	15,075.93	21,289.70	0.773	0.774	0.998	0.828
12.54	181,462.43	154.5	167.178F	6.419	28.773	162.145F	2,857	15,077.35	21,296.33	0.773	0.774	0.998	0.828
12.55	181,617.76	154.6	167.174F	6.425	28.762	162.132F	2,857	15,078.77	21,302.96	0.773	0.774	0.998	0.828
12.56	181,773.11	154.6	167.170F	6.43	28.75	162.120F	2,858	15,080.19	21,309.59	0.773	0.774	0.998	0.828
12.57	181,928.47	154.6	167.165F	6.435	28.738	162.108F	2,859	15,081.61	21,316.22	0.773	0.774	0.998	0.828
12.58	182,083.84	154.6	167.161F	6.44	28.727	162.096F	2,860	15,083.03	21,322.85	0.773	0.774	0.998	0.828
12.59	182,239.23	154.6	167.157F	6.446	28.715	162.083F	2,861	15,084.45	21,329.48	0.773	0.774	0.998	0.828
12.6	182,394.63	154.6	167.152F	6.451	28.703	162.071F	2,861	15,085.87	21,336.12	0.773	0.774	0.998	0.828
12.61	182,550.05	154.6	167.148F	6.456	28.692	162.059F	2,862	15,087.29	21,342.75	0.773	0.774	0.998	0.829
12.62	182,705.49	154.7	167.144F	6.461	28.68	162.047F	2,863	15,088.71	21,349.39	0.773	0.775	0.998	0.829
12.63	182,860.94	154.7	167.139F	6.466	28.669	162.034F	2,864	15,090.14	21,356.03	0.773	0.775	0.998	0.829
12.64	183,016.40	154.7	167.135F	6.472	28.657	162.022F	2,865	15,091.56	21,362.67	0.773	0.775	0.998	0.829
12.65	183,171.88	154.7	167.130F	6.477	28.646	162.010F	2,865	15,092.98	21,369.31	0.773	0.775	0.998	0.829
12.66	183,327.38	154.7	167.126F	6.482	28.635	161.997F	2,866	15,094.41	21,375.95	0.773	0.775	0.998	0.829
12.67	183,482.89	154.7	167.122F	6.487	28.623	161.985F	2,867	15,095.84	21,382.59	0.773	0.775	0.998	0.829
12.68	183,638.41	154.7	167.117F	6.493	28.612	161.973F	2,868	15,097.26	21,389.24	0.773	0.775	0.998	0.829
12.69	183,793.95	154.8	167.113F	6.498	28.6	161.960F	2,869	15,098.69	21,395.88	0.773	0.775	0.998	0.829
12.7	183,949.51	154.8	167.109F	6.503	28.589	161.948F	2,870	15,100.12	21,402.53	0.773	0.775	0.998	0.829
12.71	184,105.08	154.8	167.104F	6.508	28.578	161.936F	2,870	15,101.55	21,409.17	0.774	0.775	0.998	0.829
12.72	184,260.66	154.8	167.100F	6.513	28.567	161.923F	2,871	15,102.98	21,415.82	0.774	0.775	0.998	0.829
12.73	184,416.26	154.8	167.095F	6.519	28.555	161.911F	2,872	15,104.41	21,422.47	0.774	0.775	0.998	0.829
12.74	184,571.88	154.8	167.091F	6.524	28.544	161.898F	2,873	15,105.84	21,429.12	0.774	0.775	0.998	0.83
12.75	184,727.51	154.8	167.087F	6.529	28.533	161.886F	2,874	15,107.27	21,435.77	0.774	0.775	0.998	0.83
12.76	184,883.15	154.9	167.082F	6.534	28.522	161.874F	2,874	15,108.70	21,442.43	0.774	0.775	0.998	0.83
12.77	185,038.82	154.9	167.078F	6.54	28.511	161.861F	2,875	15,110.13	21,449.08	0.774	0.775	0.998	0.83
12.78	185,194.49	154.9	167.074F	6.545	28.5	161.849F	2,876	15,111.56	21,455.74	0.774	0.775	0.998	0.83
12.79	185,350.18	154.9	167.069F	6.55	28.489	161.836F	2,877	15,112.98	21,462.39	0.774	0.775	0.998	0.83
12.8	185,505.89	154.9	167.065F	6.555	28.478	161.824F	2,878	15,114.41	21,469.05	0.774	0.775	0.998	0.83
12.81	185,661.61	154.9	167.060F	6.56	28.467	161.811F	2,878	15,115.84	21,475.71	0.774	0.775	0.998	0.83
12.82	185,817.35	155	167.056F	6.566	28.456	161.799F	2,879	15,117.27	21,482.37	0.774	0.775	0.998	0.83
12.83	185,973.10	155	167.051F	6.571	28.445	161.786F	2,880	15,118.71	21,489.03	0.774	0.775	0.998	0.83
12.84	186,128.87	155	167.047F	6.576	28.434	161.774F	2,881	15,120.14	21,495.69	0.774	0.775	0.998	0.83
12.85	186,284.65	155	167.043F	6.581	28.423	161.761F	2,882	15,121.57	21,502.35	0.774	0.776	0.998	0.83
12.86	186,440.45	155	167.038F	6.587	28.412	161.749F	2,883	15,123.01	21,509.02	0.774	0.776	0.998	0.83
12.87	186,596.26	155	167.034F	6.592	28.401	161.736F	2,883	15,124.44	21,515.68	0.774	0.776	0.998	0.831
12.88	186,752.09	155	167.029F	6.597	28.39	161.724F	2,884	15,125.88	21,522.35	0.774	0.776	0.998	0.831

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
12.89	186,907.93	155.1	167.025F	6.602	28.38	161.711F	2,885	15,127.31	21,529.01	0.774	0.776	0.998	0.831
12.9	187,063.79	155.1	167.020F	6.607	28.369	161.699F	2,886	15,128.75	21,535.68	0.774	0.776	0.998	0.831
12.91	187,219.66	155.1	167.016F	6.613	28.358	161.686F	2,887	15,130.19	21,542.35	0.774	0.776	0.998	0.831
12.92	187,375.55	155.1	167.011F	6.618	28.347	161.674F	2,888	15,131.63	21,549.02	0.774	0.776	0.998	0.831
12.93	187,531.45	155.1	167.007F	6.623	28.337	161.661F	2,888	15,133.07	21,555.69	0.774	0.776	0.998	0.831
12.94	187,687.37	155.1	167.003F	6.628	28.326	161.649F	2,889	15,134.51	21,562.37	0.775	0.776	0.998	0.831
12.95	187,843.31	155.1	166.998F	6.634	28.315	161.636F	2,890	15,135.95	21,569.04	0.775	0.776	0.998	0.831
12.96	187,999.26	155.2	166.994F	6.639	28.305	161.624F	2,891	15,137.39	21,575.72	0.775	0.776	0.998	0.831
12.97	188,155.22	155.2	166.989F	6.644	28.294	161.611F	2,892	15,138.84	21,582.39	0.775	0.776	0.998	0.831
12.98	188,311.20	155.2	166.985F	6.649	28.284	161.598F	2,892	15,140.28	21,589.07	0.775	0.776	0.998	0.831
12.99	188,467.20	155.2	166.980F	6.654	28.273	161.586F	2,893	15,141.72	21,595.75	0.775	0.776	0.998	0.832
13	188,623.21	155.2	166.976F	6.66	28.262	161.575F	2,894	15,142.97	21,602.63	0.775	0.776	0.998	0.832
13.01	188,779.24	155.2	166.971F	6.665	28.252	161.562F	2,895	15,144.40	21,609.36	0.775	0.776	0.998	0.832
13.02	188,935.28	155.2	166.967F	6.67	28.241	161.550F	2,896	15,145.83	21,616.09	0.775	0.776	0.998	0.832
13.03	189,091.33	155.3	166.962F	6.675	28.231	161.537F	2,897	15,147.27	21,622.83	0.775	0.776	0.998	0.832
13.04	189,247.40	155.3	166.958F	6.681	28.22	161.525F	2,897	15,148.70	21,629.56	0.775	0.776	0.998	0.832
13.05	189,403.49	155.3	166.953F	6.686	28.21	161.512F	2,898	15,150.13	21,636.30	0.775	0.776	0.998	0.832
13.06	189,559.59	155.3	166.949F	6.691	28.199	161.500F	2,899	15,151.57	21,643.04	0.775	0.776	0.998	0.832
13.07	189,715.71	155.3	166.944F	6.696	28.189	161.487F	2,900	15,153.00	21,649.78	0.775	0.776	0.998	0.832
13.08	189,871.84	155.3	166.940F	6.701	28.179	161.475F	2,901	15,154.42	21,656.52	0.775	0.777	0.998	0.832
13.09	190,027.99	155.3	166.935F	6.707	28.168	161.462F	2,901	15,155.84	21,663.26	0.775	0.777	0.998	0.832
13.1	190,184.15	155.4	166.931F	6.712	28.158	161.450F	2,902	15,157.25	21,670.00	0.775	0.777	0.998	0.832
13.11	190,340.32	155.4	166.926F	6.717	28.148	161.437F	2,903	15,158.67	21,676.75	0.775	0.777	0.998	0.832
13.12	190,496.52	155.4	166.922F	6.722	28.137	161.425F	2,904	15,160.08	21,683.49	0.775	0.777	0.998	0.833
13.13	190,652.72	155.4	166.917F	6.728	28.127	161.413F	2,905	15,161.50	21,690.24	0.775	0.777	0.998	0.833
13.14	190,808.95	155.4	166.912F	6.733	28.117	161.400F	2,906	15,162.92	21,696.99	0.775	0.777	0.998	0.833
13.15	190,965.18	155.4	166.908F	6.738	28.106	161.388F	2,906	15,164.34	21,703.74	0.775	0.777	0.998	0.833
13.16	191,121.44	155.4	166.903F	6.743	28.096	161.375F	2,907	15,165.76	21,710.50	0.775	0.777	0.998	0.833
13.17	191,277.71	155.5	166.899F	6.748	28.086	161.363F	2,908	15,167.18	21,717.25	0.776	0.777	0.998	0.833
13.18	191,433.99	155.5	166.894F	6.754	28.076	161.351F	2,909	15,168.60	21,724.01	0.776	0.777	0.998	0.833
13.19	191,590.29	155.5	166.890F	6.759	28.066	161.338F	2,910	15,170.02	21,730.77	0.776	0.777	0.998	0.833
13.2	191,746.60	155.5	166.885F	6.764	28.056	161.326F	2,910	15,171.44	21,737.54	0.776	0.777	0.998	0.833
13.21	191,902.93	155.5	166.881F	6.769	28.046	161.313F	2,911	15,172.86	21,744.30	0.776	0.777	0.998	0.833
13.22	192,059.28	155.5	166.876F	6.775	28.036	161.301F	2,912	15,174.28	21,751.07	0.776	0.777	0.998	0.833
13.23	192,215.63	155.6	166.871F	6.78	28.026	161.288F	2,913	15,175.71	21,757.83	0.776	0.777	0.998	0.833
13.24	192,372.01	155.6	166.867F	6.785	28.016	161.276F	2,914	15,177.13	21,764.61	0.776	0.777	0.998	0.833
13.25	192,528.40	155.6	166.862F	6.79	28.006	161.263F	2,915	15,178.55	21,771.38	0.776	0.777	0.998	0.834
13.26	192,684.78	155.6	166.858F	6.795	27.996	161.251F	2,915	15,179.98	21,778.15	0.776	0.777	0.998	0.834
13.27	192,841.16	155.6	166.853F	6.801	27.986	161.238F	2,916	15,181.41	21,784.93	0.776	0.777	0.998	0.834
13.28	192,997.55	155.6	166.849F	6.806	27.976	161.226F	2,917	15,182.84	21,791.70	0.776	0.777	0.998	0.834
13.29	193,153.96	155.6	166.844F	6.811	27.966	161.213F	2,918	15,184.27	21,798.48	0.776	0.777	0.998	0.834
13.3	193,310.39	155.7	166.839F	6.816	27.956	161.201F	2,919	15,185.70	21,805.26	0.776	0.777	0.998	0.834
13.31	193,466.83	155.7	166.835F	6.822	27.946	161.188F	2,920	15,187.14	21,812.05	0.776	0.777	0.998	0.834
13.32	193,623.28	155.7	166.830F	6.827	27.936	161.176F	2,920	15,188.57	21,818.83	0.776	0.778	0.998	0.834
13.33	193,779.75	155.7	166.826F	6.832	27.927	161.163F	2,921	15,190.00	21,825.62	0.776	0.778	0.998	0.834
13.34	193,936.23	155.7	166.821F	6.837	27.917	161.151F	2,922	15,191.44	21,832.41	0.776	0.778	0.998	0.834
13.35	194,092.73	155.7	166.817F	6.843	27.907	161.138F	2,923	15,192.88	21,839.20	0.776	0.778	0.998	0.834
13.36	194,249.25	155.7	166.812F	6.848	27.897	161.126F	2,924	15,194.31	21,845.99	0.776	0.778	0.998	0.834
13.37	194,405.77	155.8	166.807F	6.853	27.888	161.113F	2,925	15,195.75	21,852.78	0.776	0.778	0.998	0.834
13.38	194,562.32	155.8	166.803F	6.858	27.878	161.100F	2,925	15,197.19	21,859.58	0.776	0.778	0.998	0.835
13.39	194,718.88	155.8	166.798F	6.863	27.868	161.088F	2,926	15,198.63	21,866.37	0.777	0.778	0.998	0.835
13.4	194,875.45	155.8	166.794F	6.869	27.859	161.075F	2,927	15,200.07	21,873.19	0.777	0.778	0.998	0.835
13.41	195,032.04	155.8	166.789F	6.874	27.849	161.063F	2,928	15,201.51	21,880.00	0.777	0.778	0.998	0.835
13.42	195,188.64	155.8	166.784F	6.879	27.84	161.050F	2,929	15,202.95	21,886.82	0.777	0.778	0.998	0.835
13.43	195,345.26	155.8	166.780F	6.884	27.83	161.037F	2,930	15,204.38	21,893.64	0.777	0.778	0.998	0.835
13.44	195,501.89	155.9	166.775F	6.89	27.82	161.025F	2,930	15,205.82	21,900.46	0.777	0.778	0.998	0.835
13.45	195,658.54	155.9	166.771F	6.895	27.811	161.012F	2,931	15,207.27	21,907.29	0.777	0.778	0.998	0.835
13.46	195,815.20	155.9	166.766F	6.9	27.801	160.999F	2,932	15,208.71	21,914.11	0.777	0.778	0.998	0.835
13.47	195,971.88	155.9	166.761F	6.905	27.792	160.987F	2,933	15,210.15	21,920.94	0.777	0.778	0.998	0.835
13.48	196,128.57	155.9	166.757F	6.91	27.782	160.974F	2,934	15,211.59	21,927.78	0.777	0.778	0.998	0.835
13.49	196,285.28	155.9	166.752F	6.916	27.773	160.961F	2,935	15,213.04	21,934.62	0.777	0.778	0.998	0.835
13.5	196,442.00	155.9	166.748F	6.921	27.764	160.949F	2,936	15,214.48	21,941.45	0.777	0.778	0.998	0.836
13.51	196,598.74	156	166.743F	6.926	27.754	160.936F	2,936	15,215.93	21,948.29	0.777	0.778	0.998	0.836
13.52	196,755.49	156	166.738F	6.931	27.745	160.923F	2,937	15,217.37	21,955.14	0.777	0.778	0.998	0.836

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
13.53	196,912.26	156	166.734F	6.937	27.736	160.911F	2,938	15,218.82	21,961.98	0.777	0.778	0.998	0.836
13.54	197,067.83	156	166.730F	6.942	27.726	160.892F	2,939	15,220.82	21,969.27	0.777	0.778	0.998	0.836
13.55	197,224.63	156	166.725F	6.947	27.717	160.879F	2,940	15,222.28	21,976.12	0.777	0.779	0.998	0.836
13.56	197,381.45	156	166.721F	6.952	27.708	160.867F	2,941	15,223.73	21,982.97	0.777	0.779	0.998	0.836
13.57	197,538.28	156.1	166.716F	6.957	27.699	160.854F	2,942	15,225.18	21,989.83	0.777	0.779	0.998	0.836
13.58	197,695.12	156.1	166.711F	6.963	27.689	160.841F	2,943	15,226.64	21,996.69	0.777	0.779	0.998	0.836
13.59	197,851.98	156.1	166.707F	6.968	27.68	160.828F	2,944	15,228.09	22,003.55	0.777	0.779	0.998	0.836
13.6	198,008.85	156.1	166.702F	6.973	27.671	160.815F	2,944	15,229.55	22,010.42	0.777	0.779	0.998	0.836
13.61	198,165.74	156.1	166.697F	6.978	27.662	160.802F	2,945	15,231.03	22,017.31	0.777	0.779	0.998	0.836
13.62	198,322.65	156.1	166.693F	6.984	27.653	160.789F	2,946	15,232.53	22,024.21	0.777	0.779	0.998	0.836
13.63	198,479.57	156.1	166.688F	6.989	27.644	160.776F	2,947	15,234.03	22,031.12	0.778	0.779	0.998	0.837
13.64	198,636.51	156.2	166.683F	6.994	27.634	160.762F	2,948	15,235.54	22,038.02	0.778	0.779	0.998	0.837
13.65	198,793.46	156.2	166.679F	6.999	27.625	160.749F	2,949	15,237.04	22,044.93	0.778	0.779	0.998	0.837
13.66	198,950.43	156.2	166.674F	7.005	27.616	160.736F	2,950	15,238.54	22,051.85	0.778	0.779	0.998	0.837
13.67	199,107.41	156.2	166.669F	7.01	27.607	160.722F	2,951	15,240.05	22,058.76	0.778	0.779	0.998	0.837
13.68	199,264.41	156.2	166.665F	7.015	27.598	160.709F	2,952	15,241.56	22,065.68	0.778	0.779	0.998	0.837
13.69	199,421.42	156.2	166.660F	7.02	27.589	160.696F	2,953	15,243.06	22,072.59	0.778	0.779	0.998	0.837
13.7	199,578.45	156.3	166.655F	7.025	27.58	160.682F	2,953	15,244.57	22,079.51	0.778	0.779	0.998	0.837
13.71	199,735.50	156.3	166.651F	7.031	27.571	160.669F	2,954	15,246.08	22,086.43	0.778	0.779	0.998	0.837
13.72	199,892.56	156.3	166.646F	7.036	27.563	160.655F	2,955	15,247.60	22,093.36	0.778	0.779	0.998	0.837
13.73	200,049.63	156.3	166.641F	7.041	27.554	160.642F	2,956	15,249.11	22,100.28	0.778	0.779	0.998	0.837
13.74	200,206.73	156.3	166.637F	7.046	27.545	160.629F	2,957	15,250.62	22,107.21	0.778	0.779	0.998	0.837
13.75	200,363.83	156.3	166.632F	7.052	27.536	160.614F	2,958	15,252.25	22,114.23	0.778	0.779	0.998	0.838
13.76	200,520.96	156.4	166.627F	7.057	27.527	160.600F	2,959	15,253.90	22,121.27	0.778	0.779	0.998	0.838
13.77	200,678.10	156.4	166.622F	7.062	27.519	160.585F	2,960	15,255.56	22,128.31	0.778	0.779	0.998	0.838
13.78	200,835.26	156.4	166.618F	7.067	27.51	160.570F	2,961	15,257.22	22,135.36	0.778	0.779	0.998	0.838
13.79	200,992.44	156.4	166.613F	7.073	27.501	160.555F	2,962	15,258.88	22,142.40	0.778	0.78	0.998	0.838
13.8	201,149.63	156.4	166.608F	7.078	27.493	160.541F	2,963	15,260.54	22,149.45	0.778	0.78	0.998	0.838
13.81	201,306.84	156.4	166.603F	7.083	27.484	160.526F	2,964	15,262.20	22,156.50	0.778	0.78	0.998	0.838
13.82	201,464.07	156.5	166.599F	7.088	27.475	160.511F	2,965	15,263.86	22,163.55	0.778	0.78	0.998	0.838
13.83	201,621.32	156.5	166.594F	7.094	27.467	160.496F	2,966	15,265.52	22,170.60	0.778	0.78	0.998	0.838
13.84	201,778.58	156.5	166.589F	7.099	27.458	160.482F	2,967	15,267.19	22,177.66	0.778	0.78	0.998	0.838
13.85	201,935.86	156.5	166.584F	7.104	27.45	160.467F	2,968	15,268.85	22,184.71	0.778	0.78	0.998	0.838
13.86	202,093.16	156.5	166.580F	7.109	27.441	160.452F	2,969	15,270.52	22,191.77	0.779	0.78	0.998	0.839
13.87	202,250.47	156.5	166.575F	7.114	27.433	160.437F	2,970	15,272.19	22,198.83	0.779	0.78	0.998	0.839
13.88	202,407.80	156.6	166.570F	7.12	27.424	160.423F	2,971	15,273.86	22,205.89	0.779	0.78	0.998	0.839
13.89	202,565.15	156.6	166.565F	7.125	27.416	160.408F	2,972	15,275.53	22,212.96	0.779	0.78	0.998	0.839
13.9	202,722.52	156.6	166.560F	7.13	27.407	160.393F	2,973	15,277.20	22,220.02	0.779	0.78	0.998	0.839
13.91	202,879.90	156.6	166.556F	7.135	27.399	160.378F	2,974	15,278.87	22,227.09	0.779	0.78	0.998	0.839
13.92	203,037.30	156.6	166.551F	7.141	27.391	160.363F	2,975	15,280.55	22,234.16	0.779	0.78	0.998	0.839
13.93	203,194.72	156.6	166.546F	7.146	27.382	160.348F	2,976	15,282.23	22,241.23	0.779	0.78	0.998	0.839
13.94	203,352.15	156.7	166.541F	7.151	27.374	160.333F	2,977	15,283.91	22,248.30	0.779	0.78	0.998	0.839
13.95	203,509.61	156.7	166.536F	7.156	27.366	160.319F	2,978	15,285.59	22,255.38	0.779	0.78	0.998	0.839
13.96	203,667.08	156.7	166.532F	7.162	27.357	160.304F	2,979	15,287.27	22,262.46	0.779	0.78	0.998	0.84
13.97	203,824.57	156.7	166.527F	7.167	27.349	160.289F	2,980	15,288.95	22,269.54	0.779	0.78	0.998	0.84
13.98	203,982.07	156.7	166.522F	7.172	27.341	160.274F	2,981	15,290.63	22,276.62	0.779	0.78	0.998	0.84
13.99	204,139.59	156.7	166.517F	7.177	27.333	160.259F	2,982	15,292.32	22,283.70	0.779	0.78	0.998	0.84
14	204,297.13	156.8	166.512F	7.183	27.324	160.244F	2,983	15,294.01	22,290.78	0.779	0.78	0.998	0.84
14.01	204,454.69	156.8	166.508F	7.188	27.316	160.229F	2,984	15,295.69	22,297.88	0.779	0.78	0.998	0.84
14.02	204,612.27	156.8	166.503F	7.193	27.308	160.214F	2,985	15,297.37	22,304.98	0.779	0.78	0.998	0.84
14.03	204,769.86	156.8	166.498F	7.198	27.3	160.199F	2,986	15,299.06	22,312.08	0.779	0.781	0.998	0.84
14.04	204,927.47	156.8	166.493F	7.203	27.292	160.184F	2,987	15,300.75	22,319.18	0.779	0.781	0.998	0.84
14.05	205,085.10	156.9	166.488F	7.209	27.284	160.169F	2,988	15,302.44	22,326.29	0.779	0.781	0.998	0.84
14.06	205,242.74	156.9	166.483F	7.214	27.275	160.154F	2,989	15,304.13	22,333.40	0.779	0.781	0.998	0.84
14.07	205,400.41	156.9	166.478F	7.219	27.267	160.139F	2,990	15,305.82	22,340.51	0.779	0.781	0.998	0.841
14.08	205,558.09	156.9	166.474F	7.224	27.259	160.124F	2,991	15,307.51	22,347.62	0.779	0.781	0.998	0.841
14.09	205,715.78	156.9	166.469F	7.23	27.251	160.109F	2,992	15,309.21	22,354.74	0.78	0.781	0.998	0.841
14.1	205,873.50	156.9	166.464F	7.235	27.243	160.094F	2,993	15,310.90	22,361.86	0.78	0.781	0.998	0.841
14.11	206,031.23	157	166.459F	7.24	27.235	160.079F	2,994	15,312.60	22,368.98	0.78	0.781	0.998	0.841
14.12	206,188.98	157	166.454F	7.245	27.227	160.064F	2,995	15,314.29	22,376.10	0.78	0.781	0.998	0.841
14.13	206,346.75	157	166.449F	7.251	27.219	160.049F	2,996	15,315.99	22,383.22	0.78	0.781	0.998	0.841
14.14	206,504.54	157	166.444F	7.256	27.211	160.034F	2,997	15,317.69	22,390.35	0.78	0.781	0.998	0.841
14.15	206,662.34	157	166.439F	7.261	27.204	160.019F	2,998	15,319.39	22,397.48	0.78	0.781	0.998	0.841
14.16	206,820.16	157	166.434F	7.266	27.196	160.004F	2,999	15,321.09	22,404.61	0.78	0.781	0.998	0.841

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
14.17	206,978.00	157.1	166.429F	7.272	27.188	159.988F	3,000	15,322.80	22,411.74	0.78	0.781	0.998	0.841
14.18	207,135.86	157.1	166.425F	7.277	27.18	159.974F	3,002	15,324.47	22,418.86	0.78	0.781	0.998	0.842
14.19	207,293.73	157.1	166.420F	7.282	27.172	159.959F	3,003	15,326.13	22,425.99	0.78	0.781	0.998	0.842
14.2	207,451.62	157.1	166.415F	7.287	27.164	159.944F	3,004	15,327.80	22,433.11	0.78	0.781	0.998	0.842
14.21	207,609.53	157.1	166.410F	7.293	27.156	159.929F	3,005	15,329.47	22,440.24	0.78	0.781	0.998	0.842
14.22	207,767.46	157.1	166.405F	7.298	27.148	159.914F	3,006	15,331.14	22,447.37	0.78	0.781	0.998	0.842
14.23	207,925.40	157.2	166.400F	7.303	27.14	159.899F	3,007	15,332.81	22,454.50	0.78	0.781	0.998	0.842
14.24	208,083.36	157.2	166.395F	7.308	27.132	159.884F	3,008	15,334.48	22,461.63	0.78	0.781	0.998	0.842
14.25	208,241.34	157.2	166.390F	7.314	27.124	159.869F	3,009	15,336.15	22,468.77	0.78	0.781	0.998	0.842
14.26	208,399.33	157.2	166.385F	7.319	27.117	159.854F	3,010	15,337.83	22,475.90	0.78	0.782	0.998	0.842
14.27	208,557.35	157.2	166.380F	7.324	27.109	159.839F	3,011	15,339.50	22,483.04	0.78	0.782	0.998	0.842
14.28	208,715.38	157.2	166.375F	7.329	27.101	159.824F	3,012	15,341.19	22,490.18	0.78	0.782	0.998	0.842
14.29	208,873.43	157.3	166.370F	7.335	27.093	159.809F	3,013	15,342.87	22,497.32	0.78	0.782	0.998	0.843
14.3	209,031.49	157.3	166.365F	7.34	27.086	159.794F	3,014	15,344.56	22,504.46	0.78	0.782	0.998	0.843
14.31	209,189.57	157.3	166.360F	7.345	27.078	159.780F	3,015	15,346.25	22,511.61	0.78	0.782	0.998	0.843
14.32	209,347.67	157.3	166.355F	7.35	27.07	159.765F	3,016	15,347.94	22,518.76	0.781	0.782	0.998	0.843
14.33	209,505.79	157.3	166.350F	7.355	27.062	159.750F	3,017	15,349.64	22,525.90	0.781	0.782	0.998	0.843
14.34	209,663.93	157.4	166.345F	7.361	27.055	159.735F	3,018	15,351.33	22,533.05	0.781	0.782	0.998	0.843
14.35	209,822.08	157.4	166.340F	7.366	27.047	159.720F	3,019	15,353.04	22,540.21	0.781	0.782	0.998	0.843
14.36	209,980.25	157.4	166.335F	7.371	27.04	159.705F	3,020	15,354.74	22,547.36	0.781	0.782	0.998	0.843
14.37	210,138.44	157.4	166.330F	7.376	27.032	159.690F	3,021	15,356.45	22,554.51	0.781	0.782	0.998	0.843
14.38	210,296.65	157.4	166.325F	7.382	27.024	159.675F	3,022	15,358.16	22,561.67	0.781	0.782	0.998	0.843
14.39	210,454.87	157.4	166.320F	7.387	27.017	159.660F	3,023	15,359.87	22,568.83	0.781	0.782	0.998	0.843
14.4	210,613.12	157.5	166.315F	7.392	27.009	159.645F	3,024	15,361.58	22,575.99	0.781	0.782	0.998	0.844
14.41	210,771.38	157.5	166.310F	7.397	27.002	159.630F	3,025	15,363.29	22,583.15	0.781	0.782	0.998	0.844
14.42	210,929.65	157.5	166.305F	7.403	26.994	159.615F	3,026	15,365.01	22,590.31	0.781	0.782	0.998	0.844
14.43	211,087.95	157.5	166.300F	7.408	26.987	159.600F	3,027	15,366.73	22,597.48	0.781	0.782	0.998	0.844
14.44	211,246.26	157.5	166.295F	7.413	26.98	159.585F	3,028	15,368.45	22,604.64	0.781	0.782	0.998	0.844
14.45	211,404.59	157.5	166.290F	7.418	26.972	159.570F	3,029	15,370.16	22,611.81	0.781	0.782	0.998	0.844
14.46	211,562.94	157.6	166.285F	7.424	26.965	159.555F	3,031	15,371.88	22,618.98	0.781	0.782	0.998	0.844
14.47	211,721.31	157.6	166.280F	7.429	26.957	159.540F	3,032	15,373.61	22,626.15	0.781	0.782	0.998	0.844
14.48	211,879.70	157.6	166.275F	7.434	26.95	159.524F	3,033	15,375.33	22,633.32	0.781	0.782	0.998	0.844
14.49	212,038.10	157.6	166.270F	7.439	26.943	159.509F	3,034	15,377.05	22,640.50	0.781	0.783	0.998	0.844
14.5	212,196.52	157.6	166.265F	7.445	26.935	159.494F	3,035	15,378.78	22,647.67	0.781	0.783	0.998	0.845
14.51	212,354.96	157.7	166.260F	7.45	26.928	159.479F	3,036	15,380.51	22,654.85	0.781	0.783	0.998	0.845
14.52	212,513.42	157.7	166.255F	7.455	26.921	159.464F	3,037	15,382.23	22,662.03	0.781	0.783	0.998	0.845
14.53	212,671.89	157.7	166.250F	7.46	26.913	159.449F	3,038	15,383.96	22,669.21	0.781	0.783	0.998	0.845
14.54	212,830.39	157.7	166.245F	7.466	26.906	159.434F	3,039	15,385.69	22,676.39	0.781	0.783	0.998	0.845
14.55	212,988.90	157.7	166.239F	7.471	26.899	159.419F	3,040	15,387.43	22,683.57	0.782	0.783	0.998	0.845
14.56	213,147.43	157.7	166.234F	7.476	26.892	159.403F	3,041	15,389.16	22,690.76	0.782	0.783	0.998	0.845
14.57	213,305.98	157.8	166.229F	7.481	26.885	159.388F	3,042	15,390.89	22,697.94	0.782	0.783	0.998	0.845
14.58	213,464.54	157.8	166.224F	7.487	26.878	159.373F	3,043	15,392.63	22,705.13	0.782	0.783	0.998	0.845
14.59	213,623.13	157.8	166.219F	7.492	26.87	159.358F	3,044	15,394.37	22,712.32	0.782	0.783	0.998	0.845
14.6	213,781.73	157.8	166.214F	7.497	26.863	159.343F	3,045	15,396.11	22,719.51	0.782	0.783	0.998	0.845
14.61	213,940.35	157.8	166.209F	7.502	26.856	159.328F	3,046	15,397.85	22,726.70	0.782	0.783	0.998	0.846
14.62	214,098.99	157.8	166.204F	7.508	26.849	159.312F	3,048	15,399.59	22,733.90	0.782	0.783	0.998	0.846
14.63	214,257.64	157.9	166.199F	7.513	26.842	159.297F	3,049	15,401.33	22,741.09	0.782	0.783	0.998	0.846
14.64	214,416.32	157.9	166.193F	7.518	26.835	159.282F	3,050	15,403.07	22,748.29	0.782	0.783	0.998	0.846
14.65	214,575.01	157.9	166.188F	7.523	26.828	159.267F	3,051	15,404.82	22,755.48	0.782	0.783	0.998	0.846
14.66	214,733.72	157.9	166.183F	7.529	26.821	159.251F	3,052	15,406.56	22,762.68	0.782	0.783	0.998	0.846
14.67	214,892.45	157.9	166.178F	7.534	26.814	159.236F	3,053	15,408.31	22,769.88	0.782	0.783	0.998	0.846
14.68	215,051.20	158	166.173F	7.539	26.807	159.221F	3,054	15,410.06	22,777.07	0.782	0.783	0.998	0.846
14.69	215,209.97	158	166.168F	7.544	26.8	159.206F	3,055	15,411.80	22,784.28	0.782	0.783	0.998	0.846
14.7	215,368.75	158	166.163F	7.55	26.793	159.190F	3,056	15,413.56	22,791.48	0.782	0.783	0.998	0.846
14.71	215,527.55	158	166.158F	7.555	26.786	159.175F	3,057	15,415.31	22,798.68	0.782	0.783	0.998	0.847
14.72	215,686.37	158	166.152F	7.56	26.779	159.160F	3,058	15,417.06	22,805.88	0.782	0.783	0.998	0.847
14.73	215,845.21	158	166.147F	7.565	26.773	159.144F	3,059	15,418.82	22,813.09	0.782	0.784	0.998	0.847
14.74	216,004.07	158.1	166.142F	7.571	26.766	159.129F	3,060	15,420.58	22,820.30	0.782	0.784	0.998	0.847
14.75	216,162.95	158.1	166.137F	7.576	26.759	159.114F	3,061	15,422.34	22,827.50	0.782	0.784	0.998	0.847
14.76	216,321.84	158.1	166.132F	7.581	26.752	159.098F	3,063	15,424.10	22,834.71	0.782	0.784	0.998	0.847
14.77	216,480.75	158.1	166.126F	7.586	26.745	159.083F	3,064	15,425.86	22,841.93	0.783	0.784	0.998	0.847
14.78	216,639.68	158.1	166.121F	7.592	26.739	159.068F	3,065	15,427.62	22,849.14	0.783	0.784	0.998	0.847
14.79	216,798.63	158.2	166.116F	7.597	26.732	159.052F	3,066	15,429.39	22,856.35	0.783	0.784	0.998	0.847
14.8	216,957.60	158.2	166.111F	7.602	26.725	159.037F	3,067	15,431.16	22,863.57	0.783	0.784	0.998	0.847

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
14.81	217,116.59	158.2	166.106F	7.608	26.718	159.021F	3,068	15,432.92	22,870.79	0.783	0.784	0.998	0.847
14.82	217,275.59	158.2	166.101F	7.613	26.712	159.006F	3,069	15,434.69	22,878.00	0.783	0.784	0.998	0.848
14.83	217,434.62	158.2	166.095F	7.618	26.705	158.991F	3,070	15,436.46	22,885.22	0.783	0.784	0.998	0.848
14.84	217,593.66	158.2	166.090F	7.623	26.698	158.975F	3,071	15,438.23	22,892.45	0.783	0.784	0.998	0.848
14.85	217,752.72	158.3	166.085F	7.629	26.692	158.960F	3,072	15,440.01	22,899.67	0.783	0.784	0.998	0.848
14.86	217,911.78	158.3	166.080F	7.634	26.685	158.944F	3,073	15,441.77	22,906.89	0.783	0.784	0.998	0.848
14.87	218,070.86	158.3	166.074F	7.639	26.679	158.929F	3,074	15,443.54	22,914.10	0.783	0.784	0.998	0.848
14.88	218,229.96	158.3	166.069F	7.644	26.672	158.914F	3,076	15,445.30	22,921.32	0.783	0.784	0.998	0.848
14.89	218,389.07	158.3	166.064F	7.65	26.665	158.898F	3,077	15,447.06	22,928.54	0.783	0.784	0.998	0.848
14.9	218,548.20	158.4	166.059F	7.655	26.659	158.883F	3,078	15,448.83	22,935.76	0.783	0.784	0.998	0.848
14.91	218,707.36	158.4	166.054F	7.66	26.652	158.868F	3,079	15,450.59	22,942.97	0.783	0.784	0.998	0.848
14.92	218,866.53	158.4	166.048F	7.665	26.646	158.852F	3,080	15,452.36	22,950.19	0.783	0.784	0.998	0.849
14.93	219,025.71	158.4	166.043F	7.671	26.639	158.837F	3,081	15,454.12	22,957.41	0.783	0.784	0.998	0.849
14.94	219,184.92	158.4	166.038F	7.676	26.633	158.822F	3,082	15,455.89	22,964.62	0.783	0.784	0.998	0.849
14.95	219,344.14	158.4	166.033F	7.681	26.626	158.806F	3,083	15,457.66	22,971.84	0.783	0.784	0.998	0.849
14.96	219,503.39	158.5	166.027F	7.686	26.62	158.791F	3,084	15,459.42	22,979.06	0.783	0.785	0.998	0.849
14.97	219,662.65	158.5	166.022F	7.692	26.614	158.776F	3,085	15,461.19	22,986.28	0.783	0.785	0.998	0.849
14.98	219,821.92	158.5	166.017F	7.697	26.607	158.760F	3,086	15,462.95	22,993.50	0.783	0.785	0.998	0.849
14.99	219,981.22	158.5	166.012F	7.702	26.601	158.745F	3,087	15,464.72	23,000.71	0.783	0.785	0.998	0.849
15	220,140.54	158.5	166.006F	7.707	26.594	158.730F	3,088	15,466.48	23,007.93	0.784	0.785	0.998	0.849
15.01	220,299.87	158.5	166.001F	7.713	26.588	158.714F	3,090	15,468.25	23,015.15	0.784	0.785	0.998	0.849
15.02	220,459.22	158.6	165.996F	7.718	26.582	158.699F	3,091	15,470.02	23,022.37	0.784	0.785	0.998	0.85
15.03	220,618.59	158.6	165.991F	7.723	26.575	158.684F	3,092	15,471.78	23,029.59	0.784	0.785	0.998	0.85
15.04	220,777.98	158.6	165.985F	7.728	26.569	158.668F	3,093	15,473.55	23,036.80	0.784	0.785	0.998	0.85
15.05	220,937.38	158.6	165.980F	7.734	26.563	158.653F	3,094	15,475.32	23,044.02	0.784	0.785	0.998	0.85
15.06	221,096.81	158.6	165.975F	7.739	26.557	158.638F	3,095	15,477.08	23,051.24	0.784	0.785	0.998	0.85
15.07	221,256.25	158.7	165.969F	7.744	26.55	158.622F	3,096	15,478.85	23,058.46	0.784	0.785	0.998	0.85
15.08	221,415.71	158.7	165.964F	7.749	26.544	158.607F	3,097	15,480.62	23,065.68	0.784	0.785	0.998	0.85
15.09	221,575.19	158.7	165.959F	7.755	26.538	158.592F	3,098	15,482.39	23,072.89	0.784	0.785	0.998	0.85
15.1	221,734.69	158.7	165.953F	7.76	26.532	158.576F	3,099	15,484.16	23,080.11	0.784	0.785	0.998	0.85
15.11	221,894.20	158.7	165.948F	7.765	26.526	158.561F	3,100	15,485.92	23,087.33	0.784	0.785	0.998	0.85
15.12	222,053.74	158.7	165.943F	7.771	26.52	158.546F	3,101	15,487.69	23,094.55	0.784	0.785	0.998	0.851
15.13	222,213.29	158.8	165.938F	7.776	26.513	158.531F	3,102	15,489.46	23,101.77	0.784	0.785	0.998	0.851
15.14	222,372.86	158.8	165.932F	7.781	26.507	158.515F	3,104	15,491.23	23,108.98	0.784	0.785	0.998	0.851
15.15	222,532.45	158.8	165.927F	7.786	26.501	158.500F	3,105	15,493.00	23,116.20	0.784	0.785	0.998	0.851
15.16	222,692.05	158.8	165.922F	7.792	26.495	158.485F	3,106	15,494.77	23,123.42	0.784	0.785	0.998	0.851
15.17	222,851.68	158.8	165.916F	7.797	26.489	158.469F	3,107	15,496.54	23,130.64	0.784	0.785	0.998	0.851
15.18	223,011.32	158.9	165.911F	7.802	26.483	158.454F	3,108	15,498.32	23,137.86	0.784	0.785	0.999	0.851
15.19	223,170.98	158.9	165.906F	7.807	26.477	158.439F	3,109	15,500.10	23,145.07	0.784	0.786	0.999	0.851
15.2	223,330.66	158.9	165.900F	7.813	26.471	158.424F	3,110	15,501.88	23,152.29	0.784	0.786	0.999	0.851
15.21	223,490.36	158.9	165.895F	7.818	26.465	158.409F	3,111	15,503.67	23,159.51	0.784	0.786	0.999	0.851
15.22	223,650.08	158.9	165.889F	7.823	26.459	158.394F	3,112	15,505.45	23,166.73	0.784	0.786	0.999	0.851
15.23	223,809.81	158.9	165.884F	7.828	26.453	158.378F	3,113	15,507.24	23,173.94	0.785	0.786	0.999	0.852
15.24	223,969.56	159	165.879F	7.834	26.447	158.363F	3,114	15,509.02	23,181.16	0.785	0.786	0.999	0.852
15.25	224,129.34	159	165.873F	7.839	26.441	158.348F	3,115	15,510.81	23,188.38	0.785	0.786	0.999	0.852
15.26	224,289.13	159	165.868F	7.844	26.436	158.333F	3,117	15,512.59	23,195.60	0.785	0.786	0.999	0.852
15.27	224,448.93	159	165.863F	7.849	26.43	158.318F	3,118	15,514.38	23,202.81	0.785	0.786	0.999	0.852
15.28	224,608.76	159	165.857F	7.855	26.424	158.303F	3,119	15,516.17	23,210.03	0.785	0.786	0.999	0.852
15.29	224,768.61	159.1	165.852F	7.86	26.418	158.287F	3,120	15,517.96	23,217.25	0.785	0.786	0.999	0.852
15.3	224,928.47	159.1	165.847F	7.865	26.412	158.272F	3,121	15,519.74	23,224.46	0.785	0.786	0.999	0.852
15.31	225,088.35	159.1	165.841F	7.871	26.406	158.257F	3,122	15,521.53	23,231.68	0.785	0.786	0.999	0.852
15.32	225,248.25	159.1	165.836F	7.876	26.401	158.242F	3,123	15,523.32	23,238.89	0.785	0.786	0.999	0.852
15.33	225,408.17	159.1	165.830F	7.881	26.395	158.227F	3,124	15,525.11	23,246.11	0.785	0.786	0.999	0.853
15.34	225,568.11	159.2	165.825F	7.886	26.389	158.212F	3,125	15,526.90	23,253.33	0.785	0.786	0.999	0.853
15.35	225,728.07	159.2	165.820F	7.892	26.383	158.196F	3,126	15,528.69	23,260.54	0.785	0.786	0.999	0.853
15.36	225,888.04	159.2	165.814F	7.897	26.378	158.181F	3,127	15,530.48	23,267.76	0.785	0.786	0.999	0.853
15.37	226,048.03	159.2	165.809F	7.902	26.372	158.166F	3,128	15,532.27	23,274.98	0.785	0.786	0.999	0.853
15.38	226,208.04	159.2	165.803F	7.907	26.366	158.151F	3,129	15,534.06	23,282.19	0.785	0.786	0.999	0.853
15.39	226,368.07	159.2	165.798F	7.913	26.361	158.136F	3,131	15,535.85	23,289.41	0.785	0.786	0.999	0.853
15.4	226,528.12	159.3	165.793F	7.918	26.355	158.121F	3,132	15,537.64	23,296.63	0.785	0.786	0.999	0.853
15.41	226,688.19	159.3	165.787F	7.923	26.349	158.106F	3,133	15,539.42	23,303.84	0.785	0.786	0.999	0.853
15.42	226,848.27	159.3	165.782F	7.928	26.344	158.090F	3,134	15,541.21	23,311.06	0.785	0.787	0.999	0.853
15.43	227,008.38	159.3	165.776F	7.934	26.338	158.075F	3,135	15,543.00	23,318.28	0.785	0.787	0.999	0.854
15.44	227,168.50	159.3	165.771F	7.939	26.333	158.060F	3,136	15,544.79	23,325.49	0.785	0.787	0.999	0.854

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
15.45	227,328.64	159.4	165.765F	7.944	26.327	158.045F	3,137	15,546.58	23,332.71	0.785	0.787	0.999	0.854
15.46	227,488.80	159.4	165.760F	7.95	26.322	158.030F	3,138	15,548.37	23,339.93	0.786	0.787	0.999	0.854
15.47	227,648.97	159.4	165.754F	7.955	26.316	158.015F	3,139	15,550.16	23,347.14	0.786	0.787	0.999	0.854
15.48	227,809.17	159.4	165.749F	7.96	26.31	158.000F	3,140	15,551.95	23,354.36	0.786	0.787	0.999	0.854
15.49	227,969.38	159.4	165.744F	7.965	26.305	157.985F	3,141	15,553.74	23,361.58	0.786	0.787	0.999	0.854
15.5	228,129.62	159.4	165.738F	7.971	26.3	157.970F	3,142	15,555.53	23,368.79	0.786	0.787	0.999	0.854
15.51	228,289.87	159.5	165.733F	7.976	26.294	157.954F	3,144	15,557.32	23,376.01	0.786	0.787	0.999	0.854
15.52	228,450.14	159.5	165.727F	7.981	26.289	157.939F	3,145	15,559.11	23,383.23	0.786	0.787	0.999	0.854
15.53	228,610.42	159.5	165.722F	7.986	26.283	157.924F	3,146	15,560.90	23,390.44	0.786	0.787	0.999	0.855
15.54	228,770.73	159.5	165.716F	7.992	26.278	157.909F	3,147	15,562.69	23,397.66	0.786	0.787	0.999	0.855
15.55	228,931.05	159.5	165.711F	7.997	26.272	157.894F	3,148	15,564.48	23,404.88	0.786	0.787	0.999	0.855
15.56	229,091.40	159.6	165.705F	8.002	26.267	157.879F	3,149	15,566.27	23,412.09	0.786	0.787	0.999	0.855
15.57	229,251.76	159.6	165.700F	8.008	26.262	157.864F	3,150	15,568.06	23,419.31	0.786	0.787	0.999	0.855
15.58	229,412.14	159.6	165.694F	8.013	26.256	157.849F	3,151	15,569.85	23,426.53	0.786	0.787	0.999	0.855
15.59	229,572.54	159.6	165.689F	8.018	26.251	157.834F	3,152	15,571.64	23,433.75	0.786	0.787	0.999	0.855
15.6	229,732.95	159.6	165.683F	8.023	26.246	157.819F	3,153	15,573.43	23,440.96	0.786	0.787	0.999	0.855
15.61	229,893.39	159.6	165.678F	8.029	26.24	157.803F	3,154	15,575.22	23,448.18	0.786	0.787	0.999	0.855
15.62	230,053.84	159.7	165.672F	8.034	26.235	157.788F	3,155	15,577.01	23,455.40	0.786	0.787	0.999	0.855
15.63	230,214.32	159.7	165.667F	8.039	26.23	157.773F	3,156	15,578.80	23,462.62	0.786	0.787	0.999	0.856
15.64	230,374.81	159.7	165.661F	8.044	26.225	157.758F	3,158	15,580.59	23,469.83	0.786	0.787	0.999	0.856
15.65	230,535.32	159.7	165.656F	8.05	26.219	157.743F	3,159	15,582.38	23,477.05	0.786	0.788	0.999	0.856
15.66	230,695.84	159.7	165.650F	8.055	26.214	157.728F	3,160	15,584.17	23,484.27	0.786	0.788	0.999	0.856
15.67	230,856.39	159.8	165.645F	8.06	26.209	157.713F	3,161	15,585.96	23,491.49	0.786	0.788	0.999	0.856
15.68	231,016.95	159.8	165.639F	8.066	26.204	157.698F	3,162	15,587.75	23,498.70	0.787	0.788	0.999	0.856
15.69	231,177.54	159.8	165.634F	8.071	26.198	157.683F	3,163	15,589.54	23,505.92	0.787	0.788	0.999	0.856
15.7	231,338.14	159.8	165.628F	8.076	26.193	157.668F	3,164	15,591.33	23,513.14	0.787	0.788	0.999	0.856
15.71	231,498.76	159.8	165.623F	8.081	26.188	157.653F	3,165	15,593.12	23,520.36	0.787	0.788	0.999	0.856
15.72	231,659.40	159.8	165.617F	8.087	26.183	157.638F	3,166	15,594.91	23,527.57	0.787	0.788	0.999	0.856
15.73	231,820.05	159.9	165.612F	8.092	26.178	157.623F	3,167	15,596.69	23,534.79	0.787	0.788	0.999	0.856
15.74	231,980.73	159.9	165.606F	8.097	26.173	157.608F	3,168	15,598.48	23,542.01	0.787	0.788	0.999	0.857
15.75	232,141.42	159.9	165.601F	8.102	26.168	157.593F	3,169	15,600.27	23,549.22	0.787	0.788	0.999	0.857
15.76	232,302.13	159.9	165.595F	8.108	26.163	157.578F	3,170	15,602.06	23,556.44	0.787	0.788	0.999	0.857
15.77	232,462.86	159.9	165.590F	8.113	26.158	157.563F	3,171	15,603.85	23,563.66	0.787	0.788	0.999	0.857
15.78	232,623.61	160	165.584F	8.118	26.153	157.548F	3,173	15,605.64	23,570.87	0.787	0.788	0.999	0.857
15.79	232,784.38	160	165.578F	8.124	26.148	157.533F	3,174	15,607.42	23,578.09	0.787	0.788	0.999	0.857
15.8	232,945.17	160	165.573F	8.129	26.143	157.518F	3,175	15,609.21	23,585.31	0.787	0.788	0.999	0.857
15.81	233,105.97	160	165.567F	8.134	26.138	157.503F	3,176	15,611.00	23,592.52	0.787	0.788	0.999	0.857
15.82	233,266.79	160	165.562F	8.139	26.133	157.488F	3,177	15,612.79	23,599.74	0.787	0.788	0.999	0.857
15.83	233,427.63	160	165.556F	8.145	26.128	157.473F	3,178	15,614.58	23,606.95	0.787	0.788	0.999	0.857
15.84	233,588.49	160.1	165.551F	8.15	26.123	157.458F	3,179	15,616.37	23,614.17	0.787	0.788	0.999	0.858
15.85	233,749.37	160.1	165.545F	8.155	26.118	157.443F	3,180	15,618.16	23,621.39	0.787	0.788	0.999	0.858
15.86	233,910.27	160.1	165.539F	8.161	26.113	157.428F	3,181	15,619.95	23,628.60	0.787	0.788	0.999	0.858
15.87	234,071.18	160.1	165.534F	8.166	26.108	157.413F	3,182	15,621.74	23,635.82	0.787	0.788	0.999	0.858
15.88	234,232.12	160.1	165.528F	8.171	26.103	157.398F	3,183	15,623.52	23,643.03	0.787	0.789	0.999	0.858
15.89	234,393.07	160.2	165.523F	8.176	26.098	157.383F	3,184	15,625.29	23,650.23	0.787	0.789	0.999	0.858
15.9	234,554.04	160.2	165.517F	8.182	26.093	157.368F	3,185	15,627.07	23,657.44	0.787	0.789	0.999	0.858
15.91	234,715.03	160.2	165.511F	8.187	26.088	157.353F	3,186	15,628.85	23,664.64	0.788	0.789	0.999	0.858
15.92	234,876.03	160.2	165.506F	8.192	26.084	157.338F	3,187	15,630.62	23,671.85	0.788	0.789	0.999	0.858
15.93	235,037.06	160.2	165.500F	8.197	26.079	157.323F	3,189	15,632.40	23,679.05	0.788	0.789	0.999	0.858
15.94	235,198.10	160.3	165.495F	8.203	26.074	157.309F	3,190	15,634.18	23,686.26	0.788	0.789	0.999	0.859
15.95	235,359.16	160.3	165.489F	8.208	26.069	157.294F	3,191	15,635.96	23,693.46	0.788	0.789	0.999	0.859
15.96	235,520.24	160.3	165.483F	8.213	26.064	157.279F	3,192	15,637.73	23,700.67	0.788	0.789	0.999	0.859
15.97	235,681.34	160.3	165.478F	8.219	26.06	157.264F	3,193	15,639.51	23,707.87	0.788	0.789	0.999	0.859
15.98	235,842.46	160.3	165.472F	8.224	26.055	157.249F	3,194	15,641.29	23,715.08	0.788	0.789	0.999	0.859
15.99	236,003.59	160.3	165.467F	8.229	26.05	157.234F	3,195	15,643.07	23,722.28	0.788	0.789	0.999	0.859
16	236,164.75	160.4	165.461F	8.234	26.046	157.219F	3,196	15,644.85	23,729.49	0.788	0.789	0.999	0.859
16.01	236,325.92	160.4	165.455F	8.24	26.041	157.205F	3,197	15,646.62	23,736.69	0.788	0.789	0.999	0.859
16.02	236,487.11	160.4	165.450F	8.245	26.036	157.190F	3,198	15,648.40	23,743.90	0.788	0.789	0.999	0.859
16.03	236,648.31	160.4	165.444F	8.25	26.032	157.175F	3,199	15,650.18	23,751.10	0.788	0.789	0.999	0.859
16.04	236,809.54	160.4	165.438F	8.256	26.027	157.160F	3,200	15,651.96	23,758.31	0.788	0.789	0.999	0.86
16.05	236,970.79	160.5	165.433F	8.261	26.022	157.145F	3,201	15,653.74	23,765.51	0.788	0.789	0.999	0.86
16.06	237,132.05	160.5	165.427F	8.266	26.018	157.130F	3,202	15,655.52	23,772.72	0.788	0.789	0.999	0.86
16.07	237,293.33	160.5	165.422F	8.271	26.013	157.116F	3,203	15,657.30	23,779.92	0.788	0.789	0.999	0.86
16.08	237,454.63	160.5	165.416F	8.277	26.008	157.101F	3,204	15,659.08	23,787.13	0.788	0.789	0.999	0.86

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
16.09	237,615.95	160.5	165.410F	8.282	26.004	157.086F	3,205	15,660.86	23,794.33	0.788	0.789	0.999	0.86
16.1	237,777.29	160.5	165.405F	8.287	25.999	157.071F	3,207	15,662.63	23,801.54	0.788	0.79	0.999	0.86
16.11	237,938.64	160.6	165.399F	8.293	25.995	157.056F	3,208	15,664.41	23,808.75	0.788	0.79	0.999	0.86
16.12	238,100.01	160.6	165.393F	8.298	25.99	157.042F	3,209	15,666.20	23,815.95	0.788	0.79	0.999	0.86
16.13	238,261.40	160.6	165.388F	8.303	25.986	157.027F	3,210	15,667.98	23,823.15	0.789	0.79	0.999	0.86
16.14	238,422.81	160.6	165.382F	8.308	25.981	157.012F	3,211	15,669.76	23,830.36	0.789	0.79	0.999	0.861
16.15	238,584.24	160.6	165.376F	8.314	25.977	156.997F	3,212	15,671.54	23,837.56	0.789	0.79	0.999	0.861
16.16	238,745.69	160.7	165.371F	8.319	25.972	156.982F	3,213	15,673.32	23,844.77	0.789	0.79	0.999	0.861
16.17	238,907.16	160.7	165.365F	8.324	25.968	156.968F	3,214	15,675.10	23,851.97	0.789	0.79	0.999	0.861
16.18	239,068.64	160.7	165.359F	8.33	25.963	156.953F	3,215	15,676.88	23,859.18	0.789	0.79	0.999	0.861
16.19	239,230.14	160.7	165.354F	8.335	25.959	156.938F	3,216	15,678.67	23,866.38	0.789	0.79	0.999	0.861
16.2	239,391.66	160.7	165.348F	8.34	25.955	156.923F	3,217	15,680.45	23,873.59	0.789	0.79	0.999	0.861
16.21	239,553.20	160.7	165.342F	8.345	25.95	156.908F	3,218	15,682.24	23,880.79	0.789	0.79	0.999	0.861
16.22	239,714.76	160.8	165.337F	8.351	25.946	156.893F	3,219	15,684.02	23,888.00	0.789	0.79	0.999	0.861
16.23	239,876.33	160.8	165.331F	8.356	25.941	156.879F	3,220	15,685.80	23,895.20	0.789	0.79	0.999	0.861
16.24	240,037.93	160.8	165.325F	8.361	25.937	156.864F	3,221	15,687.59	23,902.41	0.789	0.79	0.999	0.861
16.25	240,199.54	160.8	165.319F	8.367	25.933	156.849F	3,222	15,689.37	23,909.61	0.789	0.79	0.999	0.862
16.26	240,361.17	160.8	165.314F	8.372	25.929	156.834F	3,223	15,691.16	23,916.82	0.789	0.79	0.999	0.862
16.27	240,522.82	160.9	165.308F	8.377	25.924	156.820F	3,224	15,692.94	23,924.02	0.789	0.79	0.999	0.862
16.28	240,684.48	160.9	165.302F	8.382	25.92	156.805F	3,226	15,694.72	23,931.23	0.789	0.79	0.999	0.862
16.29	240,846.17	160.9	165.297F	8.388	25.916	156.790F	3,227	15,696.51	23,938.43	0.789	0.79	0.999	0.862
16.3	241,007.87	160.9	165.291F	8.393	25.911	156.775F	3,228	15,698.29	23,945.64	0.789	0.79	0.999	0.862
16.31	241,169.60	160.9	165.285F	8.398	25.907	156.760F	3,229	15,700.08	23,952.84	0.789	0.79	0.999	0.862
16.32	241,331.34	160.9	165.279F	8.404	25.903	156.746F	3,230	15,701.86	23,960.05	0.789	0.79	0.999	0.862
16.33	241,493.10	161	165.274F	8.409	25.899	156.731F	3,231	15,703.64	23,967.25	0.789	0.791	0.999	0.862
16.34	241,654.88	161	165.268F	8.414	25.895	156.716F	3,232	15,705.43	23,974.46	0.789	0.791	0.999	0.862
16.35	241,816.67	161	165.262F	8.419	25.89	156.701F	3,233	15,707.21	23,981.66	0.79	0.791	0.999	0.863
16.36	241,978.49	161	165.257F	8.425	25.886	156.687F	3,234	15,709.00	23,988.87	0.79	0.791	0.999	0.863
16.37	242,140.32	161	165.251F	8.43	25.882	156.672F	3,235	15,710.78	23,996.07	0.79	0.791	0.999	0.863
16.38	242,302.17	161.1	165.245F	8.435	25.878	156.657F	3,236	15,712.56	24,003.28	0.79	0.791	0.999	0.863
16.39	242,464.04	161.1	165.239F	8.441	25.874	156.642F	3,237	15,714.35	24,010.48	0.79	0.791	0.999	0.863
16.4	242,625.93	161.1	165.234F	8.446	25.87	156.628F	3,238	15,716.13	24,017.69	0.79	0.791	0.999	0.863
16.41	242,787.84	161.1	165.228F	8.451	25.865	156.613F	3,239	15,717.92	24,024.89	0.79	0.791	0.999	0.863
16.42	242,949.76	161.1	165.222F	8.456	25.861	156.598F	3,240	15,719.70	24,032.10	0.79	0.791	0.999	0.863
16.43	243,111.70	161.1	165.216F	8.462	25.857	156.583F	3,241	15,721.49	24,039.30	0.79	0.791	0.999	0.863
16.44	243,273.67	161.2	165.211F	8.467	25.853	156.569F	3,242	15,723.27	24,046.51	0.79	0.791	0.999	0.863
16.45	243,435.65	161.2	165.205F	8.472	25.849	156.554F	3,243	15,725.06	24,053.71	0.79	0.791	0.999	0.864
16.46	243,597.64	161.2	165.199F	8.478	25.845	156.539F	3,244	15,726.84	24,060.91	0.79	0.791	0.999	0.864
16.47	243,759.66	161.2	165.193F	8.483	25.841	156.525F	3,246	15,728.61	24,068.11	0.79	0.791	0.999	0.864
16.48	243,921.70	161.2	165.188F	8.488	25.837	156.510F	3,247	15,730.39	24,075.31	0.79	0.791	0.999	0.864
16.49	244,083.75	161.3	165.182F	8.494	25.833	156.495F	3,248	15,732.16	24,082.50	0.79	0.791	0.999	0.864
16.5	244,245.82	161.3	165.176F	8.499	25.829	156.481F	3,249	15,733.94	24,089.70	0.79	0.791	0.999	0.864
16.51	244,407.91	161.3	165.170F	8.504	25.825	156.466F	3,250	15,735.69	24,096.89	0.79	0.791	0.999	0.864
16.52	244,570.02	161.3	165.164F	8.509	25.821	156.452F	3,251	15,737.45	24,104.07	0.79	0.791	0.999	0.864
16.53	244,732.15	161.3	165.159F	8.515	25.817	156.437F	3,252	15,739.20	24,111.26	0.79	0.791	0.999	0.864
16.54	244,894.29	161.3	165.153F	8.52	25.813	156.423F	3,253	15,740.95	24,118.44	0.79	0.791	0.999	0.864
16.55	245,056.45	161.4	165.147F	8.525	25.809	156.408F	3,254	15,742.70	24,125.63	0.79	0.791	0.999	0.865
16.56	245,218.63	161.4	165.141F	8.531	25.805	156.394F	3,255	15,744.45	24,132.81	0.79	0.792	0.999	0.865
16.57	245,380.83	161.4	165.136F	8.536	25.801	156.379F	3,256	15,746.20	24,140.00	0.79	0.792	0.999	0.865
16.58	245,543.05	161.4	165.130F	8.541	25.797	156.365F	3,257	15,747.95	24,147.18	0.791	0.792	0.999	0.865
16.59	245,705.28	161.4	165.124F	8.546	25.793	156.351F	3,258	15,749.70	24,154.37	0.791	0.792	0.999	0.865
16.6	245,867.53	161.5	165.118F	8.552	25.789	156.336F	3,259	15,751.45	24,161.55	0.791	0.792	0.999	0.865
16.61	246,029.81	161.5	165.112F	8.557	25.785	156.322F	3,260	15,753.20	24,168.74	0.791	0.792	0.999	0.865
16.62	246,192.09	161.5	165.107F	8.562	25.781	156.307F	3,261	15,754.95	24,175.92	0.791	0.792	0.999	0.865
16.63	246,354.40	161.5	165.101F	8.568	25.778	156.293F	3,262	15,756.70	24,183.11	0.791	0.792	0.999	0.865
16.64	246,516.73	161.5	165.095F	8.573	25.774	156.278F	3,263	15,758.45	24,190.29	0.791	0.792	0.999	0.865
16.65	246,679.07	161.5	165.089F	8.578	25.77	156.264F	3,264	15,760.20	24,197.48	0.791	0.792	0.999	0.865
16.66	246,841.43	161.6	165.083F	8.584	25.766	156.250F	3,265	15,761.95	24,204.66	0.791	0.792	0.999	0.866
16.67	247,003.81	161.6	165.078F	8.589	25.762	156.235F	3,266	15,763.70	24,211.85	0.791	0.792	0.999	0.866
16.68	247,166.20	161.6	165.072F	8.594	25.758	156.221F	3,267	15,765.45	24,219.03	0.791	0.792	0.999	0.866
16.69	247,328.62	161.6	165.066F	8.599	25.755	156.206F	3,268	15,767.20	24,226.22	0.791	0.792	0.999	0.866
16.7	247,491.05	161.6	165.060F	8.605	25.751	156.192F	3,269	15,768.95	24,233.40	0.791	0.792	0.999	0.866
16.71	247,653.50	161.6	165.054F	8.61	25.747	156.177F	3,270	15,770.70	24,240.59	0.791	0.792	0.999	0.866
16.72	247,815.97	161.7	165.048F	8.615	25.743	156.163F	3,271	15,772.45	24,247.77	0.791	0.792	0.999	0.866

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
16.73	247,978.46	161.7	165.043F	8.621	25.74	156.149F	3,272	15,774.20	24,254.96	0.791	0.792	0.999	0.866
16.74	248,140.97	161.7	165.037F	8.626	25.736	156.134F	3,273	15,775.95	24,262.14	0.791	0.792	0.999	0.866
16.75	248,303.49	161.7	165.031F	8.631	25.732	156.120F	3,274	15,777.69	24,269.33	0.791	0.792	0.999	0.866
16.76	248,466.03	161.7	165.025F	8.636	25.728	156.106F	3,275	15,779.43	24,276.51	0.791	0.792	0.999	0.867
16.77	248,628.59	161.8	165.019F	8.642	25.725	156.091F	3,277	15,781.17	24,283.70	0.791	0.792	0.999	0.867
16.78	248,791.17	161.8	165.013F	8.647	25.721	156.077F	3,278	15,782.91	24,290.88	0.791	0.793	0.999	0.867
16.79	248,953.76	161.8	165.008F	8.652	25.717	156.063F	3,279	15,784.64	24,298.06	0.791	0.793	0.999	0.867
16.8	249,116.37	161.8	165.002F	8.658	25.713	156.048F	3,280	15,786.38	24,305.24	0.792	0.793	0.999	0.867
16.81	249,279.01	161.8	164.996F	8.663	25.71	156.034F	3,281	15,788.11	24,312.42	0.792	0.793	0.999	0.867
16.82	249,441.65	161.8	164.990F	8.668	25.706	156.020F	3,282	15,789.83	24,319.60	0.792	0.793	0.999	0.867
16.83	249,604.32	161.9	164.984F	8.674	25.702	156.006F	3,283	15,791.56	24,326.78	0.792	0.793	0.999	0.867
16.84	249,767.00	161.9	164.978F	8.679	25.698	155.992F	3,284	15,793.29	24,333.97	0.792	0.793	0.999	0.867
16.85	249,929.71	161.9	164.972F	8.684	25.695	155.978F	3,285	15,795.03	24,341.15	0.792	0.793	0.999	0.867
16.86	250,092.43	161.9	164.967F	8.689	25.691	155.964F	3,286	15,796.77	24,348.34	0.792	0.793	0.999	0.867
16.87	250,255.17	161.9	164.961F	8.695	25.687	155.950F	3,287	15,798.51	24,355.52	0.792	0.793	0.999	0.868
16.88	250,417.92	162	164.955F	8.7	25.684	155.936F	3,288	15,800.26	24,362.71	0.792	0.793	0.999	0.868
16.89	250,580.70	162	164.949F	8.705	25.68	155.922F	3,289	15,802.00	24,369.89	0.792	0.793	0.999	0.868
16.9	250,743.49	162	164.943F	8.711	25.676	155.909F	3,290	15,803.75	24,377.08	0.792	0.793	0.999	0.868
16.91	250,906.30	162	164.937F	8.716	25.673	155.895F	3,291	15,805.51	24,384.27	0.792	0.793	0.999	0.868
16.92	251,069.13	162	164.931F	8.721	25.669	155.881F	3,292	15,807.26	24,391.45	0.792	0.793	0.999	0.868
16.93	251,231.97	162	164.926F	8.727	25.665	155.867F	3,293	15,809.02	24,398.64	0.792	0.793	0.999	0.868
16.94	251,394.84	162.1	164.920F	8.732	25.662	155.854F	3,294	15,810.77	24,405.82	0.792	0.793	0.999	0.868
16.95	251,557.72	162.1	164.914F	8.737	25.658	155.840F	3,295	15,812.53	24,413.01	0.792	0.793	0.999	0.868
16.96	251,720.62	162.1	164.908F	8.742	25.655	155.826F	3,296	15,814.28	24,420.20	0.792	0.793	0.999	0.868
16.97	251,883.54	162.1	164.902F	8.748	25.651	155.812F	3,297	15,816.03	24,427.38	0.792	0.793	0.999	0.869
16.98	252,046.48	162.1	164.896F	8.753	25.647	155.799F	3,298	15,817.79	24,434.57	0.792	0.793	0.999	0.869
16.99	252,209.43	162.2	164.890F	8.758	25.644	155.785F	3,299	15,819.54	24,441.76	0.792	0.793	0.999	0.869
17	252,372.40	162.2	164.884F	8.764	25.64	155.771F	3,300	15,821.29	24,448.94	0.792	0.793	0.999	0.869
17.01	252,535.40	162.2	164.878F	8.769	25.637	155.758F	3,302	15,823.04	24,456.12	0.792	0.794	0.999	0.869
17.02	252,698.40	162.2	164.873F	8.774	25.633	155.744F	3,303	15,824.79	24,463.31	0.793	0.794	0.999	0.869
17.03	252,861.43	162.2	164.867F	8.78	25.63	155.730F	3,304	15,826.54	24,470.49	0.793	0.794	0.999	0.869
17.04	253,024.48	162.2	164.861F	8.785	25.626	155.716F	3,305	15,828.29	24,477.67	0.793	0.794	0.999	0.869
17.05	253,187.54	162.3	164.855F	8.79	25.623	155.703F	3,306	15,830.04	24,484.86	0.793	0.794	0.999	0.869
17.06	253,350.62	162.3	164.849F	8.795	25.619	155.689F	3,307	15,831.80	24,492.04	0.793	0.794	0.999	0.869
17.07	253,513.72	162.3	164.843F	8.801	25.616	155.675F	3,308	15,833.55	24,499.22	0.793	0.794	0.999	0.869
17.08	253,676.84	162.3	164.837F	8.806	25.613	155.662F	3,309	15,835.30	24,506.41	0.793	0.794	0.999	0.87
17.09	253,839.97	162.3	164.831F	8.811	25.609	155.648F	3,310	15,837.05	24,513.59	0.793	0.794	0.999	0.87
17.1	254,003.13	162.3	164.825F	8.817	25.606	155.635F	3,311	15,838.80	24,520.77	0.793	0.794	0.999	0.87
17.11	254,166.30	162.4	164.820F	8.822	25.602	155.621F	3,312	15,840.55	24,527.96	0.793	0.794	0.999	0.87
17.12	254,329.49	162.4	164.814F	8.827	25.599	155.607F	3,313	15,842.30	24,535.14	0.793	0.794	0.999	0.87
17.13	254,492.70	162.4	164.808F	8.833	25.596	155.594F	3,314	15,844.05	24,542.32	0.793	0.794	0.999	0.87
17.14	254,655.92	162.4	164.802F	8.838	25.592	155.580F	3,315	15,845.80	24,549.51	0.793	0.794	0.999	0.87
17.15	254,819.17	162.4	164.796F	8.843	25.589	155.566F	3,316	15,847.55	24,556.69	0.793	0.794	0.999	0.87
17.16	254,982.43	162.5	164.790F	8.849	25.586	155.553F	3,317	15,849.30	24,563.87	0.793	0.794	0.999	0.87
17.17	255,145.71	162.5	164.784F	8.854	25.582	155.539F	3,318	15,851.05	24,571.06	0.793	0.794	0.999	0.87
17.18	255,309.01	162.5	164.778F	8.859	25.579	155.525F	3,319	15,852.80	24,578.24	0.793	0.794	0.999	0.871
17.19	255,472.32	162.5	164.772F	8.864	25.576	155.512F	3,320	15,854.55	24,585.42	0.793	0.794	0.999	0.871
17.2	255,635.66	162.5	164.766F	8.87	25.572	155.498F	3,321	15,856.30	24,592.61	0.793	0.794	0.999	0.871
17.21	255,799.01	162.5	164.760F	8.875	25.569	155.484F	3,322	15,858.05	24,599.79	0.793	0.794	0.999	0.871
17.22	255,962.38	162.6	164.754F	8.88	25.566	155.471F	3,323	15,859.81	24,606.97	0.793	0.794	0.999	0.871
17.23	256,125.77	162.6	164.748F	8.886	25.563	155.457F	3,324	15,861.56	24,614.16	0.793	0.795	0.999	0.871
17.24	256,289.18	162.6	164.743F	8.891	25.559	155.444F	3,326	15,863.31	24,621.34	0.794	0.795	0.999	0.871
17.25	256,452.60	162.6	164.737F	8.896	25.556	155.430F	3,327	15,865.07	24,628.52	0.794	0.795	0.999	0.871
17.26	256,616.04	162.6	164.731F	8.902	25.553	155.416F	3,328	15,866.82	24,635.70	0.794	0.795	0.999	0.871
17.27	256,779.50	162.7	164.725F	8.907	25.55	155.403F	3,329	15,868.57	24,642.89	0.794	0.795	0.999	0.871
17.28	256,942.98	162.7	164.719F	8.912	25.546	155.389F	3,330	15,870.33	24,650.07	0.794	0.795	0.999	0.872
17.29	257,106.48	162.7	164.713F	8.918	25.543	155.376F	3,331	15,872.08	24,657.25	0.794	0.795	0.999	0.872
17.3	257,270.00	162.7	164.707F	8.923	25.54	155.362F	3,332	15,873.83	24,664.43	0.794	0.795	0.999	0.872
17.31	257,433.53	162.7	164.701F	8.928	25.537	155.349F	3,333	15,875.59	24,671.62	0.794	0.795	0.999	0.872
17.32	257,597.08	162.7	164.695F	8.933	25.534	155.335F	3,334	15,877.34	24,678.80	0.794	0.795	0.999	0.872
17.33	257,760.65	162.8	164.689F	8.939	25.531	155.321F	3,335	15,879.09	24,685.98	0.794	0.795	0.999	0.872
17.34	257,924.24	162.8	164.683F	8.944	25.528	155.308F	3,336	15,880.85	24,693.16	0.794	0.795	0.999	0.872
17.35	258,087.84	162.8	164.677F	8.949	25.525	155.294F	3,337	15,882.60	24,700.35	0.794	0.795	0.999	0.872
17.36	258,251.47	162.8	164.671F	8.955	25.521	155.281F	3,338	15,884.35	24,707.53	0.794	0.795	0.999	0.872

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
17.37	258,415.11	162.8	164.665F	8.96	25.518	155.267F	3,339	15,886.11	24,714.71	0.794	0.795	0.999	0.872
17.38	258,578.77	162.9	164.659F	8.965	25.515	155.254F	3,340	15,887.86	24,721.89	0.794	0.795	0.999	0.872
17.39	258,742.45	162.9	164.653F	8.971	25.512	155.240F	3,341	15,889.62	24,729.08	0.794	0.795	0.999	0.873
17.4	258,906.14	162.9	164.647F	8.976	25.509	155.227F	3,342	15,891.37	24,736.26	0.794	0.795	0.999	0.873
17.41	259,069.86	162.9	164.641F	8.981	25.506	155.213F	3,343	15,893.12	24,743.44	0.794	0.795	0.999	0.873
17.42	259,233.59	162.9	164.635F	8.987	25.503	155.199F	3,344	15,894.88	24,750.63	0.794	0.795	0.999	0.873
17.43	259,397.34	162.9	164.630F	8.992	25.5	155.186F	3,345	15,896.63	24,757.81	0.794	0.795	0.999	0.873
17.44	259,561.11	163	164.624F	8.997	25.497	155.172F	3,346	15,898.38	24,764.99	0.794	0.795	0.999	0.873
17.45	259,724.89	163	164.618F	9.002	25.494	155.159F	3,347	15,900.14	24,772.17	0.794	0.795	0.999	0.873
17.46	259,888.70	163	164.612F	9.008	25.491	155.145F	3,348	15,901.89	24,779.36	0.794	0.796	0.999	0.873
17.47	260,052.52	163	164.606F	9.013	25.488	155.132F	3,349	15,903.65	24,786.54	0.795	0.796	0.999	0.873
17.48	260,216.36	163	164.600F	9.018	25.485	155.118F	3,351	15,905.40	24,793.72	0.795	0.796	0.999	0.873
17.49	260,380.22	163	164.594F	9.024	25.482	155.105F	3,352	15,907.15	24,800.91	0.795	0.796	0.999	0.874
17.5	260,544.10	163.1	164.588F	9.029	25.479	155.091F	3,353	15,908.89	24,808.08	0.795	0.796	0.999	0.874
17.51	260,707.99	163.1	164.582F	9.034	25.476	155.078F	3,354	15,910.63	24,815.25	0.795	0.796	0.999	0.874
17.52	260,871.91	163.1	164.576F	9.04	25.473	155.065F	3,355	15,912.36	24,822.42	0.795	0.796	0.999	0.874
17.53	261,035.84	163.1	164.570F	9.045	25.471	155.051F	3,356	15,914.09	24,829.59	0.795	0.796	0.999	0.874
17.54	261,199.79	163.1	164.564F	9.05	25.468	155.038F	3,357	15,915.83	24,836.76	0.795	0.796	0.999	0.874
17.55	261,363.75	163.2	164.558F	9.056	25.465	155.024F	3,358	15,917.56	24,843.94	0.795	0.796	0.999	0.874
17.56	261,527.74	163.2	164.552F	9.061	25.462	155.011F	3,359	15,919.30	24,851.11	0.795	0.796	0.999	0.874
17.57	261,691.74	163.2	164.546F	9.066	25.459	154.998F	3,360	15,921.03	24,858.28	0.795	0.796	0.999	0.874
17.58	261,855.76	163.2	164.540F	9.072	25.456	154.984F	3,361	15,922.76	24,865.45	0.795	0.796	0.999	0.874
17.59	262,019.80	163.2	164.534F	9.077	25.453	154.971F	3,362	15,924.50	24,872.62	0.795	0.796	0.999	0.874
17.6	262,183.85	163.2	164.528F	9.082	25.45	154.958F	3,363	15,926.23	24,879.79	0.795	0.796	0.999	0.875
17.61	262,347.93	163.3	164.522F	9.087	25.448	154.944F	3,364	15,927.97	24,886.96	0.795	0.796	0.999	0.875
17.62	262,512.02	163.3	164.516F	9.093	25.445	154.931F	3,365	15,929.70	24,894.14	0.795	0.796	0.999	0.875
17.63	262,676.13	163.3	164.510F	9.098	25.442	154.917F	3,366	15,931.43	24,901.31	0.795	0.796	0.999	0.875
17.64	262,840.26	163.3	164.504F	9.103	25.439	154.904F	3,367	15,933.17	24,908.48	0.795	0.796	0.999	0.875
17.65	263,004.40	163.3	164.498F	9.109	25.436	154.891F	3,368	15,934.90	24,915.65	0.795	0.796	0.999	0.875
17.66	263,168.57	163.4	164.492F	9.114	25.433	154.877F	3,369	15,936.64	24,922.82	0.795	0.796	0.999	0.875
17.67	263,332.75	163.4	164.486F	9.119	25.431	154.864F	3,370	15,938.37	24,929.99	0.795	0.796	0.999	0.875
17.68	263,496.95	163.4	164.480F	9.125	25.428	154.851F	3,371	15,940.11	24,937.17	0.795	0.797	0.999	0.875
17.69	263,661.16	163.4	164.474F	9.13	25.425	154.837F	3,372	15,941.84	24,944.34	0.796	0.797	0.999	0.875
17.7	263,825.40	163.4	164.468F	9.135	25.422	154.824F	3,373	15,943.57	24,951.51	0.796	0.797	0.999	0.876
17.71	263,989.65	163.4	164.462F	9.141	25.42	154.811F	3,374	15,945.31	24,958.68	0.796	0.797	0.999	0.876
17.72	264,153.92	163.5	164.456F	9.146	25.417	154.797F	3,375	15,947.04	24,965.85	0.796	0.797	0.999	0.876
17.73	264,318.21	163.5	164.450F	9.151	25.414	154.784F	3,376	15,948.78	24,973.03	0.796	0.797	0.999	0.876
17.74	264,482.52	163.5	164.444F	9.157	25.412	154.771F	3,377	15,950.51	24,980.20	0.796	0.797	0.999	0.876
17.75	264,646.84	163.5	164.438F	9.162	25.409	154.757F	3,378	15,952.25	24,987.37	0.796	0.797	0.999	0.876
17.76	264,811.19	163.5	164.432F	9.167	25.406	154.744F	3,379	15,953.98	24,994.54	0.796	0.797	0.999	0.876
17.77	264,975.55	163.5	164.426F	9.173	25.404	154.731F	3,380	15,955.72	25,001.71	0.796	0.797	0.999	0.876
17.78	265,139.92	163.6	164.420F	9.178	25.401	154.718F	3,381	15,957.45	25,008.89	0.796	0.797	0.999	0.876
17.79	265,304.32	163.6	164.414F	9.183	25.398	154.704F	3,382	15,959.19	25,016.06	0.796	0.797	0.999	0.876
17.8	265,468.73	163.6	164.408F	9.188	25.396	154.691F	3,383	15,960.92	25,023.23	0.796	0.797	0.999	0.876
17.81	265,633.17	163.6	164.402F	9.194	25.393	154.678F	3,384	15,962.65	25,030.40	0.796	0.797	0.999	0.877
17.82	265,797.62	163.6	164.396F	9.199	25.391	154.664F	3,386	15,964.39	25,037.57	0.796	0.797	0.999	0.877
17.83	265,962.08	163.7	164.390F	9.204	25.388	154.651F	3,387	15,966.12	25,044.75	0.796	0.797	0.999	0.877
17.84	266,126.57	163.7	164.384F	9.21	25.385	154.638F	3,388	15,967.86	25,051.92	0.796	0.797	0.999	0.877
17.85	266,291.07	163.7	164.378F	9.215	25.383	154.625F	3,389	15,969.58	25,059.08	0.796	0.797	0.999	0.877
17.86	266,455.60	163.7	164.372F	9.22	25.38	154.611F	3,390	15,971.29	25,066.23	0.796	0.797	0.999	0.877
17.87	266,620.13	163.7	164.366F	9.226	25.378	154.598F	3,391	15,972.99	25,073.37	0.796	0.797	0.999	0.877
17.88	266,784.69	163.7	164.360F	9.231	25.375	154.586F	3,392	15,974.69	25,080.52	0.796	0.797	0.999	0.877
17.89	266,949.26	163.8	164.354F	9.236	25.373	154.573F	3,393	15,976.39	25,087.66	0.796	0.797	0.999	0.877
17.9	267,113.86	163.8	164.347F	9.242	25.37	154.560F	3,394	15,978.09	25,094.80	0.796	0.798	0.999	0.877
17.91	267,278.47	163.8	164.341F	9.247	25.367	154.547F	3,395	15,979.79	25,101.95	0.797	0.798	0.999	0.878
17.92	267,443.09	163.8	164.335F	9.252	25.365	154.534F	3,396	15,981.49	25,109.09	0.797	0.798	0.999	0.878
17.93	267,607.74	163.8	164.329F	9.258	25.362	154.521F	3,397	15,983.19	25,116.23	0.797	0.798	0.999	0.878
17.94	267,772.40	163.8	164.323F	9.263	25.36	154.508F	3,398	15,984.89	25,123.38	0.797	0.798	0.999	0.878
17.95	267,937.08	163.9	164.317F	9.268	25.358	154.495F	3,399	15,986.59	25,130.52	0.797	0.798	0.999	0.878
17.96	268,101.77	163.9	164.311F	9.274	25.355	154.482F	3,400	15,988.29	25,137.66	0.797	0.798	0.999	0.878
17.97	268,266.49	163.9	164.305F	9.279	25.353	154.469F	3,401	15,989.99	25,144.81	0.797	0.798	0.999	0.878
17.98	268,431.22	163.9	164.299F	9.284	25.35	154.456F	3,402	15,991.69	25,151.95	0.797	0.798	0.999	0.878
17.99	268,595.97	163.9	164.293F	9.29	25.348	154.443F	3,403	15,993.39	25,159.09	0.797	0.798	0.999	0.878
18	268,760.74	163.9	164.287F	9.295	25.345	154.430F	3,404	15,995.09	25,166.24	0.797	0.798	0.999	0.878

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
18.01	268,925.52	164	164.281F	9.3	25.343	154.417F	3,405	15,996.78	25,173.38	0.797	0.798	0.999	0.878
18.02	269,090.32	164	164.275F	9.305	25.34	154.404F	3,406	15,998.48	25,180.51	0.797	0.798	0.999	0.879
18.03	269,255.14	164	164.269F	9.311	25.338	154.392F	3,407	16,000.18	25,187.65	0.797	0.798	0.999	0.879
18.04	269,419.98	164	164.263F	9.316	25.336	154.379F	3,408	16,001.88	25,194.79	0.797	0.798	0.999	0.879
18.05	269,584.84	164	164.257F	9.321	25.333	154.366F	3,409	16,003.59	25,201.92	0.797	0.798	0.999	0.879
18.06	269,749.71	164.1	164.251F	9.327	25.331	154.353F	3,410	16,005.29	25,209.06	0.797	0.798	0.999	0.879
18.07	269,914.60	164.1	164.245F	9.332	25.329	154.340F	3,411	16,006.99	25,216.20	0.797	0.798	0.999	0.879
18.08	270,079.51	164.1	164.239F	9.337	25.326	154.328F	3,412	16,008.69	25,223.33	0.797	0.798	0.999	0.879
18.09	270,244.43	164.1	164.233F	9.343	25.324	154.315F	3,413	16,010.39	25,230.47	0.797	0.798	0.999	0.879
18.1	270,409.37	164.1	164.227F	9.348	25.322	154.302F	3,414	16,012.09	25,237.61	0.797	0.798	0.999	0.879
18.11	270,574.33	164.1	164.220F	9.353	25.319	154.289F	3,415	16,013.80	25,244.74	0.797	0.798	0.999	0.879
18.12	270,739.31	164.2	164.214F	9.359	25.317	154.276F	3,416	16,015.50	25,251.88	0.797	0.798	0.999	0.879
18.13	270,904.31	164.2	164.208F	9.364	25.315	154.264F	3,417	16,017.20	25,259.02	0.798	0.799	0.999	0.88
18.14	271,069.32	164.2	164.202F	9.369	25.312	154.251F	3,418	16,018.90	25,266.15	0.798	0.799	0.999	0.88
18.15	271,234.35	164.2	164.196F	9.375	25.31	154.238F	3,419	16,020.61	25,273.29	0.798	0.799	0.999	0.88
18.16	271,399.40	164.2	164.190F	9.38	25.308	154.225F	3,420	16,022.31	25,280.43	0.798	0.799	0.999	0.88
18.17	271,564.46	164.2	164.184F	9.385	25.306	154.213F	3,421	16,024.02	25,287.56	0.798	0.799	0.999	0.88
18.18	271,729.55	164.3	164.178F	9.391	25.304	154.200F	3,422	16,025.73	25,294.70	0.798	0.799	0.999	0.88
18.19	271,894.65	164.3	164.172F	9.396	25.301	154.187F	3,423	16,027.45	25,301.84	0.798	0.799	0.999	0.88
18.2	272,059.77	164.3	164.166F	9.401	25.299	154.175F	3,424	16,029.16	25,308.98	0.798	0.799	0.999	0.88
18.21	272,224.90	164.3	164.160F	9.407	25.297	154.162F	3,425	16,030.88	25,316.11	0.798	0.799	0.999	0.88
18.22	272,390.06	164.3	164.154F	9.412	25.295	154.149F	3,426	16,032.59	25,323.25	0.798	0.799	0.999	0.88
18.23	272,555.23	164.4	164.148F	9.417	25.293	154.137F	3,427	16,034.30	25,330.39	0.798	0.799	0.999	0.881
18.24	272,720.42	164.4	164.142F	9.423	25.29	154.124F	3,428	16,036.02	25,337.53	0.798	0.799	0.999	0.881
18.25	272,885.63	164.4	164.136F	9.428	25.288	154.111F	3,429	16,037.73	25,344.66	0.798	0.799	0.999	0.881
18.26	273,050.85	164.4	164.129F	9.433	25.286	154.099F	3,430	16,039.44	25,351.80	0.798	0.799	0.999	0.881
18.27	273,216.09	164.4	164.123F	9.439	25.284	154.086F	3,431	16,041.16	25,358.94	0.798	0.799	0.999	0.881
18.28	273,381.35	164.4	164.117F	9.444	25.282	154.073F	3,432	16,042.87	25,366.08	0.798	0.799	0.999	0.881
18.29	273,546.63	164.5	164.111F	9.449	25.28	154.061F	3,433	16,044.59	25,373.21	0.798	0.799	0.999	0.881
18.3	273,711.93	164.5	164.105F	9.455	25.278	154.048F	3,434	16,046.30	25,380.35	0.798	0.799	0.999	0.881
18.31	273,877.24	164.5	164.099F	9.46	25.276	154.035F	3,435	16,048.01	25,387.48	0.798	0.799	0.999	0.881
18.32	274,042.57	164.5	164.093F	9.465	25.274	154.023F	3,436	16,049.72	25,394.62	0.798	0.799	0.999	0.881
18.33	274,207.92	164.5	164.087F	9.471	25.272	154.010F	3,437	16,051.43	25,401.76	0.798	0.799	0.999	0.881
18.34	274,373.29	164.5	164.081F	9.476	25.27	153.997F	3,438	16,053.15	25,408.89	0.798	0.799	0.999	0.882
18.35	274,538.67	164.6	164.075F	9.481	25.268	153.985F	3,439	16,054.86	25,416.03	0.799	0.8	0.999	0.882
18.36	274,704.07	164.6	164.069F	9.487	25.265	153.972F	3,440	16,056.57	25,423.16	0.799	0.8	0.999	0.882
18.37	274,869.49	164.6	164.063F	9.492	25.263	153.960F	3,441	16,058.28	25,430.30	0.799	0.8	0.999	0.882
18.38	275,034.93	164.6	164.057F	9.497	25.261	153.947F	3,442	16,059.99	25,437.44	0.799	0.8	0.999	0.882
18.39	275,200.39	164.6	164.050F	9.502	25.259	153.934F	3,443	16,061.70	25,444.57	0.799	0.8	0.999	0.882
18.4	275,365.86	164.7	164.044F	9.508	25.257	153.922F	3,444	16,063.42	25,451.71	0.799	0.8	0.999	0.882
18.41	275,531.35	164.7	164.038F	9.513	25.256	153.909F	3,445	16,065.13	25,458.84	0.799	0.8	0.999	0.882
18.42	275,696.86	164.7	164.032F	9.518	25.254	153.897F	3,446	16,066.84	25,465.98	0.799	0.8	0.999	0.882
18.43	275,862.38	164.7	164.026F	9.524	25.252	153.884F	3,447	16,068.55	25,473.12	0.799	0.8	0.999	0.882
18.44	276,027.93	164.7	164.020F	9.529	25.25	153.871F	3,448	16,070.27	25,480.25	0.799	0.8	0.999	0.882
18.45	276,193.49	164.7	164.014F	9.534	25.248	153.859F	3,449	16,071.98	25,487.39	0.799	0.8	0.999	0.883
18.46	276,359.07	164.8	164.008F	9.54	25.246	153.846F	3,450	16,073.69	25,494.52	0.799	0.8	0.999	0.883
18.47	276,524.66	164.8	164.002F	9.545	25.244	153.834F	3,451	16,075.40	25,501.66	0.799	0.8	0.999	0.883
18.48	276,690.28	164.8	163.996F	9.55	25.242	153.821F	3,452	16,077.11	25,508.80	0.799	0.8	0.999	0.883
18.49	276,855.91	164.8	163.990F	9.556	25.24	153.809F	3,453	16,078.83	25,515.93	0.799	0.8	0.999	0.883
18.5	277,021.56	164.8	163.983F	9.561	25.238	153.796F	3,454	16,080.54	25,523.07	0.799	0.8	0.999	0.883
18.51	277,187.23	164.8	163.977F	9.566	25.236	153.783F	3,455	16,082.25	25,530.21	0.799	0.8	0.999	0.883
18.52	277,352.91	164.9	163.971F	9.572	25.234	153.771F	3,456	16,083.98	25,537.35	0.799	0.8	0.999	0.883
18.53	277,518.61	164.9	163.965F	9.577	25.233	153.759F	3,457	16,085.71	25,544.49	0.799	0.8	0.999	0.883
18.54	277,684.33	164.9	163.959F	9.582	25.231	153.746F	3,458	16,087.44	25,551.64	0.799	0.8	0.999	0.883
18.55	277,850.07	164.9	163.953F	9.588	25.229	153.734F	3,459	16,089.17	25,558.78	0.799	0.8	0.999	0.884
18.56	278,015.83	164.9	163.947F	9.593	25.227	153.721F	3,460	16,090.90	25,565.92	0.799	0.8	0.999	0.884
18.57	278,181.60	164.9	163.941F	9.598	25.225	153.709F	3,461	16,092.60	25,573.06	0.8	0.801	0.999	0.884
18.58	278,347.39	165	163.935F	9.604	25.223	153.697F	3,462	16,094.30	25,580.20	0.8	0.801	0.999	0.884
18.59	278,513.20	165	163.929F	9.609	25.221	153.685F	3,463	16,096.00	25,587.34	0.8	0.801	0.999	0.884
18.6	278,679.03	165	163.922F	9.614	25.22	153.672F	3,464	16,097.70	25,594.47	0.8	0.801	0.999	0.884
18.61	278,844.87	165	163.916F	9.62	25.218	153.660F	3,465	16,099.40	25,601.61	0.8	0.801	0.999	0.884
18.62	279,010.74	165	163.910F	9.625	25.216	153.648F	3,466	16,101.11	25,608.75	0.8	0.801	0.999	0.884
18.63	279,176.62	165.1	163.904F	9.63	25.214	153.636F	3,467	16,102.81	25,615.89	0.8	0.801	0.999	0.884
18.64	279,342.51	165.1	163.898F	9.636	25.212	153.624F	3,468	16,104.52	25,623.03	0.8	0.801	0.999	0.884

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
18.65	279,508.43	165.1	163.892F	9.641	25.21	153.612F	3,469	16,106.24	25,630.17	0.8	0.801	0.999	0.884
18.66	279,674.36	165.1	163.886F	9.646	25.209	153.600F	3,470	16,107.96	25,637.31	0.8	0.801	0.999	0.885
18.67	279,840.31	165.1	163.880F	9.652	25.207	153.588F	3,471	16,109.68	25,644.45	0.8	0.801	0.999	0.885
18.68	280,006.28	165.1	163.874F	9.657	25.205	153.575F	3,472	16,111.40	25,651.59	0.8	0.801	0.999	0.885
18.69	280,172.27	165.2	163.867F	9.662	25.203	153.563F	3,473	16,113.12	25,658.72	0.8	0.801	0.999	0.885
18.7	280,338.27	165.2	163.861F	9.668	25.201	153.551F	3,474	16,114.84	25,665.86	0.8	0.801	0.999	0.885
18.71	280,504.29	165.2	163.855F	9.673	25.2	153.539F	3,475	16,116.55	25,673.00	0.8	0.801	0.999	0.885
18.72	280,670.33	165.2	163.849F	9.678	25.198	153.528F	3,476	16,118.24	25,680.12	0.8	0.801	0.999	0.885
18.73	280,836.39	165.2	163.843F	9.684	25.196	153.516F	3,477	16,119.90	25,687.22	0.8	0.801	0.999	0.885
18.74	281,002.46	165.2	163.837F	9.689	25.194	153.504F	3,478	16,121.57	25,694.31	0.8	0.801	0.999	0.885
18.75	281,168.55	165.3	163.831F	9.694	25.193	153.493F	3,479	16,123.23	25,701.41	0.8	0.801	0.999	0.885
18.76	281,334.66	165.3	163.825F	9.7	25.191	153.481F	3,480	16,124.89	25,708.51	0.8	0.801	0.999	0.885
18.77	281,500.78	165.3	163.819F	9.705	25.189	153.470F	3,481	16,126.55	25,715.61	0.8	0.801	0.999	0.886
18.78	281,666.92	165.3	163.812F	9.71	25.187	153.458F	3,482	16,128.22	25,722.71	0.8	0.801	0.999	0.886
18.79	281,833.08	165.3	163.806F	9.716	25.186	153.446F	3,483	16,129.88	25,729.80	0.801	0.801	0.999	0.886
18.8	281,999.26	165.3	163.800F	9.721	25.184	153.435F	3,484	16,131.54	25,736.90	0.801	0.802	0.999	0.886
18.81	282,165.45	165.4	163.794F	9.726	25.182	153.423F	3,485	16,133.21	25,744.00	0.801	0.802	0.999	0.886
18.82	282,331.67	165.4	163.788F	9.732	25.18	153.412F	3,486	16,134.87	25,751.10	0.801	0.802	0.999	0.886
18.83	282,497.89	165.4	163.782F	9.737	25.179	153.400F	3,486	16,136.53	25,758.20	0.801	0.802	0.999	0.886
18.84	282,664.14	165.4	163.776F	9.742	25.177	153.388F	3,487	16,138.20	25,765.29	0.801	0.802	0.999	0.886
18.85	282,830.40	165.4	163.770F	9.748	25.175	153.377F	3,488	16,139.86	25,772.39	0.801	0.802	0.999	0.886
18.86	282,996.68	165.5	163.764F	9.753	25.174	153.365F	3,489	16,141.52	25,779.49	0.801	0.802	0.999	0.886
18.87	283,162.98	165.5	163.757F	9.758	25.172	153.354F	3,490	16,143.19	25,786.59	0.801	0.802	0.999	0.887
18.88	283,329.29	165.5	163.751F	9.764	25.17	153.342F	3,491	16,144.85	25,793.69	0.801	0.802	0.999	0.887
18.89	283,495.62	165.5	163.745F	9.769	25.169	153.331F	3,492	16,146.51	25,800.78	0.801	0.802	0.999	0.887
18.9	283,661.97	165.5	163.739F	9.774	25.167	153.319F	3,493	16,148.18	25,807.88	0.801	0.802	0.999	0.887
18.91	283,828.34	165.5	163.733F	9.78	25.165	153.308F	3,494	16,149.84	25,814.98	0.801	0.802	0.999	0.887
18.92	283,994.72	165.6	163.727F	9.785	25.164	153.296F	3,495	16,151.50	25,822.08	0.801	0.802	0.999	0.887
18.93	284,161.12	165.6	163.721F	9.79	25.162	153.284F	3,496	16,153.17	25,829.18	0.801	0.802	0.999	0.887
18.94	284,327.54	165.6	163.715F	9.796	25.161	153.273F	3,497	16,154.83	25,836.27	0.801	0.802	0.999	0.887
18.95	284,493.97	165.6	163.708F	9.801	25.159	153.261F	3,498	16,156.49	25,843.37	0.801	0.802	0.999	0.887
18.96	284,660.42	165.6	163.702F	9.806	25.157	153.250F	3,499	16,158.16	25,850.47	0.801	0.802	0.999	0.887
18.97	284,826.89	165.6	163.696F	9.812	25.156	153.238F	3,500	16,159.82	25,857.57	0.801	0.802	0.999	0.887
18.98	284,993.38	165.7	163.690F	9.817	25.154	153.227F	3,501	16,161.48	25,864.67	0.801	0.802	0.999	0.888
18.99	285,159.88	165.7	163.684F	9.822	25.153	153.215F	3,502	16,163.15	25,871.77	0.801	0.802	0.999	0.888
19	285,326.40	165.7	163.678F	9.828	25.151	153.204F	3,503	16,164.81	25,878.86	0.801	0.802	0.999	0.888
19.01	285,492.94	165.7	163.672F	9.833	25.15	153.192F	3,504	16,166.48	25,885.97	0.802	0.802	0.999	0.888
19.02	285,659.49	165.7	163.666F	9.838	25.148	153.181F	3,505	16,168.11	25,893.04	0.802	0.803	0.999	0.888
19.03	285,826.07	165.7	163.659F	9.844	25.146	153.170F	3,506	16,169.73	25,900.10	0.802	0.803	0.999	0.888
19.04	285,992.65	165.8	163.653F	9.849	25.145	153.159F	3,507	16,171.35	25,907.17	0.802	0.803	0.999	0.888
19.05	286,159.26	165.8	163.647F	9.854	25.143	153.148F	3,508	16,172.97	25,914.23	0.802	0.803	0.999	0.888
19.06	286,325.88	165.8	163.641F	9.86	25.142	153.137F	3,509	16,174.59	25,921.30	0.802	0.803	0.999	0.888
19.07	286,492.52	165.8	163.635F	9.865	25.14	153.126F	3,510	16,176.21	25,928.36	0.802	0.803	0.999	0.888
19.08	286,659.17	165.8	163.629F	9.871	25.139	153.115F	3,511	16,177.83	25,935.43	0.802	0.803	0.999	0.888
19.09	286,825.85	165.8	163.623F	9.876	25.137	153.103F	3,512	16,179.45	25,942.49	0.802	0.803	0.999	0.888
19.1	286,992.53	165.9	163.617F	9.881	25.136	153.092F	3,513	16,181.07	25,949.56	0.802	0.803	0.999	0.889
19.11	287,159.24	165.9	163.611F	9.887	25.134	153.081F	3,514	16,182.69	25,956.62	0.802	0.803	0.999	0.889
19.12	287,325.96	165.9	163.604F	9.892	25.133	153.070F	3,515	16,184.31	25,963.68	0.802	0.803	0.999	0.889
19.13	287,492.70	165.9	163.598F	9.897	25.131	153.059F	3,516	16,185.91	25,970.74	0.802	0.803	0.999	0.889
19.14	287,659.46	165.9	163.592F	9.903	25.129	153.048F	3,516	16,187.51	25,977.79	0.802	0.803	0.999	0.889
19.15	287,826.23	165.9	163.586F	9.908	25.128	153.038F	3,517	16,189.11	25,984.85	0.802	0.803	0.999	0.889
19.16	287,993.02	166	163.580F	9.913	25.126	153.027F	3,518	16,190.70	25,991.90	0.802	0.803	0.999	0.889
19.17	288,159.82	166	163.574F	9.919	25.125	153.016F	3,519	16,192.30	25,998.96	0.802	0.803	0.999	0.889
19.18	288,326.64	166	163.568F	9.924	25.123	153.005F	3,520	16,193.90	26,006.01	0.802	0.803	0.999	0.889
19.19	288,493.48	166	163.562F	9.929	25.122	152.994F	3,521	16,195.50	26,013.07	0.802	0.803	0.999	0.889
19.2	288,660.33	166	163.555F	9.935	25.12	152.983F	3,522	16,197.11	26,020.13	0.802	0.803	0.999	0.889
19.21	288,827.20	166	163.549F	9.94	25.119	152.972F	3,523	16,198.72	26,027.18	0.802	0.803	0.999	0.89
19.22	288,994.09	166.1	163.543F	9.945	25.117	152.962F	3,524	16,200.33	26,034.24	0.802	0.803	0.999	0.89
19.23	289,161.00	166.1	163.537F	9.951	25.116	152.951F	3,525	16,201.94	26,041.30	0.803	0.803	0.999	0.89
19.24	289,327.92	166.1	163.531F	9.956	25.115	152.940F	3,526	16,203.55	26,048.36	0.803	0.804	0.999	0.89
19.25	289,494.86	166.1	163.525F	9.961	25.113	152.929F	3,527	16,205.16	26,055.41	0.803	0.804	0.999	0.89
19.26	289,661.81	166.1	163.519F	9.967	25.112	152.919F	3,528	16,206.76	26,062.47	0.803	0.804	0.999	0.89
19.27	289,828.78	166.1	163.513F	9.972	25.11	152.908F	3,529	16,208.37	26,069.53	0.803	0.804	0.999	0.89
19.28	289,995.77	166.2	163.507F	9.977	25.109	152.897F	3,530	16,209.98	26,076.58	0.803	0.804	0.999	0.89

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
19.29	290,162.77	166.2	163.500F	9.983	25.107	152.887F	3,531	16,211.59	26,083.64	0.803	0.804	0.999	0.89
19.3	290,329.79	166.2	163.494F	9.988	25.106	152.876F	3,532	16,213.19	26,090.70	0.803	0.804	0.999	0.89
19.31	290,496.83	166.2	163.488F	9.993	25.105	152.865F	3,533	16,214.80	26,097.75	0.803	0.804	0.999	0.89
19.32	290,663.88	166.2	163.482F	9.999	25.103	152.854F	3,534	16,216.41	26,104.81	0.803	0.804	0.999	0.891
19.33	290,830.95	166.2	163.476F	10.004	25.102	152.844F	3,535	16,217.98	26,111.85	0.803	0.804	0.999	0.891
19.34	290,998.04	166.3	163.470F	10.009	25.1	152.833F	3,535	16,219.55	26,118.88	0.803	0.804	0.999	0.891
19.35	291,165.14	166.3	163.464F	10.015	25.099	152.823F	3,536	16,221.12	26,125.91	0.803	0.804	0.999	0.891
19.36	291,332.26	166.3	163.458F	10.02	25.097	152.813F	3,537	16,222.69	26,132.95	0.803	0.804	0.999	0.891
19.37	291,499.40	166.3	163.451F	10.025	25.096	152.802F	3,538	16,224.26	26,139.98	0.803	0.804	0.999	0.891
19.38	291,666.55	166.3	163.445F	10.031	25.095	152.792F	3,539	16,225.83	26,147.01	0.803	0.804	0.999	0.891
19.39	291,833.72	166.3	163.439F	10.036	25.093	152.781F	3,540	16,227.37	26,154.03	0.803	0.804	0.999	0.891
19.4	292,000.90	166.3	163.433F	10.041	25.092	152.771F	3,541	16,228.91	26,161.04	0.803	0.804	0.999	0.891
19.41	292,168.10	166.4	163.427F	10.047	25.09	152.761F	3,542	16,230.45	26,168.05	0.803	0.804	0.999	0.891
19.42	292,335.32	166.4	163.421F	10.052	25.089	152.751F	3,543	16,231.98	26,175.07	0.803	0.804	0.999	0.891
19.43	292,502.55	166.4	163.415F	10.057	25.087	152.741F	3,544	16,233.52	26,182.08	0.803	0.804	0.999	0.891
19.44	292,669.79	166.4	163.409F	10.063	25.086	152.730F	3,545	16,235.06	26,189.09	0.803	0.804	0.999	0.892
19.45	292,837.06	166.4	163.403F	10.068	25.085	152.720F	3,546	16,236.61	26,196.11	0.804	0.804	0.999	0.892
19.46	293,004.34	166.4	163.396F	10.073	25.083	152.710F	3,547	16,238.12	26,203.10	0.804	0.805	0.999	0.892
19.47	293,171.63	166.5	163.390F	10.079	25.082	152.701F	3,547	16,239.62	26,210.08	0.804	0.805	0.999	0.892
19.48	293,338.94	166.5	163.384F	10.084	25.08	152.691F	3,548	16,241.13	26,217.07	0.804	0.805	0.999	0.892
19.49	293,506.27	166.5	163.378F	10.089	25.079	152.681F	3,549	16,242.63	26,224.05	0.804	0.805	0.999	0.892
19.5	293,673.61	166.5	163.372F	10.095	25.078	152.671F	3,550	16,244.13	26,231.04	0.804	0.805	0.999	0.892
19.51	293,840.96	166.5	163.366F	10.1	25.076	152.662F	3,551	16,245.64	26,238.02	0.804	0.805	0.999	0.892
19.52	294,008.34	166.5	163.360F	10.106	25.075	152.652F	3,552	16,247.14	26,245.01	0.804	0.805	0.999	0.892
19.53	294,175.72	166.5	163.354F	10.111	25.073	152.642F	3,553	16,248.63	26,251.99	0.804	0.805	0.999	0.892
19.54	294,343.13	166.6	163.348F	10.116	25.072	152.633F	3,554	16,250.12	26,258.96	0.804	0.805	0.999	0.892
19.55	294,510.55	166.6	163.342F	10.122	25.071	152.623F	3,555	16,251.61	26,265.94	0.804	0.805	0.999	0.892
19.56	294,677.98	166.6	163.335F	10.127	25.069	152.613F	3,555	16,253.10	26,272.92	0.804	0.805	0.999	0.893
19.57	294,845.43	166.6	163.329F	10.132	25.068	152.604F	3,556	16,254.59	26,279.89	0.804	0.805	0.999	0.893
19.58	295,012.89	166.6	163.323F	10.138	25.066	152.594F	3,557	16,256.08	26,286.87	0.804	0.805	0.999	0.893
19.59	295,180.37	166.6	163.317F	10.143	25.065	152.584F	3,558	16,257.57	26,293.85	0.804	0.805	0.999	0.893
19.6	295,347.87	166.7	163.311F	10.148	25.064	152.575F	3,559	16,259.06	26,300.83	0.804	0.805	0.999	0.893
19.61	295,515.38	166.7	163.305F	10.154	25.062	152.565F	3,560	16,260.55	26,307.80	0.804	0.805	0.999	0.893
19.62	295,682.91	166.7	163.299F	10.159	25.061	152.555F	3,561	16,262.04	26,314.78	0.804	0.805	0.999	0.893
19.63	295,850.45	166.7	163.293F	10.164	25.06	152.546F	3,562	16,263.53	26,321.76	0.804	0.805	0.999	0.893
19.64	296,018.01	166.7	163.287F	10.17	25.058	152.536F	3,563	16,265.02	26,328.73	0.804	0.805	0.999	0.893
19.65	296,185.58	166.7	163.281F	10.175	25.057	152.526F	3,564	16,266.51	26,335.71	0.804	0.805	0.999	0.893
19.66	296,353.17	166.7	163.274F	10.18	25.056	152.517F	3,564	16,268.00	26,342.69	0.804	0.805	0.999	0.893
19.67	296,520.77	166.8	163.268F	10.186	25.055	152.507F	3,565	16,269.49	26,349.66	0.805	0.805	0.999	0.893
19.68	296,688.39	166.8	163.262F	10.191	25.053	152.497F	3,566	16,270.98	26,356.64	0.805	0.805	0.999	0.894
19.69	296,856.02	166.8	163.256F	10.196	25.052	152.488F	3,567	16,272.47	26,363.62	0.805	0.806	0.999	0.894
19.7	297,023.67	166.8	163.250F	10.202	25.051	152.478F	3,568	16,273.96	26,370.60	0.805	0.806	0.999	0.894
19.71	297,191.34	166.8	163.244F	10.207	25.049	152.469F	3,569	16,275.45	26,377.57	0.805	0.806	0.999	0.894
19.72	297,359.02	166.8	163.238F	10.212	25.048	152.459F	3,570	16,276.94	26,384.55	0.805	0.806	0.999	0.894
19.73	297,526.71	166.9	163.232F	10.218	25.047	152.449F	3,571	16,278.43	26,391.53	0.805	0.806	0.999	0.894
19.74	297,694.43	166.9	163.226F	10.223	25.046	152.440F	3,572	16,279.92	26,398.51	0.805	0.806	0.999	0.894
19.75	297,862.15	166.9	163.220F	10.228	25.045	152.430F	3,572	16,281.41	26,405.48	0.805	0.806	0.999	0.894
19.76	298,029.89	166.9	163.214F	10.234	25.043	152.420F	3,573	16,282.90	26,412.46	0.805	0.806	0.999	0.894
19.77	298,197.65	166.9	163.208F	10.239	25.042	152.411F	3,574	16,284.39	26,419.44	0.805	0.806	0.999	0.894
19.78	298,365.43	166.9	163.201F	10.245	25.041	152.401F	3,575	16,285.85	26,426.40	0.805	0.806	0.999	0.894
19.79	298,533.21	166.9	163.195F	10.25	25.04	152.393F	3,576	16,287.25	26,433.30	0.805	0.806	0.999	0.894
19.8	298,701.02	167	163.189F	10.255	25.038	152.384F	3,577	16,288.65	26,440.21	0.805	0.806	0.999	0.894
19.81	298,868.83	167	163.183F	10.261	25.037	152.375F	3,578	16,290.03	26,447.11	0.805	0.806	0.999	0.895
19.82	299,036.66	167	163.177F	10.266	25.036	152.367F	3,578	16,291.40	26,454.00	0.805	0.806	0.999	0.895
19.83	299,204.51	167	163.171F	10.271	25.035	152.358F	3,579	16,292.77	26,460.89	0.805	0.806	0.999	0.895
19.84	299,372.37	167	163.165F	10.277	25.033	152.350F	3,580	16,294.11	26,467.76	0.805	0.806	0.999	0.895
19.85	299,540.24	167	163.159F	10.282	25.032	152.342F	3,581	16,295.43	26,474.62	0.805	0.806	0.999	0.895
19.86	299,708.13	167	163.153F	10.287	25.031	152.333F	3,581	16,296.75	26,481.48	0.805	0.806	0.999	0.895
19.87	299,876.03	167.1	163.147F	10.293	25.03	152.325F	3,582	16,298.06	26,488.33	0.805	0.806	0.999	0.895
19.88	300,043.94	167.1	163.141F	10.298	25.028	152.317F	3,583	16,299.37	26,495.18	0.805	0.806	0.999	0.895
19.89	300,211.87	167.1	163.135F	10.303	25.027	152.309F	3,584	16,300.68	26,502.03	0.806	0.806	0.999	0.895
19.9	300,379.81	167.1	163.129F	10.309	25.026	152.301F	3,585	16,301.98	26,508.88	0.806	0.806	0.999	0.895
19.91	300,547.76	167.1	163.123F	10.314	25.024	152.293F	3,585	16,303.29	26,515.73	0.806	0.807	0.999	0.895
19.92	300,715.73	167.1	163.116F	10.319	25.023	152.286F	3,586	16,304.52	26,522.53	0.806	0.807	0.999	0.895

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
19.93	300,883.71	167.1	163.110F	10.325	25.022	152.279F	3,587	16,305.74	26,529.32	0.806	0.807	0.999	0.895
19.94	301,051.70	167.1	163.104F	10.33	25.02	152.271F	3,587	16,306.96	26,536.11	0.806	0.807	0.999	0.895
19.95	301,219.71	167.2	163.098F	10.335	25.019	152.264F	3,588	16,308.18	26,542.90	0.806	0.807	0.999	0.896
19.96	301,387.72	167.2	163.092F	10.341	25.018	152.257F	3,589	16,309.40	26,549.69	0.806	0.807	0.999	0.896
19.97	301,555.75	167.2	163.086F	10.346	25.017	152.249F	3,590	16,310.61	26,556.48	0.806	0.807	0.999	0.896
19.98	301,723.80	167.2	163.080F	10.351	25.015	152.242F	3,590	16,311.83	26,563.26	0.806	0.807	0.999	0.896
19.99	301,891.85	167.2	163.074F	10.357	25.014	152.235F	3,591	16,313.05	26,570.05	0.806	0.807	0.999	0.896
20	302,059.92	167.2	163.068F	10.362	25.013	152.227F	3,592	16,314.27	26,576.84	0.806	0.807	0.999	0.896
20.01	302,228.00	167.2	163.062F	10.367	25.011	152.220F	3,592	16,315.49	26,583.63	0.806	0.807	0.999	0.896
20.02	302,396.09	167.2	163.056F	10.373	25.01	152.213F	3,593	16,316.71	26,590.42	0.806	0.807	0.999	0.896
20.03	302,564.20	167.3	163.050F	10.378	25.009	152.206F	3,594	16,317.92	26,597.21	0.806	0.807	0.999	0.896
20.04	302,732.32	167.3	163.044F	10.384	25.008	152.198F	3,595	16,319.14	26,604.00	0.806	0.807	0.999	0.896
20.05	302,900.45	167.3	163.038F	10.389	25.006	152.191F	3,595	16,320.36	26,610.78	0.806	0.807	0.999	0.896
20.06	303,068.60	167.3	163.032F	10.394	25.005	152.184F	3,596	16,321.58	26,617.57	0.806	0.807	0.999	0.896
20.07	303,236.75	167.3	163.026F	10.4	25.004	152.176F	3,597	16,322.80	26,624.36	0.806	0.807	0.999	0.896
20.08	303,404.92	167.3	163.020F	10.405	25.003	152.169F	3,597	16,324.00	26,631.15	0.806	0.807	0.999	0.896
20.09	303,573.10	167.3	163.014F	10.41	25.001	152.162F	3,598	16,325.20	26,637.94	0.806	0.807	0.999	0.896
20.1	303,741.30	167.3	163.008F	10.416	25	152.155F	3,599	16,326.40	26,644.72	0.806	0.807	0.999	0.897
20.11	303,909.50	167.4	163.002F	10.421	24.999	152.148F	3,599	16,327.60	26,651.51	0.807	0.807	0.999	0.897
20.12	304,077.72	167.4	162.996F	10.426	24.998	152.140F	3,600	16,328.80	26,658.30	0.807	0.807	0.999	0.897
20.13	304,245.95	167.4	162.990F	10.432	24.996	152.133F	3,601	16,330.00	26,665.09	0.807	0.808	0.999	0.897
20.14	304,414.20	167.4	162.984F	10.437	24.995	152.126F	3,602	16,331.20	26,671.88	0.807	0.808	0.999	0.897
20.15	304,582.45	167.4	162.978F	10.442	24.994	152.119F	3,602	16,332.39	26,678.66	0.807	0.808	0.999	0.897
20.16	304,750.72	167.4	162.972F	10.448	24.993	152.112F	3,603	16,333.57	26,685.43	0.807	0.808	0.999	0.897
20.17	304,919.00	167.4	162.966F	10.453	24.992	152.105F	3,604	16,334.76	26,692.20	0.807	0.808	0.999	0.897
20.18	305,087.29	167.4	162.960F	10.458	24.99	152.098F	3,604	16,335.94	26,698.98	0.807	0.808	0.999	0.897
20.19	305,255.60	167.5	162.954F	10.464	24.989	152.091F	3,605	16,337.13	26,705.75	0.807	0.808	0.999	0.897
20.2	305,423.92	167.5	162.948F	10.469	24.988	152.084F	3,606	16,338.31	26,712.52	0.807	0.808	0.999	0.897
20.21	305,592.25	167.5	162.942F	10.474	24.987	152.077F	3,606	16,339.50	26,719.30	0.807	0.808	0.999	0.897
20.22	305,760.59	167.5	162.936F	10.48	24.986	152.070F	3,607	16,340.68	26,726.07	0.807	0.808	0.999	0.897
20.23	305,928.94	167.5	162.930F	10.485	24.984	152.063F	3,608	16,341.87	26,732.85	0.807	0.808	0.999	0.897
20.24	306,097.31	167.5	162.924F	10.49	24.983	152.056F	3,609	16,343.05	26,739.62	0.807	0.808	0.999	0.897
20.25	306,265.69	167.5	162.918F	10.496	24.982	152.050F	3,609	16,344.24	26,746.39	0.807	0.808	0.999	0.898
20.26	306,434.08	167.5	162.912F	10.501	24.981	152.043F	3,610	16,345.42	26,753.17	0.807	0.808	0.999	0.898
20.27	306,602.48	167.6	162.906F	10.507	24.98	152.036F	3,611	16,346.61	26,759.94	0.807	0.808	0.999	0.898
20.28	306,770.90	167.6	162.900F	10.512	24.979	152.029F	3,611	16,347.79	26,766.72	0.807	0.808	0.999	0.898
20.29	306,939.33	167.6	162.894F	10.517	24.978	152.022F	3,612	16,348.98	26,773.49	0.807	0.808	0.999	0.898
20.3	307,107.77	167.6	162.888F	10.523	24.977	152.015F	3,613	16,350.16	26,780.26	0.807	0.808	0.999	0.898
20.31	307,276.22	167.6	162.882F	10.528	24.975	152.008F	3,613	16,351.35	26,787.04	0.807	0.808	0.999	0.898
20.32	307,444.69	167.6	162.876F	10.533	24.974	152.001F	3,614	16,352.53	26,793.81	0.807	0.808	0.999	0.898
20.33	307,613.16	167.6	162.870F	10.539	24.973	151.994F	3,615	16,353.72	26,800.59	0.807	0.808	0.999	0.898
20.34	307,781.65	167.6	162.864F	10.544	24.972	151.987F	3,615	16,354.90	26,807.36	0.808	0.808	0.999	0.898
20.35	307,950.15	167.6	162.858F	10.549	24.971	151.980F	3,616	16,356.09	26,814.13	0.808	0.808	0.999	0.898
20.36	308,118.67	167.7	162.852F	10.555	24.97	151.973F	3,617	16,357.27	26,820.91	0.808	0.809	0.999	0.898
20.37	308,287.19	167.7	162.846F	10.56	24.969	151.966F	3,618	16,358.46	26,827.68	0.808	0.809	0.999	0.898
20.38	308,455.73	167.7	162.840F	10.565	24.968	151.960F	3,618	16,359.64	26,834.46	0.808	0.809	0.999	0.898
20.39	308,624.28	167.7	162.834F	10.571	24.967	151.953F	3,619	16,360.83	26,841.23	0.808	0.809	0.999	0.898
20.4	308,792.85	167.7	162.828F	10.576	24.966	151.946F	3,620	16,362.01	26,848.00	0.808	0.809	0.999	0.899
20.41	308,961.42	167.7	162.822F	10.581	24.965	151.939F	3,620	16,363.20	26,854.78	0.808	0.809	0.999	0.899
20.42	309,130.01	167.7	162.816F	10.587	24.964	151.932F	3,621	16,364.38	26,861.55	0.808	0.809	0.999	0.899
20.43	309,298.61	167.7	162.810F	10.592	24.963	151.925F	3,622	16,365.57	26,868.32	0.808	0.809	0.999	0.899
20.44	309,467.22	167.8	162.804F	10.597	24.962	151.918F	3,622	16,366.75	26,875.10	0.808	0.809	0.999	0.899
20.45	309,635.84	167.8	162.798F	10.603	24.961	151.911F	3,623	16,367.94	26,881.87	0.808	0.809	0.999	0.899
20.46	309,804.48	167.8	162.793F	10.608	24.96	151.904F	3,624	16,369.12	26,888.65	0.808	0.809	0.999	0.899
20.47	309,973.13	167.8	162.787F	10.613	24.959	151.897F	3,624	16,370.31	26,895.42	0.808	0.809	0.999	0.899
20.48	310,141.79	167.8	162.781F	10.619	24.958	151.890F	3,625	16,371.50	26,902.19	0.808	0.809	0.999	0.899
20.49	310,310.47	167.8	162.775F	10.624	24.957	151.884F	3,626	16,372.68	26,908.97	0.808	0.809	0.999	0.899
20.5	310,479.15	167.8	162.769F	10.63	24.956	151.877F	3,627	16,373.86	26,915.74	0.808	0.809	0.999	0.899
20.51	310,647.85	167.8	162.763F	10.635	24.955	151.870F	3,627	16,375.01	26,922.51	0.808	0.809	0.999	0.899
20.52	310,816.56	167.9	162.757F	10.64	24.954	151.863F	3,628	16,376.17	26,929.28	0.808	0.809	0.999	0.899
20.53	310,985.28	167.9	162.751F	10.646	24.953	151.856F	3,629	16,377.32	26,936.05	0.808	0.809	0.999	0.899
20.54	311,154.01	167.9	162.745F	10.651	24.952	151.850F	3,629	16,378.48	26,942.83	0.808	0.809	0.999	0.899
20.55	311,322.76	167.9	162.739F	10.656	24.951	151.843F	3,630	16,379.63	26,949.60	0.808	0.809	0.999	0.899
20.56	311,491.52	167.9	162.733F	10.662	24.95	151.837F	3,631	16,380.72	26,956.33	0.809	0.809	0.999	0.9

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Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
20.57	311,660.29	167.9	162.727F	10.667	24.949	151.831F	3,631	16,381.76	26,963.03	0.809	0.809	0.999	0.9
20.58	311,829.07	167.9	162.721F	10.672	24.948	151.825F	3,632	16,382.79	26,969.73	0.809	0.81	0.999	0.9
20.59	311,997.86	167.9	162.716F	10.678	24.946	151.820F	3,632	16,383.81	26,976.42	0.809	0.81	0.999	0.9
20.6	312,166.66	167.9	162.710F	10.683	24.945	151.814F	3,633	16,384.81	26,983.12	0.809	0.81	0.999	0.9
20.61	312,335.47	168	162.704F	10.688	24.944	151.809F	3,634	16,385.82	26,989.81	0.809	0.81	0.999	0.9
20.62	312,504.29	168	162.698F	10.694	24.943	151.803F	3,634	16,386.82	26,996.50	0.809	0.81	0.999	0.9
20.63	312,673.12	168	162.692F	10.699	24.942	151.798F	3,635	16,387.83	27,003.20	0.809	0.81	0.999	0.9
20.64	312,841.96	168	162.686F	10.704	24.941	151.792F	3,635	16,388.78	27,009.87	0.809	0.81	0.999	0.9
20.65	313,010.81	168	162.680F	10.71	24.939	151.787F	3,636	16,389.72	27,016.54	0.809	0.81	0.999	0.9
20.66	313,179.67	168	162.674F	10.715	24.938	151.782F	3,636	16,390.65	27,023.21	0.809	0.81	0.999	0.9
20.67	313,348.54	168	162.668F	10.72	24.937	151.777F	3,637	16,391.59	27,029.87	0.809	0.81	0.999	0.9
20.68	313,517.42	168	162.663F	10.726	24.936	151.773F	3,638	16,392.48	27,036.52	0.809	0.81	0.999	0.9
20.69	313,686.31	168	162.657F	10.731	24.934	151.768F	3,638	16,393.35	27,043.15	0.809	0.81	0.999	0.9
20.7	313,855.21	168	162.651F	10.736	24.933	151.764F	3,639	16,394.15	27,049.77	0.809	0.81	0.999	0.9
20.71	314,024.12	168	162.645F	10.742	24.932	151.760F	3,639	16,394.94	27,056.39	0.809	0.81	0.999	0.9
20.72	314,193.03	168.1	162.639F	10.747	24.93	151.756F	3,640	16,395.72	27,063.00	0.809	0.81	0.999	0.9
20.73	314,361.96	168.1	162.633F	10.752	24.928	151.754F	3,640	16,396.36	27,069.55	0.809	0.81	0.999	0.9
20.74	314,530.88	168.1	162.627F	10.758	24.927	151.751F	3,640	16,396.97	27,076.08	0.809	0.81	0.999	0.9
20.75	314,699.82	168.1	162.621F	10.763	24.925	151.749F	3,641	16,397.52	27,082.60	0.809	0.81	0.999	0.9
20.76	314,868.76	168.1	162.616F	10.769	24.924	151.747F	3,641	16,398.07	27,089.12	0.809	0.81	0.999	0.901
20.77	315,037.70	168.1	162.610F	10.774	24.922	151.746F	3,641	16,398.53	27,095.60	0.809	0.81	0.999	0.901
20.78	315,206.66	168.1	162.604F	10.779	24.92	151.745F	3,641	16,398.94	27,102.07	0.809	0.81	0.999	0.901
20.79	315,375.61	168.1	162.598F	10.785	24.918	151.744F	3,642	16,399.32	27,108.52	0.81	0.81	0.999	0.901
20.8	315,544.57	168.1	162.592F	10.79	24.916	151.744F	3,642	16,399.69	27,114.97	0.81	0.81	0.999	0.901
20.81	315,713.53	168.1	162.586F	10.795	24.914	151.743F	3,642	16,400.06	27,121.42	0.81	0.811	0.999	0.901
20.82	315,882.50	168.1	162.581F	10.801	24.912	151.743F	3,642	16,400.44	27,127.86	0.81	0.811	0.999	0.901
20.83	316,051.47	168.1	162.575F	10.806	24.911	151.742F	3,643	16,400.81	27,134.31	0.81	0.811	0.999	0.901
20.84	316,220.44	168.1	162.569F	10.811	24.909	151.741F	3,643	16,401.18	27,140.76	0.81	0.811	0.999	0.901
20.85	316,389.42	168.1	162.563F	10.817	24.907	151.741F	3,643	16,401.55	27,147.21	0.81	0.811	0.999	0.901
20.86	316,558.40	168.1	162.557F	10.822	24.905	151.740F	3,643	16,401.93	27,153.66	0.81	0.811	0.999	0.901
20.87	316,727.38	168.1	162.552F	10.827	24.903	151.740F	3,644	16,402.30	27,160.10	0.81	0.811	0.999	0.901
20.88	316,896.37	168.1	162.546F	10.833	24.901	151.739F	3,644	16,402.67	27,166.55	0.81	0.811	0.999	0.901
20.89	317,065.37	168.1	162.540F	10.838	24.9	151.738F	3,644	16,403.03	27,172.99	0.81	0.811	0.999	0.901
20.9	317,234.36	168.1	162.534F	10.843	24.898	151.738F	3,644	16,403.38	27,179.43	0.81	0.811	0.999	0.901
20.91	317,403.37	168.1	162.529F	10.849	24.896	151.738F	3,645	16,403.73	27,185.87	0.81	0.811	0.999	0.901
20.92	317,572.37	168.1	162.523F	10.854	24.894	151.737F	3,645	16,404.07	27,192.31	0.81	0.811	0.999	0.901
20.93	317,741.38	168.1	162.517F	10.859	24.892	151.737F	3,645	16,404.42	27,198.75	0.81	0.811	0.999	0.901
20.94	317,910.39	168.1	162.511F	10.865	24.891	151.737F	3,645	16,404.77	27,205.19	0.81	0.811	0.999	0.901
20.95	318,079.41	168.2	162.506F	10.87	24.889	151.736F	3,645	16,405.12	27,211.63	0.81	0.811	0.999	0.901
20.96	318,248.42	168.2	162.500F	10.875	24.887	151.736F	3,646	16,405.47	27,218.07	0.81	0.811	0.999	0.901
20.97	318,417.45	168.2	162.494F	10.881	24.885	151.735F	3,646	16,405.81	27,224.51	0.81	0.811	0.999	0.901
20.98	318,586.47	168.2	162.488F	10.886	24.884	151.735F	3,646	16,406.16	27,230.94	0.81	0.811	0.999	0.901
20.99	318,755.50	168.2	162.483F	10.891	24.882	151.735F	3,646	16,406.51	27,237.38	0.81	0.811	0.999	0.901
21	318,924.54	168.2	162.477F	10.897	24.88	151.734F	3,646	16,406.86	27,243.82	0.81	0.811	0.999	0.901
21.01	319,093.57	168.2	162.471F	10.902	24.878	151.734F	3,647	16,407.21	27,250.26	0.81	0.811	0.999	0.901
21.02	319,262.62	168.2	162.466F	10.907	24.877	151.734F	3,647	16,407.56	27,256.70	0.811	0.811	0.999	0.901
21.03	319,431.66	168.2	162.460F	10.913	24.875	151.733F	3,647	16,407.92	27,263.14	0.811	0.811	0.999	0.901
21.04	319,600.71	168.2	162.454F	10.918	24.873	151.733F	3,647	16,408.28	27,269.58	0.811	0.811	0.999	0.901
21.05	319,769.76	168.2	162.449F	10.923	24.872	151.733F	3,648	16,408.64	27,276.02	0.811	0.812	0.999	0.901
21.06	319,938.82	168.2	162.443F	10.929	24.87	151.732F	3,648	16,409.00	27,282.47	0.811	0.812	0.999	0.901
21.07	320,107.88	168.2	162.437F	10.934	24.868	151.732F	3,648	16,409.36	27,288.91	0.811	0.812	0.999	0.901
21.08	320,276.94	168.2	162.432F	10.939	24.866	151.732F	3,648	16,409.72	27,295.35	0.811	0.812	0.999	0.901
21.09	320,446.01	168.2	162.426F	10.945	24.865	151.732F	3,649	16,410.07	27,301.79	0.811	0.812	0.999	0.901
21.1	320,615.08	168.2	162.420F	10.95	24.863	151.731F	3,649	16,410.43	27,308.23	0.811	0.812	0.999	0.901
21.11	320,784.15	168.2	162.415F	10.955	24.861	151.731F	3,649	16,410.79	27,314.67	0.811	0.812	0.999	0.901
21.12	320,953.23	168.2	162.409F	10.961	24.86	151.731F	3,649	16,411.14	27,321.11	0.811	0.812	0.999	0.901
21.13	321,122.32	168.2	162.403F	10.966	24.858	151.730F	3,649	16,411.50	27,327.55	0.811	0.812	0.999	0.901
21.14	321,291.40	168.2	162.398F	10.971	24.857	151.730F	3,650	16,411.86	27,334.00	0.811	0.812	0.999	0.901
21.15	321,460.49	168.2	162.392F	10.977	24.855	151.730F	3,650	16,412.21	27,340.44	0.811	0.812	0.999	0.901
21.16	321,629.59	168.2	162.386F	10.982	24.853	151.729F	3,650	16,412.57	27,346.88	0.811	0.812	0.999	0.901
21.17	321,798.68	168.2	162.381F	10.987	24.852	151.729F	3,650	16,412.93	27,353.32	0.811	0.812	0.999	0.901
21.18	321,967.78	168.2	162.375F	10.993	24.85	151.729F	3,651	16,413.28	27,359.76	0.811	0.812	0.999	0.901
21.19	322,136.89	168.2	162.370F	10.998	24.848	151.728F	3,651	16,413.64	27,366.20	0.811	0.812	0.999	0.901
21.2	322,306.00	168.2	162.364F	11.003	24.847	151.728F	3,651	16,414.00	27,372.64	0.811	0.812	0.999	0.901

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
21.21	322,475.11	168.2	162.358F	11.009	24.845	151.728F	3,651	16,414.35	27,379.08	0.811	0.812	0.999	0.901
21.22	322,644.23	168.3	162.353F	11.014	24.844	151.728F	3,651	16,414.71	27,385.53	0.811	0.812	0.999	0.901
21.23	322,813.35	168.3	162.347F	11.019	24.842	151.727F	3,652	16,415.07	27,391.97	0.811	0.812	0.999	0.901
21.24	322,982.47	168.3	162.342F	11.025	24.841	151.727F	3,652	16,415.43	27,398.41	0.811	0.812	0.999	0.901
21.25	323,151.60	168.3	162.336F	11.03	24.839	151.727F	3,652	16,415.79	27,404.86	0.812	0.812	0.999	0.901
21.26	323,320.73	168.3	162.331F	11.035	24.837	151.726F	3,652	16,416.16	27,411.30	0.812	0.812	0.999	0.901
21.27	323,489.86	168.3	162.325F	11.041	24.836	151.726F	3,653	16,416.52	27,417.74	0.812	0.812	0.999	0.902
21.28	323,659.00	168.3	162.319F	11.046	24.834	151.726F	3,653	16,416.88	27,424.19	0.812	0.813	0.999	0.902
21.29	323,828.15	168.3	162.314F	11.051	24.833	151.726F	3,653	16,417.24	27,430.63	0.812	0.813	0.999	0.902
21.3	323,997.29	168.3	162.308F	11.057	24.831	151.725F	3,653	16,417.60	27,437.07	0.812	0.813	0.999	0.902
21.31	324,166.44	168.3	162.303F	11.062	24.83	151.725F	3,654	16,417.96	27,443.52	0.812	0.813	0.999	0.902
21.32	324,335.60	168.3	162.297F	11.067	24.828	151.725F	3,654	16,418.32	27,449.96	0.812	0.813	0.999	0.902
21.33	324,504.75	168.3	162.292F	11.073	24.827	151.725F	3,654	16,418.68	27,456.40	0.812	0.813	0.999	0.902
21.34	324,673.92	168.3	162.286F	11.078	24.825	151.724F	3,654	16,419.04	27,462.85	0.812	0.813	0.999	0.902
21.35	324,843.08	168.3	162.281F	11.083	24.824	151.724F	3,654	16,419.40	27,469.29	0.812	0.813	0.999	0.902
21.36	325,012.25	168.3	162.275F	11.089	24.822	151.724F	3,655	16,419.76	27,475.73	0.812	0.813	0.999	0.902
21.37	325,181.42	168.3	162.270F	11.094	24.821	151.723F	3,655	16,420.12	27,482.18	0.812	0.813	0.999	0.902
21.38	325,350.60	168.3	162.264F	11.099	24.819	151.723F	3,655	16,420.48	27,488.62	0.812	0.813	0.999	0.902
21.39	325,519.78	168.3	162.259F	11.105	24.818	151.723F	3,655	16,420.85	27,495.06	0.812	0.813	0.999	0.902
21.4	325,688.97	168.3	162.253F	11.11	24.816	151.723F	3,656	16,421.21	27,501.51	0.812	0.813	0.999	0.902
21.41	325,858.15	168.3	162.248F	11.115	24.815	151.722F	3,656	16,421.57	27,507.95	0.812	0.813	0.999	0.902
21.42	326,027.35	168.3	162.242F	11.121	24.814	151.722F	3,656	16,421.93	27,514.40	0.812	0.813	0.999	0.902
21.43	326,196.54	168.3	162.237F	11.126	24.812	151.722F	3,656	16,422.30	27,520.84	0.812	0.813	0.999	0.902
21.44	326,365.74	168.3	162.231F	11.131	24.811	151.722F	3,656	16,422.66	27,527.29	0.812	0.813	0.999	0.902
21.45	326,534.95	168.3	162.226F	11.137	24.809	151.721F	3,657	16,423.02	27,533.73	0.812	0.813	0.999	0.902
21.46	326,704.15	168.3	162.220F	11.142	24.808	151.721F	3,657	16,423.39	27,540.18	0.812	0.813	0.999	0.902
21.47	326,873.36	168.3	162.215F	11.147	24.806	151.721F	3,657	16,423.75	27,546.62	0.812	0.813	0.999	0.902
21.48	327,042.58	168.3	162.210F	11.153	24.805	151.721F	3,657	16,424.11	27,553.07	0.812	0.813	0.999	0.902
21.49	327,211.80	168.4	162.204F	11.158	24.804	151.720F	3,658	16,424.47	27,559.51	0.813	0.813	0.999	0.902
21.5	327,381.02	168.4	162.199F	11.163	24.802	151.720F	3,658	16,424.84	27,565.96	0.813	0.813	0.999	0.902
21.51	327,550.25	168.4	162.193F	11.169	24.801	151.720F	3,658	16,425.20	27,572.40	0.813	0.813	0.999	0.902
21.52	327,719.48	168.4	162.188F	11.174	24.799	151.720F	3,658	16,425.56	27,578.85	0.813	0.814	0.999	0.902
21.53	327,888.71	168.4	162.182F	11.179	24.798	151.719F	3,659	16,425.93	27,585.29	0.813	0.814	0.999	0.902
21.54	328,057.95	168.4	162.177F	11.185	24.797	151.719F	3,659	16,426.29	27,591.74	0.813	0.814	0.999	0.902
21.55	328,227.19	168.4	162.172F	11.19	24.795	151.719F	3,659	16,426.65	27,598.18	0.813	0.814	0.999	0.902
21.56	328,396.44	168.4	162.166F	11.195	24.794	151.719F	3,659	16,427.02	27,604.63	0.813	0.814	0.999	0.902
21.57	328,565.68	168.4	162.161F	11.201	24.793	151.718F	3,659	16,427.38	27,611.07	0.813	0.814	0.999	0.902
21.58	328,734.94	168.4	162.155F	11.206	24.791	151.718F	3,660	16,427.75	27,617.52	0.813	0.814	0.999	0.902
21.59	328,904.19	168.4	162.150F	11.211	24.79	151.718F	3,660	16,428.11	27,623.97	0.813	0.814	0.999	0.902
21.6	329,073.46	168.4	162.145F	11.217	24.789	151.718F	3,660	16,428.47	27,630.41	0.813	0.814	0.999	0.902
21.61	329,242.72	168.4	162.139F	11.222	24.787	151.718F	3,660	16,428.84	27,636.86	0.813	0.814	0.999	0.902
21.62	329,411.99	168.4	162.134F	11.227	24.786	151.718F	3,661	16,429.20	27,643.31	0.813	0.814	0.999	0.902
21.63	329,581.26	168.4	162.129F	11.233	24.785	151.718F	3,661	16,429.57	27,649.75	0.813	0.814	0.999	0.902
21.64	329,750.54	168.4	162.123F	11.238	24.783	151.717F	3,661	16,429.93	27,656.20	0.813	0.814	0.999	0.902
21.65	329,919.82	168.4	162.118F	11.243	24.782	151.717F	3,661	16,430.30	27,662.64	0.813	0.814	0.999	0.902
21.66	330,089.10	168.4	162.113F	11.249	24.781	151.717F	3,662	16,430.66	27,669.09	0.813	0.814	0.999	0.902
21.67	330,258.39	168.4	162.107F	11.254	24.78	151.717F	3,662	16,431.03	27,675.54	0.813	0.814	0.999	0.902
21.68	330,427.68	168.4	162.102F	11.259	24.778	151.717F	3,662	16,431.39	27,681.98	0.813	0.814	0.999	0.902
21.69	330,596.97	168.4	162.097F	11.265	24.777	151.717F	3,662	16,431.76	27,688.43	0.813	0.814	0.999	0.902
21.7	330,766.27	168.4	162.091F	11.27	24.776	151.717F	3,662	16,432.12	27,694.88	0.813	0.814	0.999	0.902
21.71	330,935.58	168.4	162.086F	11.275	24.774	151.716F	3,663	16,432.49	27,701.32	0.813	0.814	0.999	0.902
21.72	331,104.88	168.4	162.081F	11.281	24.773	151.716F	3,663	16,432.85	27,707.77	0.813	0.814	0.999	0.902
21.73	331,274.19	168.4	162.075F	11.286	24.772	151.716F	3,663	16,433.22	27,714.22	0.814	0.814	0.999	0.902
21.74	331,443.51	168.4	162.070F	11.291	24.771	151.716F	3,663	16,433.58	27,720.66	0.814	0.814	0.999	0.902
21.75	331,612.83	168.4	162.065F	11.297	24.769	151.716F	3,664	16,433.95	27,727.11	0.814	0.814	0.999	0.902
21.76	331,782.15	168.5	162.059F	11.302	24.768	151.716F	3,664	16,434.31	27,733.55	0.814	0.814	0.999	0.902
21.77	331,951.47	168.5	162.054F	11.307	24.767	151.716F	3,664	16,434.68	27,740.00	0.814	0.815	0.999	0.903
21.78	332,120.80	168.5	162.049F	11.313	24.766	151.715F	3,664	16,435.04	27,746.45	0.814	0.815	0.999	0.903
21.79	332,290.14	168.5	162.043F	11.318	24.765	151.715F	3,665	16,435.41	27,752.89	0.814	0.815	0.999	0.903
21.8	332,459.48	168.5	162.038F	11.323	24.763	151.715F	3,665	16,435.78	27,759.34	0.814	0.815	0.999	0.903
21.81	332,628.82	168.5	162.033F	11.328	24.762	151.715F	3,665	16,436.16	27,765.80	0.814	0.815	0.999	0.903
21.82	332,798.16	168.5	162.028F	11.334	24.761	151.715F	3,665	16,436.54	27,772.25	0.814	0.815	0.999	0.903
21.83	332,967.51	168.5	162.022F	11.339	24.76	151.715F	3,666	16,436.91	27,778.70	0.814	0.815	0.999	0.903
21.84	333,136.86	168.5	162.017F	11.344	24.759	151.715F	3,666	16,437.29	27,785.15	0.814	0.815	0.999	0.903

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
21.85	333,306.22	168.5	162.012F	11.35	24.758	151.715F	3,666	16,437.65	27,791.60	0.814	0.815	0.999	0.903
21.86	333,475.58	168.5	162.007F	11.355	24.756	151.715F	3,666	16,438.02	27,798.05	0.814	0.815	0.999	0.903
21.87	333,644.95	168.5	162.001F	11.36	24.755	151.715F	3,667	16,438.39	27,804.50	0.814	0.815	0.999	0.903
21.88	333,814.32	168.5	161.996F	11.366	24.754	151.715F	3,667	16,438.76	27,810.95	0.814	0.815	0.999	0.903
21.89	333,983.69	168.5	161.991F	11.371	24.753	151.715F	3,667	16,439.12	27,817.40	0.814	0.815	0.999	0.903
21.9	334,153.07	168.5	161.986F	11.376	24.752	151.715F	3,667	16,439.49	27,823.86	0.814	0.815	0.999	0.903
21.91	334,322.45	168.5	161.981F	11.382	24.751	151.715F	3,667	16,439.86	27,830.31	0.814	0.815	0.999	0.903
21.92	334,491.83	168.5	161.975F	11.387	24.749	151.715F	3,668	16,440.23	27,836.76	0.814	0.815	0.999	0.903
21.93	334,661.22	168.5	161.970F	11.392	24.748	151.715F	3,668	16,440.59	27,843.21	0.814	0.815	0.999	0.903
21.94	334,830.61	168.5	161.965F	11.398	24.747	151.715F	3,668	16,440.96	27,849.66	0.814	0.815	0.999	0.903
21.95	335,000.01	168.5	161.960F	11.403	24.746	151.715F	3,668	16,441.33	27,856.11	0.814	0.815	0.999	0.903
21.96	335,169.41	168.5	161.955F	11.408	24.745	151.715F	3,669	16,441.70	27,862.56	0.814	0.815	0.999	0.903
21.97	335,338.81	168.5	161.949F	11.414	24.744	151.715F	3,669	16,442.06	27,869.02	0.814	0.815	0.999	0.903
21.98	335,508.22	168.5	161.944F	11.419	24.743	151.715F	3,669	16,442.43	27,875.47	0.815	0.815	0.999	0.903
21.99	335,677.63	168.5	161.939F	11.424	24.742	151.715F	3,669	16,442.80	27,881.92	0.815	0.815	0.999	0.903
22	335,847.04	168.5	161.934F	11.43	24.74	151.716F	3,670	16,443.16	27,888.37	0.815	0.815	0.999	0.903
22.01	336,016.46	168.5	161.929F	11.435	24.739	151.716F	3,670	16,443.52	27,894.82	0.815	0.816	0.999	0.903
22.02	336,185.88	168.5	161.923F	11.44	24.738	151.716F	3,670	16,443.88	27,901.27	0.815	0.816	0.999	0.903
22.03	336,355.31	168.6	161.918F	11.445	24.737	151.716F	3,670	16,444.24	27,907.72	0.815	0.816	0.999	0.903
22.04	336,524.74	168.6	161.913F	11.451	24.736	151.716F	3,671	16,444.60	27,914.17	0.815	0.816	0.999	0.903
22.05	336,694.17	168.6	161.908F	11.456	24.735	151.716F	3,671	16,444.96	27,920.62	0.815	0.816	0.999	0.903
22.06	336,863.61	168.6	161.903F	11.461	24.734	151.716F	3,671	16,445.32	27,927.07	0.815	0.816	0.999	0.903
22.07	337,033.05	168.6	161.898F	11.467	24.733	151.716F	3,671	16,445.68	27,933.52	0.815	0.816	0.999	0.903
22.08	337,202.50	168.6	161.893F	11.472	24.732	151.716F	3,672	16,446.03	27,939.97	0.815	0.816	0.999	0.903
22.09	337,371.95	168.6	161.887F	11.477	24.731	151.716F	3,672	16,446.39	27,946.42	0.815	0.816	0.999	0.903
22.1	337,541.40	168.6	161.882F	11.483	24.73	151.716F	3,672	16,446.75	27,952.87	0.815	0.816	0.999	0.903
22.11	337,710.86	168.6	161.877F	11.488	24.729	151.717F	3,672	16,447.11	27,959.32	0.815	0.816	0.999	0.903
22.12	337,880.32	168.6	161.872F	11.493	24.728	151.717F	3,672	16,447.47	27,965.77	0.815	0.816	0.999	0.903
22.13	338,049.78	168.6	161.867F	11.499	24.727	151.717F	3,673	16,447.83	27,972.22	0.815	0.816	0.999	0.903
22.14	338,219.25	168.6	161.862F	11.504	24.726	151.717F	3,673	16,448.18	27,978.67	0.815	0.816	0.999	0.903
22.15	338,388.72	168.6	161.857F	11.509	24.725	151.717F	3,673	16,448.52	27,985.12	0.815	0.816	0.999	0.903
22.16	338,558.20	168.6	161.852F	11.515	24.724	151.717F	3,673	16,448.85	27,991.57	0.815	0.816	0.999	0.903
22.17	338,727.67	168.6	161.847F	11.52	24.723	151.718F	3,674	16,449.19	27,998.02	0.815	0.816	0.999	0.903
22.18	338,897.16	168.6	161.842F	11.525	24.721	151.718F	3,674	16,449.53	28,004.47	0.815	0.816	0.999	0.903
22.19	339,066.64	168.6	161.836F	11.531	24.72	151.718F	3,674	16,449.87	28,010.92	0.815	0.816	0.999	0.903
22.2	339,236.13	168.6	161.831F	11.536	24.719	151.718F	3,674	16,450.20	28,017.37	0.815	0.816	0.999	0.903
22.21	339,405.62	168.6	161.826F	11.541	24.718	151.719F	3,674	16,450.54	28,023.82	0.815	0.816	0.999	0.903
22.22	339,575.12	168.6	161.821F	11.546	24.717	151.719F	3,675	16,450.88	28,030.27	0.815	0.816	0.999	0.903
22.23	339,744.62	168.6	161.816F	11.552	24.716	151.720F	3,675	16,451.18	28,036.71	0.816	0.816	0.999	0.903
22.24	339,914.12	168.6	161.811F	11.557	24.715	151.720F	3,675	16,451.48	28,043.16	0.816	0.816	0.999	0.903
22.25	340,083.63	168.6	161.806F	11.562	24.714	151.721F	3,675	16,451.79	28,049.60	0.816	0.816	0.999	0.903
22.26	340,253.14	168.6	161.801F	11.568	24.713	151.721F	3,675	16,452.09	28,056.04	0.816	0.816	0.999	0.903
22.27	340,422.65	168.6	161.796F	11.573	24.712	151.722F	3,676	16,452.40	28,062.49	0.816	0.817	0.999	0.903
22.28	340,592.17	168.6	161.791F	11.578	24.711	151.722F	3,676	16,452.70	28,068.93	0.816	0.817	0.999	0.904
22.29	340,761.69	168.6	161.786F	11.584	24.71	151.723F	3,676	16,453.00	28,075.38	0.816	0.817	0.999	0.904
22.3	340,931.21	168.6	161.781F	11.589	24.709	151.723F	3,676	16,453.31	28,081.82	0.816	0.817	0.999	0.904
22.31	341,100.73	168.6	161.776F	11.594	24.708	151.724F	3,676	16,453.61	28,088.27	0.816	0.817	0.999	0.904
22.32	341,270.26	168.7	161.771F	11.6	24.707	151.724F	3,677	16,453.92	28,094.71	0.816	0.817	0.999	0.904
22.33	341,439.79	168.7	161.766F	11.605	24.707	151.725F	3,677	16,454.22	28,101.15	0.816	0.817	0.999	0.904
22.34	341,609.33	168.7	161.761F	11.61	24.706	151.726F	3,677	16,454.51	28,107.60	0.816	0.817	0.999	0.904
22.35	341,778.87	168.7	161.756F	11.615	24.705	151.726F	3,677	16,454.81	28,114.04	0.816	0.817	0.999	0.904
22.36	341,948.41	168.7	161.751F	11.621	24.704	151.727F	3,677	16,455.09	28,120.48	0.816	0.817	0.999	0.904
22.37	342,117.95	168.7	161.746F	11.626	24.703	151.728F	3,678	16,455.37	28,126.93	0.816	0.817	0.999	0.904
22.38	342,287.50	168.7	161.741F	11.631	24.702	151.728F	3,678	16,455.64	28,133.37	0.816	0.817	0.999	0.904
22.39	342,457.05	168.7	161.736F	11.637	24.701	151.729F	3,678	16,455.89	28,139.81	0.816	0.817	0.999	0.904
22.4	342,626.60	168.7	161.731F	11.642	24.7	151.730F	3,678	16,456.13	28,146.25	0.816	0.817	0.999	0.904
22.41	342,796.16	168.7	161.726F	11.647	24.699	151.731F	3,678	16,456.37	28,152.69	0.816	0.817	0.999	0.904
22.42	342,965.71	168.7	161.721F	11.653	24.698	151.732F	3,679	16,456.61	28,159.12	0.816	0.817	0.999	0.904
22.43	343,135.27	168.7	161.716F	11.658	24.697	151.734F	3,679	16,456.86	28,165.56	0.816	0.817	0.999	0.904
22.44	343,304.84	168.7	161.711F	11.663	24.696	151.735F	3,679	16,457.11	28,172.00	0.816	0.817	0.999	0.904
22.45	343,474.40	168.7	161.706F	11.669	24.695	151.736F	3,679	16,457.33	28,178.44	0.816	0.817	0.999	0.904
22.46	343,643.97	168.7	161.701F	11.674	24.694	151.737F	3,679	16,457.55	28,184.88	0.816	0.817	0.999	0.904
22.47	343,813.54	168.7	161.696F	11.679	24.693	151.738F	3,679	16,457.77	28,191.31	0.816	0.817	0.999	0.904
22.48	343,983.11	168.7	161.692F	11.684	24.692	151.740F	3,679	16,457.99	28,197.75	0.817	0.817	0.999	0.904

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
22.49	344,152.69	168.7	161.687F	11.69	24.691	151.741F	3,680	16,458.21	28,204.19	0.817	0.817	0.999	0.904
22.5	344,322.26	168.7	161.682F	11.695	24.69	151.742F	3,680	16,458.43	28,210.62	0.817	0.817	0.999	0.904
22.51	344,491.84	168.7	161.677F	11.7	24.689	151.744F	3,680	16,458.65	28,217.06	0.817	0.817	0.999	0.904
22.52	344,661.42	168.7	161.672F	11.706	24.688	151.745F	3,680	16,458.87	28,223.49	0.817	0.818	0.999	0.904
22.53	344,831.01	168.7	161.667F	11.711	24.687	151.746F	3,680	16,459.09	28,229.93	0.817	0.818	0.999	0.904
22.54	345,000.59	168.7	161.662F	11.716	24.686	151.747F	3,680	16,459.31	28,236.37	0.817	0.818	0.999	0.904
22.55	345,170.18	168.7	161.657F	11.722	24.685	151.749F	3,681	16,459.53	28,242.80	0.817	0.818	0.999	0.904
22.56	345,339.77	168.7	161.652F	11.727	24.684	151.750F	3,681	16,459.75	28,249.24	0.817	0.818	0.999	0.904
22.57	345,509.37	168.7	161.647F	11.732	24.683	151.751F	3,681	16,459.97	28,255.68	0.817	0.818	0.999	0.904
22.58	345,678.96	168.7	161.643F	11.738	24.682	151.753F	3,681	16,460.19	28,262.11	0.817	0.818	0.999	0.904
22.59	345,848.56	168.7	161.638F	11.743	24.681	151.754F	3,681	16,460.41	28,268.55	0.817	0.818	0.999	0.904
22.6	346,018.16	168.7	161.633F	11.748	24.68	151.755F	3,681	16,460.63	28,274.99	0.817	0.818	0.999	0.904
22.61	346,187.76	168.7	161.628F	11.753	24.68	151.756F	3,681	16,460.85	28,281.42	0.817	0.818	0.999	0.904
22.62	346,357.37	168.7	161.623F	11.759	24.679	151.758F	3,682	16,461.07	28,287.86	0.817	0.818	0.999	0.904
22.63	346,526.97	168.7	161.618F	11.764	24.678	151.759F	3,682	16,461.29	28,294.30	0.817	0.818	0.999	0.904
22.64	346,696.58	168.7	161.613F	11.769	24.677	151.760F	3,682	16,461.51	28,300.73	0.817	0.818	0.999	0.904
22.65	346,866.20	168.7	161.609F	11.775	24.676	151.762F	3,682	16,461.73	28,307.17	0.817	0.818	0.999	0.904
22.66	347,035.81	168.7	161.604F	11.78	24.675	151.763F	3,682	16,461.95	28,313.61	0.817	0.818	0.999	0.904
22.67	347,205.43	168.7	161.599F	11.785	24.674	151.764F	3,682	16,462.17	28,320.04	0.817	0.818	0.999	0.904
22.68	347,375.05	168.7	161.594F	11.791	24.673	151.766F	3,683	16,462.39	28,326.48	0.817	0.818	0.999	0.904
22.69	347,544.67	168.7	161.589F	11.796	24.672	151.767F	3,683	16,462.61	28,332.92	0.817	0.818	0.999	0.904
22.7	347,714.29	168.7	161.585F	11.801	24.672	151.768F	3,683	16,462.83	28,339.35	0.817	0.818	0.999	0.904
22.71	347,883.92	168.7	161.580F	11.806	24.671	151.769F	3,683	16,463.05	28,345.79	0.817	0.818	0.999	0.904
22.72	348,053.55	168.7	161.575F	11.812	24.67	151.771F	3,683	16,463.27	28,352.23	0.817	0.818	0.999	0.904
22.73	348,223.18	168.8	161.570F	11.817	24.669	151.772F	3,683	16,463.49	28,358.66	0.817	0.818	0.999	0.904
22.74	348,392.81	168.8	161.565F	11.822	24.668	151.773F	3,684	16,463.71	28,365.10	0.818	0.818	0.999	0.904
22.75	348,562.44	168.8	161.561F	11.828	24.667	151.775F	3,684	16,463.93	28,371.54	0.818	0.818	0.999	0.904
22.76	348,732.08	168.8	161.556F	11.833	24.667	151.776F	3,684	16,464.15	28,377.97	0.818	0.818	0.999	0.904
22.77	348,901.72	168.8	161.551F	11.838	24.666	151.777F	3,684	16,464.37	28,384.41	0.818	0.818	0.999	0.904
22.78	349,071.36	168.8	161.546F	11.844	24.665	151.778F	3,684	16,464.60	28,390.85	0.818	0.818	0.999	0.904
22.79	349,241.01	168.8	161.541F	11.849	24.664	151.780F	3,684	16,464.83	28,397.29	0.818	0.819	0.999	0.904
22.8	349,410.66	168.8	161.537F	11.854	24.663	151.781F	3,684	16,465.05	28,403.73	0.818	0.819	0.999	0.904
22.81	349,580.31	168.8	161.532F	11.859	24.663	151.783F	3,685	16,465.28	28,410.18	0.818	0.819	0.999	0.904
22.82	349,749.96	168.8	161.527F	11.865	24.662	151.784F	3,685	16,465.51	28,416.62	0.818	0.819	0.999	0.904
22.83	349,919.61	168.8	161.522F	11.87	24.661	151.785F	3,685	16,465.74	28,423.06	0.818	0.819	0.999	0.904
22.84	350,089.27	168.8	161.518F	11.875	24.66	151.787F	3,685	16,465.97	28,429.50	0.818	0.819	0.999	0.904
22.85	350,258.93	168.8	161.513F	11.881	24.66	151.788F	3,685	16,466.20	28,435.94	0.818	0.819	0.999	0.904
22.86	350,428.59	168.8	161.508F	11.886	24.659	151.789F	3,685	16,466.43	28,442.39	0.818	0.819	0.999	0.904
22.87	350,598.26	168.8	161.504F	11.891	24.658	151.791F	3,686	16,466.66	28,448.83	0.818	0.819	0.999	0.904
22.88	350,767.92	168.8	161.499F	11.897	24.657	151.792F	3,686	16,466.91	28,455.28	0.818	0.819	0.999	0.904
22.89	350,937.59	168.8	161.494F	11.902	24.657	151.794F	3,686	16,467.16	28,461.73	0.818	0.819	0.999	0.904
22.9	351,107.27	168.8	161.489F	11.907	24.656	151.795F	3,686	16,467.42	28,468.18	0.818	0.819	0.999	0.904
22.91	351,276.94	168.8	161.485F	11.912	24.655	151.797F	3,686	16,467.67	28,474.63	0.818	0.819	0.999	0.904
22.92	351,446.62	168.8	161.480F	11.918	24.654	151.799F	3,686	16,467.92	28,481.08	0.818	0.819	0.999	0.904
22.93	351,616.30	168.8	161.475F	11.923	24.654	151.800F	3,687	16,468.17	28,487.53	0.818	0.819	0.999	0.904
22.94	351,785.98	168.8	161.471F	11.928	24.653	151.802F	3,687	16,468.42	28,493.98	0.818	0.819	0.999	0.904
22.95	351,955.67	168.8	161.466F	11.934	24.652	151.803F	3,687	16,468.68	28,500.43	0.818	0.819	0.999	0.904
22.96	352,125.35	168.8	161.461F	11.939	24.652	151.805F	3,687	16,468.93	28,506.88	0.818	0.819	0.999	0.904
22.97	352,295.05	168.8	161.457F	11.944	24.651	151.806F	3,687	16,469.18	28,513.33	0.818	0.819	0.999	0.904
22.98	352,464.74	168.8	161.452F	11.95	24.65	151.808F	3,688	16,469.43	28,519.78	0.818	0.819	0.999	0.904
22.99	352,634.44	168.8	161.447F	11.955	24.65	151.810F	3,688	16,469.68	28,526.23	0.818	0.819	0.999	0.904
23	352,804.13	168.8	161.443F	11.96	24.649	151.811F	3,688	16,469.94	28,532.68	0.819	0.819	0.999	0.904
23.01	352,973.84	168.8	161.438F	11.965	24.648	151.813F	3,688	16,470.19	28,539.13	0.819	0.819	0.999	0.904
23.02	353,143.54	168.8	161.433F	11.971	24.648	151.814F	3,688	16,470.44	28,545.58	0.819	0.819	0.999	0.904
23.03	353,313.25	168.8	161.429F	11.976	24.647	151.816F	3,688	16,470.69	28,552.03	0.819	0.819	0.999	0.904
23.04	353,482.96	168.8	161.424F	11.981	24.646	151.817F	3,689	16,470.94	28,558.48	0.819	0.819	0.999	0.905
23.05	353,652.67	168.8	161.420F	11.987	24.646	151.819F	3,689	16,471.20	28,564.92	0.819	0.82	0.999	0.905
23.06	353,822.38	168.8	161.415F	11.992	24.645	151.820F	3,689	16,471.45	28,571.37	0.819	0.82	0.999	0.905
23.07	353,992.10	168.8	161.410F	11.997	24.644	151.822F	3,689	16,471.70	28,577.82	0.819	0.82	0.999	0.905
23.08	354,161.82	168.8	161.406F	12.002	24.644	151.824F	3,689	16,471.95	28,584.27	0.819	0.82	0.999	0.905
23.09	354,331.55	168.8	161.401F	12.008	24.643	151.825F	3,689	16,472.20	28,590.72	0.819	0.82	0.999	0.905
23.1	354,501.27	168.8	161.396F	12.013	24.643	151.827F	3,690	16,472.46	28,597.17	0.819	0.82	0.999	0.905
23.11	354,671.00	168.8	161.392F	12.018	24.642	151.828F	3,690	16,472.71	28,603.62	0.819	0.82	0.999	0.905
23.12	354,840.73	168.8	161.387F	12.024	24.641	151.830F	3,690	16,472.96	28,610.07	0.819	0.82	0.999	0.905

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
23.13	355,010.47	168.9	161.383F	12.029	24.641	151.831F	3,690	16,473.21	28,616.52	0.819	0.82	0.999	0.905
23.14	355,180.20	168.9	161.378F	12.034	24.64	151.833F	3,690	16,473.46	28,622.97	0.819	0.82	0.999	0.905
23.15	355,349.94	168.9	161.374F	12.04	24.64	151.835F	3,691	16,473.71	28,629.42	0.819	0.82	0.999	0.905
23.16	355,519.68	168.9	161.369F	12.045	24.639	151.836F	3,691	16,473.96	28,635.87	0.819	0.82	0.999	0.905
23.17	355,689.43	168.9	161.364F	12.05	24.638	151.838F	3,691	16,474.20	28,642.32	0.819	0.82	0.999	0.905
23.18	355,859.17	168.9	161.360F	12.055	24.638	151.839F	3,691	16,474.45	28,648.77	0.819	0.82	0.999	0.905
23.19	356,028.92	168.9	161.355F	12.061	24.637	151.841F	3,691	16,474.70	28,655.22	0.819	0.82	0.999	0.905
23.2	356,198.67	168.9	161.351F	12.066	24.637	151.843F	3,691	16,474.95	28,661.67	0.819	0.82	0.999	0.905
23.21	356,368.43	168.9	161.346F	12.071	24.636	151.844F	3,692	16,475.20	28,668.12	0.819	0.82	0.999	0.905
23.22	356,538.19	168.9	161.342F	12.077	24.636	151.846F	3,692	16,475.45	28,674.57	0.819	0.82	0.999	0.905
23.23	356,707.95	168.9	161.337F	12.082	24.635	151.847F	3,692	16,475.69	28,681.02	0.819	0.82	0.999	0.905
23.24	356,877.71	168.9	161.333F	12.087	24.635	151.849F	3,692	16,475.94	28,687.47	0.819	0.82	0.999	0.905
23.25	357,047.48	168.9	161.328F	12.092	24.634	151.850F	3,692	16,476.19	28,693.93	0.819	0.82	0.999	0.905
23.26	357,217.24	168.9	161.323F	12.098	24.634	151.852F	3,692	16,476.43	28,700.38	0.819	0.82	0.999	0.905
23.27	357,387.01	168.9	161.319F	12.103	24.633	151.854F	3,693	16,476.68	28,706.83	0.82	0.82	0.999	0.905
23.28	357,556.79	168.9	161.314F	12.108	24.632	151.855F	3,693	16,476.93	28,713.28	0.82	0.82	0.999	0.905
23.29	357,726.56	168.9	161.310F	12.114	24.632	151.857F	3,693	16,477.17	28,719.73	0.82	0.82	0.999	0.905
23.3	357,896.34	168.9	161.305F	12.119	24.631	151.858F	3,693	16,477.42	28,726.18	0.82	0.82	0.999	0.905
23.31	358,066.12	168.9	161.301F	12.124	24.631	151.860F	3,693	16,477.67	28,732.63	0.82	0.82	0.999	0.905
23.32	358,235.91	168.9	161.296F	12.129	24.63	151.862F	3,693	16,477.91	28,739.08	0.82	0.82	0.999	0.905
23.33	358,405.69	168.9	161.292F	12.135	24.63	151.863F	3,694	16,478.16	28,745.53	0.82	0.821	0.999	0.905
23.34	358,575.48	168.9	161.287F	12.14	24.629	151.865F	3,694	16,478.40	28,751.98	0.82	0.821	0.999	0.905
23.35	358,745.27	168.9	161.283F	12.145	24.629	151.866F	3,694	16,478.65	28,758.43	0.82	0.821	0.999	0.905
23.36	358,915.07	168.9	161.279F	12.151	24.628	151.868F	3,694	16,478.90	28,764.88	0.82	0.821	0.999	0.905
23.37	359,084.86	168.9	161.274F	12.156	24.628	151.870F	3,694	16,479.14	28,771.33	0.82	0.821	0.999	0.905
23.38	359,254.66	168.9	161.270F	12.163	24.63	151.872F	3,695	16,479.41	28,777.79	0.82	0.821	0.999	0.905
23.39	359,397.81	168.9	161.254F	12.167	24.629	151.860F	3,694	16,478.26	28,812.88	0.82	0.821	0.999	0.905
23.4	359,567.60	168.9	161.250F	12.173	24.628	151.862F	3,694	16,478.58	28,819.39	0.82	0.821	0.999	0.905
23.41	359,737.39	168.9	161.246F	12.178	24.628	151.865F	3,694	16,478.89	28,825.91	0.82	0.821	0.999	0.905
23.42	359,907.18	168.9	161.241F	12.183	24.628	151.867F	3,694	16,479.21	28,832.42	0.82	0.821	0.999	0.905
23.43	360,076.98	168.9	161.237F	12.188	24.627	151.869F	3,695	16,479.52	28,838.93	0.82	0.821	0.999	0.905
23.44	360,246.78	168.9	161.232F	12.194	24.627	151.871F	3,695	16,479.83	28,845.45	0.82	0.821	0.999	0.905
23.45	360,416.59	168.9	161.228F	12.199	24.626	151.874F	3,695	16,480.15	28,851.96	0.82	0.821	0.999	0.905
23.46	360,586.39	168.9	161.223F	12.204	24.626	151.876F	3,695	16,480.46	28,858.48	0.82	0.821	0.999	0.905
23.47	360,756.21	168.9	161.219F	12.21	24.625	151.878F	3,695	16,480.78	28,864.99	0.82	0.821	0.999	0.905
23.48	360,926.02	168.9	161.215F	12.215	24.625	151.880F	3,696	16,481.09	28,871.51	0.82	0.821	0.999	0.905
23.49	361,095.84	168.9	161.210F	12.22	24.625	151.882F	3,696	16,481.41	28,878.02	0.82	0.821	0.999	0.905
23.5	361,265.66	168.9	161.206F	12.225	24.624	151.885F	3,696	16,481.72	28,884.54	0.82	0.821	0.999	0.905
23.51	361,435.48	168.9	161.201F	12.231	24.624	151.887F	3,696	16,482.04	28,891.05	0.82	0.821	0.999	0.905
23.52	361,605.31	168.9	161.197F	12.236	24.623	151.889F	3,697	16,482.35	28,897.56	0.82	0.821	0.999	0.905
23.53	361,775.14	168.9	161.193F	12.241	24.623	151.891F	3,697	16,482.66	28,904.08	0.82	0.821	0.999	0.905
23.54	361,944.98	169	161.188F	12.247	24.623	151.894F	3,697	16,482.98	28,910.59	0.82	0.821	0.999	0.905
23.55	362,114.81	169	161.184F	12.252	24.622	151.896F	3,697	16,483.29	28,917.11	0.82	0.821	0.999	0.905
23.56	362,284.65	169	161.179F	12.257	24.622	151.898F	3,697	16,483.61	28,923.62	0.821	0.821	0.999	0.905
23.57	362,454.50	169	161.175F	12.262	24.621	151.900F	3,698	16,483.92	28,930.14	0.821	0.821	0.999	0.905
23.58	362,624.35	169	161.171F	12.268	24.621	151.903F	3,698	16,484.24	28,936.65	0.821	0.821	0.999	0.905
23.59	362,794.20	169	161.166F	12.273	24.621	151.905F	3,698	16,484.55	28,943.17	0.821	0.821	0.999	0.905
23.6	362,964.05	169	161.162F	12.278	24.62	151.907F	3,698	16,484.87	28,949.68	0.821	0.821	0.999	0.905
23.61	363,133.91	169	161.158F	12.284	24.62	151.909F	3,699	16,485.19	28,956.20	0.821	0.821	0.999	0.905
23.62	363,303.77	169	161.153F	12.289	24.62	151.912F	3,699	16,485.51	28,962.71	0.821	0.822	0.999	0.905
23.63	363,473.63	169	161.149F	12.294	24.619	151.914F	3,699	16,485.83	28,969.23	0.821	0.822	0.999	0.905
23.64	363,643.50	169	161.145F	12.299	24.619	151.916F	3,699	16,486.15	28,975.74	0.821	0.822	0.999	0.905
23.65	363,813.37	169	161.140F	12.305	24.619	151.919F	3,700	16,486.47	28,982.26	0.821	0.822	0.999	0.905
23.66	363,983.25	169	161.136F	12.31	24.618	151.921F	3,700	16,486.79	28,988.77	0.821	0.822	0.999	0.905
23.67	364,153.12	169	161.132F	12.315	24.618	151.923F	3,700	16,487.11	28,995.29	0.821	0.822	0.999	0.905
23.68	364,323.01	169	161.127F	12.321	24.618	151.925F	3,700	16,487.44	29,001.80	0.821	0.822	0.999	0.905
23.69	364,492.89	169	161.123F	12.326	24.617	151.928F	3,700	16,487.76	29,008.32	0.821	0.822	0.999	0.905
23.7	364,662.78	169	161.119F	12.331	24.617	151.930F	3,701	16,488.08	29,014.83	0.821	0.822	0.999	0.905
23.71	364,832.67	169	161.114F	12.336	24.617	151.932F	3,701	16,488.41	29,021.35	0.821	0.822	0.999	0.905
23.72	365,002.56	169	161.110F	12.342	24.617	151.935F	3,701	16,488.73	29,027.87	0.821	0.822	0.999	0.905
23.73	365,172.46	169	161.106F	12.347	24.616	151.937F	3,701	16,489.05	29,034.38	0.821	0.822	0.999	0.905
23.74	365,342.36	169	161.102F	12.352	24.616	151.939F	3,702	16,489.38	29,040.90	0.821	0.822	0.999	0.906
23.75	365,512.27	169	161.097F	12.358	24.616	151.942F	3,702	16,489.71	29,047.41	0.821	0.822	0.999	0.906
23.76	365,682.18	169	161.093F	12.363	24.616	151.944F	3,702	16,490.03	29,053.93	0.821	0.822	0.999	0.906

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
23.77	365,852.09	169	161.089F	12.368	24.615	151.946F	3,702	16,490.36	29,060.45	0.821	0.822	0.999	0.906
23.78	366,022.01	169	161.084F	12.373	24.615	151.949F	3,703	16,490.69	29,066.97	0.821	0.822	0.999	0.906
23.79	366,191.92	169	161.080F	12.379	24.615	151.951F	3,703	16,491.03	29,073.49	0.821	0.822	0.999	0.906
23.8	366,361.85	169	161.076F	12.384	24.615	151.953F	3,703	16,491.36	29,080.01	0.821	0.822	0.999	0.906
23.81	366,531.77	169	161.072F	12.389	24.614	151.956F	3,703	16,491.70	29,086.53	0.821	0.822	0.999	0.906
23.82	366,701.70	169	161.067F	12.395	24.614	151.958F	3,704	16,492.03	29,093.05	0.821	0.822	0.999	0.906
23.83	366,871.63	169	161.063F	12.4	24.614	151.961F	3,704	16,492.36	29,099.57	0.821	0.822	0.999	0.906
23.84	367,041.57	169.1	161.059F	12.405	24.614	151.963F	3,704	16,492.70	29,106.09	0.822	0.822	0.999	0.906
23.85	367,211.51	169.1	161.055F	12.41	24.614	151.965F	3,704	16,493.03	29,112.61	0.822	0.822	0.999	0.906
23.86	367,381.45	169.1	161.051F	12.416	24.613	151.968F	3,704	16,493.36	29,119.13	0.822	0.822	0.999	0.906
23.87	367,551.40	169.1	161.046F	12.421	24.613	151.970F	3,705	16,493.70	29,125.65	0.822	0.822	0.999	0.906
23.88	367,721.35	169.1	161.042F	12.426	24.613	151.972F	3,705	16,494.03	29,132.18	0.822	0.822	0.999	0.906
23.89	367,891.31	169.1	161.038F	12.432	24.613	151.975F	3,705	16,494.37	29,138.70	0.822	0.822	0.999	0.906
23.9	368,061.26	169.1	161.034F	12.437	24.613	151.977F	3,705	16,494.70	29,145.22	0.822	0.823	0.999	0.906
23.91	368,231.22	169.1	161.029F	12.442	24.612	151.980F	3,706	16,495.03	29,151.74	0.822	0.823	0.999	0.906
23.92	368,401.19	169.1	161.025F	12.447	24.612	151.982F	3,706	16,495.37	29,158.26	0.822	0.823	0.999	0.906
23.93	368,571.16	169.1	161.021F	12.453	24.612	151.984F	3,706	16,495.70	29,164.78	0.822	0.823	0.999	0.906
23.94	368,741.13	169.1	161.017F	12.458	24.612	151.987F	3,706	16,496.04	29,171.30	0.822	0.823	0.999	0.906
23.95	368,911.10	169.1	161.013F	12.463	24.612	151.989F	3,707	16,496.37	29,177.82	0.822	0.823	0.999	0.906
23.96	369,081.08	169.1	161.009F	12.468	24.612	151.992F	3,707	16,496.70	29,184.34	0.822	0.823	0.999	0.906
23.97	369,251.06	169.1	161.004F	12.474	24.611	151.994F	3,707	16,497.04	29,190.86	0.822	0.823	0.999	0.906
23.98	369,421.05	169.1	161.000F	12.479	24.611	151.996F	3,707	16,497.37	29,197.38	0.822	0.823	0.999	0.906
23.99	369,591.04	169.1	160.996F	12.484	24.611	151.999F	3,708	16,497.71	29,203.91	0.822	0.823	0.999	0.906
24	369,761.03	169.1	160.992F	12.49	24.611	152.001F	3,708	16,498.04	29,210.43	0.822	0.823	0.999	0.906
24.01	369,931.03	169.1	160.988F	12.495	24.611	152.004F	3,708	16,498.37	29,216.95	0.822	0.823	0.999	0.906
24.02	370,101.03	169.1	160.984F	12.5	24.611	152.006F	3,708	16,498.71	29,223.47	0.822	0.823	0.999	0.906
24.03	370,271.03	169.1	160.979F	12.505	24.611	152.008F	3,709	16,499.04	29,229.99	0.822	0.823	0.999	0.906
24.04	370,441.04	169.1	160.975F	12.511	24.611	152.011F	3,709	16,499.38	29,236.51	0.822	0.823	0.999	0.906
24.05	370,611.05	169.1	160.971F	12.516	24.61	152.013F	3,709	16,499.71	29,243.03	0.822	0.823	0.999	0.906
24.06	370,781.06	169.1	160.967F	12.521	24.61	152.015F	3,709	16,500.04	29,249.55	0.822	0.823	0.999	0.906
24.07	370,951.08	169.1	160.963F	12.527	24.61	152.018F	3,710	16,500.38	29,256.08	0.822	0.823	0.999	0.906
24.08	371,121.10	169.1	160.959F	12.532	24.61	152.020F	3,710	16,500.71	29,262.60	0.822	0.823	0.999	0.906
24.09	371,291.12	169.1	160.955F	12.537	24.61	152.023F	3,710	16,501.05	29,269.12	0.822	0.823	0.999	0.906
24.1	371,461.15	169.1	160.951F	12.542	24.61	152.025F	3,710	16,501.38	29,275.64	0.822	0.823	0.999	0.906
24.11	371,631.18	169.1	160.946F	12.548	24.61	152.027F	3,710	16,501.72	29,282.16	0.822	0.823	0.999	0.906
24.12	371,801.22	169.1	160.942F	12.553	24.61	152.030F	3,711	16,502.06	29,288.68	0.822	0.823	0.999	0.906
24.13	371,971.25	169.1	160.938F	12.558	24.61	152.032F	3,711	16,502.40	29,295.21	0.823	0.823	0.999	0.906
24.14	372,141.30	169.2	160.934F	12.563	24.61	152.035F	3,711	16,502.74	29,301.73	0.823	0.823	0.999	0.906
24.15	372,311.34	169.2	160.930F	12.569	24.61	152.037F	3,711	16,503.08	29,308.25	0.823	0.823	0.999	0.906
24.16	372,481.39	169.2	160.926F	12.574	24.61	152.040F	3,712	16,503.42	29,314.77	0.823	0.823	0.999	0.906
24.17	372,651.44	169.2	160.922F	12.579	24.61	152.042F	3,712	16,503.76	29,321.30	0.823	0.823	0.999	0.906
24.18	372,821.50	169.2	160.918F	12.585	24.609	152.044F	3,712	16,504.10	29,327.82	0.823	0.823	0.999	0.906
24.19	372,991.56	169.2	160.914F	12.59	24.609	152.047F	3,712	16,504.44	29,334.34	0.823	0.824	0.999	0.906
24.2	373,161.62	169.2	160.910F	12.595	24.609	152.049F	3,713	16,504.78	29,340.86	0.823	0.824	0.999	0.906
24.21	373,331.69	169.2	160.906F	12.6	24.609	152.052F	3,713	16,505.12	29,347.39	0.823	0.824	0.999	0.906
24.22	373,501.76	169.2	160.902F	12.606	24.609	152.054F	3,713	16,505.46	29,353.91	0.823	0.824	0.999	0.906
24.23	373,671.84	169.2	160.898F	12.611	24.609	152.057F	3,713	16,505.81	29,360.43	0.823	0.824	0.999	0.906
24.24	373,841.91	169.2	160.894F	12.616	24.609	152.059F	3,714	16,506.15	29,366.95	0.823	0.824	0.999	0.906
24.25	374,011.99	169.2	160.889F	12.621	24.609	152.062F	3,714	16,506.49	29,373.48	0.823	0.824	0.999	0.906
24.26	374,182.08	169.2	160.885F	12.627	24.609	152.064F	3,714	16,506.83	29,380.00	0.823	0.824	0.999	0.906
24.27	374,352.17	169.2	160.881F	12.632	24.609	152.066F	3,714	16,507.17	29,386.52	0.823	0.824	0.999	0.906
24.28	374,522.26	169.2	160.877F	12.637	24.609	152.069F	3,715	16,507.51	29,393.05	0.823	0.824	0.999	0.907
24.29	374,692.36	169.2	160.873F	12.643	24.609	152.071F	3,715	16,507.85	29,399.57	0.823	0.824	0.999	0.907
24.3	374,862.46	169.2	160.869F	12.648	24.609	152.074F	3,715	16,508.19	29,406.09	0.823	0.824	0.999	0.907
24.31	375,032.56	169.2	160.865F	12.653	24.609	152.076F	3,715	16,508.53	29,412.61	0.823	0.824	0.999	0.907
24.32	375,202.66	169.2	160.861F	12.658	24.609	152.079F	3,716	16,508.88	29,419.14	0.823	0.824	0.999	0.907
24.33	375,372.77	169.2	160.857F	12.664	24.609	152.081F	3,716	16,509.22	29,425.66	0.823	0.824	0.999	0.907
24.34	375,542.89	169.2	160.853F	12.669	24.609	152.084F	3,716	16,509.56	29,432.18	0.823	0.824	0.999	0.907
24.35	375,713.01	169.2	160.849F	12.674	24.61	152.086F	3,716	16,509.90	29,438.71	0.823	0.824	0.999	0.907
24.36	375,883.13	169.2	160.845F	12.679	24.61	152.088F	3,717	16,510.24	29,445.23	0.823	0.824	0.999	0.907
24.37	376,053.25	169.2	160.841F	12.685	24.61	152.091F	3,717	16,510.58	29,451.75	0.823	0.824	0.999	0.907
24.38	376,223.38	169.2	160.837F	12.69	24.61	152.093F	3,717	16,510.92	29,458.28	0.823	0.824	0.999	0.907
24.39	376,393.51	169.2	160.833F	12.695	24.61	152.096F	3,717	16,511.26	29,464.80	0.823	0.824	0.999	0.907
24.4	376,563.65	169.2	160.829F	12.701	24.61	152.098F	3,718	16,511.61	29,471.32	0.823	0.824	0.999	0.907

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Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
24.41	376,733.78	169.2	160.825F	12.706	24.61	152.101F	3,718	16,511.95	29,477.85	0.823	0.824	0.999	0.907
24.42	376,903.93	169.3	160.822F	12.711	24.61	152.103F	3,718	16,512.29	29,484.37	0.824	0.824	0.999	0.907
24.43	377,074.07	169.3	160.818F	12.716	24.61	152.105F	3,718	16,512.63	29,490.89	0.824	0.824	0.999	0.907
24.44	377,244.22	169.3	160.814F	12.722	24.61	152.108F	3,718	16,512.97	29,497.42	0.824	0.824	0.999	0.907
24.45	377,414.38	169.3	160.810F	12.727	24.61	152.110F	3,719	16,513.31	29,503.94	0.824	0.824	0.999	0.907
24.46	377,584.53	169.3	160.806F	12.732	24.61	152.113F	3,719	16,513.65	29,510.46	0.824	0.824	0.999	0.907
24.47	377,754.69	169.3	160.802F	12.737	24.61	152.115F	3,719	16,514.00	29,516.99	0.824	0.824	0.999	0.907
24.48	377,924.86	169.3	160.798F	12.743	24.61	152.118F	3,719	16,514.34	29,523.51	0.824	0.824	0.999	0.907
24.49	378,095.02	169.3	160.794F	12.748	24.611	152.120F	3,720	16,514.68	29,530.03	0.824	0.825	0.999	0.907
24.5	378,265.20	169.3	160.790F	12.753	24.611	152.123F	3,720	16,515.02	29,536.56	0.824	0.825	0.999	0.907
24.51	378,435.37	169.3	160.786F	12.759	24.611	152.125F	3,720	16,515.36	29,543.08	0.824	0.825	0.999	0.907
24.52	378,605.55	169.3	160.782F	12.764	24.611	152.127F	3,720	16,515.70	29,549.61	0.824	0.825	0.999	0.907
24.53	378,775.73	169.3	160.778F	12.769	24.611	152.130F	3,721	16,516.04	29,556.13	0.824	0.825	0.999	0.907
24.54	378,945.92	169.3	160.774F	12.774	24.611	152.132F	3,721	16,516.39	29,562.65	0.824	0.825	0.999	0.907
24.55	379,116.11	169.3	160.770F	12.78	24.611	152.135F	3,721	16,516.73	29,569.18	0.824	0.825	0.999	0.907
24.56	379,286.30	169.3	160.767F	12.785	24.611	152.137F	3,721	16,517.07	29,575.70	0.824	0.825	0.999	0.907
24.57	379,456.49	169.3	160.763F	12.79	24.612	152.140F	3,722	16,517.41	29,582.22	0.824	0.825	0.999	0.907
24.58	379,626.69	169.3	160.759F	12.795	24.612	152.142F	3,722	16,517.75	29,588.75	0.824	0.825	0.999	0.907
24.59	379,796.90	169.3	160.755F	12.801	24.612	152.144F	3,722	16,518.09	29,595.27	0.824	0.825	0.999	0.907
24.6	379,967.11	169.3	160.751F	12.806	24.612	152.147F	3,722	16,518.43	29,601.80	0.824	0.825	0.999	0.907
24.61	380,137.32	169.3	160.747F	12.811	24.612	152.149F	3,723	16,518.78	29,608.32	0.824	0.825	0.999	0.907
24.62	380,307.53	169.3	160.743F	12.817	24.612	152.152F	3,723	16,519.13	29,614.85	0.824	0.825	0.999	0.907
24.63	380,477.75	169.3	160.739F	12.822	24.613	152.154F	3,723	16,519.47	29,621.38	0.824	0.825	0.999	0.907
24.64	380,647.97	169.3	160.736F	12.827	24.613	152.157F	3,723	16,519.82	29,627.90	0.824	0.825	0.999	0.907
24.65	380,818.20	169.3	160.732F	12.832	24.613	152.159F	3,724	16,520.17	29,634.43	0.824	0.825	0.999	0.907
24.66	380,988.42	169.3	160.728F	12.838	24.613	152.162F	3,724	16,520.52	29,640.96	0.824	0.825	0.999	0.907
24.67	381,158.66	169.3	160.724F	12.843	24.613	152.164F	3,724	16,520.86	29,647.49	0.824	0.825	0.999	0.907
24.68	381,328.89	169.3	160.720F	12.848	24.613	152.167F	3,724	16,521.21	29,654.01	0.824	0.825	0.999	0.907
24.69	381,499.13	169.3	160.716F	12.853	24.614	152.169F	3,725	16,521.56	29,660.54	0.824	0.825	0.999	0.907
24.7	381,669.38	169.3	160.712F	12.859	24.614	152.172F	3,725	16,521.90	29,667.07	0.824	0.825	0.999	0.907
24.71	381,839.62	169.4	160.709F	12.864	24.614	152.174F	3,725	16,522.25	29,673.60	0.825	0.825	0.999	0.907
24.72	382,009.87	169.4	160.705F	12.869	24.614	152.177F	3,725	16,522.60	29,680.12	0.825	0.825	0.999	0.907
24.73	382,180.13	169.4	160.701F	12.874	24.614	152.179F	3,726	16,522.95	29,686.65	0.825	0.825	0.999	0.907
24.74	382,350.39	169.4	160.697F	12.88	24.615	152.182F	3,726	16,523.29	29,693.18	0.825	0.825	0.999	0.907
24.75	382,520.65	169.4	160.693F	12.885	24.615	152.184F	3,726	16,523.64	29,699.71	0.825	0.825	0.999	0.907
24.76	382,690.91	169.4	160.690F	12.89	24.615	152.187F	3,726	16,523.99	29,706.23	0.825	0.825	0.999	0.907
24.77	382,861.18	169.4	160.686F	12.896	24.615	152.189F	3,727	16,524.34	29,712.76	0.825	0.825	0.999	0.907
24.78	383,031.46	169.4	160.682F	12.901	24.616	152.192F	3,727	16,524.68	29,719.29	0.825	0.826	0.999	0.907
24.79	383,201.73	169.4	160.678F	12.906	24.616	152.194F	3,727	16,525.03	29,725.82	0.825	0.826	0.999	0.907
24.8	383,372.01	169.4	160.674F	12.911	24.616	152.197F	3,727	16,525.38	29,732.34	0.825	0.826	0.999	0.907
24.81	383,542.30	169.4	160.671F	12.917	24.616	152.199F	3,728	16,525.73	29,738.87	0.825	0.826	0.999	0.908
24.82	383,712.58	169.4	160.667F	12.922	24.617	152.202F	3,728	16,526.07	29,745.40	0.825	0.826	0.999	0.908
24.83	383,882.88	169.4	160.663F	12.927	24.617	152.204F	3,728	16,526.42	29,751.93	0.825	0.826	0.999	0.908
24.84	384,053.17	169.4	160.659F	12.932	24.617	152.207F	3,728	16,526.77	29,758.46	0.825	0.826	0.999	0.908
24.85	384,223.47	169.4	160.655F	12.938	24.617	152.209F	3,729	16,527.11	29,764.98	0.825	0.826	0.999	0.908
24.86	384,393.77	169.4	160.652F	12.943	24.618	152.212F	3,729	16,527.46	29,771.51	0.825	0.826	0.999	0.908
24.87	384,564.08	169.4	160.648F	12.948	24.618	152.214F	3,729	16,527.81	29,778.04	0.825	0.826	0.999	0.908
24.88	384,734.39	169.4	160.644F	12.953	24.618	152.217F	3,729	16,528.16	29,784.57	0.825	0.826	0.999	0.908
24.89	384,904.70	169.4	160.640F	12.959	24.618	152.219F	3,730	16,528.50	29,791.10	0.825	0.826	0.999	0.908
24.9	385,075.02	169.4	160.637F	12.964	24.619	152.222F	3,730	16,528.85	29,797.62	0.825	0.826	0.999	0.908
24.91	385,245.34	169.4	160.633F	12.969	24.619	152.224F	3,730	16,529.20	29,804.15	0.825	0.826	0.999	0.908
24.92	385,415.66	169.4	160.629F	12.975	24.619	152.227F	3,730	16,529.55	29,810.68	0.825	0.826	0.999	0.908
24.93	385,585.99	169.4	160.625F	12.98	24.62	152.229F	3,731	16,529.89	29,817.20	0.825	0.826	0.999	0.908
24.94	385,756.32	169.4	160.622F	12.985	24.62	152.231F	3,731	16,530.23	29,823.73	0.825	0.826	0.999	0.908
24.95	385,926.65	169.4	160.618F	12.99	24.62	152.234F	3,731	16,530.58	29,830.26	0.825	0.826	0.999	0.908
24.96	386,096.99	169.4	160.614F	12.996	24.621	152.236F	3,731	16,530.92	29,836.78	0.825	0.826	0.999	0.908
24.97	386,267.33	169.4	160.611F	13.001	24.621	152.239F	3,732	16,531.27	29,843.31	0.825	0.826	0.999	0.908
24.98	386,437.68	169.4	160.607F	13.006	24.621	152.242F	3,732	16,531.60	29,849.84	0.825	0.826	0.999	0.908
24.99	386,608.03	169.5	160.603F	13.011	24.622	152.244F	3,732	16,531.93	29,856.36	0.825	0.826	0.999	0.908
25	386,778.38	169.5	160.599F	13.017	24.622	152.247F	3,732	16,532.27	29,862.89	0.825	0.826	0.999	0.908
25.01	386,948.74	169.5	160.596F	13.022	24.622	152.250F	3,732	16,532.60	29,869.42	0.826	0.826	0.999	0.908
25.02	387,119.10	169.5	160.592F	13.027	24.623	152.253F	3,733	16,532.93	29,875.95	0.826	0.826	0.999	0.908
25.03	387,289.46	169.5	160.588F	13.032	24.623	152.255F	3,733	16,533.26	29,882.47	0.826	0.826	0.999	0.908
25.04	387,459.83	169.5	160.585F	13.038	24.623	152.258F	3,733	16,533.60	29,889.00	0.826	0.826	0.999	0.908

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
25.05	387,630.20	169.5	160.581F	13.043	24.624	152.261F	3,733	16,533.93	29,895.53	0.826	0.826	0.999	0.908
25.06	387,800.57	169.5	160.577F	13.048	24.624	152.264F	3,734	16,534.26	29,902.06	0.826	0.826	0.999	0.908
25.07	387,970.95	169.5	160.574F	13.054	24.624	152.266F	3,734	16,534.59	29,908.58	0.826	0.826	0.999	0.908
25.08	388,141.33	169.5	160.570F	13.059	24.625	152.269F	3,734	16,534.92	29,915.11	0.826	0.826	0.999	0.908
25.09	388,311.71	169.5	160.566F	13.064	24.625	152.272F	3,734	16,535.26	29,921.64	0.826	0.827	0.999	0.908
25.1	388,482.10	169.5	160.563F	13.069	24.625	152.275F	3,735	16,535.59	29,928.17	0.826	0.827	0.999	0.908
25.11	388,652.49	169.5	160.559F	13.075	24.626	152.277F	3,735	16,535.92	29,934.69	0.826	0.827	0.999	0.908
25.12	388,822.89	169.5	160.555F	13.08	24.626	152.280F	3,735	16,536.25	29,941.22	0.826	0.827	0.999	0.908
25.13	388,993.29	169.5	160.552F	13.085	24.627	152.283F	3,735	16,536.59	29,947.75	0.826	0.827	0.999	0.908
25.14	389,163.69	169.5	160.548F	13.09	24.627	152.286F	3,735	16,536.92	29,954.28	0.826	0.827	0.999	0.908
25.15	389,334.09	169.5	160.544F	13.096	24.627	152.288F	3,736	16,537.25	29,960.80	0.826	0.827	0.999	0.908
25.16	389,504.50	169.5	160.541F	13.101	24.628	152.291F	3,736	16,537.58	29,967.33	0.826	0.827	0.999	0.908
25.17	389,674.92	169.5	160.537F	13.106	24.628	152.294F	3,736	16,537.91	29,973.86	0.826	0.827	0.999	0.908
25.18	389,845.33	169.5	160.534F	13.111	24.629	152.297F	3,736	16,538.25	29,980.39	0.826	0.827	0.999	0.908
25.19	390,015.75	169.5	160.530F	13.117	24.629	152.299F	3,737	16,538.58	29,986.92	0.826	0.827	0.999	0.908
25.2	390,186.17	169.5	160.526F	13.122	24.629	152.302F	3,737	16,538.91	29,993.44	0.826	0.827	0.999	0.908
25.21	390,356.60	169.5	160.523F	13.127	24.63	152.305F	3,737	16,539.24	29,999.97	0.826	0.827	0.999	0.908
25.22	390,527.03	169.5	160.519F	13.132	24.63	152.307F	3,737	16,539.58	30,006.50	0.826	0.827	0.999	0.908
25.23	390,697.46	169.5	160.515F	13.138	24.631	152.310F	3,738	16,539.91	30,013.03	0.826	0.827	0.999	0.908
25.24	390,867.90	169.5	160.512F	13.143	24.631	152.313F	3,738	16,540.24	30,019.56	0.826	0.827	0.999	0.908
25.25	391,038.34	169.5	160.508F	13.148	24.632	152.316F	3,738	16,540.57	30,026.08	0.826	0.827	0.999	0.908
25.26	391,208.78	169.5	160.505F	13.154	24.632	152.318F	3,738	16,540.91	30,032.61	0.826	0.827	0.999	0.908
25.27	391,379.23	169.5	160.501F	13.159	24.632	152.321F	3,739	16,541.24	30,039.14	0.826	0.827	0.999	0.908
25.28	391,549.68	169.6	160.497F	13.164	24.633	152.324F	3,739	16,541.57	30,045.67	0.826	0.827	0.999	0.908
25.29	391,720.14	169.6	160.494F	13.169	24.633	152.327F	3,739	16,541.90	30,052.20	0.826	0.827	0.999	0.908
25.3	391,890.59	169.6	160.490F	13.175	24.634	152.329F	3,739	16,542.24	30,058.72	0.826	0.827	0.999	0.908
25.31	392,061.06	169.6	160.487F	13.18	24.634	152.332F	3,739	16,542.57	30,065.25	0.826	0.827	0.999	0.908
25.32	392,231.52	169.6	160.483F	13.185	24.635	152.335F	3,740	16,542.90	30,071.78	0.827	0.827	0.999	0.908
25.33	392,401.99	169.6	160.480F	13.19	24.635	152.338F	3,740	16,543.23	30,078.31	0.827	0.827	0.999	0.908
25.34	392,572.46	169.6	160.476F	13.196	24.636	152.340F	3,740	16,543.57	30,084.84	0.827	0.827	0.999	0.908
25.35	392,742.94	169.6	160.473F	13.201	24.636	152.343F	3,740	16,543.90	30,091.37	0.827	0.827	0.999	0.909
25.36	392,913.42	169.6	160.469F	13.206	24.637	152.346F	3,741	16,544.23	30,097.90	0.827	0.827	0.999	0.909
25.37	393,083.90	169.6	160.465F	13.211	24.637	152.349F	3,741	16,544.57	30,104.43	0.827	0.827	0.999	0.909
25.38	393,254.38	169.6	160.462F	13.217	24.638	152.351F	3,741	16,544.91	30,110.96	0.827	0.827	0.999	0.909
25.39	393,424.87	169.6	160.458F	13.222	24.638	152.354F	3,741	16,545.24	30,117.49	0.827	0.827	0.999	0.909
25.4	393,595.37	169.6	160.455F	13.227	24.639	152.357F	3,742	16,545.59	30,124.03	0.827	0.828	0.999	0.909
25.41	393,765.86	169.6	160.451F	13.232	24.639	152.360F	3,742	16,545.94	30,130.56	0.827	0.828	0.999	0.909
25.42	393,936.36	169.6	160.448F	13.238	24.64	152.363F	3,742	16,546.29	30,137.10	0.827	0.828	0.999	0.909
25.43	394,106.87	169.6	160.444F	13.243	24.64	152.366F	3,742	16,546.64	30,143.64	0.827	0.828	0.999	0.909
25.44	394,277.38	169.6	160.441F	13.248	24.641	152.369F	3,743	16,546.99	30,150.17	0.827	0.828	0.999	0.909
25.45	394,447.89	169.6	160.437F	13.253	24.641	152.372F	3,743	16,547.34	30,156.71	0.827	0.828	0.999	0.909
25.46	394,618.40	169.6	160.434F	13.259	24.642	152.374F	3,743	16,547.69	30,163.25	0.827	0.828	0.999	0.909
25.47	394,788.92	169.6	160.430F	13.264	24.642	152.377F	3,743	16,548.04	30,169.78	0.827	0.828	0.999	0.909
25.48	394,959.45	169.6	160.427F	13.269	24.643	152.380F	3,744	16,548.39	30,176.32	0.827	0.828	0.999	0.909
25.49	395,129.97	169.6	160.423F	13.274	24.643	152.383F	3,744	16,548.74	30,182.86	0.827	0.828	0.999	0.909
25.5	395,300.50	169.6	160.420F	13.28	24.644	152.386F	3,744	16,549.09	30,189.40	0.827	0.828	0.999	0.909
25.51	395,471.04	169.6	160.416F	13.285	24.644	152.389F	3,744	16,549.44	30,195.93	0.827	0.828	0.999	0.909
25.52	395,641.57	169.6	160.413F	13.29	24.645	152.392F	3,744	16,549.80	30,202.47	0.827	0.828	0.999	0.909
25.53	395,812.11	169.6	160.409F	13.296	24.646	152.395F	3,745	16,550.15	30,209.01	0.827	0.828	0.999	0.909
25.54	395,982.66	169.6	160.406F	13.301	24.646	152.398F	3,745	16,550.50	30,215.54	0.827	0.828	0.999	0.909
25.55	396,153.21	169.6	160.402F	13.306	24.647	152.400F	3,745	16,550.85	30,222.08	0.827	0.828	0.999	0.909
25.56	396,323.76	169.6	160.399F	13.311	24.647	152.403F	3,745	16,551.20	30,228.62	0.827	0.828	0.999	0.909
25.57	396,494.32	169.7	160.395F	13.317	24.648	152.406F	3,746	16,551.55	30,235.16	0.827	0.828	0.999	0.909
25.58	396,664.88	169.7	160.392F	13.322	24.648	152.409F	3,746	16,551.90	30,241.69	0.827	0.828	0.999	0.909
25.59	396,835.44	169.7	160.388F	13.327	24.649	152.412F	3,746	16,552.25	30,248.23	0.827	0.828	0.999	0.909
25.6	397,006.01	169.7	160.385F	13.332	24.65	152.415F	3,746	16,552.60	30,254.77	0.827	0.828	0.999	0.909
25.61	397,176.58	169.7	160.382F	13.338	24.65	152.418F	3,747	16,552.95	30,261.31	0.827	0.828	0.999	0.909
25.62	397,347.15	169.7	160.378F	13.343	24.651	152.421F	3,747	16,553.30	30,267.84	0.827	0.828	0.999	0.909
25.63	397,517.73	169.7	160.375F	13.348	24.651	152.424F	3,747	16,553.65	30,274.38	0.828	0.828	0.999	0.909
25.64	397,688.31	169.7	160.371F	13.353	24.652	152.426F	3,747	16,554.00	30,280.92	0.828	0.828	0.999	0.909
25.65	397,858.90	169.7	160.368F	13.359	24.653	152.429F	3,748	16,554.35	30,287.46	0.828	0.828	0.999	0.909
25.66	398,029.49	169.7	160.364F	13.364	24.653	152.432F	3,748	16,554.70	30,293.99	0.828	0.828	0.999	0.909
25.67	398,200.08	169.7	160.361F	13.369	24.654	152.435F	3,748	16,555.05	30,300.53	0.828	0.828	0.999	0.909
25.68	398,370.68	169.7	160.358F	13.374	24.654	152.438F	3,748	16,555.40	30,307.07	0.828	0.828	0.999	0.909

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
25.69	398,541.28	169.7	160.354F	13.38	24.655	152.441F	3,749	16,555.75	30,313.61	0.828	0.828	0.999	0.909
25.7	398,711.88	169.7	160.351F	13.385	24.656	152.444F	3,749	16,556.10	30,320.15	0.828	0.828	0.999	0.909
25.71	398,882.49	169.7	160.347F	13.39	24.656	152.447F	3,749	16,556.45	30,326.68	0.828	0.829	0.999	0.909
25.72	399,053.10	169.7	160.344F	13.395	24.657	152.450F	3,749	16,556.80	30,333.22	0.828	0.829	0.999	0.909
25.73	399,223.72	169.7	160.340F	13.401	24.658	152.452F	3,750	16,557.14	30,339.74	0.828	0.829	0.999	0.909
25.74	399,394.34	169.7	160.337F	13.406	24.658	152.455F	3,750	16,557.47	30,346.26	0.828	0.829	0.999	0.909
25.75	399,564.96	169.7	160.334F	13.411	24.659	152.458F	3,750	16,557.80	30,352.78	0.828	0.829	0.999	0.909
25.76	399,735.59	169.7	160.330F	13.416	24.66	152.460F	3,750	16,558.13	30,359.29	0.828	0.829	0.999	0.909
25.77	399,906.22	169.7	160.327F	13.422	24.66	152.463F	3,751	16,558.46	30,365.81	0.828	0.829	0.999	0.909
25.78	400,076.86	169.7	160.324F	13.427	24.661	152.466F	3,751	16,558.79	30,372.33	0.828	0.829	0.999	0.909
25.79	400,247.50	169.7	160.320F	13.432	24.662	152.469F	3,751	16,559.12	30,378.84	0.828	0.829	0.999	0.909
25.8	400,418.14	169.7	160.317F	13.437	24.662	152.471F	3,751	16,559.45	30,385.36	0.828	0.829	0.999	0.909
25.81	400,588.79	169.7	160.313F	13.443	24.663	152.474F	3,751	16,559.78	30,391.88	0.828	0.829	0.999	0.909
25.82	400,759.43	169.7	160.310F	13.448	24.664	152.477F	3,752	16,560.11	30,398.40	0.828	0.829	0.999	0.909
25.83	400,930.09	169.7	160.307F	13.453	24.664	152.479F	3,752	16,560.44	30,404.92	0.828	0.829	0.999	0.909
25.84	401,100.74	169.7	160.303F	13.458	24.665	152.482F	3,752	16,560.77	30,411.44	0.828	0.829	0.999	0.909
25.85	401,271.40	169.8	160.300F	13.464	24.666	152.485F	3,752	16,561.10	30,417.96	0.828	0.829	0.999	0.909
25.86	401,442.07	169.8	160.297F	13.469	24.666	152.488F	3,753	16,561.44	30,424.48	0.828	0.829	0.999	0.909
25.87	401,612.73	169.8	160.293F	13.474	24.667	152.490F	3,753	16,561.77	30,431.00	0.828	0.829	0.999	0.909
25.88	401,783.40	169.8	160.290F	13.479	24.668	152.493F	3,753	16,562.10	30,437.52	0.828	0.829	0.999	0.91
25.89	401,954.08	169.8	160.287F	13.485	24.668	152.496F	3,753	16,562.44	30,444.04	0.828	0.829	0.999	0.91
25.9	402,124.76	169.8	160.283F	13.49	24.669	152.498F	3,754	16,562.77	30,450.56	0.828	0.829	0.999	0.91
25.91	402,295.44	169.8	160.280F	13.495	24.67	152.501F	3,754	16,563.11	30,457.09	0.828	0.829	0.999	0.91
25.92	402,466.12	169.8	160.277F	13.5	24.67	152.504F	3,754	16,563.44	30,463.61	0.828	0.829	0.999	0.91
25.93	402,636.81	169.8	160.273F	13.506	24.671	152.507F	3,754	16,563.77	30,470.13	0.828	0.829	0.999	0.91
25.94	402,807.50	169.8	160.270F	13.511	24.672	152.509F	3,754	16,564.11	30,476.66	0.829	0.829	0.999	0.91
25.95	402,978.20	169.8	160.267F	13.516	24.673	152.512F	3,755	16,564.45	30,483.18	0.829	0.829	0.999	0.91
25.96	403,148.90	169.8	160.263F	13.522	24.673	152.515F	3,755	16,564.79	30,489.71	0.829	0.829	0.999	0.91
25.97	403,319.56	169.8	160.260F	13.527	24.675	152.518F	3,755	16,565.15	30,496.25	0.829	0.829	0.999	0.91
25.98	403,490.21	169.8	160.257F	13.533	24.675	152.520F	3,755	16,565.51	30,502.79	0.829	0.829	0.999	0.91
25.99	403,660.86	169.8	160.254F	13.538	24.676	152.523F	3,756	16,565.88	30,509.34	0.829	0.829	0.999	0.91
26	403,831.51	169.8	160.250F	13.543	24.677	152.526F	3,756	16,566.25	30,515.89	0.829	0.829	0.999	0.91
26.01	404,002.16	169.8	160.247F	13.548	24.678	152.528F	3,756	16,566.61	30,522.44	0.829	0.829	0.999	0.91
26.02	404,172.82	169.8	160.244F	13.554	24.678	152.531F	3,756	16,566.98	30,528.99	0.829	0.829	0.999	0.91
26.03	404,343.49	169.8	160.241F	13.559	24.679	152.534F	3,757	16,567.34	30,535.54	0.829	0.83	0.999	0.91
26.04	404,514.15	169.8	160.237F	13.564	24.68	152.536F	3,757	16,567.71	30,542.10	0.829	0.83	0.999	0.91
26.05	404,684.82	169.8	160.234F	13.569	24.681	152.539F	3,757	16,568.08	30,548.65	0.829	0.83	0.999	0.91
26.06	404,855.50	169.8	160.231F	13.575	24.682	152.541F	3,758	16,568.45	30,555.21	0.829	0.83	0.999	0.91
26.07	405,026.18	169.8	160.228F	13.58	24.682	152.544F	3,758	16,568.81	30,561.76	0.829	0.83	0.999	0.91
26.08	405,196.86	169.8	160.224F	13.585	24.683	152.547F	3,758	16,569.18	30,568.32	0.829	0.83	0.999	0.91
26.09	405,367.55	169.8	160.221F	13.59	24.684	152.549F	3,758	16,569.55	30,574.88	0.829	0.83	0.999	0.91
26.1	405,538.24	169.8	160.218F	13.596	24.685	152.552F	3,759	16,569.92	30,581.44	0.829	0.83	0.999	0.91
26.11	405,708.93	169.8	160.215F	13.601	24.685	152.555F	3,759	16,570.29	30,588.00	0.829	0.83	0.999	0.91
26.12	405,879.63	169.8	160.211F	13.606	24.686	152.557F	3,759	16,570.66	30,594.56	0.829	0.83	0.999	0.91
26.13	406,050.33	169.9	160.208F	13.611	24.687	152.560F	3,759	16,571.03	30,601.12	0.829	0.83	0.999	0.91
26.14	406,221.04	169.9	160.205F	13.617	24.688	152.563F	3,760	16,571.40	30,607.69	0.829	0.83	0.999	0.91
26.15	406,391.75	169.9	160.202F	13.622	24.689	152.565F	3,760	16,571.77	30,614.25	0.829	0.83	0.999	0.91
26.16	406,562.46	169.9	160.199F	13.627	24.689	152.568F	3,760	16,572.14	30,620.82	0.829	0.83	0.999	0.91
26.17	406,733.18	169.9	160.195F	13.632	24.69	152.571F	3,760	16,572.51	30,627.39	0.829	0.83	0.999	0.91
26.18	406,903.90	169.9	160.192F	13.638	24.691	152.573F	3,761	16,572.88	30,633.95	0.829	0.83	0.999	0.91
26.19	407,074.62	169.9	160.189F	13.643	24.692	152.576F	3,761	16,573.26	30,640.52	0.829	0.83	0.999	0.91
26.2	407,245.35	169.9	160.186F	13.648	24.693	152.579F	3,761	16,573.63	30,647.09	0.829	0.83	0.999	0.91
26.21	407,416.09	169.9	160.183F	13.653	24.694	152.582F	3,761	16,574.00	30,653.66	0.829	0.83	0.999	0.91
26.22	407,586.82	169.9	160.179F	13.659	24.694	152.584F	3,762	16,574.38	30,660.24	0.829	0.83	0.999	0.91
26.23	407,757.56	169.9	160.176F	13.664	24.695	152.587F	3,762	16,574.76	30,666.81	0.829	0.83	0.999	0.91
26.24	407,928.31	169.9	160.173F	13.669	24.696	152.590F	3,762	16,575.13	30,673.39	0.829	0.83	0.999	0.91
26.25	408,099.06	169.9	160.170F	13.674	24.697	152.592F	3,762	16,575.51	30,679.96	0.829	0.83	0.999	0.91
26.26	408,269.81	169.9	160.167F	13.68	24.698	152.595F	3,763	16,575.88	30,686.54	0.83	0.83	0.999	0.91
26.27	408,440.57	169.9	160.164F	13.685	24.699	152.598F	3,763	16,576.26	30,693.12	0.83	0.83	0.999	0.91
26.28	408,611.33	169.9	160.160F	13.69	24.699	152.601F	3,763	16,576.64	30,699.69	0.83	0.83	0.999	0.91
26.29	408,782.09	169.9	160.157F	13.695	24.7	152.603F	3,764	16,577.02	30,706.27	0.83	0.83	0.999	0.91
26.3	408,952.86	169.9	160.154F	13.701	24.701	152.606F	3,764	16,577.40	30,712.85	0.83	0.83	0.999	0.91
26.31	409,123.64	169.9	160.151F	13.706	24.702	152.609F	3,764	16,577.77	30,719.44	0.83	0.83	0.999	0.91
26.32	409,294.41	169.9	160.148F	13.711	24.703	152.611F	3,764	16,578.15	30,726.02	0.83	0.83	0.999	0.91

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
26.33	409,465.19	169.9	160.145F	13.716	24.704	152.614F	3,765	16,578.53	30,732.60	0.83	0.83	0.999	0.91
26.34	409,635.98	169.9	160.142F	13.722	24.705	152.617F	3,765	16,578.91	30,739.19	0.83	0.83	0.999	0.91
26.35	409,806.77	169.9	160.138F	13.727	24.706	152.620F	3,765	16,579.29	30,745.77	0.83	0.83	0.999	0.91
26.36	409,977.56	169.9	160.135F	13.732	24.706	152.622F	3,765	16,579.67	30,752.36	0.83	0.831	0.999	0.91
26.37	410,148.36	169.9	160.132F	13.737	24.707	152.625F	3,766	16,580.05	30,758.95	0.83	0.831	0.999	0.91
26.38	410,319.16	169.9	160.129F	13.743	24.708	152.628F	3,766	16,580.43	30,765.54	0.83	0.831	0.999	0.911
26.39	410,489.96	170	160.126F	13.748	24.709	152.631F	3,766	16,580.81	30,772.13	0.83	0.831	0.999	0.911
26.4	410,660.77	170	160.123F	13.753	24.71	152.634F	3,767	16,581.20	30,778.72	0.83	0.831	0.999	0.911
26.41	410,831.59	170	160.120F	13.758	24.711	152.636F	3,767	16,581.58	30,785.31	0.83	0.831	0.999	0.911
26.42	411,002.40	170	160.117F	13.764	24.712	152.639F	3,767	16,581.96	30,791.91	0.83	0.831	0.999	0.911
26.43	411,173.22	170	160.113F	13.769	24.713	152.642F	3,767	16,582.34	30,798.50	0.83	0.831	0.999	0.911
26.44	411,344.05	170	160.110F	13.774	24.714	152.645F	3,768	16,582.73	30,805.10	0.83	0.831	0.999	0.911
26.45	411,514.88	170	160.107F	13.779	24.715	152.647F	3,768	16,583.11	30,811.69	0.83	0.831	0.999	0.911
26.46	411,685.71	170	160.104F	13.785	24.715	152.650F	3,768	16,583.49	30,818.29	0.83	0.831	0.999	0.911
26.47	411,856.55	170	160.101F	13.79	24.716	152.653F	3,768	16,583.87	30,824.89	0.83	0.831	0.999	0.911
26.48	412,027.39	170	160.098F	13.795	24.717	152.656F	3,769	16,584.26	30,831.49	0.83	0.831	0.999	0.911
26.49	412,198.24	170	160.095F	13.8	24.718	152.658F	3,769	16,584.64	30,838.09	0.83	0.831	0.999	0.911
26.5	412,369.09	170	160.092F	13.806	24.719	152.661F	3,769	16,585.02	30,844.69	0.83	0.831	0.999	0.911
26.51	412,539.94	170	160.089F	13.811	24.72	152.664F	3,769	16,585.41	30,851.29	0.83	0.831	0.999	0.911
26.52	412,710.80	170	160.086F	13.816	24.721	152.667F	3,770	16,585.79	30,857.89	0.83	0.831	0.999	0.911
26.53	412,881.66	170	160.083F	13.821	24.722	152.670F	3,770	16,586.17	30,864.49	0.83	0.831	0.999	0.911
26.54	413,052.53	170	160.080F	13.827	24.723	152.672F	3,770	16,586.56	30,871.10	0.83	0.831	0.999	0.911
26.55	413,223.40	170	160.077F	13.832	24.724	152.675F	3,771	16,586.94	30,877.70	0.83	0.831	0.999	0.911
26.56	413,394.27	170	160.073F	13.837	24.725	152.678F	3,771	16,587.33	30,884.31	0.83	0.831	0.999	0.911
26.57	413,565.15	170	160.070F	13.842	24.726	152.681F	3,771	16,587.71	30,890.92	0.83	0.831	0.999	0.911
26.58	413,736.03	170	160.067F	13.848	24.727	152.684F	3,771	16,588.10	30,897.53	0.83	0.831	0.999	0.911
26.59	413,906.92	170	160.064F	13.853	24.728	152.686F	3,772	16,588.48	30,904.14	0.831	0.831	0.999	0.911
26.6	414,077.81	170	160.061F	13.858	24.729	152.689F	3,772	16,588.87	30,910.75	0.831	0.831	0.999	0.911
26.61	414,248.71	170	160.058F	13.863	24.73	152.692F	3,772	16,589.26	30,917.36	0.831	0.831	0.999	0.911
26.62	414,419.60	170	160.055F	13.869	24.731	152.695F	3,772	16,589.64	30,923.97	0.831	0.831	0.999	0.911
26.63	414,590.51	170	160.052F	13.874	24.732	152.698F	3,773	16,590.03	30,930.59	0.831	0.831	0.999	0.911
26.64	414,761.42	170.1	160.049F	13.879	24.733	152.700F	3,773	16,590.42	30,937.20	0.831	0.831	0.999	0.911
26.65	414,932.33	170.1	160.046F	13.884	24.734	152.703F	3,773	16,590.81	30,943.82	0.831	0.831	0.999	0.911
26.66	415,103.24	170.1	160.043F	13.89	24.735	152.706F	3,774	16,591.19	30,950.43	0.831	0.831	0.999	0.911
26.67	415,274.16	170.1	160.040F	13.895	24.736	152.709F	3,774	16,591.58	30,957.05	0.831	0.831	0.999	0.911
26.68	415,445.09	170.1	160.037F	13.9	24.737	152.712F	3,774	16,591.98	30,963.67	0.831	0.831	0.999	0.911
26.69	415,616.02	170.1	160.034F	13.905	24.738	152.715F	3,774	16,592.37	30,970.29	0.831	0.832	0.999	0.911
26.7	415,786.95	170.1	160.031F	13.911	24.739	152.718F	3,775	16,592.77	30,976.92	0.831	0.832	0.999	0.911
26.71	415,957.88	170.1	160.028F	13.916	24.74	152.720F	3,775	16,593.17	30,983.54	0.831	0.832	0.999	0.911
26.72	416,128.83	170.1	160.025F	13.921	24.741	152.723F	3,775	16,593.57	30,990.16	0.831	0.832	0.999	0.911
26.73	416,299.77	170.1	160.022F	13.926	24.742	152.726F	3,776	16,593.96	30,996.79	0.831	0.832	0.999	0.911
26.74	416,470.72	170.1	160.019F	13.932	24.743	152.729F	3,776	16,594.36	31,003.42	0.831	0.832	0.999	0.911
26.75	416,641.68	170.1	160.016F	13.937	24.744	152.732F	3,776	16,594.76	31,010.04	0.831	0.832	0.999	0.911
26.76	416,812.63	170.1	160.013F	13.942	24.745	152.735F	3,776	16,595.16	31,016.67	0.831	0.832	0.999	0.911
26.77	416,983.60	170.1	160.010F	13.947	24.746	152.738F	3,777	16,595.56	31,023.30	0.831	0.832	0.999	0.911
26.78	417,154.56	170.1	160.007F	13.953	24.747	152.741F	3,777	16,595.96	31,029.93	0.831	0.832	0.999	0.911
26.79	417,325.53	170.1	160.004F	13.958	24.748	152.744F	3,777	16,596.36	31,036.57	0.831	0.832	0.999	0.911
26.8	417,496.51	170.1	160.001F	13.963	24.749	152.747F	3,777	16,596.76	31,043.20	0.831	0.832	0.999	0.911
26.81	417,667.49	170.1	159.998F	13.968	24.75	152.750F	3,778	16,597.16	31,049.83	0.831	0.832	0.999	0.911
26.82	417,838.47	170.1	159.995F	13.974	24.751	152.753F	3,778	16,597.56	31,056.47	0.831	0.832	0.999	0.911
26.83	418,009.46	170.1	159.992F	13.979	24.752	152.755F	3,778	16,597.96	31,063.11	0.831	0.832	0.999	0.911
26.84	418,180.46	170.1	159.989F	13.984	24.753	152.758F	3,779	16,598.37	31,069.74	0.831	0.832	0.999	0.912
26.85	418,351.45	170.1	159.986F	13.989	24.754	152.761F	3,779	16,598.77	31,076.38	0.831	0.832	0.999	0.912
26.86	418,522.45	170.1	159.983F	13.995	24.755	152.764F	3,779	16,599.17	31,083.02	0.831	0.832	0.999	0.912
26.87	418,693.46	170.1	159.981F	14	24.756	152.767F	3,779	16,599.57	31,089.66	0.831	0.832	0.999	0.912
26.88	418,864.47	170.1	159.978F	14.005	24.757	152.770F	3,780	16,599.98	31,096.30	0.831	0.832	0.999	0.912
26.89	419,035.48	170.2	159.975F	14.01	24.758	152.773F	3,780	16,600.38	31,102.95	0.831	0.832	0.999	0.912
26.9	419,206.50	170.2	159.972F	14.016	24.76	152.776F	3,780	16,600.79	31,109.59	0.831	0.832	0.999	0.912
26.91	419,377.53	170.2	159.969F	14.021	24.761	152.779F	3,781	16,601.19	31,116.24	0.831	0.832	0.999	0.912
26.92	419,548.55	170.2	159.966F	14.026	24.762	152.782F	3,781	16,601.60	31,122.88	0.832	0.832	0.999	0.912
26.93	419,719.59	170.2	159.963F	14.031	24.763	152.785F	3,781	16,602.00	31,129.53	0.832	0.832	0.999	0.912
26.94	419,890.62	170.2	159.960F	14.037	24.764	152.788F	3,781	16,602.41	31,136.18	0.832	0.832	0.999	0.912
26.95	420,061.66	170.2	159.957F	14.042	24.765	152.791F	3,782	16,602.81	31,142.83	0.832	0.832	0.999	0.912
26.96	420,232.71	170.2	159.954F	14.047	24.766	152.794F	3,782	16,603.22	31,149.48	0.832	0.832	0.999	0.912

Prepared: Verified: Approved: Acceptance Code:
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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
26.97	420,403.76	170.2	159.951F	14.052	24.767	152.797F	3,782	16,603.63	31,156.13	0.832	0.832	0.999	0.912
26.98	420,574.81	170.2	159.948F	14.058	24.768	152.800F	3,783	16,604.03	31,162.78	0.832	0.832	0.999	0.912
26.99	420,745.87	170.2	159.945F	14.063	24.769	152.803F	3,783	16,604.44	31,169.43	0.832	0.832	0.999	0.912
27	420,916.94	170.2	159.943F	14.068	24.771	152.806F	3,783	16,604.85	31,176.09	0.832	0.832	0.999	0.912
27.01	421,088.00	170.2	159.940F	14.073	24.772	152.809F	3,783	16,605.26	31,182.74	0.832	0.832	0.999	0.912
27.02	421,259.07	170.2	159.937F	14.078	24.773	152.812F	3,784	16,605.66	31,189.40	0.832	0.833	0.999	0.912
27.03	421,430.15	170.2	159.934F	14.084	24.774	152.815F	3,784	16,606.07	31,196.06	0.832	0.833	0.999	0.912
27.04	421,601.23	170.2	159.931F	14.089	24.775	152.818F	3,784	16,606.48	31,202.72	0.832	0.833	0.999	0.912
27.05	421,772.32	170.2	159.928F	14.094	24.776	152.821F	3,785	16,606.89	31,209.38	0.832	0.833	0.999	0.912
27.06	421,943.41	170.2	159.925F	14.099	24.777	152.824F	3,785	16,607.30	31,216.04	0.832	0.833	0.999	0.912
27.07	422,114.50	170.2	159.922F	14.105	24.778	152.827F	3,785	16,607.71	31,222.70	0.832	0.833	0.999	0.912
27.08	422,285.60	170.2	159.920F	14.11	24.78	152.830F	3,785	16,608.12	31,229.36	0.832	0.833	0.999	0.912
27.09	422,456.70	170.2	159.917F	14.115	24.781	152.833F	3,786	16,608.53	31,236.03	0.832	0.833	0.999	0.912
27.1	422,627.81	170.2	159.914F	14.12	24.782	152.836F	3,786	16,608.94	31,242.69	0.832	0.833	0.999	0.912
27.11	422,798.92	170.2	159.911F	14.126	24.783	152.839F	3,786	16,609.35	31,249.36	0.832	0.833	0.999	0.912
27.12	422,970.04	170.3	159.908F	14.131	24.784	152.842F	3,787	16,609.77	31,256.03	0.832	0.833	0.999	0.912
27.13	423,141.16	170.3	159.905F	14.136	24.785	152.845F	3,787	16,610.18	31,262.69	0.832	0.833	0.999	0.912
27.14	423,312.29	170.3	159.902F	14.141	24.786	152.848F	3,787	16,610.59	31,269.36	0.832	0.833	0.999	0.912
27.15	423,483.42	170.3	159.900F	14.147	24.788	152.851F	3,788	16,611.00	31,276.03	0.832	0.833	0.999	0.912
27.16	423,654.55	170.3	159.897F	14.152	24.789	152.854F	3,788	16,611.42	31,282.70	0.832	0.833	0.999	0.912
27.17	423,825.69	170.3	159.894F	14.157	24.79	152.857F	3,788	16,611.83	31,289.38	0.832	0.833	0.999	0.912
27.18	423,996.83	170.3	159.891F	14.162	24.791	152.860F	3,788	16,612.24	31,296.05	0.832	0.833	0.999	0.912
27.19	424,167.98	170.3	159.888F	14.168	24.792	152.863F	3,789	16,612.66	31,302.73	0.832	0.833	0.999	0.912
27.2	424,339.13	170.3	159.885F	14.173	24.794	152.866F	3,789	16,613.07	31,309.40	0.832	0.833	0.999	0.912
27.21	424,510.29	170.3	159.883F	14.178	24.795	152.869F	3,789	16,613.49	31,316.08	0.832	0.833	0.999	0.912
27.22	424,681.45	170.3	159.880F	14.183	24.796	152.872F	3,790	16,613.90	31,322.76	0.832	0.833	0.999	0.912
27.23	424,852.62	170.3	159.877F	14.189	24.797	152.875F	3,790	16,614.32	31,329.43	0.832	0.833	0.999	0.912
27.24	425,023.79	170.3	159.874F	14.194	24.798	152.878F	3,790	16,614.74	31,336.11	0.832	0.833	0.999	0.912
27.25	425,194.96	170.3	159.871F	14.199	24.799	152.881F	3,790	16,615.15	31,342.80	0.832	0.833	0.999	0.912
27.26	425,366.14	170.3	159.869F	14.204	24.801	152.885F	3,791	16,615.57	31,349.48	0.833	0.833	0.999	0.912
27.27	425,537.33	170.3	159.866F	14.21	24.802	152.888F	3,791	16,615.99	31,356.16	0.833	0.833	0.999	0.912
27.28	425,708.52	170.3	159.863F	14.215	24.803	152.891F	3,791	16,616.40	31,362.84	0.833	0.833	0.999	0.912
27.29	425,879.71	170.3	159.860F	14.22	24.804	152.894F	3,792	16,616.82	31,369.53	0.833	0.833	0.999	0.913
27.3	426,050.91	170.3	159.857F	14.225	24.806	152.897F	3,792	16,617.24	31,376.22	0.833	0.833	0.999	0.913
27.31	426,222.11	170.3	159.855F	14.231	24.807	152.900F	3,792	16,617.66	31,382.90	0.833	0.833	0.999	0.913
27.32	426,393.32	170.3	159.852F	14.236	24.808	152.903F	3,793	16,618.08	31,389.59	0.833	0.833	0.999	0.913
27.33	426,564.53	170.3	159.849F	14.241	24.809	152.906F	3,793	16,618.49	31,396.28	0.833	0.833	0.999	0.913
27.34	426,735.75	170.3	159.846F	14.246	24.81	152.909F	3,793	16,618.91	31,402.97	0.833	0.833	0.999	0.913
27.35	426,906.97	170.3	159.843F	14.252	24.812	152.912F	3,793	16,619.33	31,409.66	0.833	0.833	0.999	0.913
27.36	427,078.20	170.4	159.841F	14.257	24.813	152.915F	3,794	16,619.75	31,416.36	0.833	0.833	0.999	0.913
27.37	427,249.43	170.4	159.838F	14.262	24.814	152.918F	3,794	16,620.17	31,423.05	0.833	0.834	0.999	0.913
27.38	427,420.66	170.4	159.835F	14.267	24.815	152.922F	3,794	16,620.60	31,429.74	0.833	0.834	0.999	0.913
27.39	427,591.90	170.4	159.832F	14.272	24.817	152.925F	3,795	16,621.02	31,436.44	0.833	0.834	0.999	0.913
27.4	427,763.14	170.4	159.830F	14.278	24.818	152.928F	3,795	16,621.44	31,443.14	0.833	0.834	0.999	0.913
27.41	427,934.39	170.4	159.827F	14.283	24.819	152.931F	3,795	16,621.86	31,449.83	0.833	0.834	0.999	0.913
27.42	428,105.65	170.4	159.824F	14.288	24.82	152.934F	3,796	16,622.29	31,456.54	0.833	0.834	0.999	0.913
27.43	428,276.91	170.4	159.821F	14.293	24.822	152.937F	3,796	16,622.71	31,463.24	0.833	0.834	0.999	0.913
27.44	428,448.17	170.4	159.819F	14.299	24.823	152.940F	3,796	16,623.14	31,469.94	0.833	0.834	0.999	0.913
27.45	428,619.44	170.4	159.816F	14.304	24.824	152.944F	3,796	16,623.56	31,476.65	0.833	0.834	0.999	0.913
27.46	428,790.71	170.4	159.813F	14.309	24.825	152.947F	3,797	16,623.99	31,483.35	0.833	0.834	0.999	0.913
27.47	428,961.99	170.4	159.810F	14.314	24.827	152.950F	3,797	16,624.42	31,490.06	0.833	0.834	0.999	0.913
27.48	429,133.27	170.4	159.808F	14.32	24.828	152.953F	3,797	16,624.85	31,496.77	0.833	0.834	0.999	0.913
27.49	429,304.55	170.4	159.805F	14.325	24.829	152.956F	3,798	16,625.27	31,503.48	0.833	0.834	0.999	0.913
27.5	429,475.85	170.4	159.802F	14.33	24.83	152.959F	3,798	16,625.70	31,510.19	0.833	0.834	0.999	0.913
27.51	429,647.14	170.4	159.800F	14.335	24.832	152.963F	3,798	16,626.13	31,516.90	0.833	0.834	0.999	0.913
27.52	429,818.44	170.4	159.797F	14.341	24.833	152.966F	3,799	16,626.56	31,523.61	0.833	0.834	0.999	0.913
27.53	429,989.75	170.4	159.794F	14.346	24.834	152.969F	3,799	16,626.99	31,530.32	0.833	0.834	0.999	0.913
27.54	430,161.06	170.4	159.791F	14.351	24.836	152.972F	3,799	16,627.42	31,537.04	0.833	0.834	0.999	0.913
27.55	430,332.37	170.4	159.789F	14.356	24.837	152.975F	3,799	16,627.85	31,543.75	0.833	0.834	0.999	0.913
27.56	430,503.69	170.4	159.786F	14.362	24.838	152.978F	3,800	16,628.28	31,550.47	0.833	0.834	0.999	0.913
27.57	430,675.02	170.4	159.783F	14.367	24.839	152.982F	3,800	16,628.71	31,557.19	0.833	0.834	0.999	0.913
27.58	430,846.35	170.4	159.781F	14.372	24.841	152.985F	3,800	16,629.14	31,563.91	0.833	0.834	0.999	0.913
27.59	431,017.68	170.5	159.778F	14.377	24.842	152.988F	3,801	16,629.57	31,570.62	0.833	0.834	0.999	0.913
27.6	431,189.02	170.5	159.775F	14.383	24.843	152.991F	3,801	16,630.01	31,577.35	0.834	0.834	0.999	0.913

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Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
27.61	431,360.36	170.5	159.773F	14.388	24.845	152.994F	3,801	16,630.44	31,584.07	0.834	0.834	0.999	0.913
27.62	431,531.71	170.5	159.770F	14.393	24.846	152.998F	3,802	16,630.87	31,590.79	0.834	0.834	0.999	0.913
27.63	431,703.07	170.5	159.767F	14.398	24.847	153.001F	3,802	16,631.30	31,597.51	0.834	0.834	0.999	0.913
27.64	431,874.42	170.5	159.765F	14.404	24.849	153.004F	3,802	16,631.74	31,604.24	0.834	0.834	0.999	0.913
27.65	432,045.79	170.5	159.762F	14.409	24.85	153.007F	3,803	16,632.17	31,610.96	0.834	0.834	0.999	0.913
27.66	432,217.15	170.5	159.759F	14.414	24.851	153.011F	3,803	16,632.60	31,617.69	0.834	0.834	0.999	0.913
27.67	432,388.53	170.5	159.757F	14.419	24.853	153.014F	3,803	16,633.04	31,624.42	0.834	0.834	0.999	0.913
27.68	432,559.90	170.5	159.754F	14.424	24.854	153.017F	3,803	16,633.47	31,631.15	0.834	0.834	0.999	0.913
27.69	432,731.29	170.5	159.751F	14.43	24.855	153.020F	3,804	16,633.91	31,637.88	0.834	0.834	0.999	0.913
27.7	432,902.67	170.5	159.749F	14.435	24.857	153.023F	3,804	16,634.34	31,644.61	0.834	0.834	0.999	0.913
27.71	433,074.06	170.5	159.746F	14.44	24.858	153.027F	3,804	16,634.78	31,651.34	0.834	0.835	0.999	0.913
27.72	433,245.46	170.5	159.743F	14.445	24.859	153.030F	3,805	16,635.21	31,658.08	0.834	0.835	0.999	0.914
27.73	433,416.86	170.5	159.741F	14.451	24.861	153.033F	3,805	16,635.65	31,664.81	0.834	0.835	0.999	0.914
27.74	433,588.27	170.5	159.738F	14.456	24.862	153.036F	3,805	16,636.09	31,671.55	0.834	0.835	0.999	0.914
27.75	433,759.68	170.5	159.735F	14.461	24.863	153.040F	3,806	16,636.52	31,678.28	0.834	0.835	0.999	0.914
27.76	433,931.10	170.5	159.733F	14.466	24.865	153.043F	3,806	16,636.96	31,685.02	0.834	0.835	0.999	0.914
27.77	434,102.52	170.5	159.730F	14.472	24.866	153.046F	3,806	16,637.40	31,691.76	0.834	0.835	0.999	0.914
27.78	434,273.94	170.5	159.727F	14.477	24.867	153.049F	3,807	16,637.84	31,698.50	0.834	0.835	0.999	0.914
27.79	434,445.37	170.5	159.725F	14.482	24.869	153.053F	3,807	16,638.28	31,705.24	0.834	0.835	0.999	0.914
27.8	434,616.81	170.5	159.722F	14.487	24.87	153.056F	3,807	16,638.71	31,711.98	0.834	0.835	0.999	0.914
27.81	434,788.25	170.6	159.720F	14.493	24.872	153.059F	3,807	16,639.15	31,718.72	0.834	0.835	0.999	0.914
27.82	434,959.70	170.6	159.717F	14.498	24.873	153.062F	3,808	16,639.59	31,725.47	0.834	0.835	0.999	0.914
27.83	435,131.15	170.6	159.714F	14.503	24.874	153.066F	3,808	16,640.03	31,732.21	0.834	0.835	0.999	0.914
27.84	435,302.60	170.6	159.712F	14.508	24.876	153.069F	3,808	16,640.47	31,738.96	0.834	0.835	0.999	0.914
27.85	435,474.06	170.6	159.709F	14.514	24.877	153.072F	3,809	16,640.91	31,745.71	0.834	0.835	0.999	0.914
27.86	435,645.53	170.6	159.707F	14.519	24.879	153.076F	3,809	16,641.35	31,752.45	0.834	0.835	0.999	0.914
27.87	435,817.00	170.6	159.704F	14.524	24.88	153.079F	3,809	16,641.80	31,759.20	0.834	0.835	0.999	0.914
27.88	435,988.47	170.6	159.701F	14.529	24.881	153.082F	3,810	16,642.24	31,765.95	0.834	0.835	0.999	0.914
27.89	436,159.95	170.6	159.699F	14.535	24.883	153.085F	3,810	16,642.68	31,772.70	0.834	0.835	0.999	0.914
27.9	436,331.44	170.6	159.696F	14.54	24.884	153.089F	3,810	16,643.12	31,779.46	0.834	0.835	0.999	0.914
27.91	436,502.92	170.6	159.694F	14.545	24.886	153.092F	3,811	16,643.56	31,786.21	0.834	0.835	0.999	0.914
27.92	436,674.42	170.6	159.691F	14.55	24.887	153.095F	3,811	16,644.01	31,792.96	0.834	0.835	0.999	0.914
27.93	436,845.92	170.6	159.689F	14.556	24.888	153.099F	3,811	16,644.45	31,799.72	0.834	0.835	0.999	0.914
27.94	437,017.42	170.6	159.686F	14.561	24.89	153.102F	3,812	16,644.89	31,806.48	0.834	0.835	0.999	0.914
27.95	437,188.93	170.6	159.683F	14.566	24.891	153.105F	3,812	16,645.34	31,813.23	0.835	0.835	0.999	0.914
27.96	437,360.45	170.6	159.681F	14.571	24.893	153.109F	3,812	16,645.78	31,819.99	0.835	0.835	0.999	0.914
27.97	437,531.97	170.6	159.678F	14.576	24.894	153.112F	3,813	16,646.23	31,826.75	0.835	0.835	0.999	0.914
27.98	437,703.49	170.6	159.676F	14.582	24.895	153.115F	3,813	16,646.67	31,833.51	0.835	0.835	0.999	0.914
27.99	437,875.02	170.6	159.673F	14.587	24.897	153.118F	3,813	16,647.12	31,840.28	0.835	0.835	0.999	0.914
28	438,046.56	170.6	159.671F	14.592	24.898	153.122F	3,813	16,647.56	31,847.04	0.835	0.835	0.999	0.914
28.01	438,218.09	170.6	159.668F	14.597	24.9	153.125F	3,814	16,648.01	31,853.80	0.835	0.835	0.999	0.914
28.02	438,389.64	170.6	159.665F	14.603	24.901	153.128F	3,814	16,648.46	31,860.57	0.835	0.835	0.999	0.914
28.03	438,561.19	170.7	159.663F	14.608	24.903	153.132F	3,814	16,648.90	31,867.33	0.835	0.835	0.999	0.914
28.04	438,732.74	170.7	159.660F	14.613	24.904	153.135F	3,815	16,649.35	31,874.10	0.835	0.835	0.999	0.914
28.05	438,904.30	170.7	159.658F	14.618	24.905	153.138F	3,815	16,649.80	31,880.87	0.835	0.835	0.999	0.914
28.06	439,075.87	170.7	159.655F	14.624	24.907	153.142F	3,815	16,650.24	31,887.64	0.835	0.835	0.999	0.914
28.07	439,247.44	170.7	159.653F	14.629	24.908	153.145F	3,816	16,650.69	31,894.41	0.835	0.836	0.999	0.914
28.08	439,419.01	170.7	159.650F	14.634	24.91	153.149F	3,816	16,651.14	31,901.18	0.835	0.836	0.999	0.914
28.09	439,590.59	170.7	159.648F	14.639	24.911	153.152F	3,816	16,651.59	31,907.95	0.835	0.836	0.999	0.914
28.1	439,762.18	170.7	159.645F	14.645	24.913	153.155F	3,817	16,652.04	31,914.73	0.835	0.836	0.999	0.914
28.11	439,933.77	170.7	159.643F	14.65	24.914	153.159F	3,817	16,652.49	31,921.50	0.835	0.836	0.999	0.914
28.12	440,105.36	170.7	159.640F	14.655	24.916	153.162F	3,817	16,652.94	31,928.28	0.835	0.836	0.999	0.914
28.13	440,276.96	170.7	159.638F	14.66	24.917	153.165F	3,818	16,653.39	31,935.05	0.835	0.836	0.999	0.915
28.14	440,448.56	170.7	159.635F	14.666	24.919	153.169F	3,818	16,653.84	31,941.83	0.835	0.836	0.999	0.915
28.15	440,620.17	170.7	159.633F	14.671	24.92	153.172F	3,818	16,654.29	31,948.61	0.835	0.836	0.999	0.915
28.16	440,791.79	170.7	159.630F	14.676	24.922	153.175F	3,819	16,654.74	31,955.39	0.835	0.836	0.999	0.915
28.17	440,963.41	170.7	159.628F	14.681	24.923	153.179F	3,819	16,655.19	31,962.17	0.835	0.836	0.999	0.915
28.18	441,135.04	170.7	159.625F	14.686	24.925	153.182F	3,819	16,655.64	31,968.95	0.835	0.836	0.999	0.915
28.19	441,306.67	170.7	159.623F	14.692	24.926	153.186F	3,820	16,656.10	31,975.74	0.835	0.836	0.999	0.915
28.2	441,478.30	170.7	159.620F	14.697	24.928	153.189F	3,820	16,656.55	31,982.52	0.835	0.836	0.999	0.915
28.21	441,649.94	170.7	159.618F	14.702	24.929	153.192F	3,820	16,657.00	31,989.31	0.835	0.836	0.999	0.915
28.22	441,821.59	170.7	159.615F	14.707	24.931	153.196F	3,821	16,657.46	31,996.09	0.835	0.836	0.999	0.915
28.23	441,993.24	170.7	159.613F	14.713	24.932	153.199F	3,821	16,657.91	32,002.88	0.835	0.836	0.999	0.915
28.24	442,164.89	170.7	159.610F	14.718	24.934	153.202F	3,821	16,658.36	32,009.67	0.835	0.836	0.999	0.915

Prepared: Verified: Approved: Acceptance Code:
UNCONTROLLED WHEN PRINTED

Cidade de Niterio MV18 HYDROSTATIC TABLE

Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
28.25	442,336.56	170.8	159.608F	14.723	24.935	153.206F	3,821	16,658.82	32,016.46	0.835	0.836	0.999	0.915
28.26	442,508.22	170.8	159.605F	14.728	24.937	153.209F	3,822	16,659.27	32,023.25	0.835	0.836	0.999	0.915
28.27	442,679.89	170.8	159.603F	14.734	24.938	153.213F	3,822	16,659.73	32,030.04	0.835	0.836	0.999	0.915
28.28	442,851.57	170.8	159.601F	14.739	24.94	153.216F	3,822	16,660.18	32,036.83	0.835	0.836	0.999	0.915
28.29	443,023.25	170.8	159.598F	14.744	24.941	153.220F	3,823	16,660.64	32,043.63	0.835	0.836	0.999	0.915
28.3	443,194.94	170.8	159.596F	14.749	24.943	153.223F	3,823	16,661.09	32,050.42	0.836	0.836	0.999	0.915
28.31	443,366.63	170.8	159.593F	14.755	24.944	153.226F	3,823	16,661.55	32,057.21	0.836	0.836	0.999	0.915
28.32	443,538.33	170.8	159.591F	14.76	24.946	153.230F	3,824	16,662.00	32,064.01	0.836	0.836	0.999	0.915
28.33	443,710.03	170.8	159.588F	14.765	24.947	153.233F	3,824	16,662.45	32,070.80	0.836	0.836	0.999	0.915
28.34	443,881.74	170.8	159.586F	14.77	24.949	153.236F	3,824	16,662.91	32,077.60	0.836	0.836	0.999	0.915
28.35	444,053.45	170.8	159.583F	14.776	24.95	153.240F	3,825	16,663.36	32,084.39	0.836	0.836	0.999	0.915
28.36	444,225.15	170.8	159.581F	14.781	24.944	153.222F	3,824	16,659.78	32,095.01	0.836	0.836	0.999	0.915
28.37	444,396.80	170.7	159.579F	14.786	24.935	153.198F	3,823	16,655.19	32,106.59	0.836	0.836	0.999	0.915
28.38	444,568.41	170.7	159.576F	14.791	24.926	153.174F	3,822	16,650.61	32,118.17	0.836	0.836	0.999	0.914
28.39	444,739.97	170.6	159.574F	14.796	24.918	153.150F	3,821	16,646.02	32,129.75	0.836	0.836	0.999	0.914
28.4	444,911.49	170.6	159.571F	14.802	24.91	153.126F	3,820	16,641.43	32,141.33	0.836	0.836	0.999	0.914
28.41	445,082.96	170.5	159.569F	14.807	24.902	153.103F	3,819	16,636.85	32,152.91	0.836	0.836	0.999	0.914
28.42	445,254.38	170.5	159.566F	14.812	24.893	153.079F	3,818	16,632.26	32,164.49	0.836	0.837	0.999	0.913
28.43	445,425.79	170.5	159.564F	14.817	24.902	153.039F	3,817	16,635.59	32,168.54	0.836	0.837	0.999	0.914
28.44	445,597.25	170.6	159.561F	14.823	24.914	152.995F	3,816	16,640.91	32,170.70	0.836	0.837	0.999	0.914
28.45	445,768.76	170.6	159.559F	14.828	24.926	152.950F	3,816	16,646.22	32,172.87	0.836	0.837	0.999	0.914
28.46	445,940.33	170.7	159.556F	14.833	24.938	152.906F	3,815	16,651.53	32,175.03	0.836	0.837	0.999	0.914
28.47	446,111.96	170.7	159.554F	14.838	24.95	152.862F	3,814	16,656.85	32,177.20	0.836	0.837	0.999	0.915
28.48	446,283.37	170.1	159.551F	14.844	24.828	152.824F	3,809	16,597.14	32,241.49	0.836	0.837	0.999	0.911
28.49	446,454.02	169.3	159.549F	14.849	24.674	152.787F	3,802	16,521.13	32,321.36	0.836	0.837	0.999	0.907
28.5	446,623.89	168.6	159.546F	14.854	24.523	152.750F	3,796	16,445.12	32,401.23	0.836	0.837	0.999	0.903
28.51	446,792.97	167.8	159.543F	14.859	24.374	152.712F	3,790	16,369.10	32,481.10	0.836	0.837	0.999	0.899
28.52	446,961.27	167	159.541F	14.864	24.228	152.675F	3,783	16,293.09	32,560.97	0.836	0.837	0.999	0.895
28.53	447,128.79	166.2	159.538F	14.869	24.084	152.636F	3,777	16,217.08	32,640.85	0.836	0.837	0.999	0.891
28.54	447,295.52	165.4	159.536F	14.874	23.942	152.598F	3,770	16,141.07	32,720.72	0.836	0.837	0.999	0.886
28.55	447,461.47	164.7	159.533F	14.879	23.8	152.550F	3,763	16,063.80	32,801.80	0.836	0.837	0.999	0.882
28.56	447,626.61	163.8	159.531F	14.885	23.655	152.483F	3,755	15,983.61	32,885.65	0.836	0.837	0.999	0.878
28.57	447,790.91	163	159.528F	14.89	23.508	152.425F	3,746	15,900.73	32,972.08	0.836	0.837	0.999	0.873
28.58	447,954.35	162.1	159.526F	14.895	23.363	152.370F	3,737	15,817.32	33,058.99	0.836	0.837	0.999	0.869
28.59	448,116.93	161.3	159.523F	14.899	23.22	152.314F	3,728	15,733.92	33,145.90	0.836	0.837	0.999	0.864
28.6	448,278.62	160.3	159.520F	14.904	23.065	152.264F	3,717	15,643.32	33,239.69	0.836	0.837	0.999	0.859
28.61	448,439.36	159.4	159.518F	14.909	22.91	152.215F	3,705	15,550.92	33,335.20	0.836	0.837	0.999	0.854
28.62	448,599.16	158.4	159.515F	14.914	22.758	152.165F	3,693	15,458.51	33,430.71	0.836	0.837	0.999	0.849
28.63	448,758.00	157.5	159.513F	14.919	22.608	152.115F	3,681	15,366.11	33,526.22	0.836	0.837	0.999	0.844
28.64	448,915.89	156.6	159.510F	14.924	22.461	152.064F	3,669	15,273.70	33,621.74	0.836	0.837	0.999	0.839
28.65	449,072.83	155.6	159.507F	14.929	22.316	152.013F	3,657	15,181.30	33,717.25	0.836	0.837	0.999	0.834
28.66	449,228.81	154.7	159.505F	14.933	22.174	151.960F	3,645	15,088.90	33,812.77	0.836	0.837	0.999	0.829
28.67	449,383.84	153.7	159.502F	14.938	22.032	151.896F	3,632	14,995.04	33,909.65	0.836	0.837	0.999	0.823
28.68	449,537.90	152.7	159.500F	14.943	21.893	151.830F	3,619	14,901.09	34,006.64	0.836	0.837	0.999	0.818
28.69	449,691.00	151.8	159.497F	14.947	21.756	151.763F	3,607	14,807.13	34,103.63	0.836	0.837	0.999	0.813
28.7	449,843.12	150.8	159.495F	14.952	21.62	151.703F	3,593	14,712.19	34,201.56	0.836	0.837	0.999	0.808
28.71	449,994.26	149.8	159.492F	14.957	21.486	151.644F	3,580	14,617.00	34,299.72	0.836	0.837	0.999	0.803
28.72	450,144.42	148.8	159.489F	14.961	21.353	151.598F	3,566	14,520.06	34,399.55	0.836	0.837	0.998	0.797
28.73	450,293.57	147.8	159.487F	14.966	21.219	151.560F	3,551	14,421.92	34,500.53	0.836	0.838	0.998	0.792
28.74	450,441.71	146.8	159.484F	14.97	21.088	151.522F	3,537	14,323.59	34,601.69	0.836	0.838	0.998	0.787
28.75	450,588.83	145.8	159.482F	14.975	20.957	151.466F	3,521	14,223.24	34,704.76	0.836	0.838	0.998	0.781
28.76	450,734.90	144.7	159.479F	14.979	20.825	151.403F	3,505	14,121.02	34,809.60	0.836	0.838	0.998	0.775
28.77	450,879.92	143.7	159.476F	14.984	20.696	151.341F	3,488	14,018.64	34,914.60	0.836	0.838	0.998	0.77
28.78	451,023.89	142.6	159.474F	14.988	20.569	151.278F	3,471	13,916.26	35,019.60	0.836	0.838	0.998	0.764
28.79	451,166.80	141.6	159.471F	14.993	20.445	151.214F	3,455	13,813.88	35,124.60	0.836	0.838	0.998	0.759
28.8	451,308.65	140.5	159.469F	14.997	20.323	151.149F	3,438	13,711.50	35,229.60	0.836	0.838	0.998	0.753
28.81	451,449.45	139.5	159.466F	15.001	20.203	151.084F	3,421	13,609.06	35,334.63	0.836	0.838	0.998	0.747
28.82	451,589.12	138.4	159.463F	15.005	20.086	151.019F	3,405	13,506.64	35,439.75	0.836	0.838	0.998	0.742
28.83	451,727.72	137.4	159.461F	15.01	19.969	150.969F	3,387	13,402.45	35,546.55	0.836	0.838	0.998	0.736
28.84	451,865.24	136.3	159.458F	15.014	19.854	150.922F	3,369	13,297.81	35,653.77	0.836	0.838	0.998	0.73
28.85	452,001.68	135.2	159.456F	15.018	19.74	150.876F	3,351	13,191.96	35,762.43	0.836	0.838	0.997	0.724
28.86	452,137.04	134.1	159.453F	15.022	19.627	150.818F	3,332	13,084.96	35,872.62	0.836	0.838	0.997	0.719
28.87	452,271.26	133	159.451F	15.026	19.517	150.759F	3,312	12,978.03	35,982.88	0.836	0.838	0.997	0.713
28.88	452,404.43	131.9	159.448F	15.03	19.409	150.699F	3,293	12,871.09	36,093.11	0.836	0.838	0.997	0.707

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
28.89	452,536.45	130.8	159.445F	15.034	19.297	150.663F	3,273	12,760.57	36,206.50	0.836	0.838	0.997	0.701
28.9	452,667.30	129.7	159.443F	15.038	19.185	150.636F	3,252	12,648.90	36,320.42	0.836	0.838	0.997	0.695
28.91	452,797.02	128.5	159.440F	15.042	19.076	150.608F	3,231	12,537.21	36,434.32	0.836	0.838	0.997	0.688
28.92	452,925.60	127.4	159.438F	15.046	18.969	150.579F	3,210	12,425.53	36,548.22	0.836	0.838	0.997	0.682
28.93	453,053.02	126.2	159.435F	15.05	18.864	150.550F	3,190	12,313.85	36,662.12	0.835	0.838	0.997	0.676
28.94	453,179.29	125.1	159.433F	15.054	18.761	150.526F	3,169	12,201.44	36,776.71	0.835	0.838	0.997	0.67
28.95	453,304.38	123.9	159.430F	15.058	18.653	150.511F	3,145	12,083.22	36,896.96	0.835	0.838	0.996	0.664
28.96	453,428.26	122.6	159.428F	15.062	18.547	150.492F	3,120	11,964.27	37,018.48	0.835	0.838	0.996	0.657
28.97	453,550.87	121.4	159.426F	15.065	18.443	150.472F	3,096	11,845.42	37,140.11	0.835	0.838	0.996	0.65
28.98	453,672.30	120.2	159.423F	15.069	18.342	150.451F	3,071	11,726.56	37,261.71	0.835	0.839	0.996	0.644
28.99	453,792.50	119	159.421F	15.073	18.243	150.432F	3,047	11,607.55	37,383.17	0.835	0.839	0.996	0.637
29	453,911.43	117.8	159.418F	15.077	18.146	150.414F	3,022	11,488.23	37,504.29	0.835	0.839	0.996	0.631
29.01	454,029.15	116.5	159.416F	15.08	18.051	150.396F	2,998	11,368.89	37,625.40	0.835	0.839	0.996	0.624
29.02	454,145.65	115.3	159.414F	15.084	17.957	150.396F	2,972	11,248.06	37,748.29	0.835	0.839	0.996	0.618
29.03	454,260.89	114.1	159.411F	15.087	17.866	150.399F	2,946	11,127.15	37,871.91	0.835	0.839	0.995	0.611
29.04	454,374.90	112.8	159.409F	15.091	17.777	150.401F	2,920	11,006.30	37,995.57	0.835	0.839	0.995	0.604
29.05	454,487.67	111.6	159.407F	15.094	17.691	150.404F	2,895	10,885.29	38,119.08	0.835	0.839	0.995	0.598
29.06	454,599.16	110.3	159.405F	15.098	17.605	150.411F	2,869	10,763.88	38,242.17	0.835	0.839	0.995	0.591
29.07	454,709.41	109.1	159.403F	15.101	17.523	150.415F	2,843	10,642.85	38,365.63	0.834	0.839	0.995	0.584
29.08	454,818.43	107.8	159.400F	15.104	17.442	150.397F	2,816	10,520.55	38,490.61	0.834	0.839	0.995	0.578
29.09	454,926.17	106.6	159.398F	15.108	17.362	150.374F	2,789	10,397.83	38,615.88	0.834	0.839	0.995	0.571
29.1	455,032.63	105.3	159.396F	15.111	17.283	150.410F	2,759	10,270.79	38,744.50	0.834	0.839	0.994	0.564
29.11	455,137.76	103.9	159.394F	15.114	17.204	150.486F	2,727	10,140.94	38,875.39	0.834	0.839	0.994	0.557
29.12	455,241.56	102.6	159.392F	15.117	17.128	150.564F	2,695	10,011.09	39,006.29	0.834	0.839	0.994	0.55
29.13	455,344.02	101.3	159.390F	15.121	17.053	150.645F	2,663	9,881.23	39,137.18	0.834	0.839	0.994	0.543
29.14	455,445.14	100	159.388F	15.124	16.981	150.727F	2,631	9,751.38	39,268.07	0.834	0.839	0.994	0.535
29.15	455,544.92	98.6	159.386F	15.127	16.911	150.812F	2,599	9,621.53	39,398.96	0.834	0.839	0.994	0.528
29.16	455,643.36	97.3	159.384F	15.13	16.842	150.899F	2,567	9,491.68	39,529.85	0.834	0.839	0.993	0.521
29.17	455,740.47	96	159.383F	15.133	16.776	150.989F	2,535	9,361.82	39,660.74	0.834	0.839	0.993	0.514
29.18	455,836.24	94.6	159.381F	15.136	16.711	151.081F	2,503	9,231.97	39,791.63	0.833	0.839	0.993	0.507
29.19	455,930.67	93.3	159.379F	15.139	16.648	151.162F	2,471	9,101.32	39,923.24	0.833	0.839	0.993	0.5
29.2	456,023.75	91.9	159.378F	15.142	16.587	151.243F	2,438	8,970.48	40,055.03	0.833	0.839	0.993	0.493
29.21	456,115.48	90.6	159.376F	15.144	16.528	151.327F	2,405	8,839.63	40,186.82	0.833	0.839	0.993	0.485
29.22	456,205.87	89.3	159.374F	15.147	16.47	151.412F	2,372	8,708.78	40,318.60	0.833	0.839	0.992	0.478
29.23	456,294.91	87.9	159.373F	15.15	16.414	151.501F	2,340	8,577.93	40,450.39	0.833	0.839	0.992	0.471
29.24	456,382.59	86.6	159.371F	15.153	16.36	151.592F	2,307	8,447.08	40,582.18	0.833	0.839	0.992	0.464
29.25	456,468.94	85.2	159.370F	15.155	16.308	151.686F	2,274	8,316.24	40,713.96	0.833	0.839	0.992	0.457
29.26	456,553.93	83.9	159.368F	15.158	16.257	151.783F	2,241	8,185.39	40,845.74	0.832	0.839	0.992	0.45
29.27	456,637.58	82.6	159.367F	15.161	16.209	151.883F	2,208	8,054.54	40,977.53	0.832	0.839	0.991	0.442
29.28	456,719.87	81.2	159.366F	15.163	16.161	151.986F	2,176	7,923.74	41,109.26	0.832	0.84	0.991	0.435
29.29	456,800.82	79.9	159.364F	15.166	16.116	152.093F	2,143	7,792.95	41,240.98	0.832	0.84	0.991	0.428
29.3	456,880.43	78.5	159.363F	15.168	16.072	152.204F	2,110	7,662.17	41,372.69	0.832	0.84	0.991	0.421
29.31	456,958.68	77.2	159.362F	15.171	16.029	152.319F	2,077	7,531.39	41,504.41	0.832	0.84	0.991	0.414
29.32	457,035.59	75.9	159.361F	15.173	15.988	152.437F	2,044	7,400.61	41,636.12	0.832	0.84	0.99	0.406
29.33	457,111.16	74.5	159.360F	15.175	15.949	152.560F	2,012	7,269.82	41,767.83	0.831	0.84	0.99	0.399
29.34	457,185.37	73.2	159.359F	15.178	15.911	152.687F	1,979	7,139.04	41,899.54	0.831	0.84	0.99	0.392
29.35	457,258.24	71.8	159.357F	15.18	15.875	152.819F	1,946	7,008.26	42,031.25	0.831	0.84	0.99	0.385
29.36	457,329.76	70.5	159.356F	15.182	15.839	152.956F	1,913	6,877.48	42,162.96	0.831	0.84	0.99	0.378
29.37	457,399.93	69.2	159.355F	15.184	15.806	153.099F	1,880	6,746.70	42,294.66	0.831	0.84	0.989	0.37
29.38	457,468.75	67.8	159.355F	15.186	15.773	153.216F	1,846	6,614.51	42,427.65	0.831	0.84	0.989	0.363
29.39	457,536.21	66.4	159.354F	15.188	15.741	153.328F	1,812	6,481.94	42,560.99	0.831	0.84	0.989	0.356
29.4	457,602.30	65.1	159.353F	15.191	15.711	153.446F	1,778	6,349.38	42,694.32	0.83	0.84	0.989	0.349
29.41	457,667.02	63.7	159.352F	15.193	15.682	153.569F	1,744	6,216.81	42,827.66	0.83	0.84	0.989	0.341
29.42	457,730.38	62.4	159.351F	15.195	15.654	153.697F	1,710	6,084.24	42,960.99	0.83	0.84	0.988	0.334
29.43	457,792.37	61	159.350F	15.196	15.628	153.830F	1,675	5,951.68	43,094.33	0.83	0.84	0.988	0.327
29.44	457,853.00	59.6	159.350F	15.198	15.602	153.970F	1,641	5,819.11	43,227.66	0.83	0.84	0.988	0.32
29.45	457,912.26	58.3	159.349F	15.2	15.578	154.117F	1,607	5,686.54	43,360.99	0.83	0.84	0.988	0.312
29.46	457,970.15	56.9	159.348F	15.202	15.555	154.270F	1,573	5,553.98	43,494.32	0.829	0.84	0.987	0.305
29.47	458,026.68	55.6	159.348F	15.204	15.533	154.431F	1,539	5,421.41	43,627.65	0.829	0.84	0.987	0.298
29.48	458,081.85	54.2	159.347F	15.206	15.512	154.599F	1,504	5,288.84	43,760.98	0.829	0.84	0.987	0.29
29.49	458,135.65	52.9	159.347F	15.207	15.492	154.777F	1,470	5,156.28	43,894.30	0.829	0.84	0.987	0.283
29.5	458,188.08	51.5	159.346F	15.209	15.474	154.964F	1,436	5,023.71	44,027.63	0.829	0.84	0.986	0.276
29.51	458,239.15	50.1	159.346F	15.211	15.456	155.161F	1,401	4,891.14	44,160.95	0.828	0.84	0.986	0.269
29.52	458,288.85	48.8	159.345F	15.212	15.439	155.369F	1,367	4,758.58	44,294.28	0.828	0.84	0.986	0.261

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Cidade de Niterio MV18 HYDROSTATIC TABLE													
Draft			Buoyancy		Metacenter	Waterplane			Wetted	Coefficients			
Keel	Disp	TP1	LCB	KB	KMt	LCF	MT1	Area	Surface	Cb	Cp	Cm	Cwp
m	MT	MT/cm	m-AP	m	m	m-AP	m-MT/cm	m^2	m^2				
29.53	458,337.19	47.4	159.345F	15.214	15.423	155.589F	1,333	4,626.01	44,427.60	0.828	0.84	0.986	0.254
29.54	458,384.16	46.1	159.344F	15.215	15.408	155.822F	1,299	4,493.44	44,560.92	0.828	0.84	0.985	0.247
29.55	458,429.76	44.7	159.344F	15.217	15.394	156.069F	1,264	4,360.88	44,694.25	0.828	0.84	0.985	0.239
29.56	458,474.00	43.3	159.344F	15.218	15.381	156.331F	1,230	4,228.31	44,827.57	0.827	0.84	0.985	0.232
29.57	458,516.88	42	159.343F	15.219	15.369	156.611F	1,195	4,095.74	44,960.89	0.827	0.84	0.985	0.225
29.58	458,558.38	40.6	159.343F	15.221	15.357	156.909F	1,161	3,963.18	45,094.21	0.827	0.84	0.984	0.218
29.59	458,598.53	39.3	159.343F	15.222	15.346	157.228F	1,127	3,830.61	45,227.52	0.827	0.84	0.984	0.21
29.6	458,598.48	38.4	159.349F	15.225	15.337	156.765F	1,099	3,744.61	45,311.55	0.827	0.84	0.984	0.206
29.61	458,637.03	37	159.348F	15.226	15.328	157.059F	1,064	3,614.21	45,442.70	0.826	0.84	0.984	0.198
29.62	458,674.19	35.7	159.348F	15.227	15.319	157.369F	1,030	3,484.16	45,573.50	0.826	0.84	0.983	0.191
29.63	458,709.97	34.4	159.348F	15.228	15.311	157.697F	996	3,354.46	45,703.95	0.826	0.84	0.983	0.184
29.64	458,744.37	33.1	159.348F	15.229	15.304	158.043F	962	3,225.12	45,834.04	0.826	0.84	0.983	0.177
29.65	458,777.40	31.7	159.347F	15.231	15.297	158.411F	928	3,096.13	45,963.78	0.825	0.84	0.982	0.17
29.66	458,809.06	30.4	159.347F	15.232	15.291	158.803F	894	2,967.49	46,093.16	0.825	0.84	0.982	0.163
29.67	458,839.36	29.1	159.347F	15.233	15.285	159.222F	860	2,839.20	46,222.19	0.825	0.84	0.982	0.156
29.68	458,868.30	27.8	159.347F	15.233	15.28	159.672F	826	2,711.26	46,350.87	0.825	0.84	0.982	0.149
29.69	458,895.90	26.5	159.347F	15.234	15.275	160.157F	792	2,583.68	46,479.19	0.825	0.84	0.981	0.142
29.7	458,922.14	25.2	159.347F	15.235	15.271	160.683F	758	2,456.45	46,607.16	0.824	0.84	0.981	0.135
29.71	458,947.05	23.9	159.347F	15.236	15.268	161.256F	724	2,329.57	46,734.78	0.824	0.84	0.981	0.128
29.72	458,970.62	22.6	159.347F	15.237	15.264	161.884F	691	2,203.04	46,862.04	0.824	0.84	0.98	0.121
29.73	458,992.87	21.3	159.347F	15.237	15.261	162.576F	657	2,076.87	46,988.95	0.824	0.84	0.98	0.114
29.74	459,013.79	20	159.348F	15.238	15.259	163.344F	623	1,951.05	47,115.50	0.823	0.84	0.98	0.107
29.75	459,033.39	18.7	159.348F	15.239	15.257	164.205F	589	1,825.58	47,241.70	0.823	0.84	0.98	0.1
29.76	459,051.68	17.4	159.348F	15.239	15.255	165.177F	555	1,700.47	47,367.55	0.823	0.84	0.979	0.093
29.77	459,068.66	16.2	159.348F	15.24	15.253	166.286F	521	1,575.70	47,493.04	0.823	0.84	0.979	0.087
29.78	459,084.34	14.9	159.348F	15.24	15.252	167.568F	486	1,451.29	47,618.18	0.822	0.84	0.979	0.08
29.79	459,098.73	13.6	159.349F	15.241	15.251	169.070F	452	1,327.23	47,742.96	0.822	0.84	0.978	0.073
29.8	459,111.82	12.3	159.349F	15.241	15.25	170.858F	418	1,203.53	47,867.40	0.822	0.84	0.978	0.066
29.81	459,123.63	11.1	159.349F	15.242	15.25	173.028F	383	1,080.17	47,991.47	0.822	0.84	0.978	0.059
29.82	459,134.16	9.8	159.350F	15.242	15.249	175.727F	348	957.17	48,115.20	0.821	0.84	0.977	0.053
29.83	459,143.41	8.6	159.350F	15.242	15.249	179.185F	313	834.52	48,238.57	0.821	0.84	0.977	0.046
29.84	459,151.39	7.2	159.350F	15.243	15.248	182.728F	273	706.09	48,367.61	0.821	0.84	0.977	0.039
29.85	459,161.22	5.7	159.352F	15.242	15.243	183.079F	224	558.13	48,523.13	0.821	0.84	0.976	0.031
29.86	459,113.29	4.3	159.363F	15.242	15.243	181.448F	180	415.55	48,676.94	0.82	0.84	0.976	0.023
29.87	458,652.58	3.5	159.410F	15.255	15.255	168.648F	146	346.05	48,638.23	0.819	0.839	0.976	0.019
29.88	458,633.43	2.8	159.415F	15.255	15.255	172.260F	121	276.45	48,713.13	0.819	0.839	0.975	0.015
29.89	458,630.61	2.2	159.416F	15.256	15.256	176.429F	97	213.94	48,778.91	0.819	0.839	0.975	0.012
29.9	458,581.82	1.6	159.427F	15.256	15.256	183.494F	73	155.49	48,836.51	0.818	0.839	0.975	0.009
29.91	459,173.70	1.1	159.338F	15.242	15.242	181.617F	52	109.3	48,982.10	0.819	0.84	0.974	0.006
29.92	459,191.23	0.7	159.333F	15.242	15.242	184.889F	32	68.53	49,023.96	0.819	0.84	0.974	0.004

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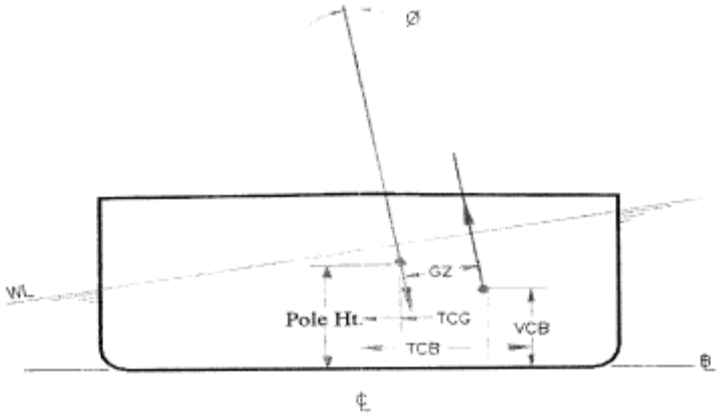
APPENDIX – B CROSS CURVE TABLE



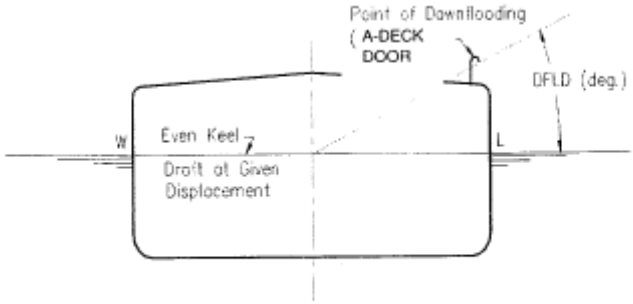
$$GZ = VCB \sin\emptyset + TCB \cos\emptyset - \text{Pole Ht.} \sin\emptyset - TCG \cos\emptyset$$

GZ = Righting Arm
Ø = Angle of Heel
Pole Ht. = Vertical Center of Gravity
TCG = Transverse Center of Gravity
VCB = Vertical Center of Buoyancy
TCB = Transverse Center of Buoyancy

Righting Arm Definition

In our calculation, we assume Pole Ht. = 0 m

The calculated results are sometimes refered to as KN curves



Downflood Angle Definition

For our case, progess flooding point are listed below:

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Downflooding Points				
	Location			Designation
	Long m-AP	Trans m-CL	Vert m-BL	
Stbd				
1	4.525	17.562	30.668	Aft Peak WB Vent
2	13.126	10.234	30.668	Aft Peak WB Vent
3	15.005	21.57	30.668	Drink Water Tank Vent
4	27.885	17.038	30.668	Cofferdam Vent
5	38.467	20.668	30.668	MDO Service Tank Vent
6	40.91	20.668	30.668	No.2 HFO Storage Tank Vent
7	51.433	20.668	30.668	HFO Storage Tank Vent
8	57.028	8.252	30.668	Doppler Sonar & Echo Sound Vent
9	58.691	15.691	30.668	No.1 MDO Tank Vent
10	113.911	10.546	31.202	Wing Tank (4S) Vent
11	158.579	10.546	31.202	Wing Tank (4S) Vent
12	194.253	19.941	30.668	W.B.T (2S) Vent
13	237.294	19.941	30.668	W.B.T (2S) Vent
Port				
14	4.525	-18.252	30.668	Aft Peak WB Vent
15	13.386	-10.835	30.668	Aft Peak WB Vent
16	20.571	-18.252	30.668	Cofferdam Vent
17	22.84	-18.252	30.668	Sep. Bilge Oil Tk. Vent
18	25.066	-18.252	30.668	Bilge Tk. Vent
19	30.791	-25.836	30.668	F.W. TK. Vent
20	37.238	-26.404	30.668	Drink Water Tank Vent
21	39.869	-20.635	30.668	No2 MDO Tank (P) Vent
22	51.433	-20.635	30.668	No2 MDO Tank (P) Vent
23	58.213	-15.268	30.668	No1 MDO Tank (P) Vent
24	114.735	-16.982	30.668	W.B.T (4P) Vent
25	157.755	-16.982	30.668	W.B.T (4P) Vent

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CROSS CURVE TABLE

Heel Angle (deg)	0	5	10	15	20	25	30	40	50	60	Down Flooding Angle (deg)
Disp	GZ	GZ	GZ	GZ	GZ	GZ	GZ	GZ	GZ	GZ	
MT	m	m	m	m	m	m	m	m	m	m	
5,000.00	0	20.298	22.936	23.888	24.171	24.046	23.623	22.073	19.766	16.912	59
10,000.00	0	16.882	20.556	22.052	22.731	22.938	22.8	21.776	19.978	17.649	59
15,000.00	0	14.5	18.796	20.709	21.675	22.116	22.191	21.549	20.123	18.187	59
20,000.00	0	12.647	17.362	19.598	20.802	21.433	21.682	21.356	20.242	18.63	59
25,000.00	0	11.117	16.157	18.629	20.036	20.836	21.231	21.187	20.344	19.015	59
30,000.00	0	9.809	15.113	17.766	19.345	20.294	20.826	21.032	20.435	19.359	59
35,000.00	0	8.67	14.188	16.991	18.709	19.795	20.45	20.889	20.521	19.673	59
40,000.00	0	7.733	13.352	16.288	18.123	19.331	20.104	20.76	20.599	19.962	59
45,000.00	0	6.989	12.587	15.642	17.582	18.897	19.782	20.639	20.67	20.228	59
50,000.00	0	6.385	11.882	15.046	17.079	18.495	19.482	20.525	20.733	20.462	59
55,000.00	0	5.883	11.226	14.491	16.617	18.122	19.2	20.418	20.792	20.641	59
60,000.00	0	5.46	10.615	13.972	16.187	17.773	18.931	20.315	20.845	20.766	59
65,000.00	0	5.101	10.041	13.487	15.788	17.448	18.676	20.216	20.896	20.848	59
70,000.00	0	4.792	9.502	13.032	15.413	17.141	18.436	20.12	20.943	20.896	59
75,000.00	0	4.524	9.001	12.604	15.058	16.851	18.208	20.029	20.986	20.918	59
80,000.00	0	4.288	8.553	12.199	14.722	16.575	17.992	19.939	21.009	20.919	59
85,000.00	0	4.078	8.154	11.816	14.401	16.313	17.787	19.853	21.01	20.906	59
90,000.00	0	3.892	7.799	11.452	14.094	16.062	17.591	19.77	20.99	20.876	59
95,000.00	0	3.726	7.482	11.103	13.801	15.823	17.405	19.689	20.954	20.833	59
100,000.00	0	3.577	7.199	10.77	13.52	15.594	17.227	19.611	20.904	20.781	59
105,000.00	0	3.444	6.946	10.451	13.25	15.373	17.056	19.537	20.841	20.72	59
110,000.00	0	3.326	6.719	10.141	12.99	15.162	16.892	19.466	20.766	20.651	59
115,000.00	0	3.222	6.514	9.849	12.74	14.958	16.734	19.394	20.683	20.577	59
120,000.00	0	3.13	6.327	9.578	12.498	14.763	16.583	19.317	20.59	20.499	59
125,000.00	0	3.047	6.156	9.328	12.266	14.574	16.436	19.232	20.491	20.413	59
130,000.00	0	2.972	6.001	9.096	12.041	14.391	16.295	19.14	20.387	20.323	59
135,000.00	0	2.907	5.86	8.882	11.824	14.215	16.158	19.041	20.278	20.228	57
140,000.00	0	2.848	5.732	8.685	11.615	14.044	16.026	18.936	20.165	20.132	56
145,000.00	0	2.794	5.615	8.504	11.413	13.879	15.898	18.827	20.049	20.034	54
150,000.00	0	2.744	5.509	8.337	11.216	13.719	15.775	18.713	19.929	19.932	53
155,000.00	0	2.699	5.411	8.184	11.027	13.564	15.655	18.594	19.807	19.828	51
160,000.00	0	2.657	5.322	8.043	10.844	13.413	15.539	18.472	19.682	19.724	50
165,000.00	0	2.616	5.24	7.913	10.674	13.267	15.426	18.347	19.555	19.617	49
170,000.00	0	2.578	5.164	7.794	10.515	13.124	15.316	18.218	19.427	19.508	48
175,000.00	0	2.543	5.094	7.685	10.366	12.986	15.207	18.089	19.298	19.399	46
180,000.00	0	2.51	5.03	7.585	10.227	12.851	15.097	17.955	19.167	19.289	45
185,000.00	0	2.48	4.97	7.493	10.097	12.721	14.985	17.82	19.036	19.179	44
190,000.00	0	2.452	4.914	7.409	9.977	12.593	14.87	17.683	18.903	19.069	43
195,000.00	0	2.425	4.862	7.331	9.866	12.469	14.751	17.543	18.77	18.958	42
200,000.00	0	2.399	4.813	7.259	9.764	12.349	14.63	17.402	18.636	18.848	41
205,000.00	0	2.376	4.768	7.193	9.669	12.233	14.505	17.26	18.502	18.737	40

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210,000.00	0	2.355	4.727	7.132	9.582	12.123	14.379	17.116	18.368	18.627	39
215,000.00	0	2.335	4.689	7.074	9.502	12.018	14.249	16.971	18.234	18.516	39
220,000.00	0	2.317	4.654	7.021	9.427	11.917	14.116	16.825	18.099	18.406	38
225,000.00	0	2.3	4.621	6.971	9.359	11.817	13.984	16.677	17.964	18.296	37
230,000.00	0	2.285	4.591	6.924	9.295	11.721	13.85	16.531	17.828	18.186	36
235,000.00	0	2.271	4.562	6.881	9.236	11.625	13.714	16.383	17.693	18.076	35
240,000.00	0	2.259	4.537	6.841	9.181	11.531	13.576	16.232	17.557	17.967	35
245,000.00	0	2.248	4.513	6.804	9.13	11.438	13.437	16.082	17.42	17.857	34
250,000.00	0	2.237	4.491	6.77	9.082	11.346	13.297	15.931	17.284	17.748	33
255,000.00	0	2.228	4.471	6.738	9.038	11.254	13.154	15.779	17.147	17.638	33
260,000.00	0	2.22	4.453	6.708	8.997	11.163	13.014	15.627	17.011	17.528	32
265,000.00	0	2.212	4.436	6.681	8.958	11.072	12.875	15.474	16.873	17.419	31
270,000.00	0	2.206	4.421	6.655	8.919	10.98	12.738	15.32	16.736	17.31	31
275,000.00	0	2.2	4.407	6.632	8.878	10.888	12.602	15.167	16.599	17.2	30
280,000.00	0	2.194	4.394	6.61	8.835	10.795	12.467	15.011	16.461	17.091	29
285,000.00	0	2.189	4.382	6.59	8.79	10.702	12.334	14.856	16.322	16.981	29
290,000.00	0	2.185	4.371	6.572	8.742	10.606	12.202	14.701	16.184	16.872	28
295,000.00	0	2.18	4.361	6.556	8.692	10.511	12.072	14.545	16.045	16.762	27
300,000.00	0	2.177	4.352	6.541	8.639	10.415	11.943	14.389	15.906	16.652	27
305,000.00	0	2.173	4.344	6.527	8.583	10.319	11.814	14.233	15.766	16.542	26
310,000.00	0	2.169	4.336	6.515	8.524	10.221	11.686	14.076	15.627	16.43	26
315,000.00	0	2.166	4.33	6.502	8.463	10.122	11.559	13.919	15.487	16.317	25
320,000.00	0	2.163	4.324	6.486	8.4	10.023	11.433	13.761	15.347	16.204	24
325,000.00	0	2.16	4.318	6.465	8.333	9.922	11.306	13.604	15.207	16.09	23
330,000.00	0	2.157	4.313	6.44	8.263	9.82	11.181	13.448	15.067	15.976	22
335,000.00	0	2.154	4.309	6.41	8.191	9.717	11.055	13.293	14.926	15.862	22
340,000.00	0	2.152	4.305	6.377	8.116	9.613	10.93	13.139	14.784	15.746	21
345,000.00	0	2.15	4.302	6.338	8.038	9.507	10.805	12.987	14.641	15.63	20
350,000.00	0	2.148	4.299	6.295	7.958	9.4	10.679	12.838	14.497	15.514	19
351,659.52	0	2.147	4.299	6.28	7.931	9.365	10.637	12.789	14.449	15.476	19

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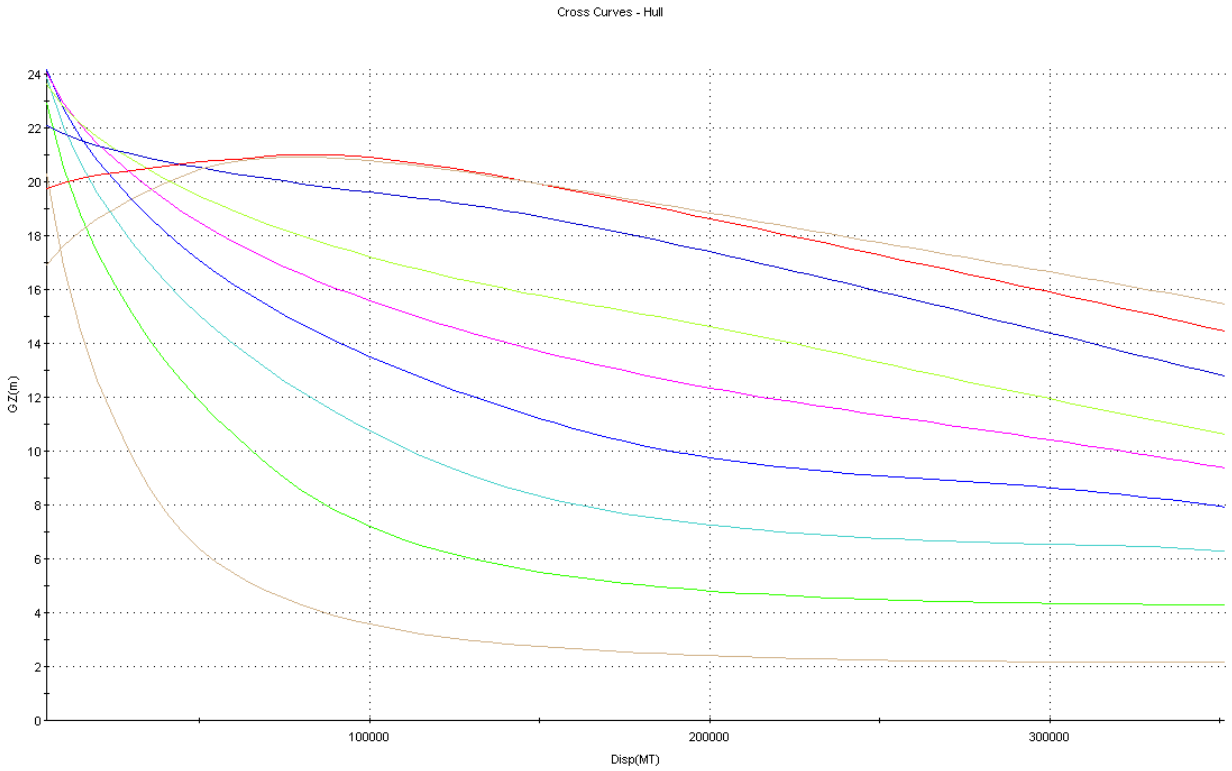

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APPENDIX – C CIDADE DE NITERIO MV18 TANK CAPACITY

I) CARGO OIL TANKS		Position		100% Full Capacity		98 % Full Capacity		100% Full Center of Gravity			Free Surface
Name	Side	Aft	Fwd					LCG	VCG	TCG	98% Full
		m-AP	m-AP	m^2	Barrel	m^3	Barrel	m-AP	m-BL	m-CL	m^4
CARGO 1C	C	237.945F	290.190F	33787.78	212515	33112.02	208264.7	262.092F	14.815	0.000P	37340
CARGO 2C	C	191.505F	237.945F	33011.8	207634.3	32351.56	203481.6	262.092F	14.815	0.000P	40226
CARGO 3C	C	145.065F	191.505F	33011.75	207634	32351.52	203481.3	168.285F	14.783	0.000P	40265
CARGO 4C	C	98.625F	145.065F	33011.78	207634.2	32351.54	203481.5	121.849F	14.785	0.000S	40157
CARGO 5C	C	46.680F	98.625F	36723.28	230978.4	35988.81	226358.8	72.835F	14.874	0.000S	45348
CARGO 1P	P	237.945F	290.190F	22732.29	142979.3	22470.62	141333.4	261.881F	14.88	18.850P	21968
CARGO 1S	S	237.945F	290.190F	22350.23	140576.2	22096.21	138978.5	262.190F	14.855	18.681S	21954
CARGO 3P	P	145.065F	191.505F	21137.89	132951	20715.13	130292	168.285F	14.457	20.016P	15615
CARGO 3S	S	145.065F	191.505F	23482.61	147698.6	23012.96	144744.6	168.621F	14.418	20.839S	22282
CARGO 5P	P	57.990F	98.625F	17297.16	108793.9	17103.33	107574.8	79.469F	16.059	19.996P	17803
CARGO 5S	S	57.990F	98.625F	17297.16	108793.9	17103.33	107574.8	79.469F	16.059	19.996P	17803

II) SLOP TANKS		Position		100% Full Capacity		98 % Full Capacity		100% Full Center of Gravity			Free Surface
Name	Side	Aft	Fwd					LCG	VCG	TCG	98% Full
		m-AP	m-AP	m^2	Barrel	m^3	Barrel	m-AP	m-BL	m-CL	m^4
SLOP P	P	46.680F	57.990F	3245.08	20410.58	3315.379	20852.74	52.675F	18.759	18.503P	3364
SLOP S	S	46.680F	57.990F	2345.07	14749.79	3315.379	20852.74	52.675F	19.759	18.503S	3364

III) VOID TANKS		Position		100% Full Capacity		98 % Full Capacity		100% Full Center of Gravity			Free Surface
Name	Side	Aft	Fwd					LCG	VCG	TCG	98% Full
		m-AP	m-AP	m^2	Barrel	m^3	Barrel	m-AP	m-BL	m-CL	m^4
FOREPEAK	C	290.190F	308.715F	7654.74	48146.02	7501.645	47183.1	295.990F	16.479	0.000P	17117
NO. 1 VOID WING S	S	237.945F	249.555F	382.03	2402.854	374.3894	2354.797	4.078F	22.546	0.000P	4
VOID 2P	P	191.505F	237.945F	23924.79	150479.8	23446.29	147470.2	214.691F	14.458	20.982P	22210
NO. 3 VOID WING P	P	145.065F	191.505F	2607.98	16403.41	2555.82	16075.34	168.285F	14.439	28.992P	31
NO. 3 VOID WING S	S	145.065F	156.675F	453.48	2852.253	444.4104	2795.208	150.870F	16.375	29.000S	8
VOID 4S	S	98.625F	145.065F	23667.97	148864.4	23194.61	145887.1	122.020F	14.611	20.897S	22239
AFTPEAK	C	6.285A	11.680F	3597.2	22625.31	3525.256	22172.8	4.078F	22.546	0.000P	10451

IV) WATER BALLAST		Position		100% Full Capacity		98 % Full Capacity		100% Full Center of Gravity			Free Surface
Name	Side	Aft	Fwd					LCG	VCG	TCG	98% Full
		m-AP	m-AP	m^2	Barrel	m^3	Barrel	m-AP	m-BL	m-CL	m^4
BALLAST 2S	S	191.505F	237.945F	23924.79	150479.8	23446.29	147470.2	214.691F	14.458	20.982S	22210
BALLAST 4P	P	98.625F	145.065F	23667.5	148861.5	23194.15	145884.2	122.020F	14.611	20.897P	22239

V) FRESH WATER TANKS		Position		100% Full Capacity		98 % Full Capacity		100% Full Center of Gravity			Free Surface
Name	Side	Aft	Fwd					LCG	VCG	TCG	98% Full
		m-AP	m-AP	m^2	Barrel	m^3	Barrel	m-AP	m-BL	m-CL	m^4
FRWATERP	P	19.780F	24.280F	177.9	1118.938	174.342	1096.559	22.101F	24.871	18.368P	20
DRINKING P	P	24.280F	28.780F	229.09	1440.907	224.5082	1412.089	26.641F	24.875	19.207P	44
DRINKING S	S	11.680F	22.480F	330.7	2080.004	324.086	2038.404	17.202F	24.9	16.993S	62

VI) DEISEL OIL TANKS		Position		100% Full Capacity		98 % Full Capacity		100% Full Center of Gravity			Free Surface
Name	Side	Aft	Fwd					LCG	VCG	TCG	98% Full
		m-AP	m-AP	m^2	Barrel	m^3	Barrel	m-AP	m-BL	m-CL	m^4
DIESEL OIL TK. (S)	S	23.380F	29.680F	387.88	2439.649	380.1224	2390.856	26.681F	23.75	19.224S	64
D.O. SERV. T. (S)	S	26.080F	29.680F	32.6	205.0442	31.948	200.9433	27.880F	23.25	17.705S	2

VII) FUEL OIL TANKS		Position		100% Full Capacity		98 % Full Capacity		100% Full Center of Gravity			Free Surface
Name	Side	Aft	Fwd					LCG	VCG	TCG	98% Full
		m-AP	m-AP	m^2	Barrel	m^3	Barrel	m-AP	m-BL	m-CL	m^4
No.1 F.O.T. (S)	S	42.280F	47.680F	958.5	6028.677	939.33	5908.104	44.602F	19.514	17.656S	922
No.1 F.O.T. (P)	P	42.280F	47.680F	958.5	6028.677	939.33	5908.104	44.602F	19.514	17.656P	922
No.2 F.O.T. (S)	S	29.680F	42.280F	1,286.10	8089.183	1260.378	7927.4	36.434F	22.581	20.270S	428
No.2 F.O.T. (P)	P	29.680F	42.280F	1,380.20	8681.044	1352.596	8507.423	36.588F	22.606	20.088P	428
H.F.O. SETT.T. (S)	S	34.180F	38.680F	52.2	328.3223	51.156	321.7559	36.430F	22.875	18.155S	7
H.F.O. SERV. T. (S)	S	38.680F	42.280F	41.8	262.9095	40.964	257.6513	40.480F	22.875	18.155S	6

Reference to the “Tank Tables”

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Tank 1C								
		Height	Height	Center	Center	Center	Waterplane	Waterplane
Volume	Volume	Keel	Ref	LCG	VCG	TCG	FSt	Area
m3	bbls	m	m-BL	m-AP	m-BL	m-CL	m4	m2
---	0	0.022	---	262.073F	0	0.000P	---	---
675.76	4,250.38	0.615	0.593	262.073F	0.296	0.000S	43,350	1,151.31
1,795.57	11,293.82	1.597	1.575	262.073F	0.787	0.000P	50,472	1,151.31
3,591.15	22,587.65	3.171	3.149	262.073F	1.575	0.000P	50,472	1,151.31
5,386.72	33,881.47	4.746	4.724	262.073F	2.362	0.000S	50,472	1,151.31
7,182.30	45,175.29	6.32	6.298	262.073F	3.149	0.000P	50,472	1,151.31
8,977.87	56,469.12	7.895	7.873	262.073F	3.936	0.000P	50,472	1,151.31
10,773.45	67,762.94	9.469	9.447	262.073F	4.724	0.000S	50,472	1,151.31
12,569.02	79,056.76	11.044	11.022	262.073F	5.511	0.000S	50,472	1,151.31
14,364.60	90,350.59	12.619	12.597	262.073F	6.298	0.000P	50,472	1,151.31
16,160.17	101,644.41	14.193	14.171	262.073F	7.086	0.000S	50,472	1,151.31
17,955.74	112,938.24	15.768	15.746	262.073F	7.873	0.000P	50,472	1,151.31
19,751.32	124,232.06	17.342	17.32	262.073F	8.66	0.000S	50,472	1,151.31
21,546.89	135,525.88	18.917	18.895	262.073F	9.447	0.000S	50,472	1,151.31
23,342.47	146,819.71	20.492	20.47	262.073F	10.235	0.000S	50,472	1,151.31
25,138.04	158,113.53	22.066	22.044	262.073F	11.022	0.000S	50,472	1,151.31
26,933.62	169,407.35	23.641	23.619	262.073F	11.809	0.000S	50,472	1,151.31
28,729.19	180,701.18	25.215	25.193	262.073F	12.597	0.000S	50,472	1,151.31
30,524.77	191,995.00	26.79	26.768	262.073F	13.384	0.000P	50,472	1,151.31
32,320.34	203,288.82	28.364	28.342	262.073F	14.171	0.000P	50,294	1,151.31
33,112.03	208,268.38	29.059	29.037	262.073F	14.518	0.000P	37,340	---
33,787.78	212,518.76	29.939	29.917	262.092F	14.815	0.000P	---	---

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Ballast 2P								
		Height	Height	Center	Center	Center	Waterplane	Waterplane
Volume	Volume	Keel	Ref	LCG	VCG	TCG	FSt	Area
m3	bbls	m	m-BL	m-AP	m-BL	m-CL	m4	m2
---	0	0.022	---	214.483F	0	20.204P	---	---
478.51	3,009.77	0.635	0.613	214.555F	0.311	20.509P	20,427	803.19
1,237.21	7,781.80	1.564	1.542	214.600F	0.782	20.752P	22,044	826.1
2,514.57	15,816.14	3.105	3.083	214.634F	1.56	20.890P	22,176	829.71
3,793.86	23,862.69	4.647	4.625	214.655F	2.334	20.940P	22,209	830.28
5,073.75	31,912.92	6.189	6.167	214.668F	3.106	20.965P	22,231	830.6
6,353.99	39,965.37	7.73	7.708	214.676F	3.878	20.981P	22,234	830.69
7,634.25	48,018.01	9.272	9.25	214.682F	4.65	20.992P	22,234	830.69
8,914.52	56,070.64	10.814	10.792	214.686F	5.421	20.999P	22,234	830.69
10,194.78	64,123.27	12.356	12.334	214.689F	6.192	21.005P	22,234	830.69
11,475.05	72,175.90	13.897	13.875	214.692F	6.964	21.009P	22,234	830.69
12,755.32	80,228.53	15.439	15.417	214.694F	7.735	21.013P	22,234	830.69
14,035.58	88,281.16	16.981	16.959	214.695F	8.506	21.015P	22,235	830.69
15,315.85	96,333.79	18.522	18.5	214.697F	9.277	21.018P	22,235	830.69
16,596.11	104,386.42	20.064	20.042	214.698F	10.048	21.020P	22,235	830.69
17,876.38	112,439.05	21.606	21.584	214.699F	10.819	21.021P	22,235	830.69
19,156.65	120,491.68	23.147	23.125	214.699F	11.59	21.023P	22,235	830.69
20,436.91	128,544.31	24.689	24.667	214.700F	12.361	21.024P	22,235	830.69
21,717.18	136,596.95	26.231	26.209	214.701F	13.131	21.025P	22,234	830.69
22,997.44	144,649.58	27.772	27.75	214.701F	13.902	21.026P	22,234	830.69
23,446.29	147,472.76	28.313	28.291	214.702F	14.173	21.027P	22,234	---
23,924.79	150,482.40	29.314	29.292	214.702F	14.462	20.984P	---	---

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SLOP P								
		Height	Height	Center	Center	Center	Waterplane	
Volume	Volume	Keel	Ref	LCG	VCG	TCG	FSt	Area
m3	bbls	m	m-BL	m-AP	m-BL	m-CL	m4	m2
---	0	0.727	0.705	57.656F	0.705	12.155P	---	---
6.54	41.13	2.239	2.217	55.581F	1.828	12.738P	5	11.63
38.58	242.66	3.752	3.73	54.432F	2.869	13.266P	35	29.2
96.48	606.84	5.264	5.242	53.952F	3.872	13.747P	102	45.31
161.97	1,018.77	6.777	6.755	53.753F	4.722	13.954P	63	39.9
212.77	1,338.29	8.29	8.268	53.595F	5.381	13.906P	30	31.63
278.6	1,752.33	9.802	9.78	53.456F	6.272	14.047P	378	72.8
409.06	2,572.91	11.315	11.293	53.318F	7.634	14.705P	750	91.8
572.93	3,603.64	12.827	12.805	53.195F	8.884	15.351P	1,203	111.77
762.56	4,796.35	14.34	14.318	53.066F	10.07	15.914P	1,554	128.55
971.1	6,108.06	15.853	15.831	52.967F	11.147	16.380P	1,962	140.22
1,197.57	7,532.46	17.365	17.343	52.890F	12.177	16.797P	2,428	151.45
1,440.66	9,061.45	18.878	18.856	52.828F	13.178	17.178P	2,927	161.75
1,698.74	10,684.76	20.39	20.368	52.777F	14.156	17.526P	3,317	170.17
1,965.04	12,359.74	21.903	21.881	52.737F	15.101	17.821P	3,389	172.27
2,232.67	14,043.10	23.416	23.394	52.705F	16.004	18.051P	3,402	172.6
2,500.52	15,727.82	24.928	24.906	52.681F	16.877	18.232P	3,401	172.61
2,768.38	17,412.56	26.441	26.419	52.660F	17.727	18.378P	3,401	172.61
3,036.23	19,097.30	27.954	27.932	52.644F	18.56	18.499P	3,401	172.61
3,180.17	20,002.70	28.769	28.747	52.637F	19.003	18.555P	3,352	---
3,245.08	20,410.91	29.466	29.444	52.644F	19.202	18.540P	---	---

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No. 1 F.O.T (P)								
Volume	Volume	Height Keel	Height Ref	Center LCG	Center VCG	Center TCG	Waterplane FSt	Waterplane Area
m3	bbls	m	m-BL	m-AP	m-BL	m-CL	m4	m2
---	0	4.825	4.803	46.064F	4.803	12.958P	---	---
10.85	68.22	6.117	6.095	45.693F	5.526	13.161P	9	12.2
28.58	179.78	7.409	7.387	45.505F	6.304	13.428P	21	17.59
52.7	331.5	8.701	8.679	45.403F	7.108	13.717P	43	22.97
83.14	522.92	9.993	9.971	45.326F	7.991	14.038P	65	24.67
117.64	739.96	11.285	11.263	45.219F	8.778	14.328P	103	28.67
155.47	977.89	12.577	12.555	45.103F	9.516	14.604P	162	32.38
196.44	1,235.57	13.869	13.847	44.993F	10.267	14.887P	224	36.42
242.62	1,526.02	15.161	15.139	44.906F	11.074	15.199P	323	41.2
294.5	1,852.37	16.453	16.431	44.839F	11.906	15.528P	449	46
352.1	2,214.62	17.745	17.723	44.787F	12.753	15.869P	598	50.76
415.09	2,610.84	19.037	19.015	44.745F	13.607	16.211P	758	55.11
482.72	3,036.21	20.329	20.307	44.710F	14.456	16.540P	882	58.33
553.1	3,478.89	21.621	21.599	44.683F	15.283	16.830P	916	59.52
624.1	3,925.46	22.913	22.891	44.662F	16.075	17.064P	922	59.73
695.17	4,372.47	24.204	24.182	44.645F	16.838	17.250P	922	59.73
766.24	4,819.48	25.496	25.474	44.632F	17.579	17.402P	922	59.73
837.31	5,266.49	26.788	26.766	44.620F	18.304	17.528P	922	59.73
908.37	5,713.50	28.08	28.058	44.611F	19.016	17.635P	922	59.73
939.33	5,908.18	28.644	28.622	44.607F	19.324	17.676P	918	---
958.5	6,028.75	29.372	29.35	44.602F	19.514	17.656P	---	---

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Fr. Water P								
Volume	Volume	Height Keel	Height Ref	Center LCG	Center VCG	Center TCG	Waterplane FSt	Waterplane Area
m3	bbls	m	m-BL	m-AP	m-BL	m-CL	m4	m2
---	0	20.722	20.7	22.107F	20.7	18.209P	---	---
3.56	22.38	20.902	20.88	22.106F	20.791	18.228P	16	14.97
8.84	55.58	21.165	21.143	22.104F	20.923	18.246P	17	15.2
17.93	112.78	21.608	21.586	22.102F	21.147	18.270P	18	15.61
27.26	171.46	22.051	22.029	22.101F	21.373	18.293P	19	15.99
36.8	231.46	22.494	22.472	22.100F	21.601	18.315P	20	16.28
46.41	291.9	22.936	22.914	22.099F	21.827	18.330P	20	16.28
56.02	352.35	23.379	23.357	22.098F	22.052	18.340P	20	16.28
65.63	412.79	23.822	23.8	22.098F	22.275	18.347P	20	16.28
75.24	473.24	24.265	24.243	22.097F	22.498	18.353P	20	16.28
84.85	533.68	24.708	24.686	22.097F	22.721	18.357P	20	16.28
94.46	594.13	25.151	25.129	22.097F	22.943	18.360P	20	16.28
104.07	654.57	25.594	25.572	22.097F	23.166	18.363P	20	16.28
113.68	715.02	26.037	26.015	22.097F	23.388	18.365P	20	16.28
123.29	775.46	26.48	26.458	22.097F	23.61	18.367P	20	16.28
132.9	835.91	26.922	26.9	22.096F	23.832	18.368P	20	16.28
142.51	896.35	27.365	27.343	22.096F	24.054	18.370P	20	16.28
152.12	956.8	27.808	27.786	22.096F	24.275	18.371P	20	16.28
161.73	1,017.24	28.251	28.229	22.096F	24.497	18.372P	20	16.28
171.34	1,077.69	28.694	28.672	22.096F	24.719	18.373P	20	16.28
174.34	1,096.57	28.832	28.81	22.096F	24.788	18.373P	20	---
177.9	1,118.95	29.137	29.115	22.101F	24.871	18.368P	---	---

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Diesel Oil Tk. (S)								
		Height	Height	Center	Center	Center	Waterplane	Waterplane
Volume	Volume	Keel	Ref	LCG	VCG	TCG	FSt	Area
m3	bbls	m	m-BL	m-AP	m-BL	m-CL	m4	m2
---	0	15.585	15.563	29.612F	15.563	16.830S	---	---
0.33	2.06	16.299	16.277	29.129F	16.099	17.039S	0	1.01
2.65	16.69	17.013	16.991	28.557F	16.635	17.265S	1	4.04
8.92	56.09	17.728	17.706	28.002F	17.17	17.488S	4	9.1
20.7	130.19	18.442	18.42	27.543F	17.695	17.728S	11	14.92
37.88	238.28	19.157	19.135	27.284F	18.193	17.984S	23	19.83
59.32	373.11	19.871	19.849	27.139F	18.667	18.212S	36	23.84
84.63	532.33	20.585	20.563	27.041F	19.13	18.422S	52	27.7
107.55	676.46	21.3	21.278	26.931F	19.509	18.637S	38	22.68
130.22	819.07	22.014	21.992	26.847F	19.879	18.806S	42	23.52
153.52	965.64	22.729	22.707	26.786F	20.254	18.936S	42	23.86
176.93	1,112.83	23.443	23.421	26.741F	20.626	19.033S	42	23.86
200.33	1,260.01	24.157	24.135	26.707F	20.994	19.107S	42	23.86
223.73	1,407.20	24.872	24.85	26.680F	21.36	19.166S	42	23.86
247.13	1,554.38	25.586	25.564	26.658F	21.724	19.213S	43	23.86
274.76	1,728.20	26.301	26.279	26.658F	22.148	19.229S	64	30.3
304.48	1,915.13	27.015	26.993	26.668F	22.586	19.231S	64	30.3
334.2	2,102.07	27.73	27.708	26.675F	23.01	19.233S	64	30.3
363.92	2,289.00	28.444	28.422	26.681F	23.423	19.234S	64	30.3
380.12	2,390.90	28.833	28.811	26.684F	23.644	19.235S	64	---
387.88	2,439.69	29.158	29.136	26.681F	23.75	19.224S	---	---

APPENDIX – D LIGHTSHIP WEIGHT AS CONVERTED & LIGHTSHIP DISTRIBUTION

Summary of Light Ship Weight and center of gravity of the FPSO after conversion is as follows

Lightship of Original Tanker: 31,841 MT

Lightship of Conversion FPSO: 48,446.8 MT

L.C.G. : 145.67 m-AP

V.C.G. : 21.000 m-B.L.

T.C.G. : 1.082 m-CL, Port

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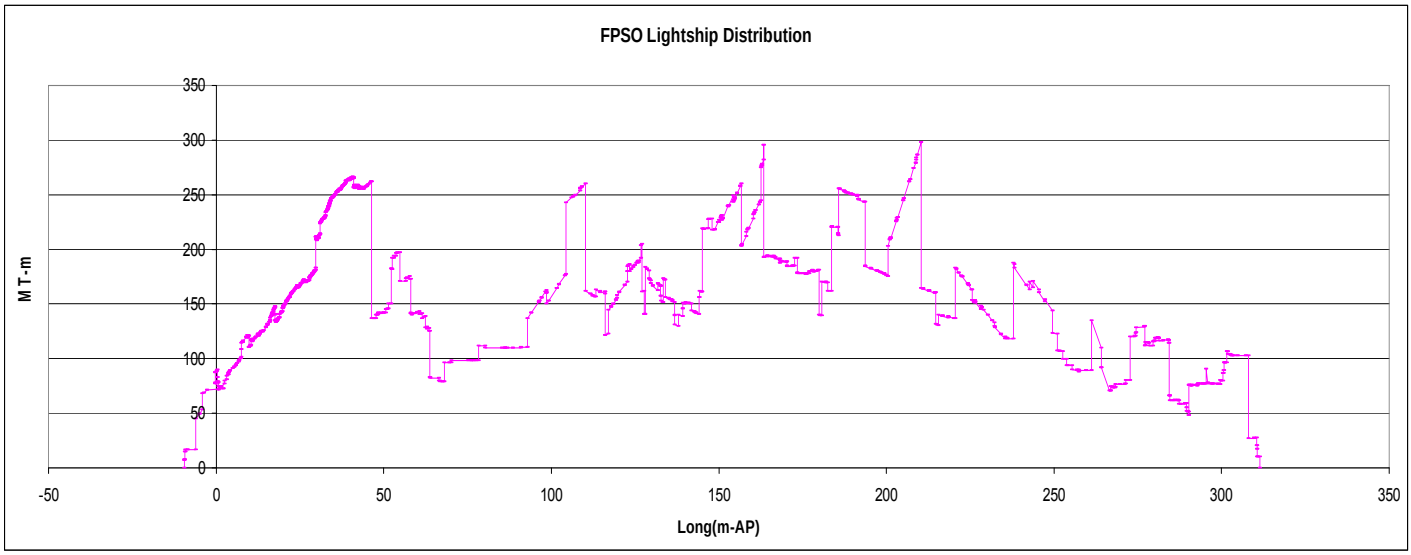

Figure 0-1: MV18 FPSO Lightship Distribution

The Lightship Weight was confirmed by the Lightship Surver Report to be 48,447 MT with and LCG of 145.67. When the Oct. 31, 2008 Weight Control Report value of 47,788 MT was compared to the Lightship Surver a difference between the final weight and LCG were found. The Lightship weight distribution was adjusted by adding this 658.83 MT difference between the Weight Control Report and the Lightship Survery Report uniformly between frames 34 and 50.5 which was the difference. The VCG is from the final Oct. 31, 2008 Weight Control Report with a margin of +0.5m. The TCG is from the final Weight Control Report. Below you will find a Lightship distribution comparison of the Lightship included in Rev C of this report and the final lightship distribution, Figure 0-2**. There are also BM and SF plots of the previous lightship and the final lightship weight in** Figure 0-3 **and** Figure 0-4

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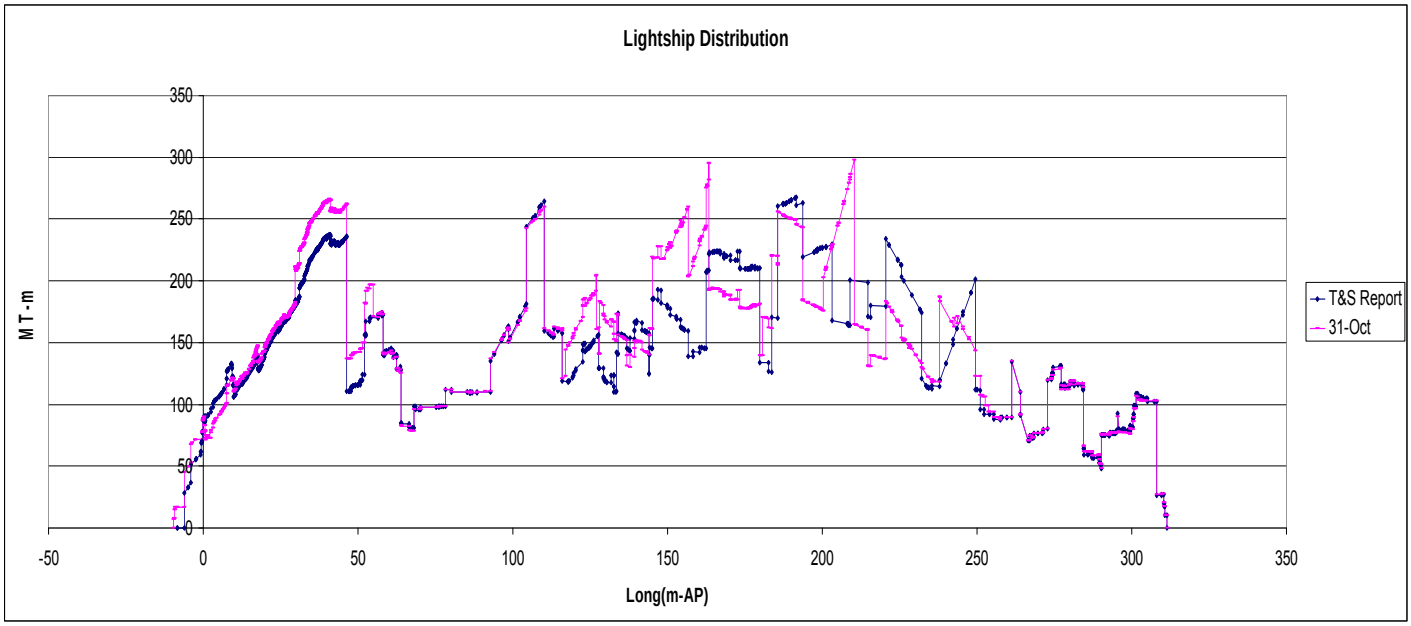

Figure 0-2: Lightship Comparison

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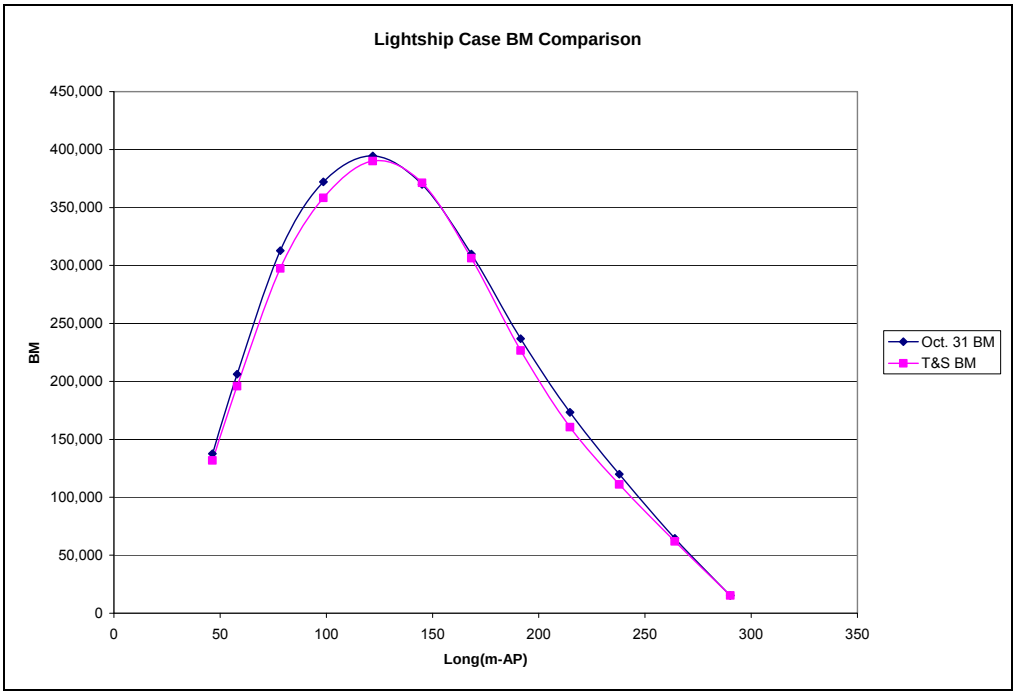

Figure 0-3: BM Lightship Comparison

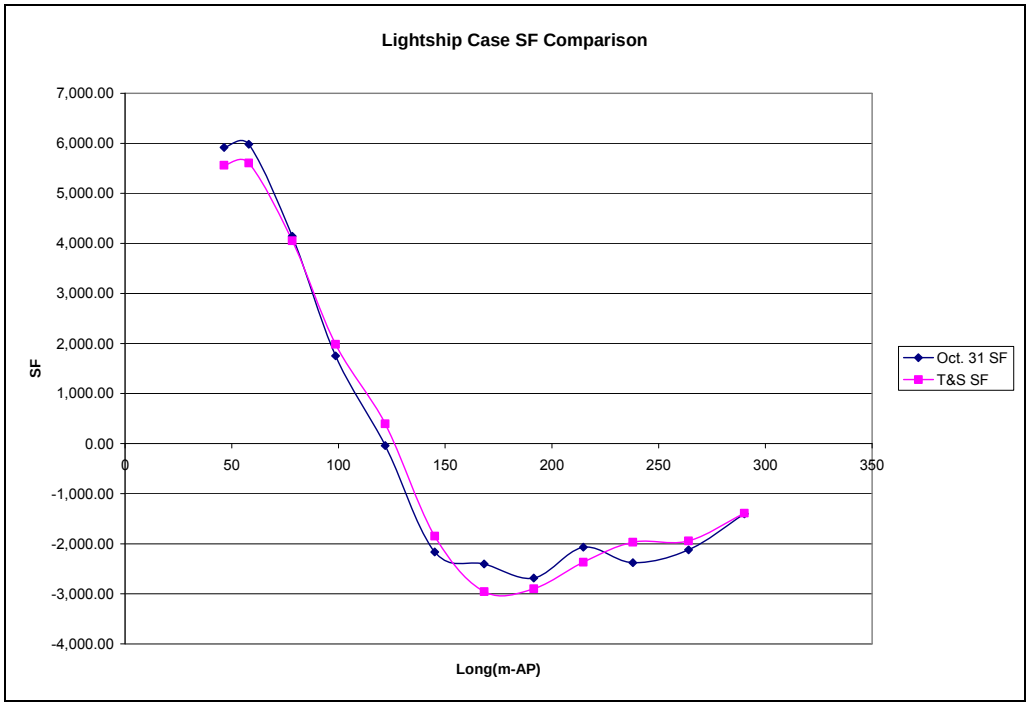

Figure 0-4: SF Lightship Comparison

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APPENDIX – E DRAFT MARK CORRECTION TABLE

Distance between perpendiculars = 303.5
Distance of aft draft mark = 12.58
Distance of Fp draft mark = 302.7
Distance between draft mark = 290.12

Trim bt. Draft mark (m)	For. Corr. (Cf) (m)	Aft Corr. (Ca) (m)	Trim bt. Draft mark (m)	For. Corr. (Cf) (m)	Aft Corr. (Ca) (m)	Trim bt. Draft mark (m)	For. Corr. (Cf) (m)	Aft Corr. (Ca) (m)
-4	0.011	-0.173	0.7	-0.002	0.030	3.5	-0.010	0.152
-3.8	0.010	-0.165	0.75	-0.002	0.033	4	-0.011	0.173
-3.6	0.010	-0.156	0.8	-0.002	0.035	4.5	-0.012	0.195
-3.4	0.009	-0.147	0.85	-0.002	0.037	5	-0.014	0.217
-3.2	0.009	-0.139	0.9	-0.002	0.039	5.5	-0.015	0.238
-3	0.008	-0.130	0.95	-0.003	0.041	6	-0.017	0.260
-2.8	0.008	-0.121	1	-0.003	0.043	6.5	-0.018	0.282
-2.6	0.007	-0.113	1.05	-0.003	0.046	7	-0.019	0.304
-2.4	0.007	-0.104	1.1	-0.003	0.048	7.5	-0.021	0.325
-2.2	0.006	-0.095	1.15	-0.003	0.050	8	-0.022	0.347
-2	0.006	-0.087	1.2	-0.003	0.052	8.5	-0.023	0.369
-1.8	0.005	-0.078	1.25	-0.003	0.054	9	-0.025	0.390
-1.6	0.004	-0.069	1.3	-0.004	0.056	9.5	-0.026	0.412
-1.4	0.004	-0.061	1.35	-0.004	0.059	10	-0.028	0.434
-1.2	0.003	-0.052	1.4	-0.004	0.061	10.5	-0.029	0.455
-1	0.003	-0.043	1.45	-0.004	0.063	11	-0.030	0.477
-0.95	0.003	-0.041	1.5	-0.004	0.065	11.5	-0.032	0.499
-0.9	0.002	-0.039	1.55	-0.004	0.067	12	-0.033	0.520
-0.85	0.002	-0.037	1.6	-0.004	0.069	12.5	-0.034	0.542
-0.8	0.002	-0.035	1.65	-0.005	0.072	13	-0.036	0.564
-0.75	0.002	-0.033	1.7	-0.005	0.074	13.5	-0.037	0.585
-0.7	0.002	-0.030	1.75	-0.005	0.076	14	-0.039	0.607
-0.65	0.002	-0.028	1.8	-0.005	0.078	14.5	-0.040	0.629
-0.6	0.002	-0.026	1.85	-0.005	0.080	15	-0.041	0.650
-0.55	0.002	-0.024	1.9	-0.005	0.082	15.5	-0.043	0.672
-0.5	0.001	-0.022	1.95	-0.005	0.085	16	-0.044	0.694
-0.45	0.001	-0.020	2	-0.006	0.087	16.5	-0.045	0.715
-0.4	0.001	-0.017	2.05	-0.006	0.089	17	-0.047	0.737
-0.35	0.001	-0.015	2.1	-0.006	0.091	17.5	-0.048	0.759
-0.3	0.001	-0.013	2.15	-0.006	0.093	18	-0.050	0.781
-0.25	0.001	-0.011	2.2	-0.006	0.095	18.5	-0.051	0.802
-0.2	0.001	-0.009	2.25	-0.006	0.098	19	-0.052	0.824
-0.15	0.000	-0.007	2.3	-0.006	0.100	19.5	-0.054	0.846
-0.1	0.000	-0.004	2.35	-0.006	0.102	20	-0.055	0.867
-0.05	0.000	-0.002	2.4	-0.007	0.104	20.5	-0.057	0.889
0	0.000	0.000	2.45	-0.007	0.106	21	-0.058	0.911
0.05	0.000	0.002	2.5	-0.007	0.108	21.5	-0.059	0.932
0.1	0.000	0.004	2.55	-0.007	0.111	22	-0.061	0.954
0.15	0.000	0.007	2.6	-0.007	0.113	22.5	-0.062	0.976
0.2	-0.001	0.009	2.65	-0.007	0.115	23	-0.063	0.997
0.25	-0.001	0.011	2.7	-0.007	0.117	23.5	-0.065	1.019
0.3	-0.001	0.013	2.75	-0.008	0.119	24	-0.066	1.041
0.35	-0.001	0.015	2.8	-0.008	0.121	24.5	-0.068	1.062
0.4	-0.001	0.017	2.85	-0.008	0.124	25	-0.069	1.084
0.45	-0.001	0.020	2.9	-0.008	0.126	25.5	-0.070	1.106
0.5	-0.001	0.022	2.95	-0.008	0.128	26	-0.072	1.127
0.55	-0.002	0.024	3	-0.008	0.130	26.5	-0.073	1.149
0.6	-0.002	0.026	3.05	-0.008	0.132	27	-0.074	1.171
0.65	-0.002	0.028	3.1	-0.009	0.134	27.5	-0.076	1.192

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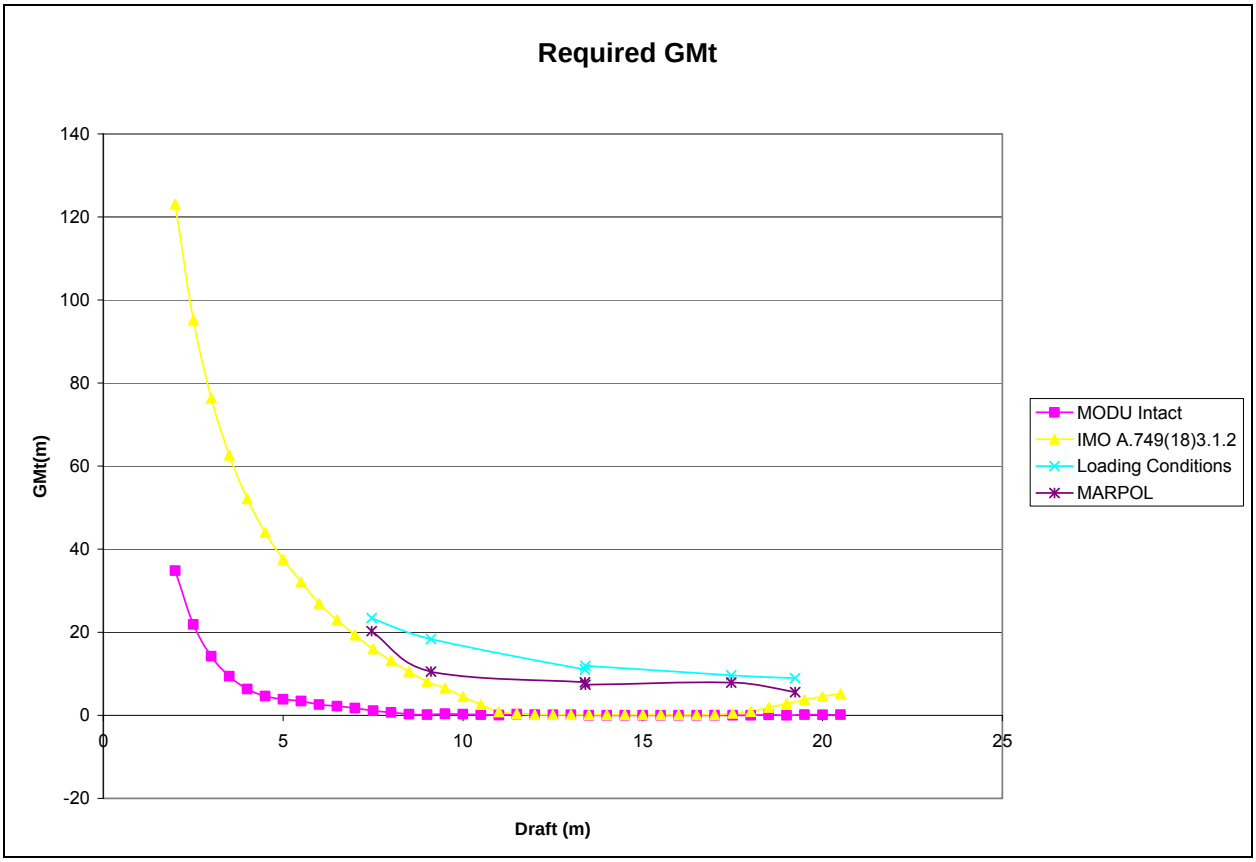
APPENDIX – F REQUIRED GM CURVE



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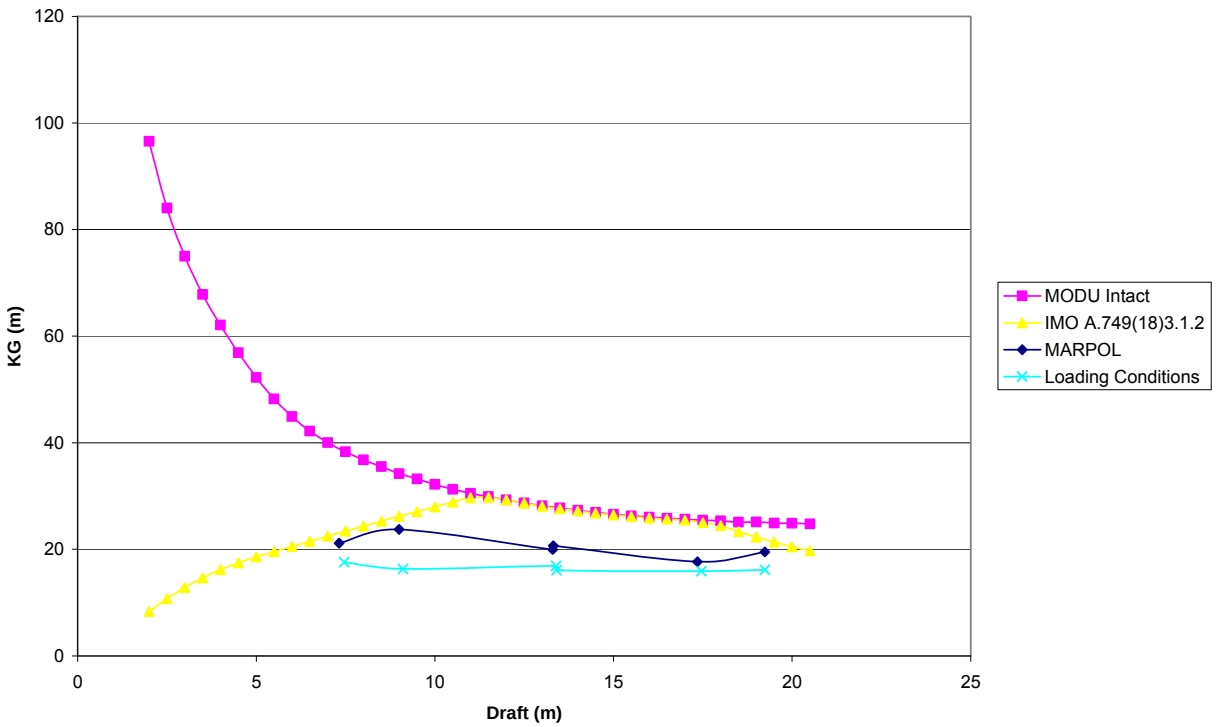
Max KG



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APPENDIX – G INTACT TRIM & STABILITY BOOKLET

INTACT TRIM & STABILITY OF STANDARD LOADING

1 INTRODUCTION

1.1 GENERAL

The purpose of this document is to describe the results of an intact trim and stability analysis and longitudinal strength charactereistics of the Cidad de Niteroi MV18 FPSO crude oil tanker "Apollo Shoju" (previously "Shoju Maru"). This report outlines the study of the trim, intact stability, and longitudinal strength characteristics for the load conditions used for the FEA hull Assessment and Motions Analysis for the FPSO vessel. The particulars of the vessel are as shown below:

SHIP NAME	Original	APOLLO SHOJU
	Converted	PETROBRAS FPSO CIDADE DE NITEROI MV18
OWNER	Original	
	Converted	MODEC International
BUILDER/HULL NO	Original	MITSUBISHI HEAVY INDUSTRIES LTD, JAPAN/ Hull #1981
	Converted	
YEAR OF BUILD	Original	1986
	Converted	2008
CLASSIFICATION	Original	NK
	Converted	American Bureau of Shipping
TYPE OF SHIP	Original	OIL TANKER, VLCC
	Converted	FLOATING PRODUCTION STORAGE OFFLOADING VESSEL (FPSO)

Particular	**Value**
Length Overall	315.00 m
Length Between Perpendiculars	303.50 m
Breadth Molded	60.00 m
Depth Molded	28.45 m
Full Displacement	289,879 MT
Summer Load Draft	19.250m (molded) 19.273m (extreme)
Block Coefficient	0.8049

The Hydrostatic characteristics of the vessel were calculated based on the hull from obtained by entering offshets from structural section drawings gor the Tanker "Apollo Shoju" (Reference #). The hull displacement of the model has been verified as to match that of the loading and stability manual for the tanker Apollo Shoju. The calculated hydrostatics table can be found in **Appendix – A**

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The hull is made up of six centerline tanks, five wing tanks, a forepeak tank, an aftpeak tank, and smaller tanks for slop, fuel oil, diesel oil, potable water and feed water. Figure 1.1 shows the tank arrangement after conversion.

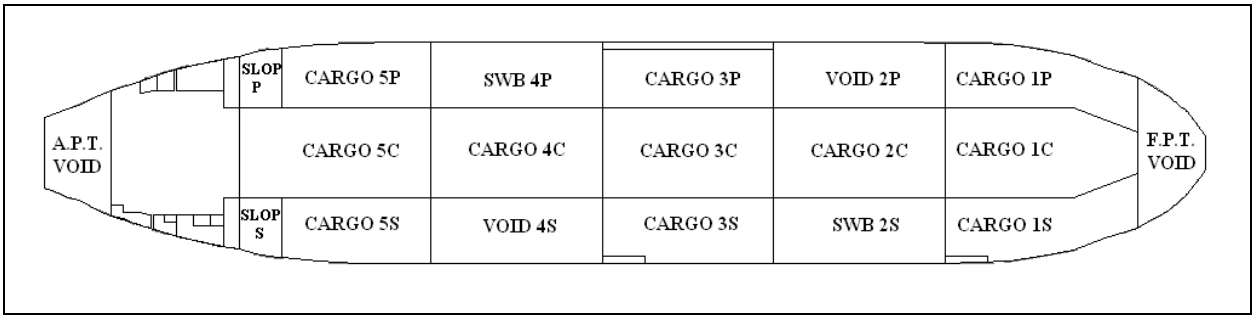

Figure 1.1 Tank Arrangement Diagram

2 SUMMARY

This report documents the development of the Stillwater load cases to be used for the hull assessment analysis, and motions analysis. The resulting trim, intact stability and longitudinal strength characteristics can be found in section 7 for each loading case.

3 REFERENCES

1. "General Arrangement", Mitsubishi Heavy Industries, Ltd. Dwg. No. BZA1-0011F

2. HECSALV, HECSDS computer software, Version 7.5.16, Herbert Engineering Corp. 20

3. General Technical Description, Petrobras Document No. I-ET-001

4. FPSO Hull Assessment - Phase A – Apollo Shoju, MODEC International LLC, Document No. WH201-MI20-3004-0021

5.Loading and Stability Manual, Mitsubishi Heavy Industries, Ltd. Dwg. No. CZA0-0081F

4 LIGHTSHIP WEIGHT DISTRIBUTION

The FPSO lightship weight is based upon the original tanker Apollo Shoju lightship weight along with all the new added structure, equipment and etc as shown in Table 4- 1 Added Lightship Weight summary.

The calculated lightship weight is 48,446.8 MT

L.C.G. : 145.67	m-AP
V.C.G. : 21	m-B.L.
T.C.G. : 1.082	m-CL, Port

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Table 4- 1 FPSO Added Weights

	Weight (MT)	VCG	LCG	TCG
Marine Hull	4,119.12	19.941	171.143F	6.171P
Topside Modules	9,651.86	37.744	166.150F	2.533P
Piping & Mech	419.53	25.873	124.090F	1.164S
Outfitting	485.39	35.891	104.444F	7.304S
Accommodation	128.25	36.628	34.419F	0.595P
Electrical	202.06	36.399	124.749F	1.460S
Mechnical Item Added Weights	350.24	19.859	117.339F	.871S
MFE Outfitting Added Weights	1,246.28	23.794	165.489F	9.852P
Rip Out Weight	-655.77	22.869	141.986F	0.809S
Fwd Mooring Lines	1,176	0	278.580F	0
Aft Mooring Lines	1,121	0	57.990F	0
Risers and Riser Porch	4708	14.75	188.603F	31.500P

5 LOADING CRITERIA

5.1 LONGITUDINAL STRENGHT

The Stillwater bending moment (BM) allowables of the existing hull was taken from the vessel's original loading manual. The Stillwater allowables for FPSO service at the operating site have been evaluated with site specific environmental conditions. Using the site loads, the initial hull strength assessment has shown that the original tanker still water allowables for shear force and bending moment do not satisfy the current ABS class requirements. To ensure safe operations on site, a reduced set of still water allowabes are defined for vertical bending moment and shear force from the finding in Phase A Hull Analysis (Reference 4). The Stillwater Shear Force and Bending Moment values on-site along the hull are listed in Table 5- 1, below.

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Table 5- 1 - Shear Force and Bending Moment Allowables On-Site

Frame #	Long (m-AP)	Allowable BM (MT-m)		Allowable SF (MT)	
49	31.500F	574,000H	612,000S	9,059	-9,059
51	56.450F	574,000H	612,000S	13,488	-13,386
54.5	78.310F	574,000H	612,000S	16,852	-16,509
58	66.450F	574,000H	612,000S	20,141	-19,875
62	121.850F	574,000H	612,000S	17,055	-17,014
66	86.450F	574,000H	612,000S	12,500	-12,500
70	168.260F	574,000H	612,000S	18,983	-18,983
74	116.450F	574,000H	612,000S	22,500	-22,500
78	214.730F	574,000H	612,000S	15,599	-15,971
82	237.945F	574,000H	612,000S	21,673	-21,989
86.5	264.070F	574,000H	612,000S	16,591	-16,972
91	290.190F	574,000H	605,000S	11,595	-11,595

The Transit Shear force (SF) and Bending moment (BM) allowables for “Apollo Shoju” have also been reduced according to the findings of the Phase A Hull Analysis (Reference 4). The Transit BM and SF are shown in Table 5- 2, below. Figure 5. 1 and Figure 5. 2 illustrate the at sea and transit allowables for the Cidade de Niteroi MV 18 FPSO.

Table 5- 2 - Transit Stillwater Allowables

Frame #	Long (m-AP)	Allowable BM (MT-m)		Allowable SF (MT)	
49	31.500F	513,475H	483,301S	9,059	-9,059
51	56.450F	574,000H	599,683S	12,792	-12,231
54.5	78.310F	574,000H	612,000S	13,450	-12,828
58	66.450F	574,000H	612,000S	20,443	-19,920
62	121.850F	511,340H	434,505S	14,253	-14,213
66	86.450F	516,094H	439,259S	12,500	-12,500
70	168.260F	519,744H	442,909S	16,182	-16,182
74	116.450F	565,969H	489,134S	22,500	-22,500
78	214.730F	570892H	506,679S	11,597	-12,273
82	237.945F	574,000H	612,000S	21,495	-22,172
86.5	264.070F	574,000H	612,000S	13,124	-13,770
91	290.190F	572,033H	562,403S	11,595	-11,595

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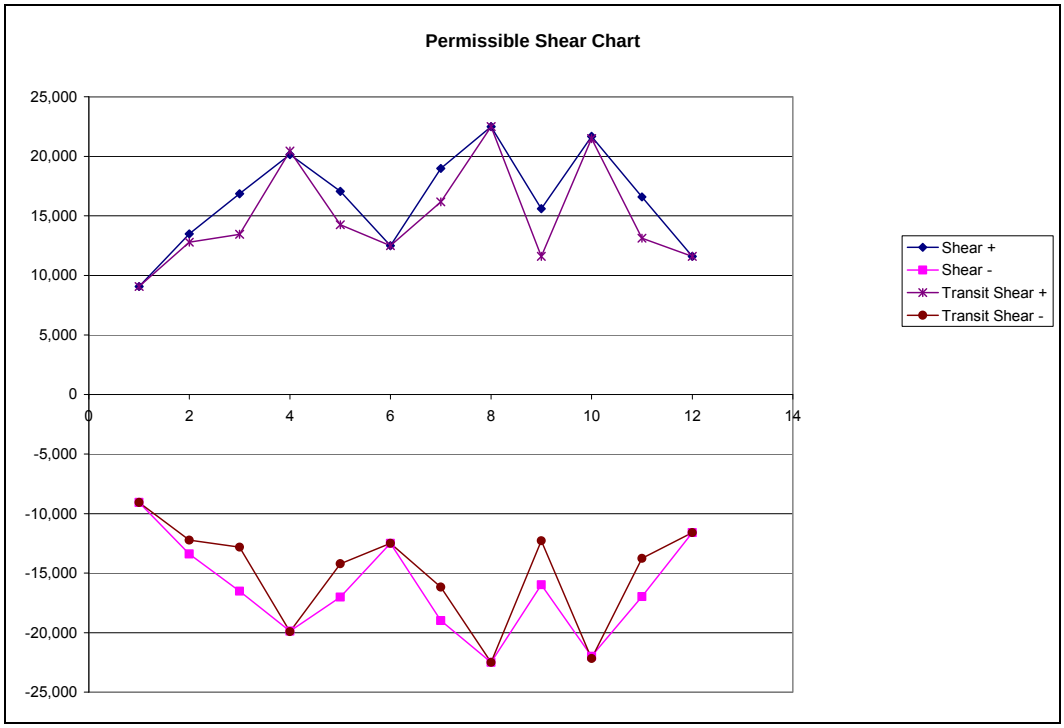

Figure 5. 1 Allowable Shear Force At Sea and Transit

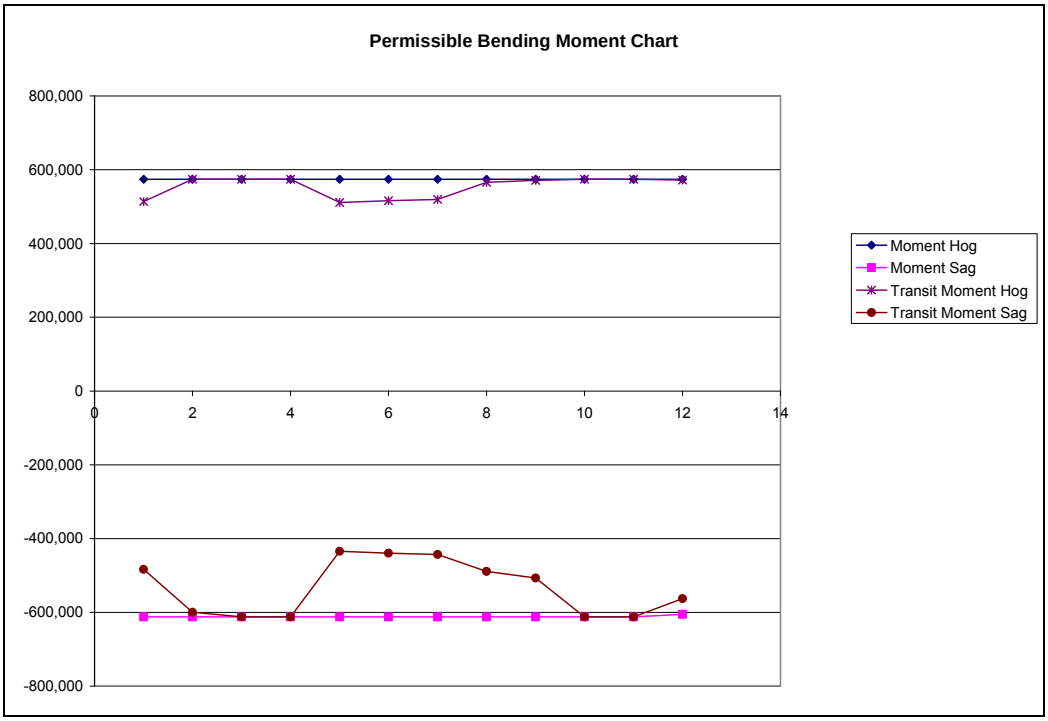

Figure 5. 2 Allowable Bending Moment At Sea and Transit

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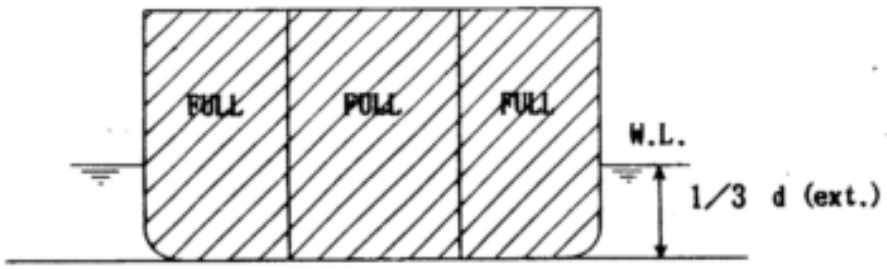
5.3 TRANSVERSE STRENGTH

According to the original tanker loading condition, following load condition is not allowed under the draught less than 1/3d (ext.) from view point of transverse strength.



5.3 DESIGN TRIM

To be kept even keel ~ Trim by stern

Max 5m trim by stern

5.4 DESING HEEL

Max 0.5 degree

5.5 PROGRESSIVE DOWN FLOODING POINT

Progressive down flooding point are as below, which is the same as original tanker

Down flooding point Door at A-Deck

Long'l	:	34.742 m-AP
Trans'v	:	7.080 m-CL
Vert'l	:	33.761 m-BL

5.6 INTACT STABILITY CRITERIA

a) IMO A.749(18) 3.1.2 General Intact Stability Criteria For All Ship

b) IMO A.749(18) 3.2.2 Weather Criteria

c) IMO A.749 (18) 4.6.4 MODU Intact Stability Criteria

Require GM corresponding to draft is calculated and shown in Appendix – G.

6 TANK CAPACITIES

FPSO tank capacities for the cargo and ballast tanks at 98% load are shown in Table 6- 1 below.

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Table 6- 1 Tank Capacities

I) CARGO OIL TANKS		Position		98 % Full Capacity	
Name	Side	Aft	Fwd		
		m-AP	m-AP	m^3	Barrel
CARGO 1C	C	237.945F	290.190F	33112.02	208264.7
CARGO 2C	C	191.505F	237.945F	32351.56	203481.6
CARGO 3C	C	145.065F	191.505F	32351.52	203481.3
CARGO 4C	C	98.625F	145.065F	32351.54	203481.5
CARGO 5C	C	46.680F	98.625F	35988.81	226358.8
CARGO 1P	P	237.945F	290.190F	22277.64	140119.7
CARGO 1S	S	237.945F	290.190F	21903.23	137764.7
CARGO 3P	P	145.065F	191.505F	20715.13	130292
CARGO 3S	S	145.065F	191.505F	23012.96	144744.6
CARGO 5P	P	57.990F	98.625F	16951.22	106618.1
CARGO 5S	S	57.990F	98.625F	16951.22	106618.1

II) SLOP TANKS		Position		98 % Full Capacity	
Name	Side	Aft	Fwd		
		m-AP	m-AP	m^3	Barrel
SLOP P	P	46.680F	57.990F	3180.178	20002.37
SLOP S	S	46.680F	57.990F	3180.169	20002.31

III) VOID TANKS		Position		98 % Full Capacity	
Name	Side	Aft	Fwd		
		m-AP	m-AP	m^3	Barrel
FOREPEAK	C	290.190F	308.715F	7501.645	47183.1
NO. 1 VOID WING S	S	237.945F	249.555F	374.3894	2354.797
VOID 2P	P	191.505F	237.945F	23446.29	147470.2
NO. 3 VOID WING P	P	145.065F	191.505F	2555.82	16075.34
NO. 3 VOID WING S	S	145.065F	156.675F	444.4104	2795.208
VOID 4S	S	98.625F	145.065F	23194.61	145887.1
AFTPEAK	C	6.285A	11.680F	3525.256	22172.8

IV) WATER BALLAST		Position		98 % Full Capacity	
Name	Side	Aft	Fwd		
		m-AP	m-AP	m^3	Barrel
BALLAST 2S	S	191.505F	237.945F	23446.29	147470.2
BALLAST 4P	P	98.625F	145.065F	23194.15	145884.2

V) FRESH WATER TANKS		Position		98 % Full Capacity	
Name	Side	Aft	Fwd		
		m-AP	m-AP	m^3	Barrel
FRWATERP	P	19.780F	24.280F	174.342	1096.559
DRINKING P	P	24.280F	28.780F	224.5082	1412.089
DRINKING S	S	11.680F	22.480F	324.086	2038.404

VI) DEISEL OIL TANKS		Position		98 % Full Capacity	
Name	Side	Aft	Fwd		
		m-AP	m-AP	m^3	Barrel
DIESEL OIL TK. (S)	S	23.380F	29.680F	380.1224	2390.856
D.O. SERV. T. (S)	S	26.080F	29.680F	31.948	200.9433

VII) FUEL OIL TANKS		Position		98 % Full Capacity	
Name	Side	Aft	Fwd		
		m-AP	m-AP	m^3	Barrel
No.1 F.O.T. (S)	S	42.280F	47.680F	939.33	5908.104
No.1 F.O.T. (P)	P	42.280F	47.680F	939.33	5908.104
No.2 F.O.T. (S)	S	29.680F	42.280F	1,260.38	7927.4
No.2 F.O.T. (P)	P	29.680F	42.280F	1,352.60	8507.423
H.F.O. SETT.T. (S)	S	34.180F	38.680F	51.156	321.7559
H.F.O. SERV. T. (S)	S	38.680F	42.280F	40.964	257.6513

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7 LOADING CONDITIONS

7.1 METHODOLOGY

The load cases presented in this document are intended to represent actual conditions that the vessel could see during conversion, transit to the site, and operating off the coast of Brazil.

- The original tanker ballast tanks 2S and 4P are carried over as ballast tanks in the FPSO.
- The AP, FP, 2P and 4S ballast tanks in the original tanker will be converted to void spaces at conversion.
- During transit C.O.T. tank 1C, 3C, 5C and 1S will be filled with sea water in order to obtain required draft for sailing.

7.2 STANDARD LOAD CASE

The standard loading conditions are intended to be representatives of the most critical conditions in terms of longitudinal strength, stability and operational requirement (heel & trim). The following conditions have been considered:

A. Lightship Condition: For reference. No mooring loads, cargo or consumables are included.

A1. – Lightship Condition

B. Transit Condition: No mooring loads or topside liquid are included but consumables are included. Minimum number of cargo tanks are used as temporary ballast water tanks

B1. – Transit Departure 100% Consumables

B2. – Transit Arrival 10% Consumables

C. Onsite Condition: The design load cases for on-site include the FPSO lightship weight, plus the liquid in topside modules, mooring and riser loads. Cargo loaded at 0%, 25%, 50%, 75% and full load capacity have been evaluated. Maximum stresses during intermediate load cases are also presented respectively.

C1. – Min Cargo – Ballasted

C2. – 95% Cargo – Full Load

C3. – 50% Cargo – Half Load A

C4. – 50% Cargo – Half Load B

C5. – 25% Cargo – Light Load

C6. – 75% Cargo – Intermediate Load

C7. – Intermediate Load – Max VBM Sag

C8. – Intermediate Load – Max VBM Hog

C9. – Intermediate Load – Max VSF

D. Tank Inspection: Load case for individual tank inspection and maintenance work with continuous production are evaluated.

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D1. – Intermediate Load Tank Inspection – Cargo 1C

D2. – Intermediate Load Tank Inspection – Cargo 2C

D3. – Intermediate Load Tank Inspection – Cargo 3C

D4. – Intermediate Load Tank Inspection – Cargo 4C

D5. – Intermediate Load Tank Inspection – Cargo 5C

D6. – Intermediate Load Tank Inspection – Cargo 1S

D7. – Intermediate Load Tank Inspection – Cargo 1P

D8. – Intermediate Load Tank Inspection – Cargo 3S

D9. – Intermediate Load Tank Inspection – Cargo 3P

D10. – Intermediate Load Tank Inspection – Cargo 5S

D11. – Intermediate Load Tank Inspection – Cargo 5P

7.3 RESULT

Detailed information of trim & stability, tank loading & stress distribution of the load cases presented in this document can be found in the following pages.

Operating Guidance to avoid roll amplitude in excess of 10 degrees:

The vessel's natural roll period ranges between 11.5 seconds in the Ballast Condition and 13.7 seconds in the Full Load Condition. The site 100 year return wave peak period is 11.4 seconds. In the mid draft operating range (12 m / 180,000 mt displacement) , the vessel's natural roll period can approach the extreme wave peak encounter period in some load conditions; such as loading only all center tanks first or loading all tanks uniformly. As the natural roll period approaches the beam wave encounter period the magnitude of the vessel roll will increase. Therefore it is recommended that the "typical" vessel loading sequence (load wing tanks first, then center tanks) as outlined in Appendix H be followed to avoid excessive roll, particularly if extreme weather is expected while the vessel is in the mid draft range.

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	NO		A		B1		B2		C1		C2		C3		C4	
	CONDITION DISCRIPTION		LIGHTSHIP**		TRANSIT DEPARTURE		TRANSIT ARRIVAL		MIN CARGO		FULL LOAD		HALF LOAD A		HALF LOAD B	
			TOTAL CAPACITY													
			VOID TK	62288.19	MT											
			WATER BAL. TK	48782.1	MT											
			CARGO OIL TK	262147.73	MT											
			SLOP TK	6021.81	MT											
			DEISEL OIL TK	381.69	MT											
			FUEL OIL TK	4539.8	MT											
			FRESH WATER TK	737.7	MT											
LOAD SUMMARY			WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%
	VOID TK.	MT	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	WATER BAL. TK	MT	0	0%	36,587	75%	36,587	75%	41,504	85%	0	0%	0	0%	0	0%
	CARGO OIL TK	MT	0	0%	82,873	27%	86,329	29%	0	0%	26,678	87%	131,603	50%	131,261	50%
	SLOP TK	MT	0	0%	0	0%	0	0%	0	0%	2,888	50%	2,888	50%	2,888	50%
	DEISEL OIL TK	MT	0	0%	378	100%	38	10%	189	50%	189	50%	189	50%	189	50%
	FUEL OIL TK	MT	0	0%	4,537	100%	454	10%	2,269	50%	2,268	50%	2,268	50%	2,268	50%
	FRESH WATER TK	MT	0	0%	738	100%	74	10%	369	50%	369	50%	369	50%	369	50%
	TOPSIDE LIQUID	MT	0		0		0		1,910		1,910		1,910		1,910	
	MOORING LOAD	MT	0		0		0		2,297		2,297		2,297		2,297	
	RISER LOAD	MT	0		0		0		4,708		4,708		4,708		4,708	
DISPLACEMENT	DEAD WEIGHT	MT	0		125,113		123,482		53,246		41,307		146,232		145,890	
	LIGHT WEIGHT	MT	48,447		48,447		48,447		48,447		48,447		48,447		48,447	
	TOTAL DISPLACEMENT	MT	48,447		173,560		171,929		101,694		289,755		194,679		194,338	
DRAFT	DRAFT AT L.C.F	m	3.58		12.027		11.921		7.240		19.264		13.385		13.363	
	FP	m	1.2141		10.726		10.478		5.208		19.256		13.275		12.695	
	MEAN	m	3.886		12.126		12.032		7.459		19.264		13.392		13.406	
	AP	m	6.532		13.526		13.586		9.710		19.272		13.509		14.118	
	TRIM	m-AFT	5.291		2.8		3.108		4.502		0.016		0.234		1.422	
	HEEL	DEG.	1P		0S		0P		0P		0.000		0.000		0.000	
	FREEBOARD	m	21.941		13.701		13.795		18.368		6.563		12.435		12.421	
LONGITUDINAL STRENGHT			VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %
	MAX SF & %	MT	5,900	65%	5,838	64%	-6,044	44%	6,506	72%	17,313	86%	4,367	32%	5,940	44%
	ALLOW SF	MT	9,059		9,059		-13,858		9,059		20,141		13,488		13,488	
	MAX SF LOCATION		46.380F		46.380F		145.065F		46.380F		98.625F		57.990F		57.990F	
	MAX BM & %	MT	394,533	69%	403,719	79%	247,629	48%	299,229	52%	474,615	83%	193,980	34%	223,211	39%
	ALLOW BM	MT	574,000		511,340		511,340		574,000		574000		574,000		574,000	
	MAX BM LOCATION		121.850F		121.850F		121.850F		78.301F		145.065F		78.310F		78.310F	
STABILITY	KMt	m	78.026		29.363		29.485		41.019		25.119		27.946		27.968	
	VCG	m	21		14.400		14.216		17.372		15.049		15.793		14.876	
	GMt	m	57.026		14.963		15.268		23.647		10.069		12.154		13.091	
	F.S. CORRECTION	m	0		1.282		1.294		0.241		1.107		1.122		1.201	
	GMt (Corrected)	m	57.026		13.681		13.975		23.406		8.962		11.031		11.891	
	IMO MIN REG. CRITERION															
	AREA 0-30 => 0.055	m-rad	3.36		1.940		1.99		2.75		1.18		1.57		1.69	
	AREA 0-40 => 0.09	m-rad	4.6		3.300		3.39		4.2		1.92		2.71		2.92	
	AREA 30 - 40 => 0.03	m-rad	1.24		1.360		1.39		1.45		0.74		1.14		1.23	
	ANGLE AT MAX GZ =>25	Deg	20P	FAILED	39S		39P		34P		38P		37P		38P	
	MAX GZ ABOVE 30 DEG => 0.2	m	8.018		8.000		8.173		8.339		4.294		6.664		7.19	
	REQUIRED GM	m	57.026		13.681		13.975		23.406		8.962		11.031		11.891	

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	NO		C5		C6		C7		C8		C9		D1		D2	
	CONDITION DISCRIPTION		LIGHT LOAD		INTERMEDIATE LOAD		MAX VBM SAG		MAX VBM HOG		MAX VSF		TANK INSPECTION 1C		TANK INSPECTION 2C	
			TOTAL CAPACITY													
			VOID TK	62288.19	MT											
			WATER BAL. TK	48782.1	MT											
			CARGO OIL TK	262147.73	MT											
			SLOP TK	6021.81	MT											
			DEISEL OIL TK	381.69	MT											
			FUEL OIL TK	4539.8	MT											
			FRESH WATER TK	737.7	MT											
LOAD SUMMARY			WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%
	VOID TK.	MT	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	WATER BAL. TK	MT	0	0%	0	0%	0	0%	0	0%	12,130	25%	0	0%	0	0%
	CARGO OIL TK	MT	65,677	25%	196,642	75%	218,921	84%	115,439	44%	169,655	66%	135,125	52%	149,639	57%
	SLOP TK	MT	2,888	50%	2,888	50%	2,888	50%	2,888	50%	2,888	50%	2,888	50%	2,888	50%
	DEISEL OIL TK	MT	189	50%	189	50%	189	50%	189	50%	189	50%	189	50%	189	50%
	FUEL OIL TK	MT	2,268	50%	2,268	50%	2,042	45%	2,268	50%	2,268	50%	2,268	50%	2,268	50%
	FRESH WATER TK	MT	369	50%	369	50%	369	50%	369	50%	369	50%	369	50%	369	50%
	TOPSIDE LIQUID	MT	1,910		1,910		1,910		1,910		1,910		1,910		1,910	
	MOORING LOAD	MT	2,297		2,297		2,297		2,297		2,297		2,297		2,297	
	RISER LOAD	MT	4,708		4,708		4,708		4,708		4,708		4,708		4,708	
DISPLACEMENT	DEAD WEIGHT	MT	80,306		211,271		233,324		130,068		196,414		149,754		164,268	
	LIGHT WEIGHT	MT	48,447		48,447		48,447		48,447		48,447		48,447		48,447	
	TOTAL DISPLACEMENT	MT	128,754		259,719		281,771		178,516		244,862		198,202		212,715	
DRAFT	DRAFT AT L.C.F	m	9.074		17.449		18.785		12.348		16.535		13.609		14.530	
	FP	m	8.683		16.960		16.269		10.930		14.854		12.462		13.714	
	MEAN	m	9.111		17.460		18.814		12.454		16.588		13.682		14.574	
	AP	m	9.540		17.960		21.359		13.978		18.323		14.902		15.433	
	TRIM	m-AFT	0.857		1.000		5.091		3.048		3.469		2.440		1.719	
	HEEL	DEG.	0.000		0.000		0.000		0.000		0.000		0.0		0.0	
	FREEBOARD	m	16.716		8.367		7.013		13.373		9.239		12.145		11.253	
LONGITUDINAL STRENGHT			VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %
	MAX SF & %	MT	6,307	70%	-11,923	95%	-12,495	100%	7,465	55%	22,497	100%	-12,264	98%	-14,922	68%
	ALLOW SF	MT	9,059		-12,500		12,500		13,488		22,500		-12,500		-21,989	
	MAX SF LOCATION		46.380F		145.065F		145.065F		57.990F		191.505F		145.065F		237.945F	
	MAX BM & %	MT	353,969	62%	-382,977	63%	-611,998	100%	571,493	100%	325,096	57%	-509,649	83%	477,386	83%
	ALLOW BM	MT	574,000		-612,000		-612,000		574,000		-612,000		-612,000		574,000	
	MAX BM LOCATION		78.310F		168.260F		168.260F		168.260F		214.73F		168.260F		214.730F	
STABILITY	KMt	m	34.712		25.503		25.194		28.993		25.851		27.73		26.954	
	VCG	m	15.124		14.818		14.462		14.987		14.715		14.278		14.61	
	GMt	m	19.589		10.685		10.732		14.006		11.136		13.452		12.344	
	F.S. CORRECTION	m	1.209		1.075		1.216		1.118		1.099		1.28		1.116	
			18.379		9.61		9.516		12.888		10.037		12.172		11.228	
	IMO MIN REG. CRITERION															
	AREA 0-30 => 0.055	m-rad	2.38		1.34		1.28		1.83		1.42		1.75		1.62	
	AREA 0-40 => 0.09	m-rad	3.84		2.26		2.11		3.13		2.43		3.03		2.8	
	AREA 30 - 40 => 0.03	m-rad	1.47		0.92		0.83		1.3		1.01		1.27		1.18	
	ANGLE AT MAX GZ =>25	Deg	39P		38P		39P		38P		38P		38P		38P	
	MAX GZ ABOVE 30 DEG => 0.2	m	8.568		5.381		4.842		7.594		5.893		7.441		6.902	
	REQUIRED GM	m	18.379		9.61		9.516		12.888		10.037		12.172		11.228	

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	NO		D3		D4		D5		D6		D7		D8		D9	
	CONDITION DISCRIPTION		TANK INSPECTION 3C		TANK INSPECTION 4C		TANK INSPECTION 5C		TANK INSPECTION 1S		TANK INSPECTION 1P		TANK INSPECTION 3S		TANK INSPECTION 3P	
			TOTAL CAPACITY													
			VOID TK						62288.19	MT						
			WATER BAL. TK						48782.1	MT						
			CARGO OIL TK						262147.73	MT						
			SLOP TK						6021.81	MT						
			DEISEL OIL TK						381.69	MT						
			FUEL OIL TK						4539.8	MT						
			FRESH WATER TK						737.7	MT						
LOAD SUMMARY			WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%	WEIGHT	%
	VOID TK.	MT	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
	WATER BAL. TK	MT	0	0%	18,055	38%	0	0%	0	0%	0	0%	0	0%	0	0%
	CARGO OIL TK	MT	139,308	53%	141,743	56%	164,884	63%	198,932	76%	198,860	76%	198,779	76%	193,915	74%
	SLOP TK	MT	2,888	50%	2,888	50%	2,888	50%	2,888	50%	2,888	50%	2,888	50%	2,888	50%
	DEISEL OIL TK	MT	189	50%	189	50%	189	50%	189	50%	189	50%	189	50%	189	50%
	FUEL OIL TK	MT	2,268	50%	2,268	50%	2,268	50%	2,268	50%	2,268	50%	2,268	50%	2,268	50%
	FRESH WATER TK	MT	369	50%	369	50%	369	50%	369	50%	369	50%	369	50%	369	50%
	TOPSIDE LIQUID	MT	1,910		1,910		1,910		1,910		1,910		1,910		1,910	
	MOORING LOAD	MT	2,297		2,297		2,297		2,297		2,297		2,297		2,297	
	RISER LOAD	MT	4,708		4,708		4,708		4,708		4,708		4,708		4,708	
DISPLACEMENT	DEAD WEIGHT	MT	153,937		174,427		179,513		213,561		213,489		213,408		208,544	
	LIGHT WEIGHT	MT	48,447		48,447		48,447		48,447		48,447		48,447		48,447	
	TOTAL DISPLACEMENT	MT	202,384		222,875		227,960		262,009		261,936		261,855		256,992	
DRAFT	DRAFT AT L.C.F	m	13.877		15.168		15.487		17.588		17.583		17.578		17.283	
	FP	m	13.851		14.319		15.174		17.090		17.086		17.447		17.136	
	MEAN	m	13.878		15.208		15.501		17.598		17.594		17.581		17.286	
	AP	m	13.906		16.096		15.827		18.107		18.102		17.715		17.436	
	TRIM	m-AFT	0.055		1.777		0.653		1.018		1.025		0.269		0.301	
	HEEL	DEG.	0.0		0.0		0.0		0.0		0.0		0.0		0.0	
	FREEBOARD	m	11.949		10.619		10.326		8.229		8.233		8.246		8.541	
LONGITUDINAL STRENGHT			VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %	VALUE	ALL %
	MAX SF & %	MT	7,346	54%	-12,433	99%	-4,876	39%	-7,008	56%	-5,895	47%	11,197	56%	9,426	47%
	ALLOW SF	MT	13,488		-12,500		-12,500		-12,500		-12,500		20,141		20,141	
	MAX SF LOCATION		57.900F		145.065F		145.065F		145.065F		145.065F		98.625F		98.625F	
	MAX BM & %	MT	458,252	80%	544,010	95%	70,637	12%	179,585	31%	231,611	40%	491,123	86%	386,953	67%
	ALLOW BM	MT	574,000		574,000		574,000		574,000		574,000		574,000		574,000	
	MAX BM LOCATION		145.065F		121.850F		121.850F		121.850F		121.850F		145.065F		145.065F	
STABILITY	KMt	m	27.472		26.543		26.338		25.471		25.472		25.473		25.55	
	VCG	m	14.775		13.614		15.487		15.541		15.705		15.145		14.881	
	GMt	m	12.698		12.93		10.851		9.93		9.767		10.328		10.669	
	F.S. CORRECTION	m	1.077		1.604		1.035		0.971		0.941		1.029		1.115	
			11.621		11.326		9.816		8.959		8.826		9.299		9.553	
	IMO MIN REG. CRITERION															
	AREA 0-30 => 0.055	m-rad	1.69		1.6		1.44		1.27		1.25		1.3		1.36	
	AREA 0-40 => 0.09	m-rad	2.92		2.78		2.47		2.13		2.09		218		2.3	
	AREA 30 - 40 => 0.03	m-rad	1.23		1.18		1.03		0.86		0.84		0.89		0.93	
	ANGLE AT MAX GZ =>25	Deg	38p		38P		37P		37P		37P		38P		38P	
	MAX GZ ABOVE 30 DEG => 0.	m	7.157		6.901		6.011		4.978		4.887		5.155		5.445	
	REQUIRED GM	m	11.621		11.326		9.816		8.959		8.826		9.299		9.553	

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	NO		D10		D11	
	CONDITION DISCRIPTION		TANK INSPECTION 5S		TANK INSPECTION 5P	
			TOTAL CAPACITY			
			VOID TK		62288.19	MT
			WATER BAL. TK		48782.1	MT
			CARGO OIL TK		262147.73	MT
			SLOP TK		6021.81	MT
			DEISEL OIL TK		381.69	MT
			FUEL OIL TK		4539.8	MT
			FRESH WATER TK		737.7	MT
LOAD SUMMARY			WEIGHT	%	WEIGHT	%
	VOID TK.	MT	0	0%	0	0%
	WATER BAL. TK	MT	0	0%	0	0%
	CARGO OIL TK	MT	195,013	75%	190,115	73%
	SLOP TK	MT	2,888	50%	2,888	50%
	DEISEL OIL TK	MT	189	50%	189	50%
	FUEL OIL TK	MT	2,268	50%	2,268	50%
	FRESH WATER TK	MT	369	50%	369	50%
	TOPSIDE LIQUID	MT	1,910		1,910	
	MOORING LOAD	MT	2,297		2,297	
	RISER LOAD	MT	4,708		4,708	
DISPLACEMENT	DEAD WEIGHT	MT	209,642		204,744	
	LIGHT WEIGHT	MT	48,447		48,447	
	TOTAL DISPLACEMENT	MT	258,089		253,191	
DRAFT	DRAFT AT L.C.F	m	17.350		17.048	
	FP	m	16.875		16.895	
	MEAN	m	17.361		17.052	
	AP	m	17.847		17.210	
	TRIM	m	0.972		0.315	
	HEEL	DEG.	0.0		0.0	
	FREEBOARD	m	8.466		8.775	
LONGITUDINAL STRENGHT			VALUE	ALL %	VALUE	ALL %
	MAX SF & %	MT	-10,505	84%	-6,933	55%
	ALLOW SF	MT	-12,500		-12,500	
	MAX SF LOCATION		145.065F		145.065F	
	MAX BM & %	MT	-267,836	44%	216,510	38%
	ALLOW BM	MT	-612000		574,000	
	MAX BM LOCATION		168.260F		121.850F	
STABILITY	KMt	m	25.526		25.644	
	VCG	m	14.997		14.672	
	GMt	m	10.528		10.972	
	F.S. CORRECTION	m	1.06		1.078	
			9.469		9.895	
	IMO MIN REG. CRITERION					
	AREA 0-30 => 0.055	m-rad	1.35		1.39	
	AREA 0-40 => 0.09	m-rad	2.27		2.36	
	AREA 30 - 40 => 0.03	m-rad	0.92		0.97	
	ANGLE AT MAX GZ =>25	Deg	38P		38P	
	MAX GZ ABOVE 30 DEG => 0.2	m	5.374		5.681	
	REQUIRED GM	m	9.469		9.895	

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Intact Trim and Stability Summary
Lightship

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	0.00	----	----	----	----
Fuel Oil	0.00	----	----	----	----
Diesel Oil	0.00	----	----	----	----
Fresh Water	0.00	----	----	----	----
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	0.00	----	----	----	----
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	9,651.86	37.744	166.150F	2.533P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	0.00	----	----	----	----
Displacement	48,446.80	21.000	145.670F	1.082P	0

Stability Calculation			**Trim Calculation**		
KMt	78.026	m	LCF Draft	3.580	m
VCG	21.000	m	LCB (even keel)	170.905F	m-AP
GMt (Solid)	57.026	m	LCF	169.312F	m-AP
FSc	0.000	m	MT1cm	2,311	m-MT/cm
GMt (Corrected)	57.026	m	Trim	5.291	m-A
			List	1P	deg
Specific Gravity	1.0250		Propeller Immersion	65.24	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	6.532	m	Shear	6,024.20	MT at 57.990F m-AP
Draft at M.S.	3.886	m	Bending Moment	394,533H	m-MT at 121.850F m-AP
Draft at F.P.	1.241	m	Shear % Allowable	65.00%	at 46.380F m-AP
			Moment % Allowable	69.00%	at 121.850F m-AP
Draft at Aft Marks	6.532	m			
Draft at Mid Marks	3.886	m			
Draft at Fwd Marks	1.241	m			

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Tankage and Cargo Summary
Lightship

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
1SWCARGO	0.00	0.0	19,891.70	0.000	257.231F	17.224S	0	0.8900	0.00	0.00	---	15.6
1CCARGO	0.00	0.0	30,071.13	0.000	262.073F	0.000P	0	0.8900	0.00	0.00	---	15.6
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	---	15.6
2CCARGO	0.00	0.0	29,380.51	0.000	214.725F	0.000S	0	0.8900	0.00	0.00	---	15.6
3SWCARGO	0.00	0.0	20,899.52	0.000	168.288F	20.294S	0	0.8900	0.00	0.00	---	15.6
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	---	15.6
3CCARGO	0.00	0.0	29,380.46	0.000	168.285F	0.000P	0	0.8900	0.00	0.00	---	15.6
4CCARGO	0.00	0.0	29,380.49	0.000	121.845F	0.000S	0	0.8900	0.00	0.00	---	15.6
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	---	15.6
5CCARGO	0.00	0.0	32,683.72	0.000	76.442F	0.000S	0	0.8900	0.00	0.00	---	15.6
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	---	15.6
Totals	0.00	0.0	261,520.93	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

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Tankage and Cargo Summary
Lightship

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	0.00	0.0	929.74	4.803	46.064F	12.958S	0	0.9700	0.00	0.00	---	15.6
No.1 F.O.T. (P)	0.00	0.0	929.74	4.803	46.064F	12.958P	0	0.9700	0.00	0.00	---	15.6
No.2 F.O.T. (S)	0.00	0.0	1,247.52	10.707	42.209F	16.829S	0	0.9700	0.00	0.00	---	15.6
No.2 F.O.T. (P)	0.00	0.0	1,338.80	10.707	42.209F	16.829P	0	0.9700	0.00	0.00	---	15.6
H.F.O. SETT.T.	0.00	0.0	52.20	20.700	36.430F	18.155S	0	1.0000	0.00	0.00	---	15.6
H.F.O. SERV. T.	0.00	0.0	41.80	20.700	40.480F	18.155S	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	4,539.80	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	0.00	0.0	349.09	15.563	29.612F	16.830S	0	0.9000	0.00	0.00	---	15.6
D.O. SERV. T. (S	0.00	0.0	32.60	20.700	27.880F	17.705S	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	381.69	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	0.00	0.0	177.90	20.700	22.107F	18.209P	0	1.0000	0.00
DRINKING P	0.00	0.0	229.09	20.700	26.652F	19.072P	0	1.0000	0.00
DRINKING S	0.00	0.0	330.70	20.700	17.193F	16.826S	0	1.0000	0.00
Totals	0.00	0.0	737.70	0.000	151.750F	0.000	0.00	1.0000	0.00

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Tankage and Cargo Summary
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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	0.00	0.0	2,888.12	0.705	57.656F	12.155S	0	0.8900	0.00
Slop Tank (P)	0.00	0.0	2,888.12	0.705	57.656F	12.155P	0	0.8900	0.00
Totals	0.00	0.0	5,776.23	0.000	151.750F	0.000	0.00	1.0000	0.00

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST COV	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	189.60	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	210.70	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	223.90	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	215.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	381.30	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,115.60	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	622.60	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	849.60	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	117.90	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,106.20	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	445.49	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	804.10	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	750.70	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	372.80	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	325.30	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	633.67	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	736.90	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	550.50	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	9,651.86	37.744	166.150F	2.533P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed p	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMP	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AI	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CO	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Lightship

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Lightship

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	0.00	1.000	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	0.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	0.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	0.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	0.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	0.00	---	---	---	---	---	---

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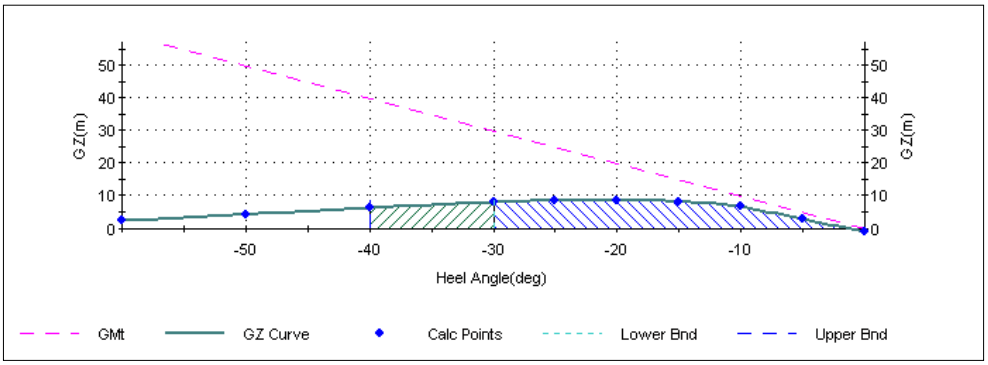
Righting Arm Summary
Lightship

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	3.36	0.06
Area to 40. deg	m-rad	4.60	0.09
Area 30. to 40. deg	m-rad	1.24	0.03
Angle at Maximum GZ	deg	20P	>25
Maximum GZ above 30 deg	m	8.018	0.200
Initial GM	m	57.026	0.150

This Condition Failed In Intact Stability

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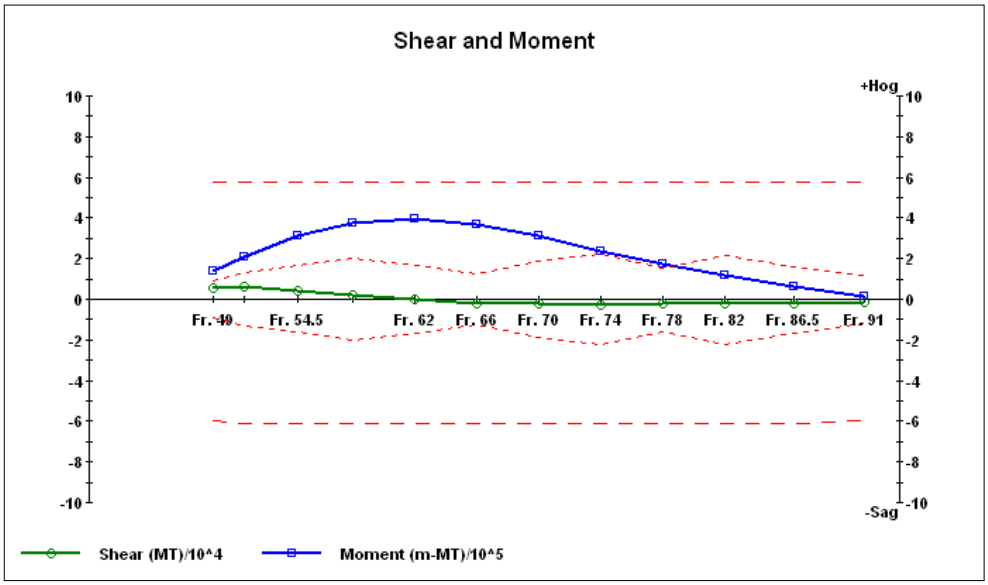
Longitudinal Shear and Bending Moment Summary
Lightship



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	8,455.27	2,555.68	5,899.59	169,622	32,385	137,237H
Fr. 51	57.990F	10,336.78	4,312.57	6,024.20	278,076	71,998	206,078H
Fr. 54.5	78.310F	12,481.97	8,337.71	4,144.25	511,476	198,695	312,782H
Fr. 58	98.625F	14,949.38	13,197.16	1,752.22	788,390	416,345	372,045H
Fr. 62	121.850F	19,156.14	19,194.89	-38.75	1,186,435	791,903	394,533H
Fr. 66	145.065F	22,901.98	25,067.13	-2,165.15	1,676,709	1,306,722	369,987H
Fr. 70	168.260F	28,101.68	30,504.63	-2,402.95	2,269,306	1,959,357	309,949H
Fr. 74	191.505F	32,745.86	35,430.47	-2,684.61	2,972,909	2,736,147	236,762H
Fr. 78	214.730F	37,678.75	39,747.07	-2,068.31	3,790,540	3,617,236	173,304H
Fr. 82	237.945F	40,998.48	43,376.06	-2,377.58	4,705,196	4,585,246	119,950H
Fr. 86.5	264.070F	44,398.02	46,520.94	-2,122.92	5,826,275	5,761,732	64,543H
Fr. 91	290.190F	46,807.00	48,208.94	-1,401.95	7,017,938	7,002,631	15,306H

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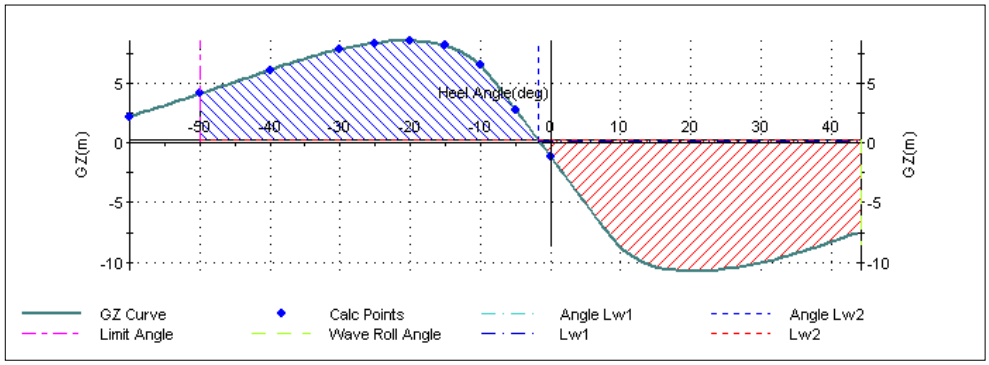
Righting Arm Summary
Lightship-Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	5.16			
Righting Area B	m-rad	5.23			
Area Ratio B/A		1.013	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	3.886		Limiting Angle	deg
Projected Area (Hull)	m2	7,852.74			
Vertical Arm (Hull)	m	16.768		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	48,446.80		X1	
Wind Heeling Lever Lw1	m	0.216		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.324		Roll Angle	deg
Heeling Angle at Lw2	deg	2			

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Righting Arm Summary
Lightship-Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.668
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	0.981
Heeling Angle at Lw1	deg	3.372
		9.576
Heel from Gusting Wind		0.082
Wind Heeling Lever Lw2	m	44
Heeling Angle at Lw2	deg	

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Lightship

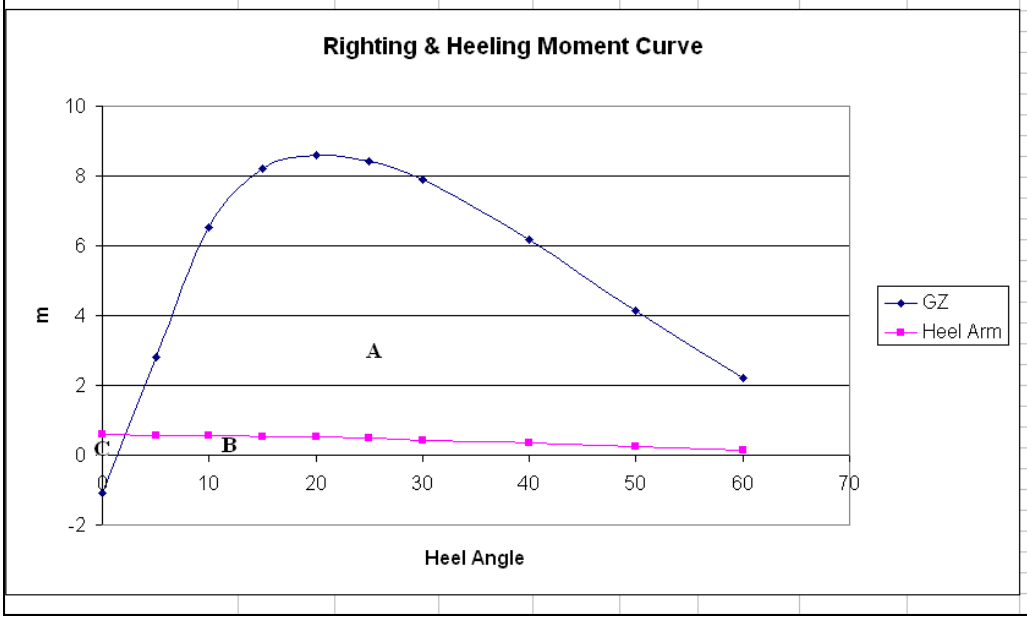
DISPLACEMENT =	48,447	MT		
FWD DRAFT =	1.241	m		
MEAN DRAFT =	3.886	m		
AFT DRAFT =	6.532	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.15	37.419	1.2	970.051	1928969.833	68432133.8	35.476
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	34133401.47	34.685
Projected Hull Area @ Mean Draft 3.886	Hull	7564.425		16.168	1	1616.751	12229791.453	173968783.4	14.225
							sum =	276534318.7	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-1.082	0.582
5	2.809	0.577
10	6.529	0.564
15	8.216	0.543
20	8.603	0.514
25	8.422	0.478
30	7.888	0.436
40	6.164	0.341
50	4.156	0.240
60	2.218	0.145

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Transit Departure

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	82,872.64	11.548	178.983F	0.606S	176,917
Fuel Oil	4,536.98	21.338	39.863F	0.011S	0
Diesel Oil	378.43	23.711	26.774F	19.106S	0
Fresh Water	737.70	24.885	21.315F	2.777P	0
SW Ballast	36,587.17	10.950	168.633F	0.171S	45,601
Void	0.00	----	----	----	----
Slop Tanks	0.00	----	----	----	----
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	9,651.86	37.744	166.150F	2.533P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	0.00	----	----	----	----
Displacement	173,559.72	14.400	162.864F	0.053S	222,518

Stability Calculation			Trim Calculation		
KMt	29.363	m	LCF Draft	12.027	m
VCG	14.400	m	LCB (even keel)	167.383F	m-AP
GMt (Solid)	14.963	m	LCF	162.485F	m-AP
FSc	1.282	m	MT1cm	2,801	m-MT/cm
GMt (Corrected)	13.681	m	Trim	2.800	m-A
			List	0S	deg
Specific Gravity	1.0250		Propeller Immersion	140.14	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	13.526	m	Shear	7,191.05	MT at 57.990F m-AP
Draft at M.S.	12.126	m	Bending Moment	406,046H	m-MT at 98.625F m-AP
Draft at F.P.	10.726	m	Shear % Allowable	64.00%	at 46.380F m-AP
			Moment % Allowable	79.00%	at 121.850F m-AP
Draft at Aft Marks	13.526	m			
Draft at Mid Marks	12.126	m			
Draft at Fwd Marks	10.726	m			

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Tankage and Cargo Summary
Transit Departure

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	2,749.08	12.0	22,908.98	2.093	260.099F	18.270S	20,575	1.0250	2,682.03	16,869.44	---
1CCARGO	27,013.33	78.0	34,632.48	11.555	262.073F	0.000S	51,734	1.0250	26,354.47	165,764.63	---
1PWCARGO	0.00	0.0	23,300.59	0.000	257.231F	17.224P	0	1.0250	0.00	0.00	---
2CCARGO	0.00	0.0	33,837.10	0.000	214.725F	0.000S	0	1.0250	0.00	0.00	---
3SWCARGO	0.00	0.0	24,069.67	0.000	168.288F	20.294S	0	1.0250	0.00	0.00	---
3PWCARGO	0.00	0.0	21,666.33	0.000	168.286F	20.041P	0	1.0250	0.00	0.00	---
3CCARGO	33,160.31	98.0	33,837.05	14.487	168.285F	0.000S	41,272	1.0250	32,351.52	203,484.92	---
4CCARGO	0.00	0.0	33,837.08	0.000	121.845F	0.000S	0	1.0250	0.00	0.00	---
5SWCARGO	0.00	0.0	17,729.59	0.000	88.939F	14.778S	0	1.0250	0.00	0.00	---
5CCARGO	19,949.92	53.0	37,641.37	7.956	73.080F	0.000S	63,336	1.0250	19,463.34	122,420.73	---
5PWCARGO	0.00	0.0	17,729.59	0.000	88.939F	14.778P	0	1.0250	0.00	0.00	---
Totals	82,872.64	27.5	301,189.83	11.548	178.983F	0.606S	176,916.81	1.0250	80,851.35	508,539.72	

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Tankage and Cargo Summary
Transit Departure

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	929.74	100.0	929.74	19.514	44.602F	17.656S	0	0.9700	958.50	6,028.75	---	15.6
No.1 F.O.T. (P)	929.74	100.0	929.74	19.514	44.602F	17.656P	0	0.9700	958.50	6,028.75	---	15.6
No.2 F.O.T. (S)	1,247.52	100.0	1,247.52	22.581	36.434F	20.270S	0	0.9700	1,286.10	8,089.34	---	15.6
No.2 F.O.T. (P)	1,338.80	100.0	1,338.80	22.606	36.588F	20.088P	0	0.9700	1,380.20	8,681.22	---	15.6
H.F.O. SETT.T.	50.64	100.0	50.64	22.875	36.430F	18.155S	0	0.9700	52.20	328.35	---	15.6
H.F.O. SERV. T.	40.55	100.0	40.55	22.875	40.480F	18.155S	0	0.9700	41.80	262.92	---	15.6
Totals	4,536.98	100.0	4,536.98	21.338	39.863F	0.011S	0.00	0.9700	4,677.30	29,419.34		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	349.09	100.0	349.09	23.750	26.681F	19.224S	0	0.9000	387.88	2,439.69	---	15.6
D.O. SERV. T. (S	29.34	100.0	29.34	23.250	27.880F	17.705S	0	0.9000	32.60	205.04	---	15.6
Totals	378.43	100.0	378.43	23.711	26.774F	19.106S	0.00	0.9000	420.48	2,644.73		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	177.90	100.0	177.90	24.871	22.101F	18.368P	0	1.0000	177.90
DRINKING P	229.09	100.0	229.09	24.875	26.641F	19.207P	0	1.0000	229.09
DRINKING S	330.70	100.0	330.70	24.900	17.202F	16.993S	0	1.0000	330.70
Totals	737.70	100.0	737.70	24.885	21.315F	2.777P	0.00	1.0000	737.70

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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	18,392.19	75.0	24,522.91	10.855	214.691F	21.020S	22,765	1.0250	17,943.60
4PWBAL	18,194.98	75.0	24,259.98	11.046	122.076F	20.905P	22,836	1.0250	17,751.20
Totals	36,587.17	75.0	48,782.89	10.950	168.633F	0.171S	45,601.41	1.0250	35,694.80

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	0.00	0.0	2,888.12	0.705	57.656F	12.155S	0	0.8900	0.00
Slop Tank (P)	0.00	0.0	2,888.12	0.705	57.656F	12.155P	0	0.8900	0.00
Totals	0.00	0.0	5,776.23	0.000	151.750F	0.000	0.00	1.0000	0.00

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	189.60	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	210.70	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	223.90	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	215.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	381.30	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,115.60	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	622.60	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	849.60	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	117.90	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,106.20	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	445.49	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	804.10	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	750.70	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	372.80	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	325.30	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	633.67	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	736.90	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	550.50	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	9,651.86	37.744	166.150F	2.533P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Transit Departure

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Transit Departure

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	0.00	1.000	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	0.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	0.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	0.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	0.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	0.00	---	---	---	---	---	---

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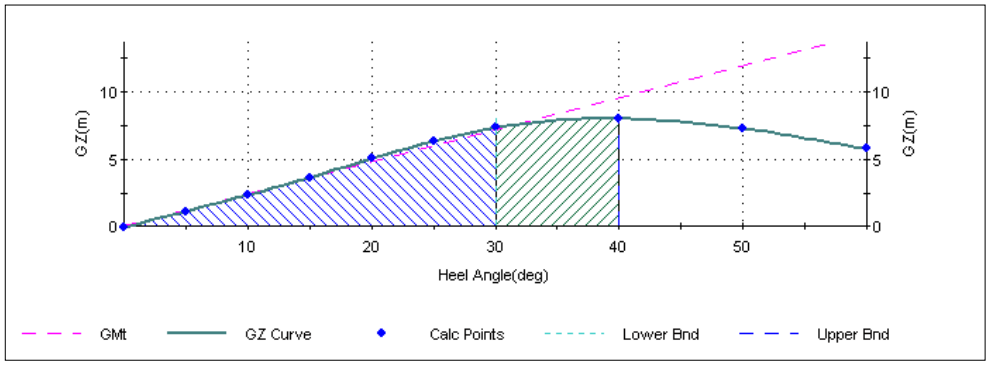
Righting Arm Summary
Transit Departure

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.94	0.06
Area to 40. deg	m-rad	3.30	0.09
Area 30. to 40. deg	m-rad	1.36	0.03
Angle at Maximum GZ	deg	39S	>25
Maximum GZ above 30 deg	m	8.000	0.200
Initial GM	m	13.681	0.150

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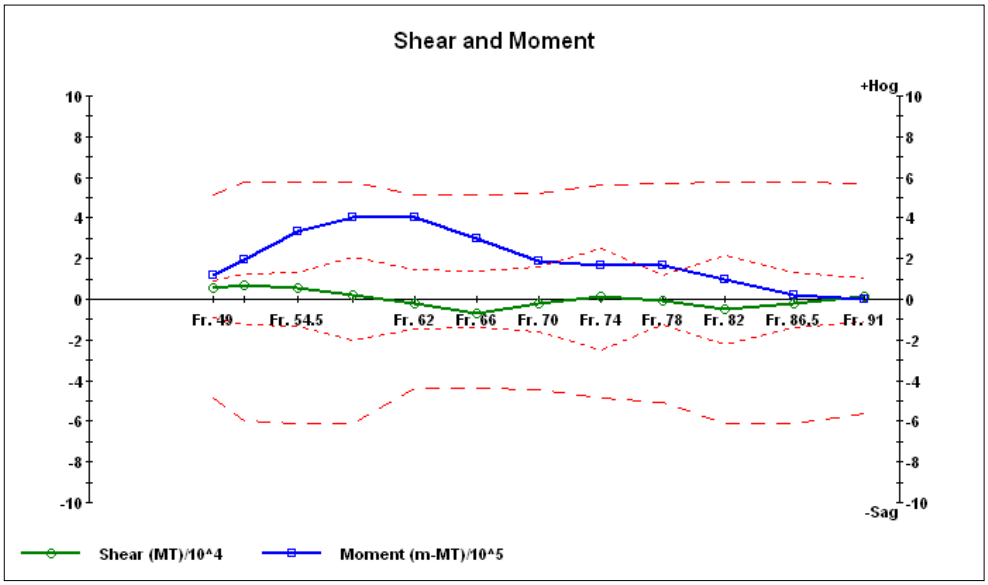
Longitudinal Shear and Bending Moment Summary
Transit Departure



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	13,803.47	7,965.82	5,837.65	225,287	105,010	120,277H
Fr. 51	57.990F	20,165.71	12,974.66	7,191.05	422,711	226,157	196,553H
Fr. 54.5	78.310F	30,048.12	24,621.82	5,426.30	933,935	601,977	331,958H
Fr. 58	98.625F	40,552.41	38,702.39	1,850.02	1,648,829	1,242,784	406,046H
Fr. 62	121.850F	53,723.00	56,006.64	-2,283.64	2,745,072	2,341,353	403,719H
Fr. 66	145.065F	66,700.00	73,526.35	-6,826.34	4,144,442	3,845,425	299,016H
Fr. 70	168.260F	88,462.00	90,887.06	-2,425.07	5,945,015	5,759,564	185,451H
Fr. 74	191.505F	109,704.18	108,028.84	1,675.34	8,244,604	8,080,815	163,789H
Fr. 78	214.730F	123,855.27	124,801.10	-945.84	10,956,716	10,791,574	165,142H
Fr. 82	237.945F	136,348.99	141,107.46	-4,758.47	13,978,524	13,880,913	97,611H
Fr. 86.5	264.070F	156,491.30	158,461.70	-1,970.40	17,817,439	17,797,446	19,993H
Fr. 91	290.190F	171,919.92	170,757.00	1,162.91	22,115,111	22,113,884	1,227H

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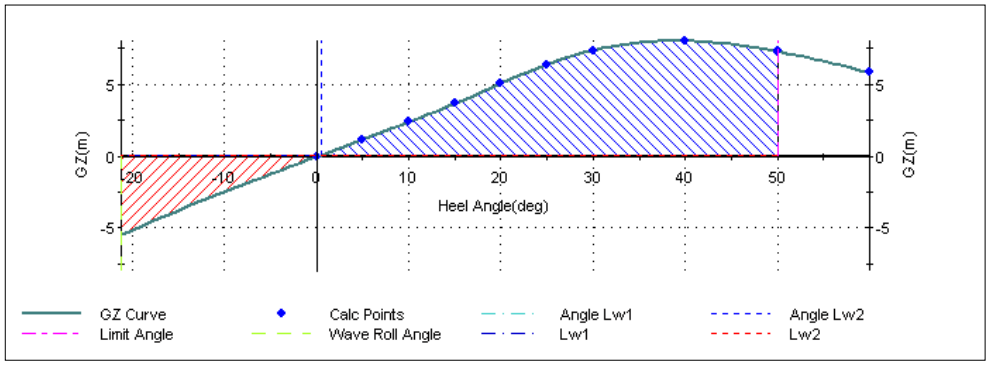
Righting Arm Summary
Transit Departure - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.96			
Righting Area B	m-rad	4.59			
Area Ratio B/A		4.800	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	12.126		Limiting Angle	deg
Projected Area (Hull)	m2	5,383.53			
Vertical Arm (Hull)	m	20.848		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	173,559.72		X1	
Wind Heeling Lever Lw1	m	0.046		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.070		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Transit Departure - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.767
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.906
		11.679
Heel from Gusting Wind		0.067
Wind Heeling Lever Lw2	m	21
Heeling Angle at Lw2	deg	

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Transit Departure

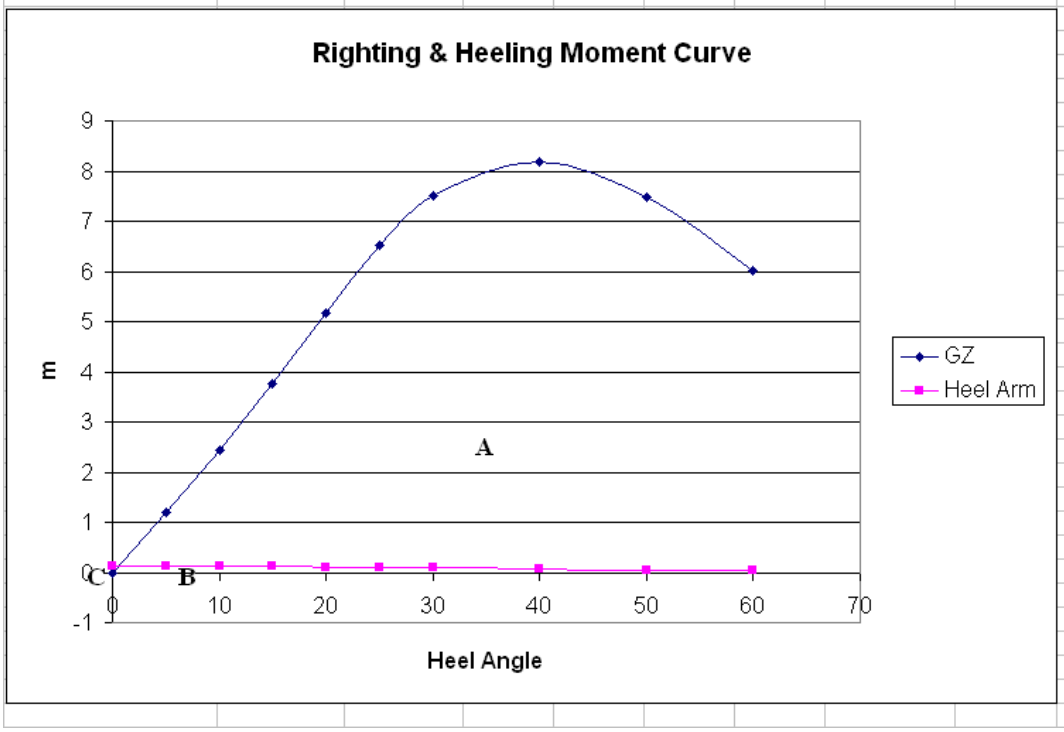
DISPLACEMENT =	171,928	MT		
FWD DRAFT =	10.478	m		
MEAN DRAFT =	12.032	m		
AFT DRAFT =	13.586	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.15	37.419	1.2	970.051	1928969.833	60575440	31.403
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	30125175	30.612
Projected Hull Area @ Mean Draft 12.032	Hull	5278.19		20.241	1	1616.751	8533518.800	121389305	14.225
							sum =	212089919	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.023	0.126
5	1.201	0.125
10	2.444	0.122
15	3.755	0.117
20	5.174	0.111
25	6.512	0.103
30	7.497	0.094
40	8.17	0.074
50	7.475	0.052
60	6.019	0.031

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Transit Arrival

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	86,329.04	11.794	169.927F	0.483S	176,341
Fuel Oil	453.70	12.683	41.072F	0.019P	360
Diesel Oil	37.84	18.426	27.324F	17.971S	22
Fresh Water	73.77	21.145	21.323F	2.771P	117
SW Ballast	36,587.17	10.950	168.633F	0.171S	45,601
Void	0.00	----	----	----	----
Slop Tanks	0.00	----	----	----	----
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	9,651.86	37.744	166.150F	2.533P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	0.00	----	----	----	----
Displacement	171,928.31	14.216	162.381F	0.023P	222,441

Stability Calculation			**Trim Calculation**		
KMt	29.485	m	LCF Draft	11.921	m
VCG	14.216	m	LCB (even keel)	167.425F	m-AP
GMt (Solid)	15.268	m	LCF	162.562F	m-AP
FSc	1.294	m	MT1cm	2,790	m-MT/cm
GMt (Corrected)	13.975	m	Trim	3.108	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	140.72	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	13.586	m	Shear	-6,044.31	MT at 145.065F m-AP
Draft at M.S.	12.032	m	Bending Moment	247,629H	m-MT at 121.850F m-AP
Draft at F.P.	10.478	m	Shear % Allowable	44.00%	at 145.065F m-AP
			Moment % Allowable	48.00%	at 121.850F m-AP
Draft at Aft Marks	13.586	m			
Draft at Mid Marks	12.032	m			
Draft at Fwd Marks	10.478	m			

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Tankage and Cargo Summary
Transit Arrival

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	2,290.90	10.0	22,908.98	1.780	259.919F	18.197S	20,164	1.0250	2,235.02	14,057.87	---
1CCARGO	25,281.71	73.0	34,632.48	10.815	262.073F	0.000S	51,734	1.0250	24,665.08	155,138.69	---
1PWCARGO	0.00	0.0	23,300.59	0.000	257.231F	17.224P	0	1.0250	0.00	0.00	---
2CCARGO	0.00	0.0	33,837.10	0.000	214.725F	0.000S	0	1.0250	0.00	0.00	---
3SWCARGO	0.00	0.0	24,069.67	0.000	168.288F	20.294S	0	1.0250	0.00	0.00	---
3PWCARGO	0.00	0.0	21,666.33	0.000	168.286F	20.041P	0	1.0250	0.00	0.00	---
3CCARGO	33,160.31	98.0	33,837.05	14.487	168.285F	0.000S	41,272	1.0250	32,351.52	203,484.92	---
4CCARGO	0.00	0.0	33,837.08	0.000	121.845F	0.000S	0	1.0250	0.00	0.00	---
5SWCARGO	0.00	0.0	17,729.59	0.000	88.939F	14.778S	0	1.0250	0.00	0.00	---
5CCARGO	25,596.13	68.0	37,641.37	10.169	72.986F	0.000S	63,172	1.0250	24,971.83	157,068.10	---
5PWCARGO	0.00	0.0	17,729.59	0.000	88.939F	14.778P	0	1.0250	0.00	0.00	---
Totals	86,329.04	28.7	301,189.83	11.794	169.927F	0.483S	176,341.16	1.0250	84,223.45	529,749.58	

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Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	92.97	10.0	929.74	8.281	45.287F	14.145S	76	0.9700	95.85	602.88	---	15.6
No.1 F.O.T. (P)	92.97	10.0	929.74	8.281	45.287F	14.145P	76	0.9700	95.85	602.88	---	15.6
No.2 F.O.T. (S)	124.75	10.0	1,247.52	15.482	38.200F	18.306S	92	0.9700	128.61	808.93	---	15.6
No.2 F.O.T. (P)	133.88	10.0	1,338.80	15.629	38.088F	18.361P	102	0.9700	138.02	868.12	---	15.6
H.F.O. SETT.T.	5.06	10.0	50.64	20.918	36.430F	18.155S	7	0.9700	5.22	32.83	---	15.6
H.F.O. SERV. T.	4.05	10.0	40.55	20.918	40.480F	18.155S	6	0.9700	4.18	26.29	---	15.6
Totals	453.70	10.0	4,536.98	12.683	41.072F	0.019P	359.58	0.9700	467.73	2,941.93		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	34.91	10.0	349.09	18.213	27.277F	17.994S	21	0.9000	38.79	243.97	---	15.6
D.O. SERV. T. (S	2.93	10.0	29.34	20.955	27.880F	17.705S	2	0.9000	3.26	20.50	---	15.6
Totals	37.84	10.0	378.43	18.426	27.324F	17.971S	22.43	0.9000	42.05	264.47		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	17.79	10.0	177.90	21.144	22.102F	18.270P	18	1.0000	17.79
DRINKING P	22.91	10.0	229.09	21.136	26.651F	19.124P	41	1.0000	22.91
DRINKING S	33.07	10.0	330.70	21.152	17.213F	16.895S	58	1.0000	33.07
Totals	73.77	10.0	737.70	21.145	21.323F	2.771P	116.52	1.0000	73.77

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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	18,392.19	75.0	24,522.91	10.855	214.691F	21.020S	22,765	1.0250	17,943.60
4PWBAL	18,194.98	75.0	24,259.98	11.046	122.076F	20.905P	22,836	1.0250	17,751.20
Totals	36,587.17	75.0	48,782.89	10.950	168.633F	0.171S	45,601.41	1.0250	35,694.80

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	0.00	0.0	2,888.12	0.705	57.656F	12.155S	0	0.8900	0.00
Slop Tank (P)	0.00	0.0	2,888.12	0.705	57.656F	12.155P	0	0.8900	0.00
Totals	0.00	0.0	5,776.23	0.000	151.750F	0.000	0.00	1.0000	0.00

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	189.60	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	210.70	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	223.90	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	215.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	381.30	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,115.60	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	622.60	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	849.60	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	117.90	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,106.20	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	445.49	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	804.10	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	750.70	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	372.80	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	325.30	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	633.67	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	736.90	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	550.50	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	9,651.86	37.744	166.150F	2.533P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed p	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMP	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AI	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CO	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
Transit Arrival

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Transit Arrival

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Transit Arrival

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	0.00	1.000	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	0.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	0.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	0.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	0.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	0.00	---	---	---	---	---	---

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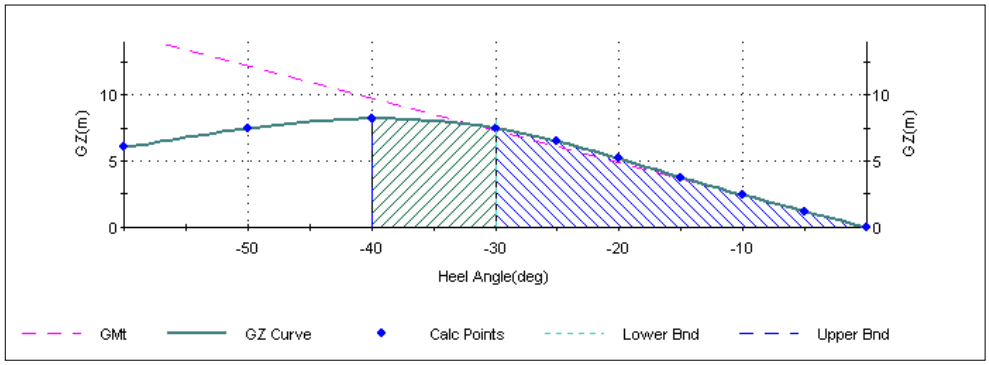
Righting Arm Summary
Transit Arrival

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.99	0.06
Area to 40. deg	m-rad	3.39	0.09
Area 30. to 40. deg	m-rad	1.39	0.03
Angle at Maximum GZ	deg	39P	>25
Maximum GZ above 30 deg	m	8.173	0.200
Initial GM	m	13.975	0.150

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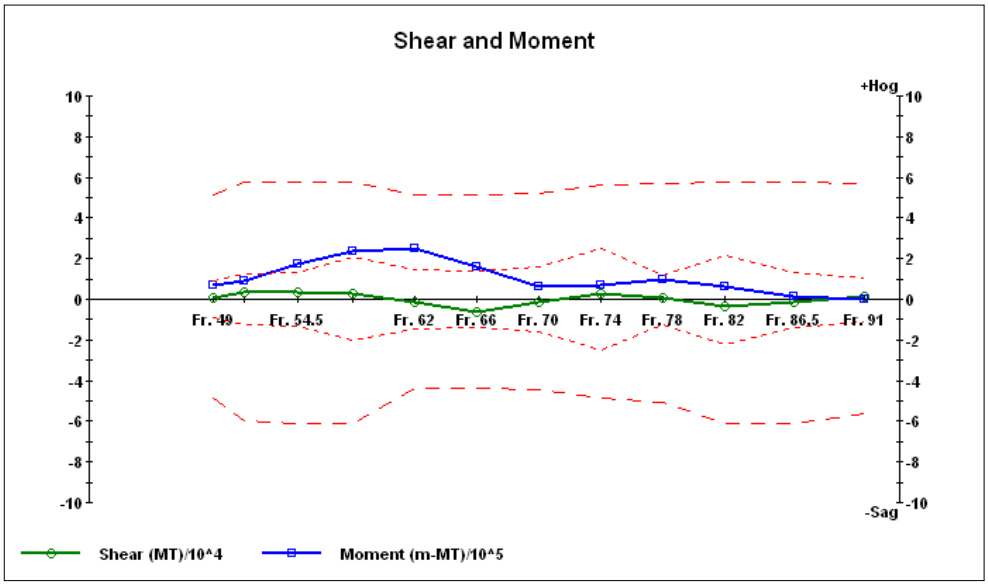
Longitudinal Shear and Bending Moment Summary
Transit Arrival



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	8,964.24	7,989.80	974.44	174,637	105,508	69,130H
Fr. 51	57.990F	16,307.14	12,999.70	3,307.45	320,094	226,946	93,148H
Fr. 54.5	78.310F	28,398.21	24,631.17	3,767.04	775,352	603,157	172,194H
Fr. 58	98.625F	41,110.82	38,670.16	2,440.66	1,479,159	1,243,776	235,383H
Fr. 62	121.850F	54,281.41	55,895.22	-1,613.81	2,588,371	2,340,741	247,629H
Fr. 66	145.065F	67,258.41	73,302.71	-6,044.31	4,000,704	3,840,988	159,715H
Fr. 70	168.260F	89,020.40	90,518.23	-1,497.83	5,814,229	5,748,324	65,905H
Fr. 74	191.505F	110,262.59	107,481.61	2,780.98	8,126,798	8,059,003	67,796H
Fr. 78	214.730F	124,413.67	124,043.07	370.61	10,851,879	10,754,678	97,201H
Fr. 82	237.945F	136,907.40	140,106.62	-3,199.22	13,886,651	13,823,661	62,990H
Fr. 86.5	264.070F	155,815.20	157,154.96	-1,339.76	17,723,421	17,710,107	13,314H
Fr. 91	290.190F	170,288.52	169,194.63	1,093.89	21,990,350	21,988,820	1,530H

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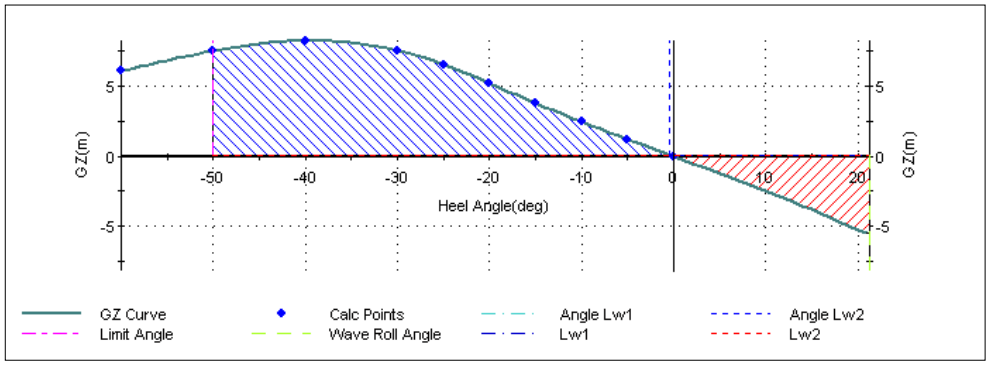
Righting Arm Summary
Transit Arrival- Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	1.09			
Righting Area B	m-rad	4.71			
Area Ratio B/A		4.334	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	12.032		Limiting Angle	deg
Projected Area (Hull)	m2	5,412.39			
Vertical Arm (Hull)	m	20.797		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	171,928.32		X1	
Wind Heeling Lever Lw1	m	0.047		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.071		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Righting Arm Summary
Transit Arrival- Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.766
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.903
		11.584
Heel from Gusting Wind		0.068
Wind Heeling Lever Lw2	m	21
Heeling Angle at Lw2	deg	

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Transit Departure

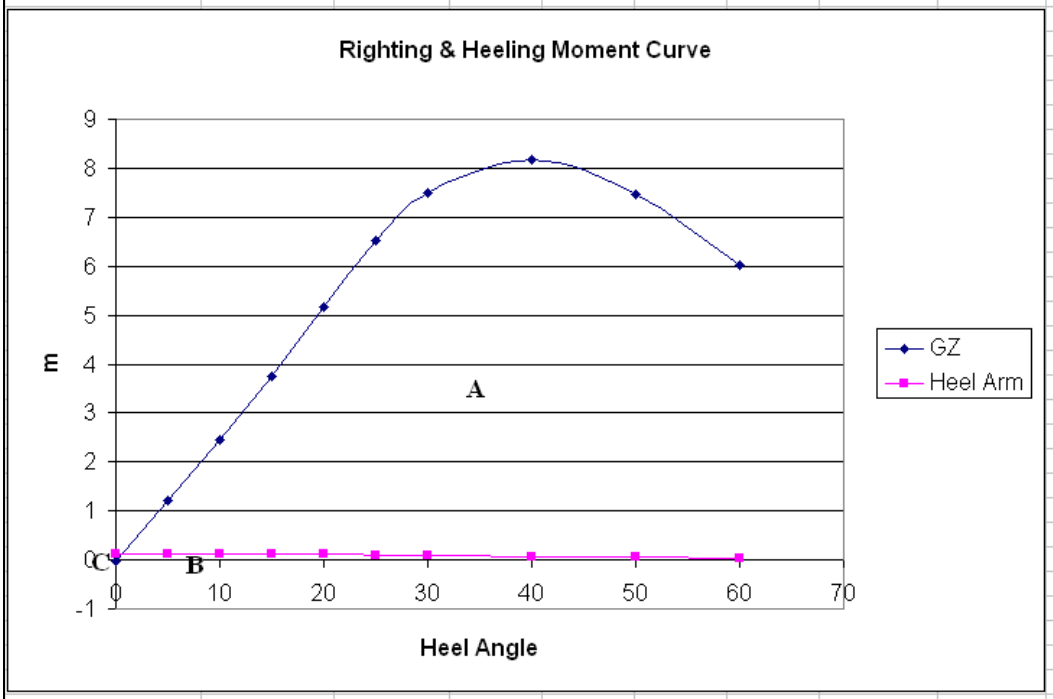
DISPLACEMENT =	173,560	MT		
FWD DRAFT =	10.726	m		
MEAN DRAFT =	12.126	m		
AFT DRAFT =	13.526	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.15	37.419	1.2	970.051	1928969.833	60484778.1	31.356
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	30078922.2	30.565
Projected Hull Area @ Mean Draft 11.915	Hull	5384.918		20.288	1	1616.751	8706071.398	123843866	14.225
							sum =	214407566	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.053	0.126
5	1.145	0.125
10	2.363	0.122
15	3.647	0.117
20	5.04	0.111
25	6.367	0.103
30	7.349	0.094
40	7.994	0.074
50	7.282	0.052
60	5.82	0.031

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Min Cargo Load

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	0.00	----	----	----	----
Fuel Oil	2,269.17	19.850	40.083F	15.519S	1,500
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	41,504.90	12.769	176.804F	3.848S	22,836
Void	0.00	----	----	----	----
Slop Tanks	0.00	----	----	----	----
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	101,694.08	17.372	158.379F	0.096P	24,502

Stability Calculation			**Trim Calculation**		
KMt	41.019	m	LCF Draft	7.240	m
VCG	17.372	m	LCB (even keel)	169.329F	m-AP
GMt (Solid)	23.647	m	LCF	166.526F	m-AP
FSc	0.241	m	MT1cm	2,474	m-MT/cm
GMt (Corrected)	23.406	m	Trim	4.502	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	99.21	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	9.710	m	Shear	-8,891.69	MT at 191.505F m-AP
Draft at M.S.	7.459	m	Bending Moment	299,229H	m-MT at 78.310F m-AP
Draft at F.P.	5.208	m	Shear % Allowable	72.00%	at 46.380F m-AP
			Moment % Allowable	52.00%	at 78.310F m-AP
Draft at Aft Marks	9.710	m			
Draft at Mid Marks	7.459	m			
Draft at Fwd Marks	5.208	m			

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SHOJU MARU

HECSDS 7.8.0.9

Tankage and Cargo Summary
Min Cargo Load

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
1SWCARGO	0.00	0.0	19,891.70	0.000	257.231F	17.224S	0	0.8900	0.00	0.00	---	15.6
1CCARGO	0.00	0.0	30,071.13	0.000	262.073F	0.000P	0	0.8900	0.00	0.00	---	15.6
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	---	15.6
2CCARGO	0.00	0.0	29,380.51	0.000	214.725F	0.000S	0	0.8900	0.00	0.00	---	15.6
3SWCARGO	0.00	0.0	20,899.52	0.000	168.288F	20.294S	0	0.8900	0.00	0.00	---	15.6
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	---	15.6
3CCARGO	0.00	0.0	29,380.46	0.000	168.285F	0.000P	0	0.8900	0.00	0.00	---	15.6
4CCARGO	0.00	0.0	29,380.49	0.000	121.845F	0.000S	0	0.8900	0.00	0.00	---	15.6
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	---	15.6
5CCARGO	0.00	0.0	32,683.72	0.000	76.442F	0.000S	0	0.8900	0.00	0.00	---	15.6
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	---	15.6
Totals	0.00	0.0	261,520.93	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

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Tankage and Cargo Summary
Min Cargo Load

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	873.96	94.0	929.74	18.942	44.612F	17.624S	894	0.9700	900.99	5,667.03	---	15.6
No.1 F.O.T. (P)	92.97	10.0	929.74	8.281	45.287F	14.145P	76	0.9700	95.85	602.88	---	15.6
No.2 F.O.T. (S)	1,122.77	90.0	1,247.52	21.939	36.439F	20.269S	415	0.9700	1,157.49	7,280.41	---	15.6
No.2 F.O.T. (P)	133.88	10.0	1,338.80	15.629	38.088F	18.361P	102	0.9700	138.02	868.12	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,269.17	50.0	4,536.98	19.850	40.083F	15.519S	1,500.34	0.9700	2,339.35	14,714.07		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Min Cargo Load

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	24,522.91	100.0	24,522.91	14.458	214.691F	20.982S	0	1.0250	23,924.79
4PWBAL	16,981.99	70.0	24,259.98	10.332	122.092F	20.895P	22,836	1.0250	16,567.79
Totals	41,504.90	85.1	48,782.89	12.769	176.804F	3.848S	22,835.67	1.0250	40,492.59

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	0.00	0.0	2,888.12	0.705	57.656F	12.155S	0	0.8900	0.00
Slop Tank (P)	0.00	0.0	2,888.12	0.705	57.656F	12.155P	0	0.8900	0.00
Totals	0.00	0.0	5,776.23	0.000	151.750F	0.000	0.00	1.0000	0.00

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Tankage and Cargo Summary
Min Cargo Load

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Min Cargo Load

CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed p	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMP	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AI	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CO	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
Min Cargo Load

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Min Cargo Load

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Min Cargo Load

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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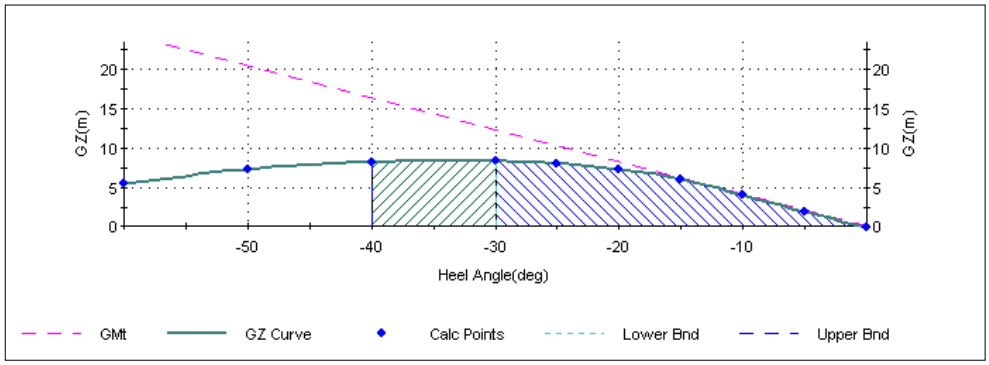
Righting Arm Summary
Min Cargo Load

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	2.75	0.06
Area to 40. deg	m-rad	4.20	0.09
Area 30. to 40. deg	m-rad	1.45	0.03
Angle at Maximum GZ	deg	34P	>25
Maximum GZ above 30 deg	m	8.339	0.200
Initial GM	m	23.406	0.150

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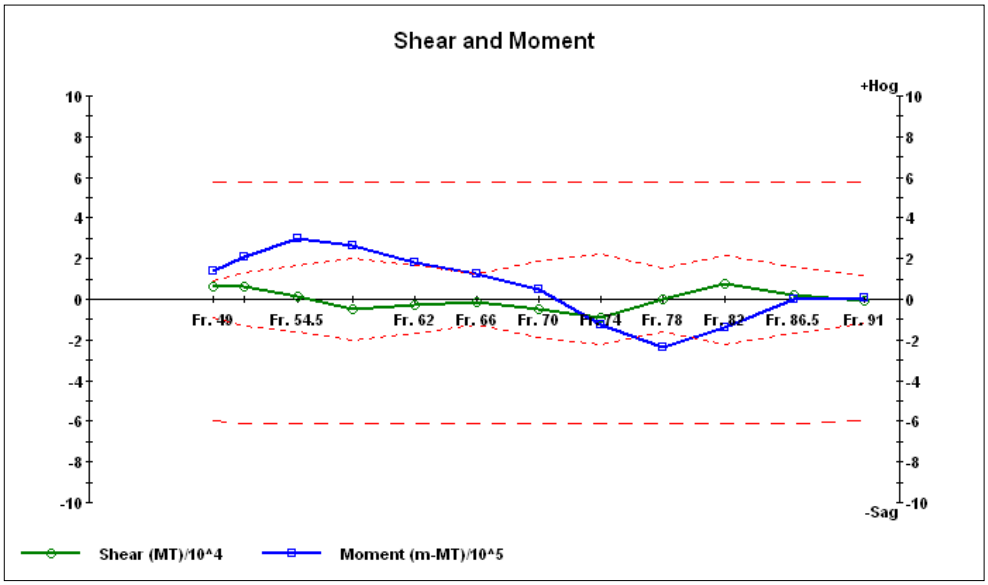
Longitudinal Shear and Bending Moment Summary
Min Cargo Load



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,109.30	4,603.58	6,505.72	196,965	57,750	139,214H
Fr. 51	57.990F	13,724.51	7,628.17	6,096.35	339,760	128,575	211,185H
Fr. 54.5	78.310F	16,430.20	14,822.58	1,607.62	651,762	352,533	299,229H
Fr. 58	98.625F	18,909.22	23,676.14	-4,766.92	1,008,914	741,897	267,018H
Fr. 62	121.850F	31,539.60	34,631.44	-3,091.84	1,596,064	1,418,070	177,994H
Fr. 66	145.065F	44,254.14	45,602.20	-1,348.06	2,478,360	2,350,264	128,095H
Fr. 70	168.260F	51,451.90	56,226.65	-4,774.75	3,587,306	3,539,104	48,203H
Fr. 74	191.505F	57,541.51	66,433.20	-8,891.69	4,849,941	4,974,766	124,825S
Fr. 78	214.730F	76,329.79	76,100.16	229.63	6,404,494	6,637,620	233,125S
Fr. 82	237.945F	92,979.88	85,139.21	7,840.67	8,374,393	8,512,287	137,894S
Fr. 86.5	264.070F	96,469.29	94,264.25	2,205.05	10,855,408	10,858,830	3,422S
Fr. 91	290.190F	100,054.27	100,466.77	-412.50	13,420,826	13,411,411	9,414H

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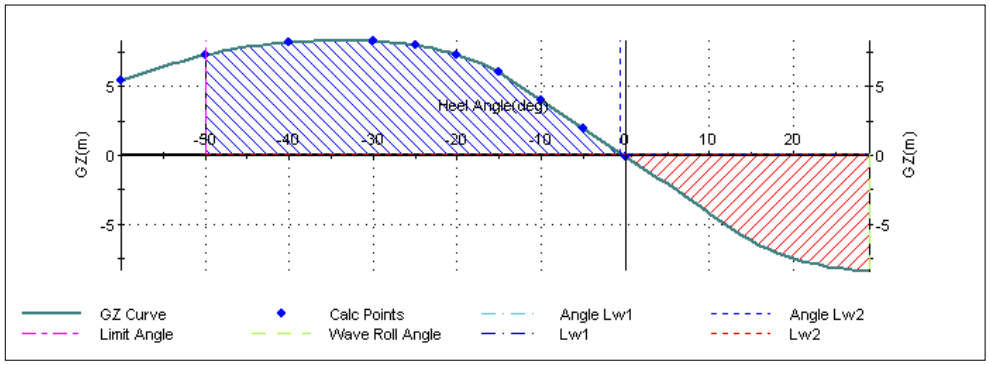
Righting Arm Summary
Min Cargo Load-Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	2.68			
Righting Area B	m-rad	5.45			
Area Ratio B/A		2.035	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	7.459		Limiting Angle	deg
Projected Area (Hull)	m2	6,791.05			
Vertical Arm (Hull)	m	18.528		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	101,694.07		X1	
Wind Heeling Lever Lw1	m	0.093		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.139		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Min Cargo Load-Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.730
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	1.547
		10.728
Heel from Gusting Wind		0.074
Wind Heeling Lever Lw2	m	29
Heeling Angle at Lw2	deg	

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Min. Cargo Load

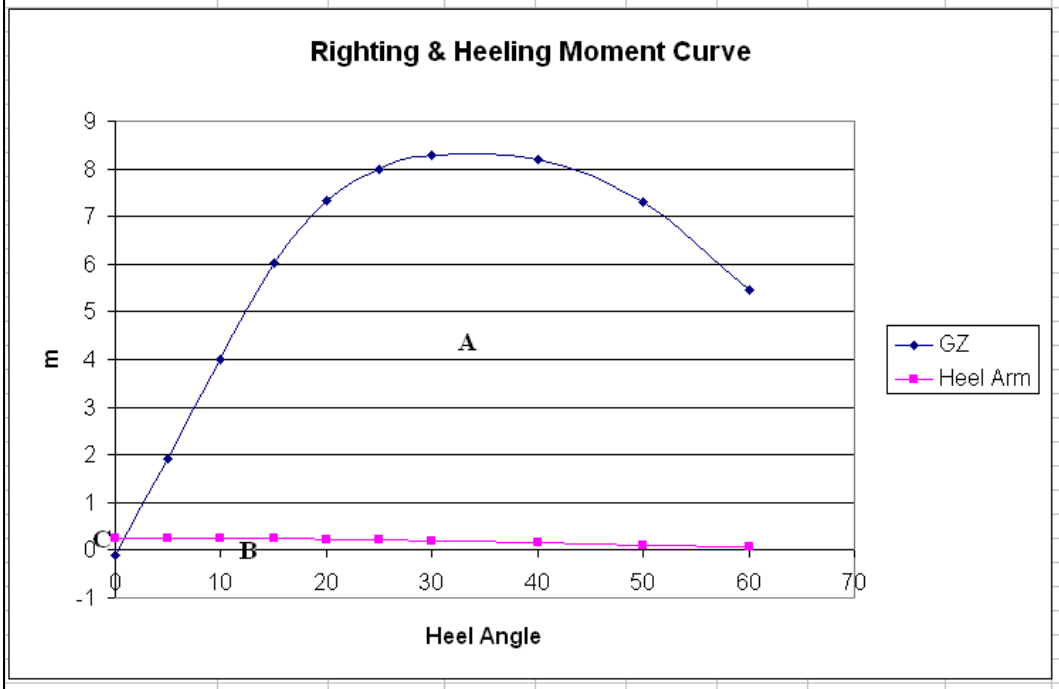
DISPLACEMENT =	101,694	MT		
FWD DRAFT =	5.208	m		
MEAN DRAFT =	7.459	m		
AFT DRAFT =	9.71	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	64986029.2	33.6895
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	32375312.3	32.8985
Projected Hull Area @ Mean Draft 7.459	Hull	6809.913		17.955	1	1616.751	11009933.446	156616303	14.225
							sum =	253977645	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.096	0.255
5	1.92	0.253
10	3.991	0.247
15	6.033	0.238
20	7.328	0.225
25	8	0.209
30	8.288	0.191
40	8.19	0.149
50	7.316	0.105
60	5.451	0.064

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
25% Cargo - Light Load

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	65,677.03	10.298	191.350F	2.870S	147,473
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	128,753.65	15.124	166.890F	0.126P	155,717

Stability Calculation			Trim Calculation		
KMt	34.712	m	LCF Draft	9.074	m
VCG	15.124	m	LCB (even keel)	168.608F	m-AP
GMt (Solid)	19.589	m	LCF	164.886F	m-AP
FSc	1.209	m	MT1cm	2,583	m-MT/cm
GMt (Corrected)	18.379	m	Trim	0.857	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	98.11	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	9.540	m	Shear	8,597.25	MT at 57.990F m-AP
Draft at M.S.	9.111	m	Bending Moment	353,969H	m-MT at 78.310F m-AP
Draft at F.P.	8.683	m	Shear % Allowable	70.00%	at 46.380F m-AP
			Moment % Allowable	62.00%	at 78.310F m-AP
Draft at Aft Marks	9.540	m			
Draft at Mid Marks	9.111	m			
Draft at Fwd Marks	8.683	m			

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Tankage and Cargo Summary
25% Cargo - Light Load

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	10,144.77	51.0	19,891.70	7.974	261.280F	18.579S	17,716	0.8900	11,398.62	71,695.14	---
1CCARGO	12,930.58	43.0	30,071.13	6.370	262.073F	0.000P	44,920	0.8900	14,528.75	91,383.07	---
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	---
2CCARGO	0.00	0.0	29,380.51	0.000	214.725F	0.000S	0	0.8900	0.00	0.00	---
3SWCARGO	0.00	0.0	20,899.52	0.000	168.288F	20.294S	0	0.8900	0.00	0.00	---
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	13,808.83	47.0	29,380.49	6.949	121.845F	0.000S	49,001	0.8900	15,515.54	97,589.80	---
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	---
5CCARGO	0.00	0.0	32,683.72	0.000	76.442F	0.000S	0	0.8900	0.00	0.00	---
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	---
Totals	65,677.03	25.1	261,520.93	10.298	191.350F	2.870S	147,473.25	0.8900	73,794.42	464,152.93	

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Tankage and Cargo Summary
25% Cargo - Light Load

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
25% Cargo - Light Load

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
25% Cargo - Light Load

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPORT	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPORT	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Tankage and Cargo Summary
25% Cargo - Light Load

CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO\	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
25% Cargo - Light Load

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
25% Cargo - Light Load

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
25% Cargo - Light Load

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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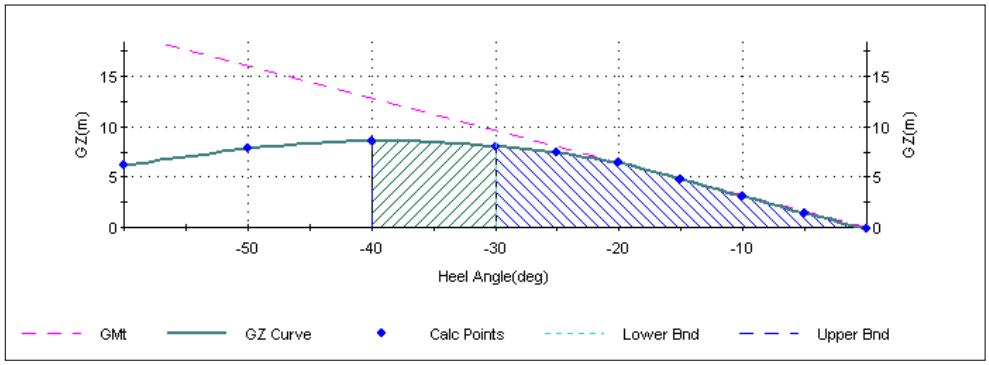
Righting Arm Summary
25% Cargo - Light Load

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	2.38	0.06
Area to 40. deg	m-rad	3.84	0.09
Area 30. to 40. deg	m-rad	1.47	0.03
Angle at Maximum GZ	deg	39P	>25
Maximum GZ above 30 deg	m	8.568	0.200
Initial GM	m	18.379	0.150

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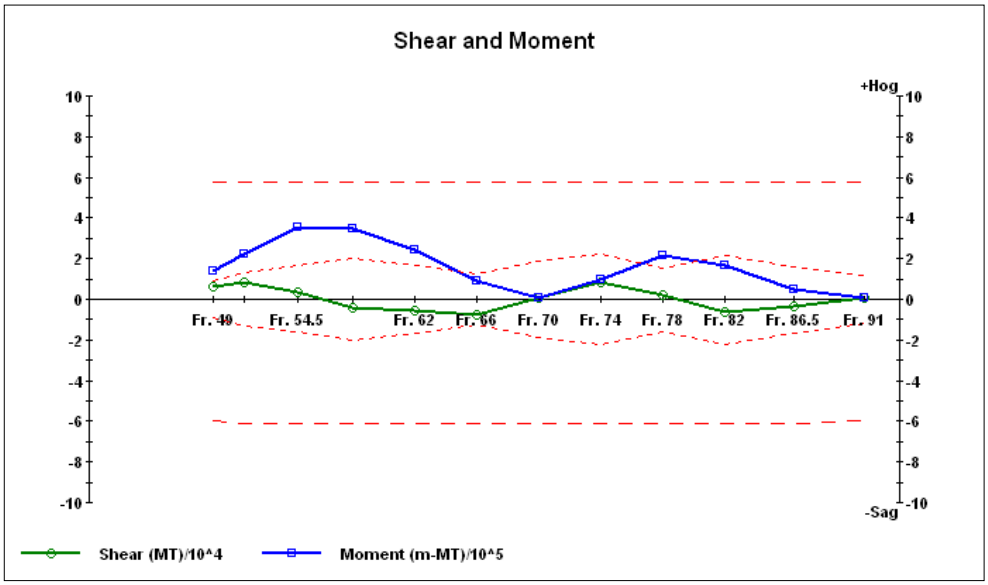
Longitudinal Shear and Bending Moment Summary
25% Cargo - Light Load



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	4,801.46	6,307.11	197,063	59,643	137,421H
Fr. 51	57.990F	16,611.95	8,014.70	8,597.25	354,862	133,852	221,010H
Fr. 54.5	78.310F	19,317.64	15,881.98	3,435.66	725,537	371,568	353,969H
Fr. 58	98.625F	21,796.66	25,848.27	-4,051.62	1,141,347	793,185	348,162H
Fr. 62	121.850F	32,975.77	38,493.02	-5,517.25	1,779,230	1,538,680	240,550H
Fr. 66	145.065F	43,968.42	51,547.28	-7,578.85	2,675,404	2,583,953	91,451H
Fr. 70	168.260F	65,547.10	64,644.08	903.02	3,944,506	3,938,527	5,979H
Fr. 74	191.505F	86,048.64	77,715.22	8,333.42	5,702,287	5,602,216	100,071H
Fr. 78	214.730F	92,545.92	90,626.44	1,919.48	7,776,085	7,563,856	212,229H
Fr. 82	237.945F	96,964.10	103,284.05	-6,319.95	9,980,355	9,817,052	163,303H
Fr. 86.5	264.070F	113,544.53	116,847.63	-3,303.10	12,743,219	12,695,020	48,199H
Fr. 91	290.190F	127,113.84	126,567.64	546.20	15,891,794	15,887,197	4,596H

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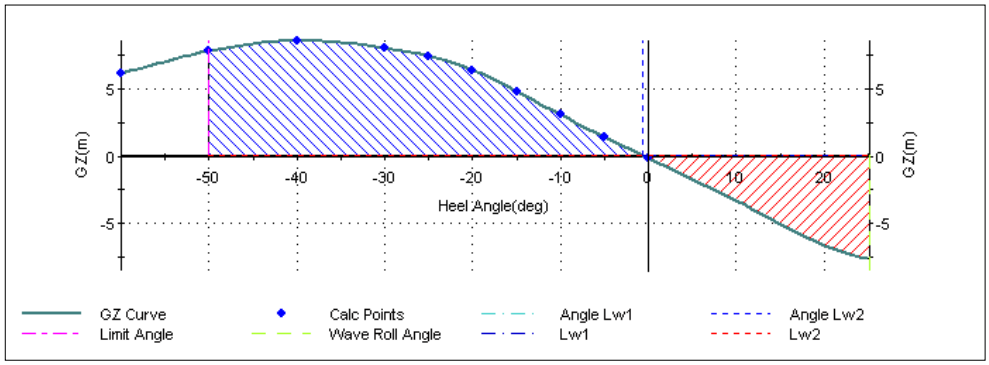
Righting Arm Summary
25% Cargo - Light Load- Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	1.74			
Righting Area B	m-rad	5.20			
Area Ratio B/A		2.982	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	9.111		Limiting Angle	deg
Projected Area (Hull)	m2	6,283.46			
Vertical Arm (Hull)	m	19.396		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	128,753.64		X1	
Wind Heeling Lever Lw1	m	0.070		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.104		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
25% Cargo - Light Load- Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.757
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	1.206
		11.130
Heel from Gusting Wind		0.071
Wind Heeling Lever Lw2	m	25
Heeling Angle at Lw2	deg	

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25% Cargo - Light Load

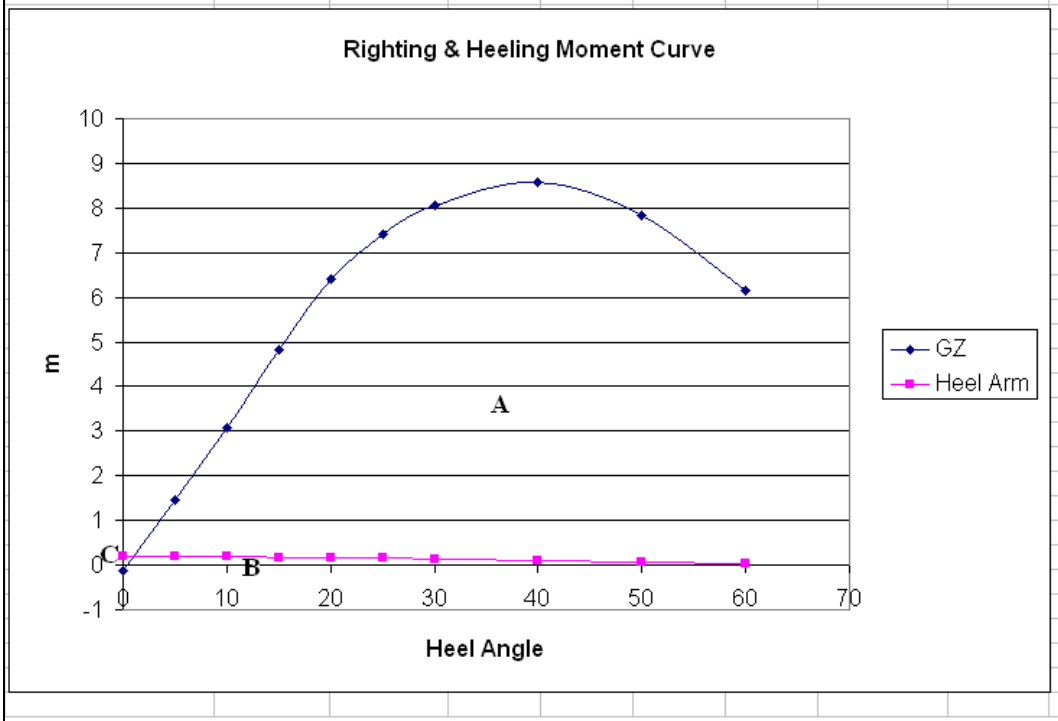
DISPLACEMENT =	128,754	MT		
FWD DRAFT =	8.683	m		
MEAN DRAFT =	9.111	m		
AFT DRAFT =	9.54	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	63392700	32.8635
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	31562448	32.0725
Projected Hull Area @ Mean Draft 9.111	Hull	6213		18.781	1	1616.751	10045521.283	142897540	14.225
							sum =	237852689	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.126	0.188
5	1.446	0.187
10	3.086	0.183
15	4.811	0.176
20	6.395	0.166
25	7.423	0.155
30	8.057	0.141
40	8.566	0.111
50	7.818	0.078
60	6.135	0.047

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
50% Cargo - Half Load A

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	131,602.81	13.705	178.430F	1.418S	210,250
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	194,679.42	15.793	166.439F	0.093P	218,494

Stability Calculation			**Trim Calculation**		
KMt	27.946	m	LCF Draft	13.385	m
VCG	15.793	m	LCB (even keel)	166.791F	m-AP
GMt (Solid)	12.154	m	LCF	161.030F	m-AP
FSc	1.122	m	MT1cm	2,931	m-MT/cm
GMt (Corrected)	11.031	m	Trim	0.234	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	140.45	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	13.509	m	Shear	4,367.39	MT at 57.990F m-AP
Draft at M.S.	13.392	m	Bending Moment	193,980H	m-MT at 78.310F m-AP
Draft at F.P.	13.275	m	Shear % Allowable	32.00%	at 57.990F m-AP
			Moment % Allowable	34.00%	at 78.310F m-AP
Draft at Aft Marks	13.509	m			
Draft at Mid Marks	13.392	m			
Draft at Fwd Marks	13.275	m			

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Tankage and Cargo Summary
50% Cargo - Half Load A

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
1SWCARGO	0.00	0.0	19,891.70	0.000	257.231F	17.224S	0	0.8900	0.00	0.00	----	15.6
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	----	15.6
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	----	15.6
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	----	15.6
3SWCARGO	0.00	0.0	20,899.52	0.000	168.288F	20.294S	0	0.8900	0.00	0.00	----	15.6
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	----	15.6
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	----	15.6
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	----	15.6
5SWCARGO	9,544.57	62.0	15,394.47	11.148	80.338F	19.550S	15,886	0.8900	10,724.24	67,453.44	----	15.6
5CCARGO	6,209.91	19.0	32,683.72	2.893	73.375F	0.000S	53,755	0.8900	6,977.42	43,886.68	----	15.6
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	----	15.6
Totals	131,602.81	50.3	261,520.93	13.705	178.430F	1.418S	210,250.17	0.8900	147,868.32	930,063.78		

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Tankage and Cargo Summary
50% Cargo - Half Load A

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
50% Cargo - Half Load A

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
50% Cargo - Half Load A

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Tankage and Cargo Summary
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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
50% Cargo - Half Load A

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
50% Cargo - Half Load A

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
50% Cargo - Half Load A

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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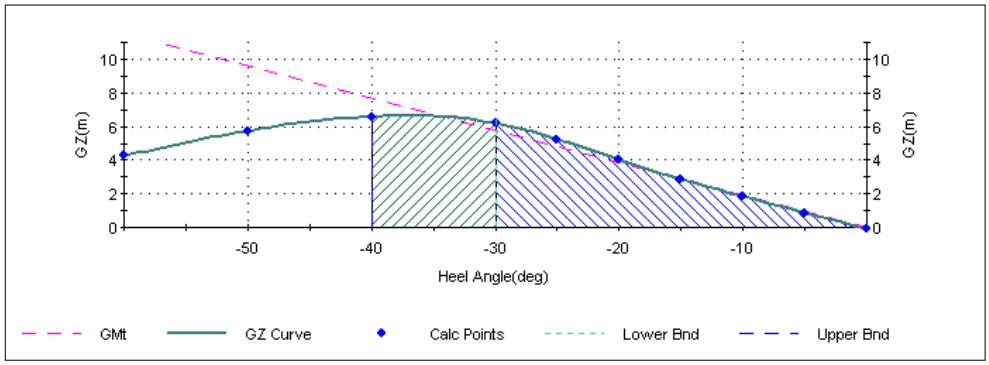
Righting Arm Summary
50% Cargo - Half Load A

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.57	0.06
Area to 40. deg	m-rad	2.71	0.09
Area 30. to 40. deg	m-rad	1.14	0.03
Angle at Maximum GZ	deg	37P	>25
Maximum GZ above 30 deg	m	6.664	0.200
Initial GM	m	11.031	0.150

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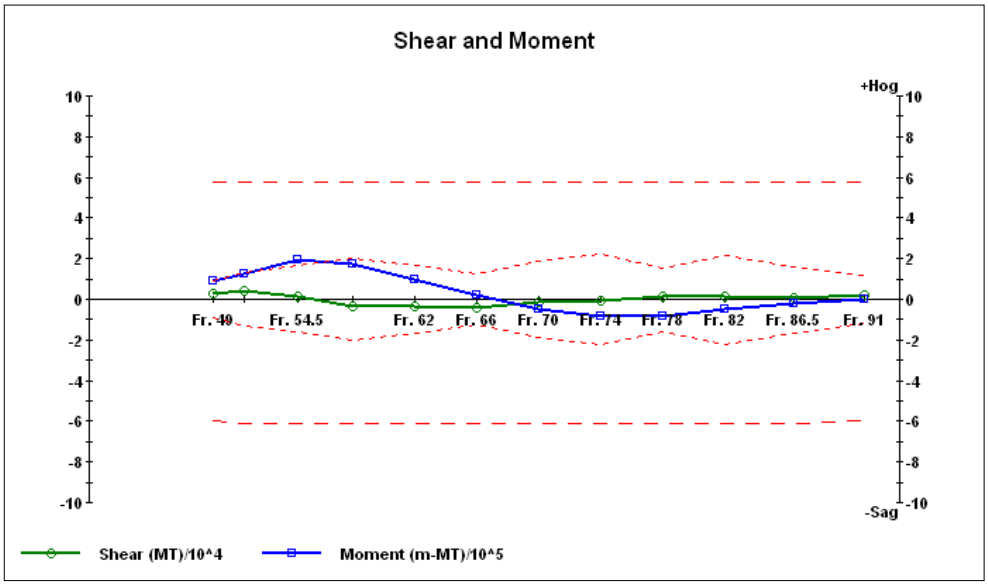
Longitudinal Shear and Bending Moment Summary
50% Cargo - Half Load A



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	8,251.86	2,856.70	197,063	108,461	88,603H
Fr. 51	57.990F	17,875.72	13,508.34	4,367.39	361,962	234,272	127,690H
Fr. 54.5	78.310F	27,032.82	25,818.67	1,214.15	821,171	627,191	193,980H
Fr. 58	98.625F	37,551.14	40,825.93	-3,274.79	1,472,684	1,301,312	171,372H
Fr. 62	121.850F	56,223.89	59,465.58	-3,241.69	2,563,485	2,464,182	99,303H
Fr. 66	145.065F	74,706.95	78,595.65	-3,888.70	4,086,308	4,066,713	19,595H
Fr. 70	168.260F	96,285.63	97,840.77	-1,555.13	6,068,391	6,119,715	51,325S
Fr. 74	191.505F	116,787.17	117,144.39	-357.22	8,540,688	8,627,099	86,411S
Fr. 78	214.730F	137,684.00	136,346.80	1,337.20	11,495,604	11,577,160	81,557S
Fr. 82	237.945F	156,495.52	155,347.77	1,147.75	14,914,825	14,965,309	50,484S
Fr. 86.5	264.070F	176,408.80	175,985.37	423.43	19,277,072	19,296,440	19,368S
Fr. 91	290.190F	193,039.62	191,181.50	1,858.12	24,108,234	24,110,841	2,607S

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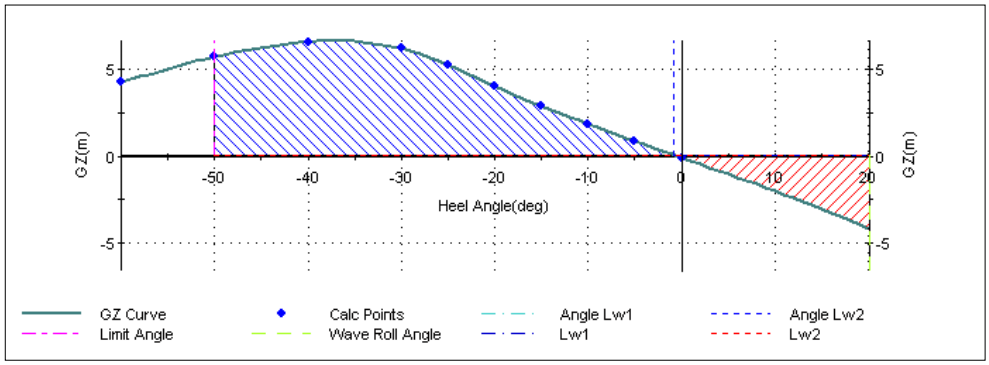
Righting Arm Summary
50% Cargo - Half Load A - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.68			
Righting Area B	m-rad	3.75			
Area Ratio B/A		5.530	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	13.392		Limiting Angle	deg
Projected Area (Hull)	m2	4,996.13			
Vertical Arm (Hull)	m	21.496		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	194,679.42		X1	
Wind Heeling Lever Lw1	m	0.039		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.059		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
50% Cargo - Half Load A - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.779
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.888
		12.545
Heel from Gusting Wind		0.062
Wind Heeling Lever Lw2	m	20
Heeling Angle at Lw2	deg	

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50% Cargo - Half Load A

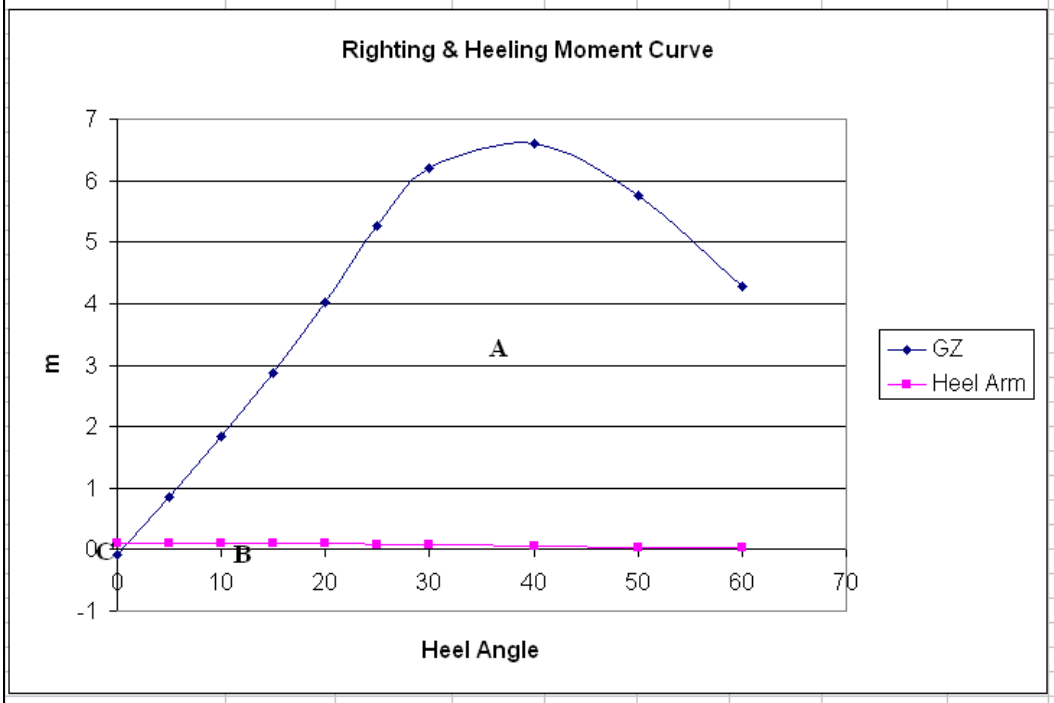
DISPLACEMENT =	194,679	MT		
FWD DRAFT =	13.275	m		
MEAN DRAFT =	13.392	m		
AFT DRAFT =	13.509	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	59263740	30.723
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	29455989	29.932
Projected Hull Area @ Mean Draft 13.392	Hull	4900.72		20.921	1	1616.751	7923238.153	112708063	14.225
							sum =	201427792	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.093	0.105
5	0.864	0.105
10	1.844	0.102
15	2.88	0.098
20	4.018	0.093
25	5.255	0.087
30	6.214	0.079
40	6.605	0.062
50	5.76	0.044
60	4.27	0.026

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
50% Cargo - Half Load B

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	131,260.89	12.343	175.823F	1.436S	225,081
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	194,337.50	14.876	164.657F	0.083P	233,325

Stability Calculation			Trim Calculation		
KMt	27.968	m	LCF Draft	13.363	m
VCG	14.876	m	LCB (even keel)	166.801F	m-AP
GMt (Solid)	13.091	m	LCF	161.059F	m-AP
FSc	1.201	m	MT1cm	2,929	m-MT/cm
GMt (Corrected)	11.891	m	Trim	1.422	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	146.70	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	14.118	m	Shear	5,939.93	MT at 57.990F m-AP
Draft at M.S.	13.406	m	Bending Moment	223,211H	m-MT at 78.310F m-AP
Draft at F.P.	12.695	m	Shear % Allowable	44.00%	at 57.990F m-AP
			Moment % Allowable	39.00%	at 78.310F m-AP
Draft at Aft Marks	14.118	m			
Draft at Mid Marks	13.406	m			
Draft at Fwd Marks	12.695	m			

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Tankage and Cargo Summary
50% Cargo - Half Load B

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
1SWCARGO	10,144.77	51.0	19,891.70	7.974	261.280F	18.579S	17,716	0.8900	11,398.62	71,695.14	----	15.6
1CCARGO	17,741.96	59.0	30,071.13	8.741	262.073F	0.000S	44,920	0.8900	19,934.79	125,386.07	----	15.6
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	----	15.6
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	----	15.6
3SWCARGO	0.00	0.0	20,899.52	0.000	168.288F	20.294S	0	0.8900	0.00	0.00	----	15.6
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	----	15.6
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	----	15.6
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	----	15.6
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	----	15.6
5CCARGO	16,995.54	52.0	32,683.72	7.808	73.089F	0.000S	55,068	0.8900	19,096.11	120,110.90	----	15.6
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	----	15.6
Totals	131,260.89	50.2	261,520.93	12.343	175.823F	1.436S	225,080.82	0.8900	147,484.15	927,647.39		

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Tankage and Cargo Summary
50% Cargo - Half Load B

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
50% Cargo - Half Load B

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
50% Cargo - Half Load B

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Tankage and Cargo Summary
50% Cargo - Half Load B

CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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Tankage and Cargo Summary
50% Cargo - Half Load B

HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
50% Cargo - Half Load B

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
50% Cargo - Half Load B

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
50% Cargo - Half Load B

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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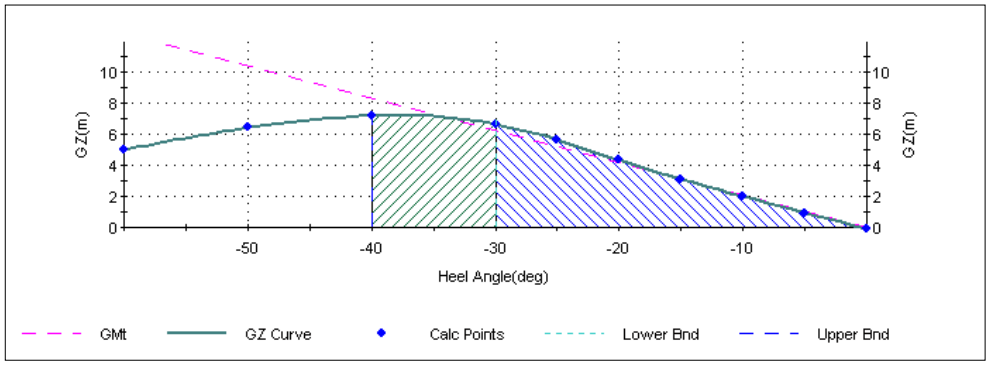
Righting Arm Summary
50% Cargo - Half Load B

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.69	0.06
Area to 40. deg	m-rad	2.92	0.09
Area 30. to 40. deg	m-rad	1.23	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	7.190	0.200
Initial GM	m	11.891	0.150

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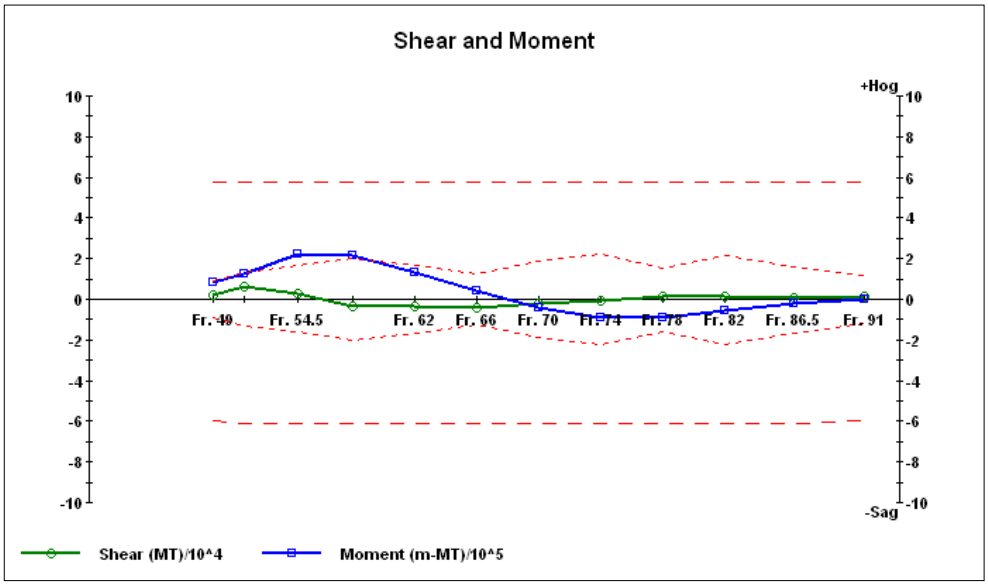
Longitudinal Shear and Bending Moment Summary
50% Cargo - Half Load B



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	8,751.76	2,356.80	197,063	116,762	80,301H
Fr. 51	57.990F	20,166.44	14,226.52	5,939.93	374,886	249,630	125,257H
Fr. 54.5	78.310F	29,462.38	26,919.73	2,542.66	884,301	661,090	223,211H
Fr. 58	98.625F	38,792.19	42,247.90	-3,455.71	1,575,345	1,360,983	214,362H
Fr. 62	121.850F	57,464.94	61,140.25	-3,675.31	2,694,969	2,560,068	134,901H
Fr. 66	145.065F	75,948.01	80,393.19	-4,445.18	4,246,604	4,203,155	43,449H
Fr. 70	168.260F	97,526.69	99,631.04	-2,104.35	6,257,473	6,298,024	40,552S
Fr. 74	191.505F	118,028.22	118,797.46	-769.24	8,758,619	8,845,697	87,078S
Fr. 78	214.730F	138,925.06	137,733.49	1,191.57	11,742,358	11,831,325	88,967S
Fr. 82	237.945F	157,736.58	156,339.85	1,396.73	15,190,390	15,247,330	56,940S
Fr. 86.5	264.070F	176,998.46	176,392.40	606.06	19,577,161	19,597,012	19,851S
Fr. 91	290.190F	192,697.71	190,992.87	1,704.84	24,412,169	24,413,940	1,772S

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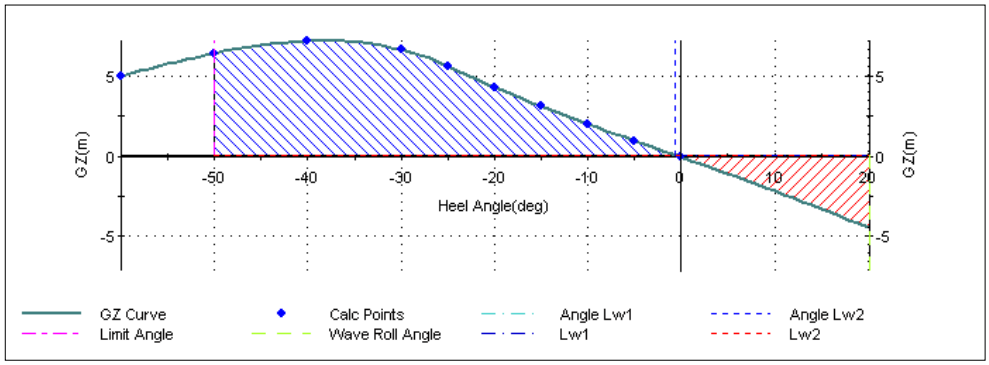
Righting Arm Summary
50% Cargo - Half Load B - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.73			
Righting Area B	m-rad	4.06			
Area Ratio B/A		5.542	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	13.406		Limiting Angle	deg
Projected Area (Hull)	m2	4,991.12			
Vertical Arm (Hull)	m	21.499		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	194,337.51		X1	
Wind Heeling Lever Lw1	m	0.040		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.059		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
50% Cargo - Half Load B - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.777
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.850
		12.021
Heel from Gusting Wind		0.065
Wind Heeling Lever Lw2	m	20
Heeling Angle at Lw2	deg	

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50% Cargo - Half Load B

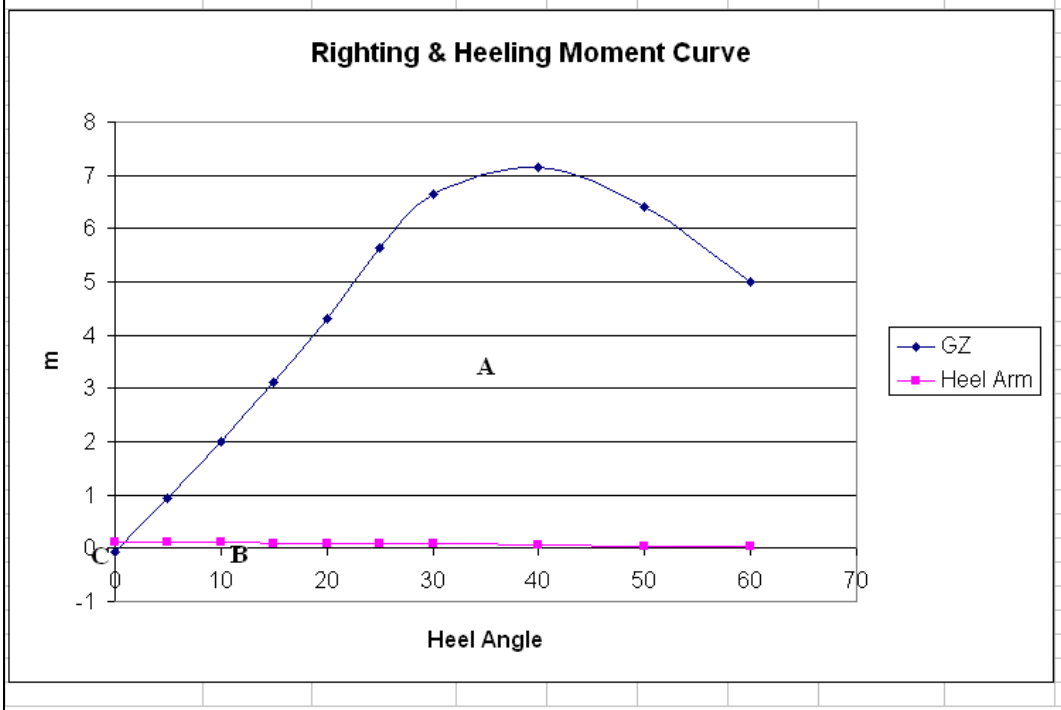
DISPLACEMENT =	194,338	MT		
FWD DRAFT =	12.695	m		
MEAN DRAFT =	13.406	m		
AFT DRAFT =	14.118	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	59250237.4	30.716
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	29449100.2	29.925
Projected Hull Area @ Mean Draft 13.406	Hull	4987.004		20.860	1	1616.751	8062743.552	114144260	14.157
							sum =	202843598	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.083	0.106
5	0.948	0.106
10	2.002	0.103
15	3.11	0.099
20	4.32	0.094
25	5.625	0.087
30	6.65	0.080
40	7.161	0.062
50	6.418	0.044
60	5.008	0.027

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
75% Cargo - Intermediate Load

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	196,642.45	13.108	170.355F	0.949S	271,066
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	259,719.08	14.818	163.328F	0.069P	279,309

Stability Calculation			Trim Calculation		
KMt	25.503	m	LCF Draft	17.449	m
VCG	14.818	m	LCB (even keel)	164.617F	m-AP
GMt (Solid)	10.685	m	LCF	155.170F	m-AP
FSc	1.075	m	MT1cm	3,347	m-MT/cm
GMt (Corrected)	9.610	m	Trim	1.000	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	187.66	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	17.960	m	Shear	-11,923.37	MT at 145.065F m-AP
Draft at M.S.	17.460	m	Bending Moment	382,977S	m-MT at 168.260F m-AP
Draft at F.P.	16.960	m	Shear % Allowable	95.00%	at 145.065F m-AP
			Moment % Allowable	63.00%	at 168.260F m-AP
Draft at Aft Marks	17.960	m			
Draft at Mid Marks	17.460	m			
Draft at Fwd Marks	16.960	m			

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	6,564.26	33.0	19,891.70	5.281	260.700F	18.494S	17,138	0.8900	7,375.57	46,390.97	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	6,676.47	33.0	20,231.74	5.347	260.537F	18.596P	18,894	0.8900	7,501.65	47,183.99	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	19,018.56	91.0	20,899.52	13.114	168.655F	20.867S	19,830	0.8900	21,369.17	134,408.05	---
3PWCARGO	10,347.00	55.0	18,812.72	7.951	168.285F	20.050P	13,898	0.8900	11,625.84	73,124.32	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	3,078.89	20.0	15,394.47	4.768	82.105F	18.149S	10,168	0.8900	3,459.43	21,759.17	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	3,078.89	20.0	15,394.47	4.768	82.105F	18.149P	10,168	0.8900	3,459.43	21,759.17	---
Totals	196,642.46	75.2	261,520.93	13.108	170.355F	0.949S	271,065.61	0.8900	220,946.58	1,389,712.20	

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed p	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMP	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AI	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CO	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
75% Cargo - Intermediate Load

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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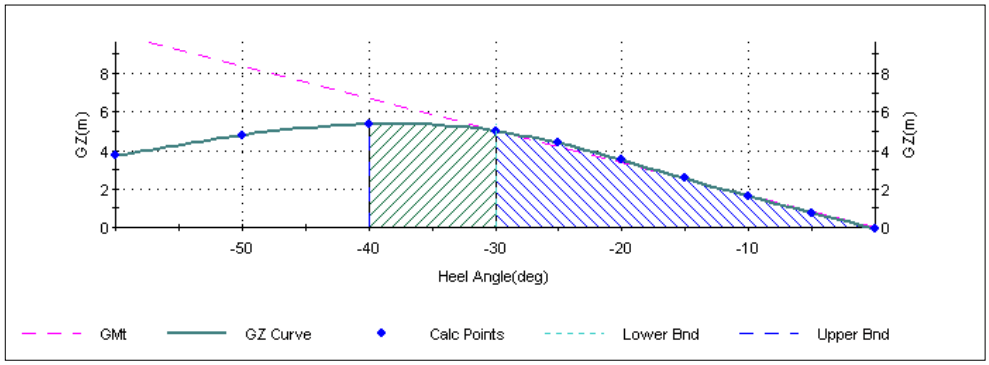
Righting Arm Summary
75% Cargo - Intermediate Load

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.34	0.06
Area to 40. deg	m-rad	2.26	0.09
Area 30. to 40. deg	m-rad	0.92	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	5.381	0.200
Initial GM	m	9.610	0.150

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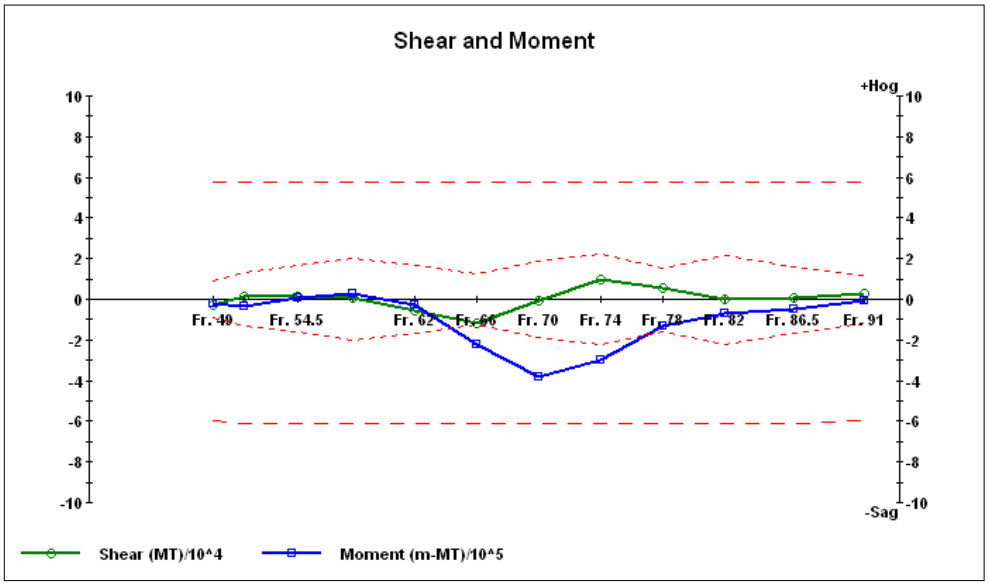
Longitudinal Shear and Bending Moment Summary
75% Cargo - Intermediate Load



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	14,183.61	-3,075.05	197,063	220,193	23,130S
Fr. 51	57.990F	23,440.13	21,935.91	1,504.22	393,399	429,006	35,607S
Fr. 54.5	78.310F	40,833.41	39,200.17	1,633.24	1,048,680	1,042,684	5,997H
Fr. 58	98.625F	59,984.49	59,434.93	549.57	2,067,565	2,041,613	25,952H
Fr. 62	121.850F	78,657.24	84,044.32	-5,387.08	3,679,381	3,706,207	26,827S
Fr. 66	145.065F	97,140.31	109,063.68	-11,923.37	5,722,995	5,947,841	224,846S
Fr. 70	168.260F	133,158.91	134,117.57	-958.66	8,392,010	8,774,987	382,977S
Fr. 74	191.505F	168,586.08	159,161.69	9,424.39	11,894,019	12,192,315	298,296S
Fr. 78	214.730F	189,482.92	184,012.97	5,469.95	16,051,964	16,183,802	131,838S
Fr. 82	237.945F	208,294.44	208,565.68	-271.25	20,673,697	20,743,166	69,469S
Fr. 86.5	264.070F	236,140.16	235,220.50	919.66	26,498,520	26,544,193	45,674S
Fr. 91	290.190F	258,079.27	255,185.28	2,893.99	32,964,899	32,973,027	8,128S

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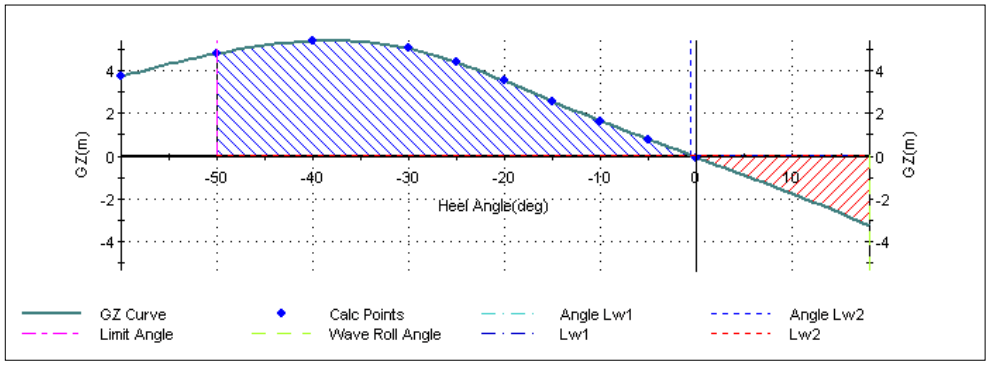
Righting Arm Summary
75% Cargo - Intermediate Load - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.48			
Righting Area B	m-rad	3.13			
Area Ratio B/A		6.563	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	17.460		Limiting Angle	deg
Projected Area (Hull)	m2	3,737.05			
Vertical Arm (Hull)	m	23.535		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	259,719.07		X1	
Wind Heeling Lever Lw1	m	0.025		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.037		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
75% Cargo - Intermediate Load - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.797
Steady Wind Pressure	bar	0.986
Displacement	MT	0.813
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.676
		12.367
Heel from Gusting Wind		0.063
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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75% Cargo - Intermediate Load

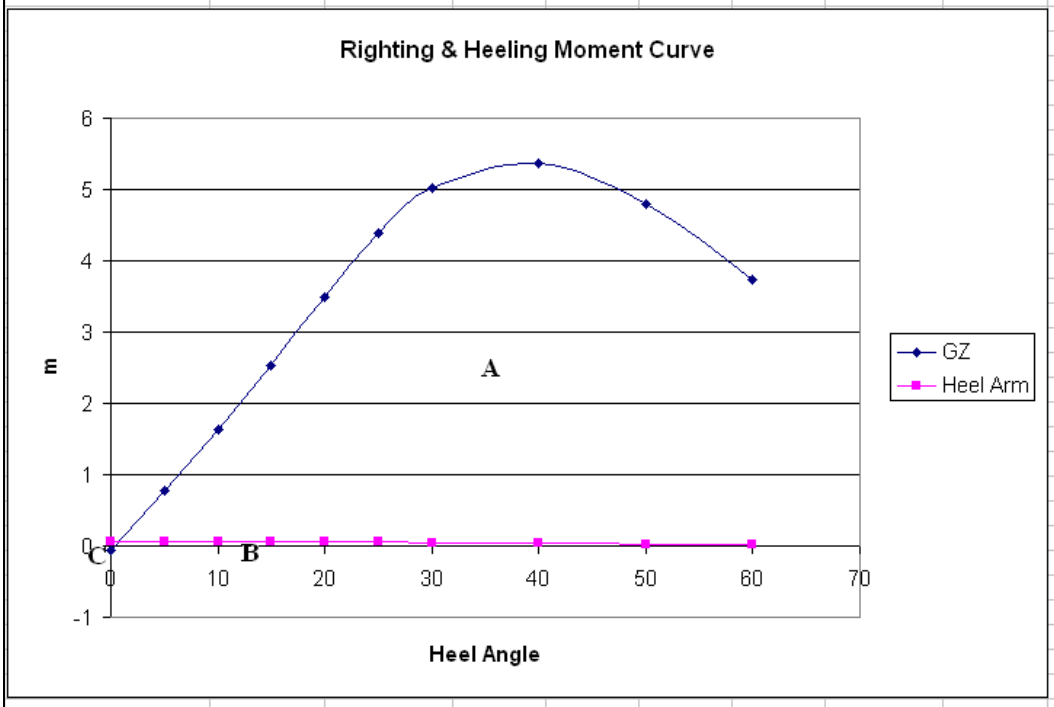
DISPLACEMENT =	259,719	MT		
FWD DRAFT =	16.96	m		
MEAN DRAFT =	17.46	m		
AFT DRAFT =	17.96	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	55340216	28.689
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27454336	27.898
Projected Hull Area @ Mean Draft 17.46	Hull	3660.608		22.955	1	1616.751	5918291.533	84187697	14.225
							sum =	166982248	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.069	0.066
5	0.769	0.065
10	1.631	0.064
15	2.537	0.061
20	3.5	0.058
25	4.388	0.054
30	5.021	0.049
40	5.364	0.038
50	4.797	0.027
60	3.736	0.016

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Full Cargo - 88%

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	226,677.92	13.631	169.643F	0.825S	312,503
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	289,754.53	15.049	163.499F	0.061P	320,746

Stability Calculation			**Trim Calculation**		
KMt	25.119	m	LCF Draft	19.264	m
VCG	15.049	m	LCB (even keel)	163.518F	m-AP
GMt (Solid)	10.069	m	LCF	152.989F	m-AP
FSc	1.107	m	MT1cm	3,524	m-MT/cm
GMt (Corrected)	8.962	m	Trim	0.016	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	201.80	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	19.272	m	Shear	17,312.89	MT at 98.625F m-AP
Draft at M.S.	19.264	m	Bending Moment	474,615H	m-MT at 145.065F m-AP
Draft at F.P.	19.256	m	Shear % Allowable	86.00%	at 98.625F m-AP
			Moment % Allowable	83.00%	at 145.065F m-AP
Draft at Aft Marks	19.272	m			
Draft at Mid Marks	19.264	m			
Draft at Fwd Marks	19.256	m			

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Tankage and Cargo Summary
Full Cargo - 88%

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	19,493.87	98.0	19,891.70	14.701	261.986F	18.704S	19,658	0.8900	21,903.22	137,767.12	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	12,543.68	62.0	20,231.74	9.626	261.220F	18.783P	19,421	0.8900	14,094.02	88,648.71	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	20,481.53	98.0	20,899.52	14.128	168.628F	20.880S	19,831	0.8900	23,012.96	144,747.13	---
3PWCARGO	18,436.46	98.0	18,812.72	14.168	168.285F	20.050P	13,898	0.8900	20,715.13	130,294.24	---
3CCARGO	12,339.79	42.0	29,380.46	6.209	168.285F	0.000P	49,001	0.8900	13,864.94	87,207.82	---
4CCARGO	22,916.78	78.0	29,380.49	11.532	121.845F	0.000P	49,001	0.8900	25,749.19	161,957.55	---
5SWCARGO	15,086.58	98.0	15,394.47	15.875	79.707F	20.020S	16,150	0.8900	16,951.22	106,619.95	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	15,086.58	98.0	15,394.47	15.875	79.707F	20.020P	16,150	0.8900	16,951.22	106,619.96	---
Totals	226,677.93	86.7	261,520.93	13.631	169.643F	0.825S	312,502.62	0.8900	254,694.30	1,601,978.95	

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Tankage and Cargo Summary
Full Cargo - 88%

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Full Cargo - 88%

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
Full Cargo - 88%

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPORT	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPORT	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Tankage and Cargo Summary
Full Cargo - 88%

CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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Tankage and Cargo Summary
Full Cargo - 88%

HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
Full Cargo - 88%

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Full Cargo - 88%

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Full Cargo - 88%

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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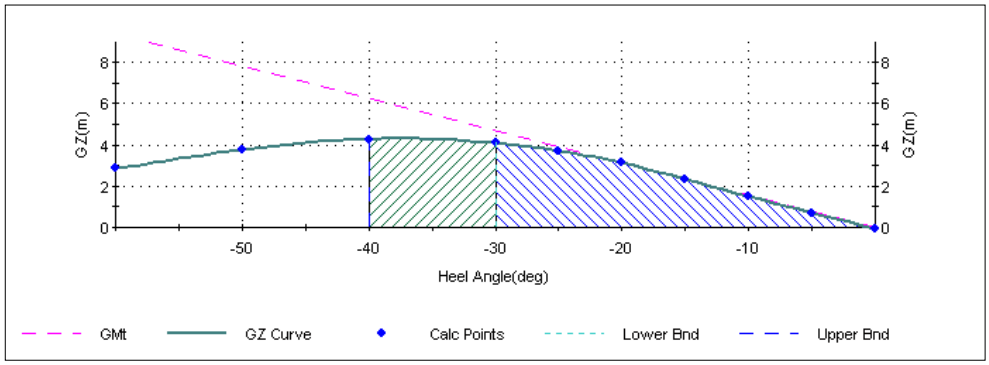
Righting Arm Summary
Full Cargo - 88%

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.18	0.06
Area to 40. deg	m-rad	1.92	0.09
Area 30. to 40. deg	m-rad	0.74	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	4.294	0.200
Initial GM	m	8.962	0.150

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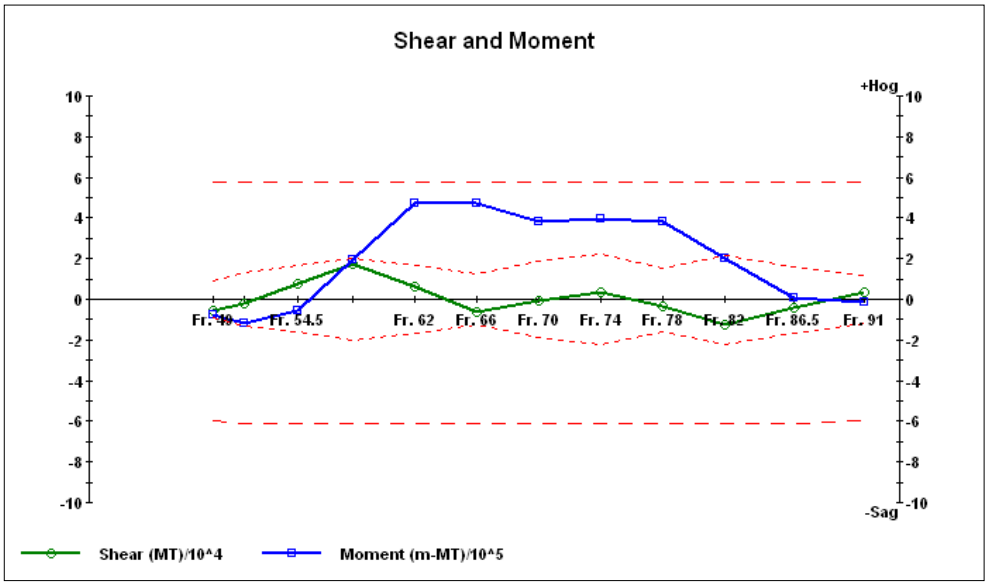
Longitudinal Shear and Bending Moment Summary
Full Cargo - 88%



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	16,658.97	-5,550.40	197,063	271,265	74,202S
Fr. 51	57.990F	23,440.13	25,339.72	-1,899.59	393,399	514,078	120,679S
Fr. 54.5	78.310F	52,147.31	44,449.20	7,698.12	1,161,275	1,215,305	54,030S
Fr. 58	98.625F	83,999.87	66,686.98	17,312.89	2,536,663	2,341,037	195,626H
Fr. 62	121.850F	99,733.94	93,696.12	6,037.82	4,672,110	4,201,734	470,377H
Fr. 66	145.065F	115,279.59	121,221.33	-5,941.74	7,170,924	6,696,308	474,615H
Fr. 70	168.260F	147,851.65	148,888.18	-1,036.53	10,220,708	9,835,505	385,204H
Fr. 74	191.505F	179,824.74	176,657.75	3,167.00	14,024,105	13,627,547	396,558H
Fr. 78	214.730F	200,721.58	204,335.55	-3,613.97	18,443,068	18,057,899	385,169H
Fr. 82	237.945F	219,533.09	231,812.30	-12,279.20	23,325,707	23,122,813	202,894H
Fr. 86.5	264.070F	257,657.04	261,809.38	-4,152.33	29,582,226	29,574,954	7,273H
Fr. 91	290.190F	288,114.74	284,571.43	3,543.31	36,725,705	36,737,376	11,672S

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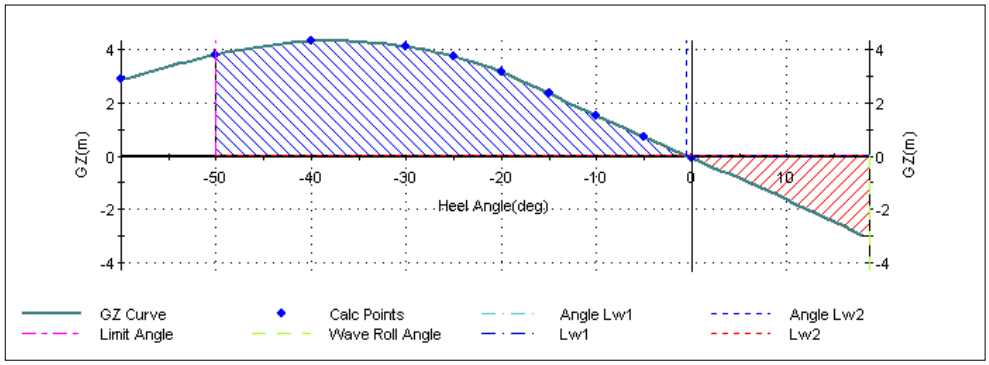
Righting Arm Summary
Full Cargo - 88%-Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.49			
Righting Area B	m-rad	2.60			
Area Ratio B/A		5.308	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	19.264		Limiting Angle	deg
Projected Area (Hull)	m2	3,181.76			
Vertical Arm (Hull)	m	24.441		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	289,754.54		X1	
Wind Heeling Lever Lw1	m	0.020		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.031		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Full Cargo - 88%-Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.806
Steady Wind Pressure	bar	0.987
Displacement	MT	0.877
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.633
		12.498
Heel from Gusting Wind		0.062
Wind Heeling Lever Lw2	m	19
Heeling Angle at Lw2	deg	

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Full Cargo Load - 88%

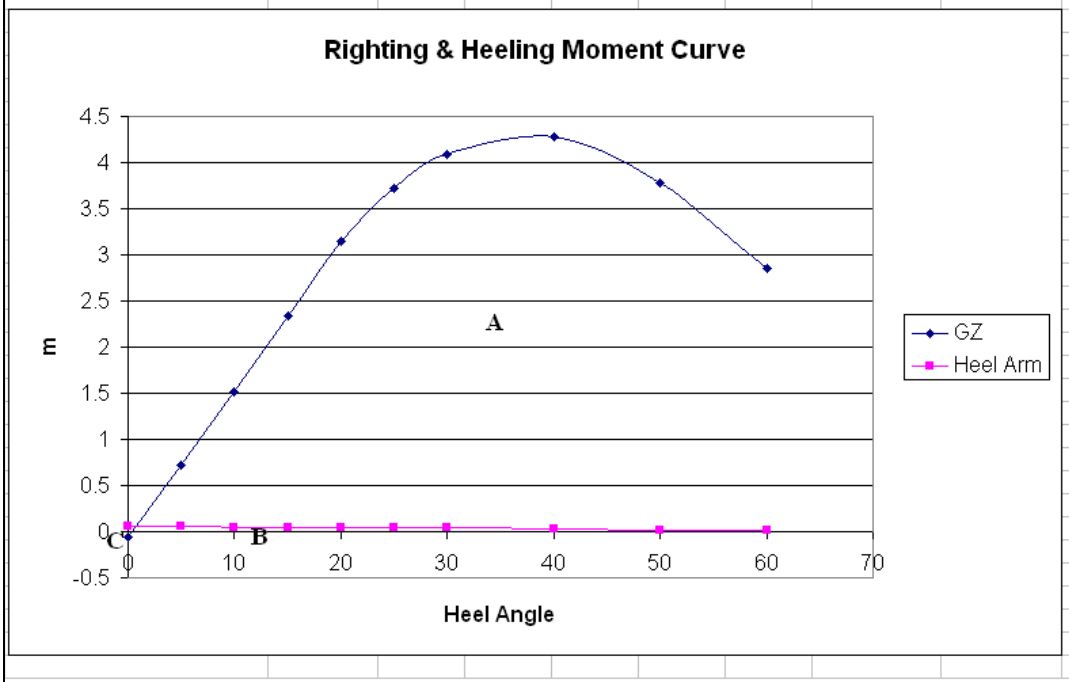
DISPLACEMENT =	289,755	MT		
FWD DRAFT =	19.256	m		
MEAN DRAFT =	19.264	m		
AFT DRAFT =	19.272	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	53600284.75	27.787
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	26566680.3	26.996
Projected Hull Area @ Mean Draft 19.264	Hull	3053.832		23.857	1	1616.751	4937285.039	70232879.67	14.225
							sum =	150399844.7	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.061	0.053
5	0.717	0.053
10	1.509	0.051
15	2.338	0.049
20	3.152	0.047
25	3.726	0.043
30	4.081	0.040
40	4.275	0.031
50	3.774	0.022
60	2.853	0.013

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Max Hog

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	115,439.05	12.728	173.884F	1.666S	191,292
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	3.492	182.807F	18.889P	0
Displacement	178,515.67	14.987	162.413F	0.069P	199,536

Stability Calculation			**Trim Calculation**		
KMt	28.993	m	LCF Draft	12.348	m
VCG	14.987	m	LCB (even keel)	167.253F	m-AP
GMt (Solid)	14.006	m	LCF	162.251F	m-AP
FSc	1.118	m	MT1cm	2,835	m-MT/cm
GMt (Corrected)	12.888	m	Trim	3.048	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	144.90	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	13.978	m	Shear	-8,794.03	MT at 191.505F m-AP
Draft at M.S.	12.454	m	Bending Moment	571,493H	m-MT at 168.260F m-AP
Draft at F.P.	10.930	m	Shear % Allowable	55.00%	at 57.990F m-AP
			Moment % Allowable	100.00%	at 168.260F m-AP
Draft at Aft Marks	13.978	m			
Draft at Mid Marks	12.454	m			
Draft at Fwd Marks	10.930	m			

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Tankage and Cargo Summary
Max Hog

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
1SWCARGO	0.00	0.0	19,891.70	0.000	257.231F	17.224S	0	0.8900	0.00	0.00	----	15.6
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	----	15.6
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	----	15.6
2CCARGO	26,736.26	91.0	29,380.51	13.453	214.725F	0.000S	48,984	0.8900	30,040.74	188,950.58	----	15.6
3SWCARGO	9,195.79	44.0	20,899.52	6.303	168.521F	20.912S	18,474	0.8900	10,332.35	64,988.51	----	15.6
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	----	15.6
3CCARGO	0.00	0.0	29,380.46	0.000	168.285F	0.000P	0	0.8900	0.00	0.00	----	15.6
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	----	15.6
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	----	15.6
5CCARGO	21,244.42	65.0	32,683.72	9.727	73.002F	0.000S	54,862	0.8900	23,870.13	150,138.63	----	15.6
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	----	15.6
Totals	115,439.05	44.1	261,520.93	12.728	173.884F	1.666S	191,292.03	0.8900	129,706.80	815,831.22		

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Tankage and Cargo Summary
Max Hog

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Max Hog

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
Max Hog

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPORT	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPORT	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Tankage and Cargo Summary
Max Hog

CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO\	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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Tankage and Cargo Summary
Max Hog

HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
Max Hog

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Max Hog

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Max Hog

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	1.000	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	3.492	182.807F	18.889P	0.00		

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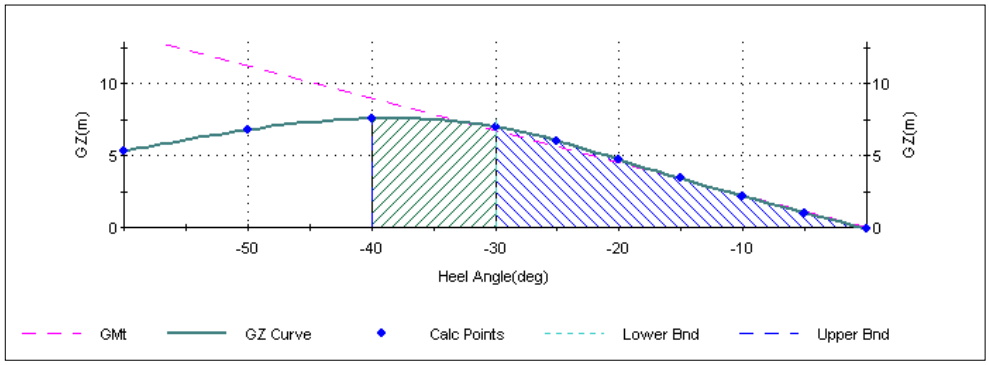
Righting Arm Summary
Max Hog

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.83	0.06
Area to 40. deg	m-rad	3.13	0.09
Area 30. to 40. deg	m-rad	1.30	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	7.594	0.200
Initial GM	m	12.888	0.150

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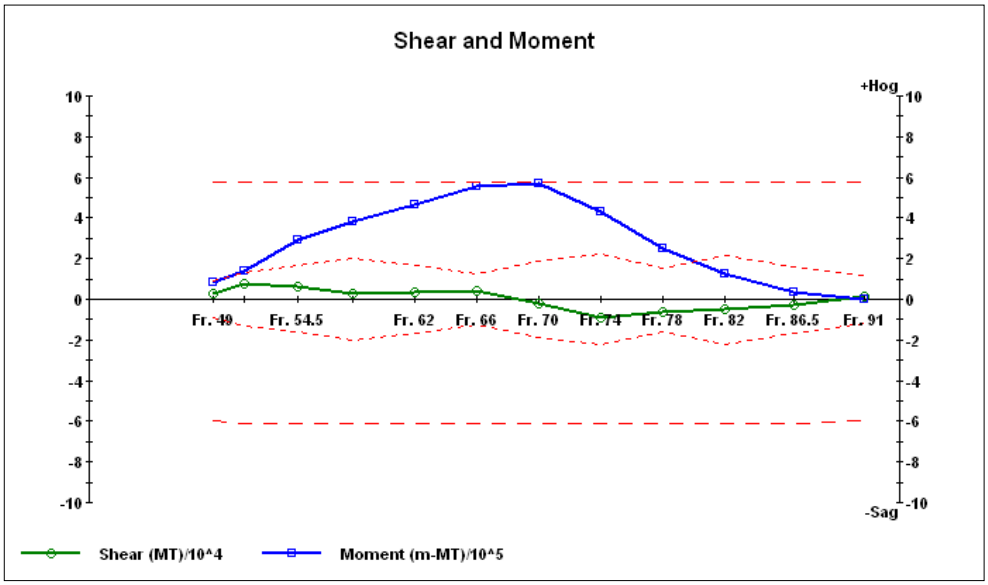
Longitudinal Shear and Bending Moment Summary
Max Hog



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	8,398.75	2,709.81	197,063	111,879	85,185H
Fr. 51	57.990F	21,091.59	13,626.88	7,464.71	380,118	239,291	140,827H
Fr. 54.5	78.310F	32,049.63	25,715.09	6,334.54	925,219	632,769	292,450H
Fr. 58	98.625F	43,041.07	40,256.73	2,784.34	1,685,701	1,300,471	385,229H
Fr. 62	121.850F	61,713.83	58,073.32	3,640.51	2,904,006	2,441,145	462,860H
Fr. 66	145.065F	80,196.89	76,079.02	4,117.87	4,554,278	3,998,888	555,390H
Fr. 70	168.260F	91,917.49	93,898.93	-1,981.44	6,549,100	5,977,607	571,493H
Fr. 74	191.505F	102,680.05	111,474.08	-8,794.03	8,806,397	8,373,944	432,453H
Fr. 78	214.730F	122,548.34	128,652.17	-6,103.83	11,421,731	11,169,471	252,259H
Fr. 82	237.945F	140,331.76	145,336.58	-5,004.82	14,477,644	14,352,655	124,989H
Fr. 86.5	264.070F	160,245.04	163,075.93	-2,830.89	18,417,613	18,384,825	32,788H
Fr. 91	290.190F	176,875.86	175,653.89	1,221.97	22,826,577	22,825,829	748H

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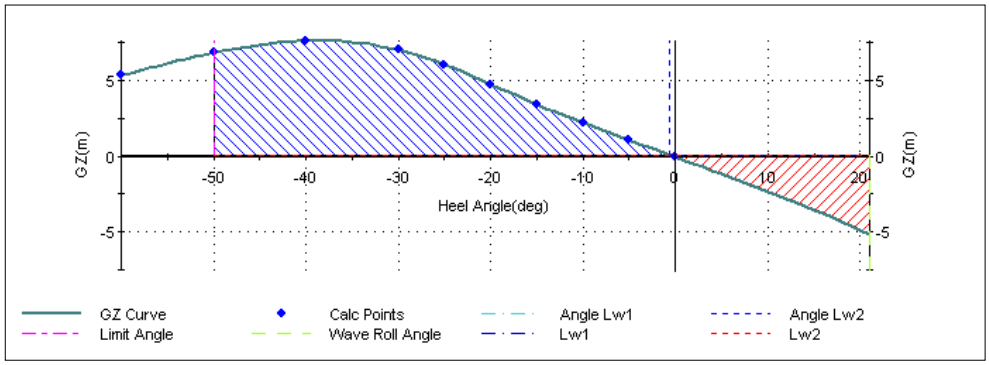
Righting Arm Summary
Max Hog- Weather Critirea

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.90			
Righting Area B	m-rad	4.34			
Area Ratio B/A		4.850	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	12.454		Limiting Angle	deg
Projected Area (Hull)	m2	5,282.93			
Vertical Arm (Hull)	m	21.008		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	178,515.66		X1	
Wind Heeling Lever Lw1	m	0.045		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.067		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Max Hog- Weather Critirea

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.768
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.906
		11.865
Heel from Gusting Wind		0.066
Wind Heeling Lever Lw2	m	21
Heeling Angle at Lw2	deg	

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Max Hog

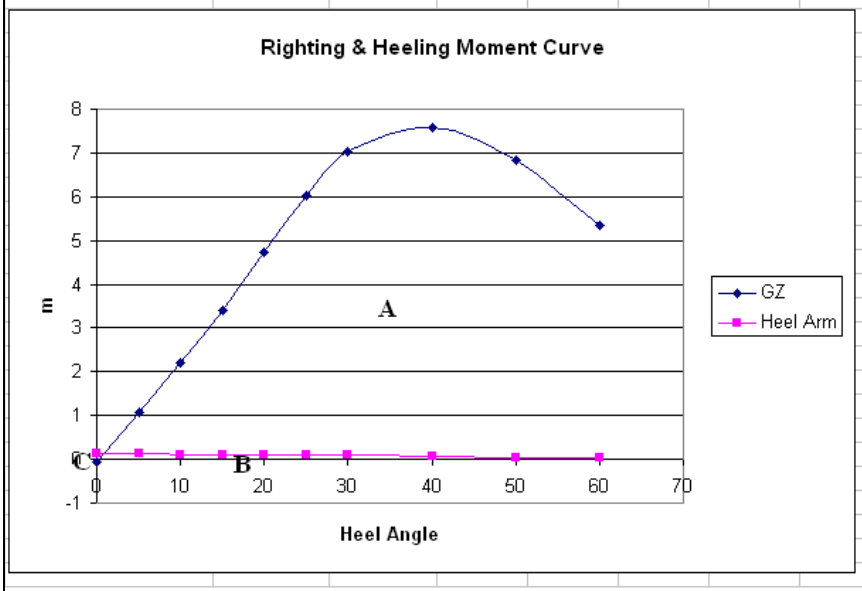
DISPLACEMENT =	178,516	MT		
FWD DRAFT =	10.93	m		
MEAN DRAFT =	12.454	m		
AFT DRAFT =	13.978	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	60307312.86	31.264
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	29988385.27	30.473
Projected Hull Area @ Mean Draft 12.454	Hull	5104.694		20.380	1	1616.751	8253018.974	117399194.9	14.225
							sum =	207694893	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.069	0.119
5	1.058	0.118
10	2.206	0.115
15	3.418	0.111
20	4.737	0.105
25	6.039	0.097
30	7.013	0.089
40	7.579	0.070
50	6.819	0.049
60	5.337	0.030

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Max Sag

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	218,921.13	13.127	162.034F	0.863S	334,606
Fuel Oil	2,041.64	16.858	40.088F	0.010P	2,204
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	3.492	182.807F	18.889P	0
Displacement	281,770.91	14.462	157.518F	0.056P	342,675

Stability Calculation			Trim Calculation		
KMt	25.194	m	LCF Draft	18.785	m
VCG	14.462	m	LCB (even keel)	163.808F	m-AP
GMt (Solid)	10.732	m	LCF	153.466F	m-AP
FSc	1.216	m	MT1cm	3,482	m-MT/cm
GMt (Corrected)	9.516	m	Trim	5.091	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	223.01	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	21.359	m	Shear	14,419.78	MT at 191.505F m-AP
Draft at M.S.	18.814	m	Bending Moment	611,998S	m-MT at 168.260F m-AP
Draft at F.P.	16.269	m	Shear % Allowable	100.00%	at 145.065F m-AP
			Moment % Allowable	100.00%	at 168.260F m-AP
Draft at Aft Marks	21.359	m			
Draft at Mid Marks	18.814	m			
Draft at Fwd Marks	16.269	m			

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Tankage and Cargo Summary
Max Sag

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	14,918.78	75.0	19,891.70	11.441	261.719F	18.642S	17,758	0.8900	16,762.67	105,434.02	---
1CCARGO	18,072.75	60.1	30,071.13	8.904	262.073F	0.000S	44,920	0.8900	20,306.46	127,723.77	---
1PWCARGO	8,092.69	40.0	20,231.74	6.410	260.715F	18.656P	19,385	0.8900	9,092.91	57,192.71	---
2CCARGO	26,442.46	90.0	29,380.51	13.305	214.725F	0.000S	49,001	0.8900	29,710.62	186,874.20	---
3SWCARGO	20,481.53	98.0	20,899.52	14.128	168.628F	20.880S	19,831	0.8900	23,012.96	144,747.13	---
3PWCARGO	18,248.34	97.0	18,812.72	14.023	168.285F	20.050P	13,898	0.8900	20,503.75	128,964.70	---
3CCARGO	28,205.24	96.0	29,380.46	14.191	168.285F	0.000S	46,942	0.8900	31,691.28	199,332.17	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	15,086.58	98.0	15,394.47	15.875	79.707F	20.020S	16,150	0.8900	16,951.22	106,619.95	---
5CCARGO	25,493.30	78.0	32,683.72	11.641	72.943F	0.000S	54,833	0.8900	28,644.16	180,166.35	---
5PWCARGO	15,086.58	98.0	15,394.47	15.875	79.707F	20.020P	16,150	0.8900	16,951.22	106,619.96	---
Totals	218,921.13	83.7	261,520.93	13.127	162.034F	0.863S	334,606.13	0.8900	245,978.80	1,547,160.10	

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Tankage and Cargo Summary
Max Sag

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	418.38	45.0	929.74	13.811	44.737F	16.290S	764	0.9700	431.32	2,712.94	---	15.6
No.1 F.O.T. (P)	418.38	45.0	929.74	13.811	44.737F	16.290P	764	0.9700	431.32	2,712.94	---	15.6
No.2 F.O.T. (S)	561.38	45.0	1,247.52	18.752	36.771F	19.733S	250	0.9700	578.75	3,640.21	---	15.6
No.2 F.O.T. (P)	602.46	45.0	1,338.80	18.996	36.848F	19.658P	413	0.9700	621.09	3,906.55	---	15.6
H.F.O. SETT.T.	22.79	45.0	50.64	21.679	36.430F	18.155S	7	0.9700	23.49	147.76	---	15.6
H.F.O. SERV. T.	18.25	45.0	40.55	21.679	40.480F	18.155S	6	0.9700	18.81	118.31	---	15.6
Totals	2,041.64	45.0	4,536.98	16.858	40.088F	0.010P	2,204.42	0.9700	2,104.79	13,238.70		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Max Sag

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
Max Sag

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST COV	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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Tankage and Cargo Summary
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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Max Sag

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	1.000	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	3.492	182.807F	18.889P	0.00		

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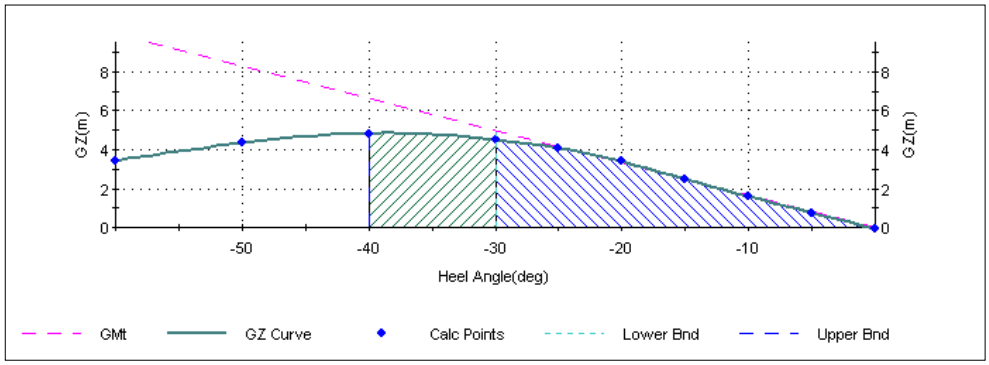
Righting Arm Summary
Max Sag

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.28	0.06
Area to 40. deg	m-rad	2.11	0.09
Area 30. to 40. deg	m-rad	0.83	0.03
Angle at Maximum GZ	deg	39P	>25
Maximum GZ above 30 deg	m	4.842	0.200
Initial GM	m	9.516	0.150

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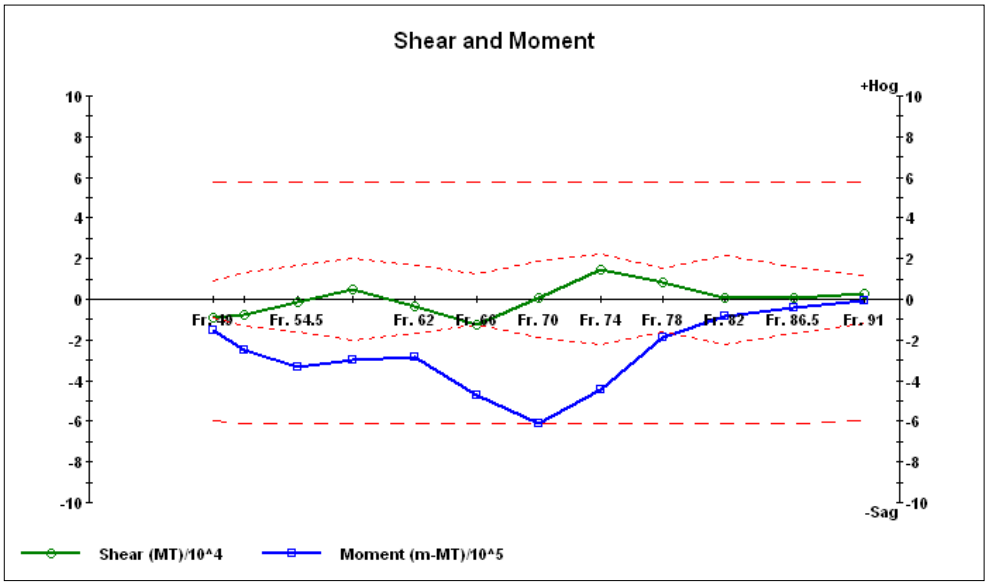
Longitudinal Shear and Bending Moment Summary
Max Sag



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	10,894.90	19,773.48	-8,878.58	195,514	345,997	150,483S
Fr. 51	57.990F	21,789.88	29,188.63	-7,398.75	381,174	629,270	248,096S
Fr. 54.5	78.310F	47,939.94	49,373.61	-1,433.67	1,089,536	1,420,203	330,667S
Fr. 58	98.625F	77,236.28	72,310.05	4,926.23	2,353,486	2,653,766	300,280S
Fr. 62	121.850F	95,909.03	99,612.06	-3,703.03	4,365,974	4,649,512	283,538S
Fr. 66	145.065F	114,392.10	126,887.55	-12,495.46	6,810,089	7,279,578	469,490S
Fr. 70	168.260F	154,794.38	153,761.70	1,032.68	9,930,099	10,542,097	611,998S
Fr. 74	191.505F	194,614.57	180,194.79	14,419.78	13,986,082	14,433,039	446,956S
Fr. 78	214.730F	214,335.93	205,998.59	8,337.34	18,734,889	18,924,919	190,030S
Fr. 82	237.945F	231,972.48	231,068.49	903.99	23,919,946	24,001,522	81,576S
Fr. 86.5	264.070F	258,825.82	257,787.53	1,038.30	30,349,614	30,392,449	42,835S
Fr. 91	290.190F	280,131.09	277,386.06	2,745.04	37,399,485	37,406,495	7,010S

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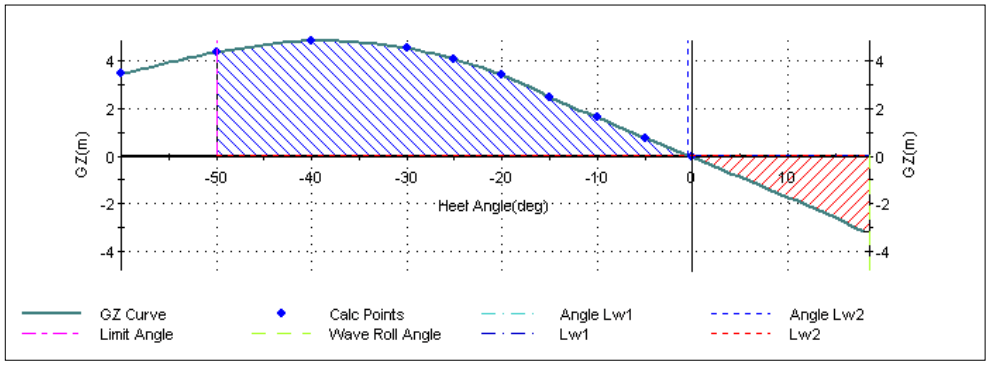
Righting Arm Summary
Max Sag- Weather Critirea

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.52			
Righting Area B	m-rad	2.89			
Area Ratio B/A		5.518	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	18.814		Limiting Angle	deg
Projected Area (Hull)	m2	3,306.45			
Vertical Arm (Hull)	m	24.133		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	281,770.89		X1	
Wind Heeling Lever Lw1	m	0.021		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.032		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Max Sag- Weather Critirea

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.802
Steady Wind Pressure	bar	0.987
Displacement	MT	0.862
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.630
		12.196
Heel from Gusting Wind		0.064
Wind Heeling Lever Lw2	m	19
Heeling Angle at Lw2	deg	

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Max Sag

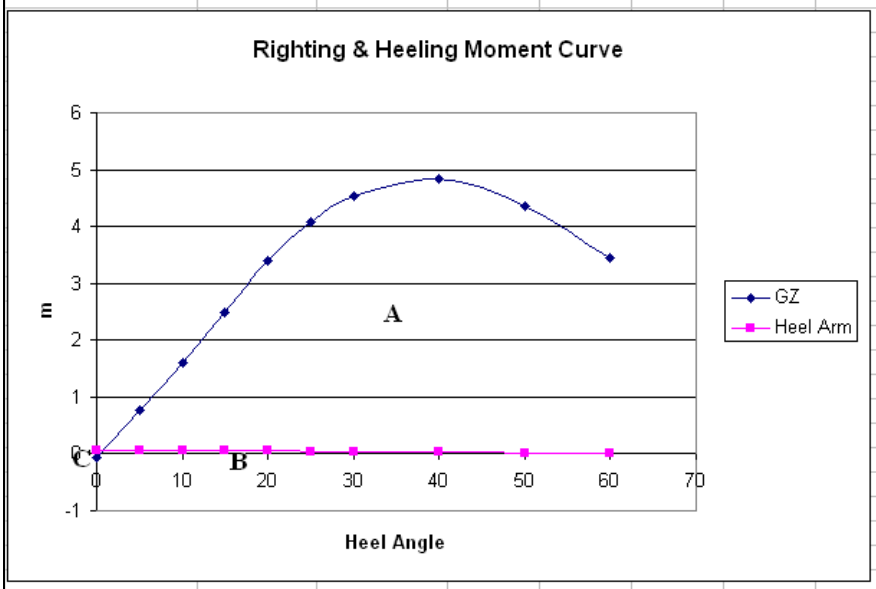
DISPLACEMENT =	281,771	MT		
FWD DRAFT =	16.269	m		
MEAN DRAFT =	18.814	m		
AFT DRAFT =	21.359	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	54034302.96	28.012
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	26788102.1	27.221
Projected Hull Area @ Mean Draft 18.814	Hull	3139.8345		23.632	1	1616.751	5076330.472	72210800.97	14.225
							sum =	153033206	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.056	0.055
5	0.77	0.055
10	1.612	0.054
15	2.491	0.052
20	3.405	0.049
25	4.086	0.045
30	4.532	0.042
40	4.836	0.032
50	4.365	0.023
60	3.446	0.014

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Max VSF

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	169,654.95	13.595	170.393F	2.606S	237,950
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	12,129.99	7.471	122.190F	20.833P	22,790
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	3.492	182.807F	18.889P	0
Displacement	244,861.55	14.715	160.542F	0.062P	268,984

Stability Calculation			Trim Calculation		
KMt	25.851	m	LCF Draft	16.535	m
VCG	14.715	m	LCB (even keel)	165.148F	m-AP
GMt (Solid)	11.136	m	LCF	156.465F	m-AP
FSc	1.099	m	MT1cm	3,252	m-MT/cm
GMt (Corrected)	10.037	m	Trim	3.469	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	191.03	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	18.323	m	Shear	22,497.03	MT at 191.505F m-AP
Draft at M.S.	16.588	m	Bending Moment	326,226S	m-MT at 168.260F m-AP
Draft at F.P.	14.854	m	Shear % Allowable	100.00%	at 191.505F m-AP
			Moment % Allowable	57.00%	at 214.730F m-AP
Draft at Aft Marks	18.323	m			
Draft at Mid Marks	16.588	m			
Draft at Fwd Marks	14.854	m			

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Tankage and Cargo Summary
Max VSF

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	19,493.87	98.0	19,891.70	14.701	261.986F	18.704S	19,658	0.8900	21,903.22	137,767.12	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	---
2CCARGO	0.00	0.0	29,380.51	0.000	214.725F	0.000S	0	0.8900	0.00	0.00	---
3SWCARGO	20,481.53	98.0	20,899.52	14.128	168.628F	20.880S	19,831	0.8900	23,012.96	144,747.13	---
3PWCARGO	18,436.46	98.0	18,812.72	14.168	168.285F	20.050P	13,898	0.8900	20,715.13	130,294.24	---
3CCARGO	26,442.41	90.0	29,380.46	13.304	168.285F	0.000S	49,001	0.8900	29,710.58	186,873.91	---
4CCARGO	20,683.86	70.4	29,380.49	10.408	121.845F	0.000S	49,001	0.8900	23,240.30	146,177.07	---
5SWCARGO	1,847.34	12.0	15,394.47	3.269	82.494F	17.555S	7,972	0.8900	2,075.66	13,055.50	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	769.72	5.0	15,394.47	1.734	83.725F	16.674P	4,996	0.8900	864.86	5,439.79	---
Totals	169,654.95	64.9	261,520.93	13.595	170.393F	2.606S	237,949.92	0.8900	190,623.54	1,198,986.00	

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Tankage and Cargo Summary
Max VSF

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Max VSF

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	12,129.99	50.0	24,259.98	7.471	122.190F	20.833P	22,790	1.0250	11,834.14
Totals	12,129.99	24.9	48,782.89	7.471	122.190F	20.833P	22,790.10	1.0250	11,834.14

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
Max VSF

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPORT	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPORT	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO\	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Max VSF

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	1.000	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	3.492	182.807F	18.889P	0.00		

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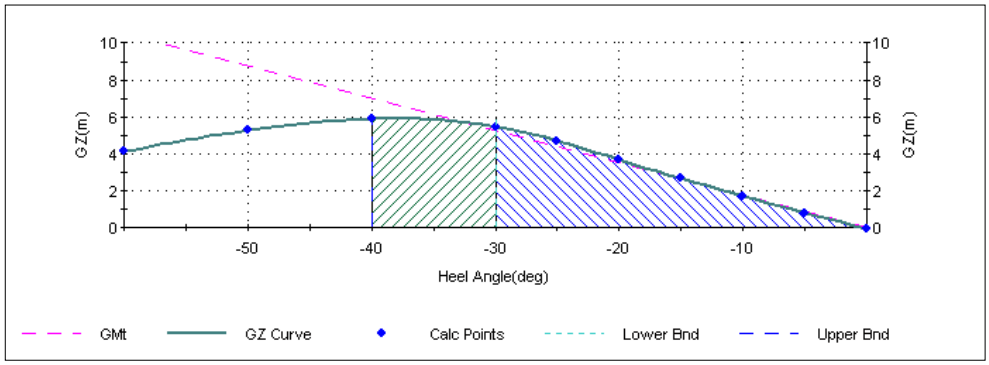
Righting Arm Summary
Max VSF

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.42	0.06
Area to 40. deg	m-rad	2.43	0.09
Area 30. to 40. deg	m-rad	1.01	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	5.893	0.200
Initial GM	m	10.037	0.150

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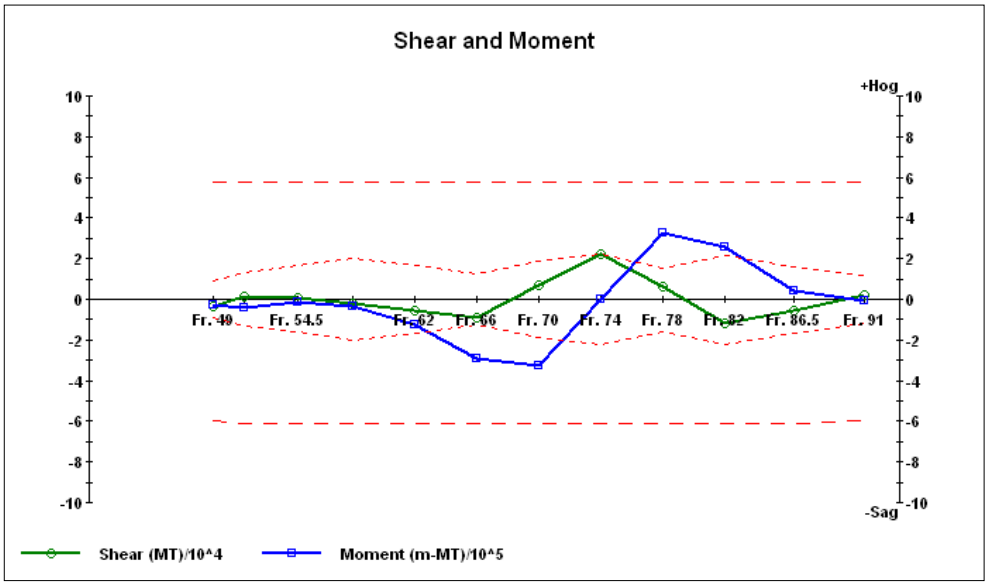
Longitudinal Shear and Bending Moment Summary
Max VSF



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	14,370.11	-3,261.54	197,063	226,642	29,579S
Fr. 51	57.990F	23,440.13	22,060.22	1,379.91	393,399	437,320	43,921S
Fr. 54.5	78.310F	39,486.72	39,054.09	432.63	1,036,434	1,051,137	14,703S
Fr. 58	98.625F	56,443.76	58,808.01	-2,364.25	2,007,109	2,042,566	35,457S
Fr. 62	121.850F	76,992.13	82,619.97	-5,627.84	3,557,948	3,683,843	125,895S
Fr. 66	145.065F	97,620.56	106,580.24	-8,959.68	5,587,286	5,880,626	293,341S
Fr. 70	168.260F	137,236.34	130,312.89	6,923.44	8,309,158	8,635,384	326,226S
Fr. 74	191.505F	176,268.33	153,771.30	22,497.03	11,947,844	11,946,427	1,417H
Fr. 78	214.730F	182,765.61	176,779.26	5,986.35	16,116,995	15,791,898	325,096H
Fr. 82	237.945F	187,183.79	199,234.34	-12,050.55	20,415,715	20,159,467	256,248H
Fr. 86.5	264.070F	218,009.89	223,276.79	-5,266.90	25,727,315	25,682,959	44,356H
Fr. 91	290.190F	243,221.75	240,886.13	2,335.63	31,762,236	31,767,257	5,020S

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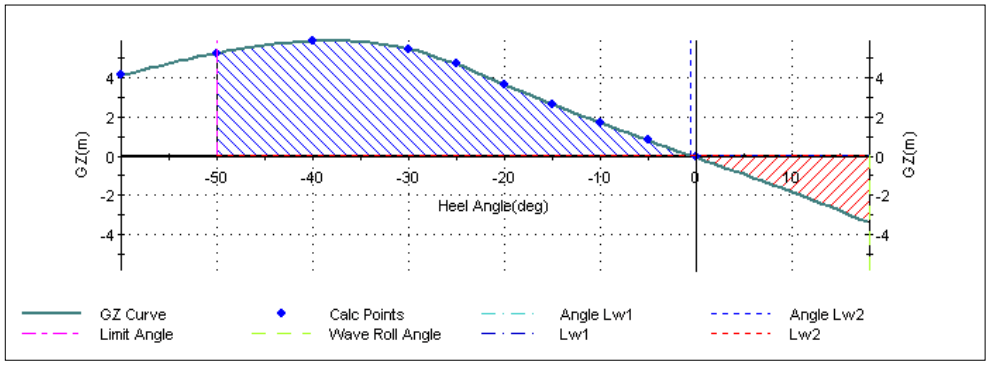
Righting Arm Summary
Max VSF - Weather Critirea

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.50			
Righting Area B	m-rad	3.38			
Area Ratio B/A		6.742	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	16.588		Limiting Angle	deg
Projected Area (Hull)	m2	4,000.64			
Vertical Arm (Hull)	m	23.070		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	244,861.55		X1	
Wind Heeling Lever Lw1	m	0.027		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.041		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Max VSF - Weather Critirea

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.791
Steady Wind Pressure	bar	0.987
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.702
		12.247
Heel from Gusting Wind		0.064
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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Max VSF

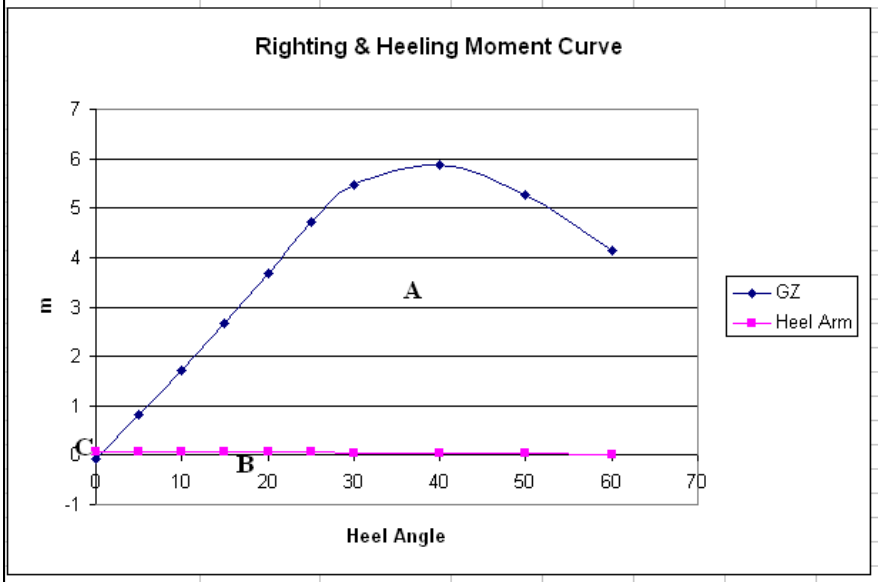
DISPLACEMENT =	244,862	MT		
FWD DRAFT =	14.854	m		
MEAN DRAFT =	16.588	m		
AFT DRAFT =	18.323	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	56181246.4	29.125
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27883402	28.334
Projected Hull Area @ Mean Draft 16.588	Hull	3707.985		22.519	1	1616.751	5994888.344	85277286.7	14.225
							sum =	169341935	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.062	0.070
5	0.811	0.070
10	1.713	0.068
15	2.662	0.066
20	3.676	0.062
25	4.705	0.058
30	5.476	0.053
40	5.871	0.041
50	5.27	0.029
60	4.134	0.018

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 1C

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	135,124.97	11.538	173.153F	1.469S	245,377
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	198,201.59	14.278	163.054F	0.032P	253,620

Stability Calculation			**Trim Calculation**		
KMt	27.730	m	LCF Draft	13.609	m
VCG	14.278	m	LCB (even keel)	166.687F	m-AP
GMt (Solid)	13.452	m	LCF	160.731F	m-AP
FSc	1.280	m	MT1cm	2,951	m-MT/cm
GMt (Corrected)	12.172	m	Trim	2.440	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	154.85	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	14.902	m	Shear	-12,264.07	MT at 145.065F m-AP
Draft at M.S.	13.682	m	Bending Moment	509,649S	m-MT at 168.260F m-AP
Draft at F.P.	12.462	m	Shear % Allowable	98.00%	at 145.065F m-AP
			Moment % Allowable	83.00%	at 168.260F m-AP
Draft at Aft Marks	14.902	m			
Draft at Mid Marks	13.682	m			
Draft at Fwd Marks	12.462	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1C

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
1SWCARGO	10,940.44	55.0	19,891.70	8.558	261.375F	18.593S	17,718	0.8900	12,292.62	77,318.28	----	15.6
1CCARGO	0.00	0.0	30,071.13	0.000	262.073F	0.000P	0	0.8900	0.00	0.00	----	15.6
1PWCARGO	10,925.14	54.0	20,231.74	8.470	261.080F	18.748P	19,412	0.8900	12,275.43	77,210.16	----	15.6
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	----	15.6
3SWCARGO	11,912.73	57.0	20,899.52	8.183	168.581F	20.892S	18,474	0.8900	13,385.09	84,189.66	----	15.6
3PWCARGO	2,445.65	13.0	18,812.72	1.880	168.285F	20.050P	13,898	0.8900	2,747.93	17,283.93	----	15.6
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	----	15.6
4CCARGO	24,973.42	85.0	29,380.49	12.567	121.845F	0.000S	49,001	0.8900	28,060.02	176,492.20	----	15.6
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	----	15.6
5CCARGO	16,341.86	50.0	32,683.72	7.512	73.107F	0.000S	55,236	0.8900	18,361.64	115,491.25	----	15.6
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	----	15.6
Totals	135,124.98	51.7	261,520.93	11.538	173.153F	1.469S	245,376.66	0.8900	151,825.82	954,955.65		

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1C

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1C

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST COV	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1C

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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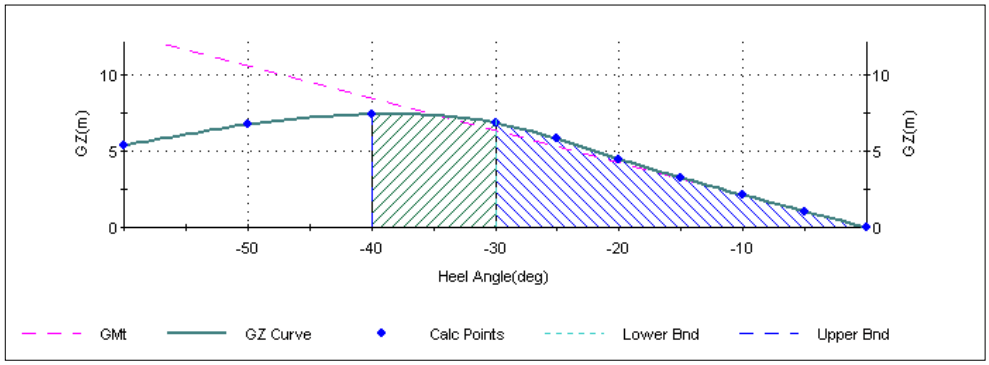
Righting Arm Summary
Tank Inspection - C.O.T. 1C

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.75	0.06
Area to 40. deg	m-rad	3.03	0.09
Area 30. to 40. deg	m-rad	1.27	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	7.441	0.200
Initial GM	m	12.172	0.150

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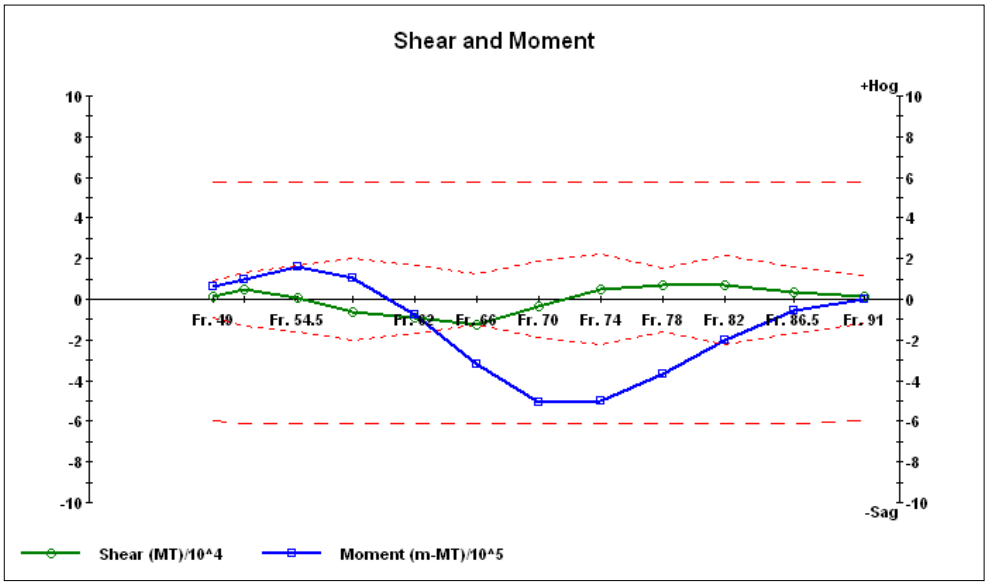
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 1C



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	9,548.93	1,559.63	197,063	131,452	65,611H
Fr. 51	57.990F	20,023.92	15,349.18	4,674.74	374,080	275,431	98,649H
Fr. 54.5	78.310F	29,064.08	28,648.80	415.28	877,999	715,857	162,142H
Fr. 58	98.625F	38,138.52	44,553.89	-6,415.38	1,558,357	1,456,837	101,520H
Fr. 62	121.850F	54,901.13	64,018.96	-9,117.84	2,640,619	2,716,339	75,720S
Fr. 66	145.065F	71,474.87	83,738.94	-12,264.07	4,110,572	4,431,882	321,310S
Fr. 70	168.260F	100,110.98	103,337.61	-3,226.63	6,099,095	6,608,744	509,649S
Fr. 74	191.505F	127,913.47	122,759.52	5,153.94	8,744,725	9,245,752	501,026S
Fr. 78	214.730F	148,810.30	141,844.86	6,965.44	11,958,049	12,325,338	367,289S
Fr. 82	237.945F	167,621.82	160,494.75	7,127.07	15,635,567	15,837,498	201,931S
Fr. 86.5	264.070F	183,828.00	180,472.21	3,355.78	20,240,480	20,295,021	54,541S
Fr. 91	290.190F	196,561.79	194,910.47	1,651.32	25,214,951	25,216,454	1,504S

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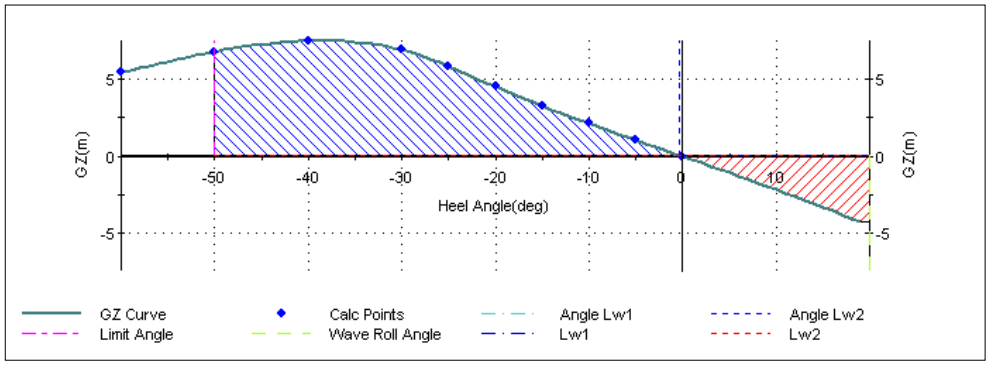
Righting Arm Summary
Tank Inspection - C.O.T. 1C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.77			
Righting Area B	m-rad	4.23			
Area Ratio B/A		5.493	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	13.682		Limiting Angle	deg
Projected Area (Hull)	m2	4,904.35			
Vertical Arm (Hull)	m	21.629		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	198,201.59		X1	
Wind Heeling Lever Lw1	m	0.038		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.057		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Righting Arm Summary
Tank Inspection - C.O.T. 1C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.776
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.812
		11.810
Heel from Gusting Wind		0.066
Wind Heeling Lever Lw2	m	20
Heeling Angle at Lw2	deg	

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Tank Inspection - C.O.T. 1C

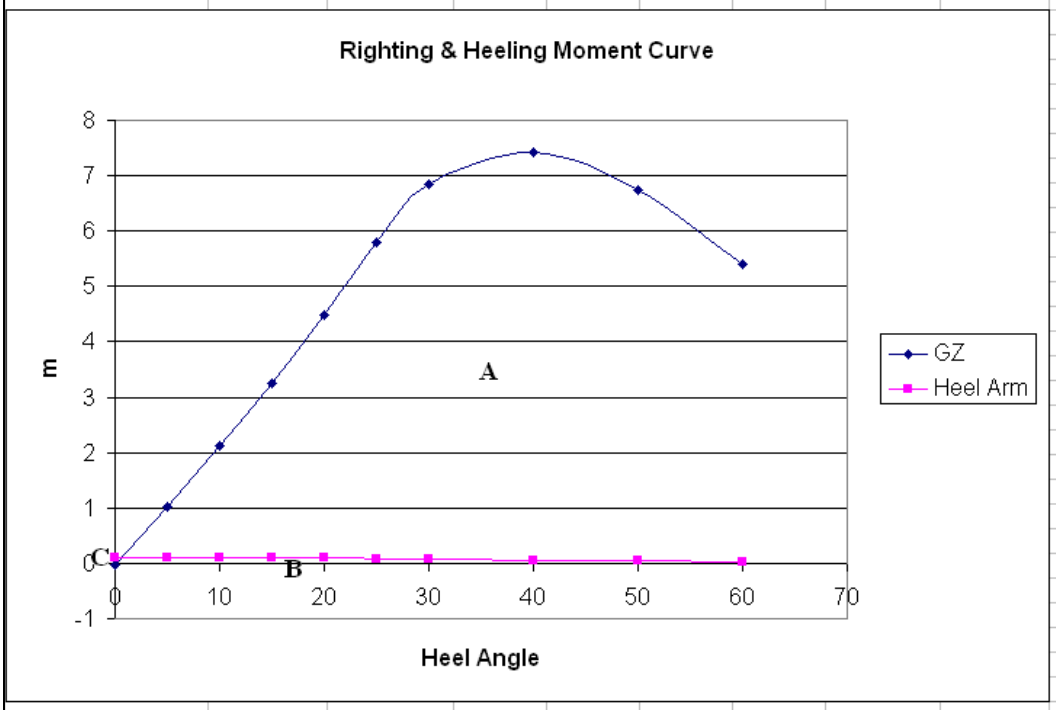
DISPLACEMENT =	198,202	MT		
FWD DRAFT =	12.462	m		
MEAN DRAFT =	13.682	m		
AFT DRAFT =	14.902	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	58984039.6	30.578
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	29313294.8	29.787
Projected Hull Area @ Mean Draft 13.682	Hull	4823.7695		20.969	1	1616.751	7798834.016	110181927	14.128
							sum =	198479261	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.032	0.102
5	1.028	0.101
10	2.11	0.099
15	3.245	0.095
20	4.476	0.090
25	5.805	0.084
30	6.857	0.077
40	7.424	0.060
50	6.745	0.042
60	5.398	0.026

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 2C

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	149,638.84	12.276	173.212F	1.279S	229,134
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	212,715.45	14.610	163.785F	0.063P	237,378

Stability Calculation			**Trim Calculation**		
KMt	26.954	m	LCF Draft	14.530	m
VCG	14.610	m	LCB (even keel)	166.241F	m-AP
GMt (Solid)	12.344	m	LCF	159.442F	m-AP
FSc	1.116	m	MT1cm	3,039	m-MT/cm
GMt (Corrected)	11.228	m	Trim	1.719	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	160.64	%
Hull calcs from tables			Tank calcs from tables		

Drafts			**Strength Calculations**		
Draft at A.P.	15.433	m	Shear	-14,922.22	MT at 237.945F m-AP
Draft at M.S.	14.574	m	Bending Moment	477,386H	m-MT at 214.730F m-AP
Draft at F.P.	13.714	m	Shear % Allowable	68.00%	at 237.945F m-AP
			Moment % Allowable	83.00%	at 214.730F m-AP
Draft at Aft Marks	15.433	m			
Draft at Mid Marks	14.574	m			
Draft at Fwd Marks	13.714	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 2C

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	8,951.27	45.0	19,891.70	7.090	261.104F	18.553S	17,712	0.8900	10,057.60	63,260.41	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	9,104.28	45.0	20,231.74	7.153	260.868F	18.695P	19,407	0.8900	10,229.53	64,341.80	---
2CCARGO	0.00	0.0	29,380.51	0.000	214.725F	0.000S	0	0.8900	0.00	0.00	---
3SWCARGO	14,420.67	69.0	20,899.52	9.922	168.617F	20.879S	18,474	0.8900	16,203.00	101,913.80	---
3PWCARGO	5,267.56	28.0	18,812.72	4.048	168.285F	20.050P	13,898	0.8900	5,918.61	37,226.92	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	---
5CCARGO	24,839.63	76.0	32,683.72	11.347	72.951F	0.000S	54,835	0.8900	27,909.70	175,546.70	---
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	---
Totals	149,638.84	57.2	261,520.93	12.276	173.212F	1.279S	229,134.49	0.8900	168,133.53	1,057,528.07	

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 2C

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 2C

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 2C

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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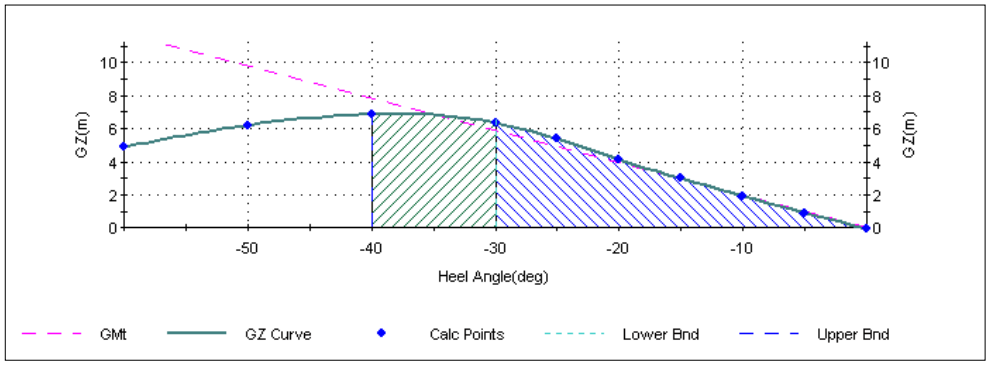
Righting Arm Summary
Tank Inspection - C.O.T. 2C

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.62	0.06
Area to 40. deg	m-rad	2.80	0.09
Area 30. to 40. deg	m-rad	1.18	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	6.902	0.200
Initial GM	m	11.228	0.150

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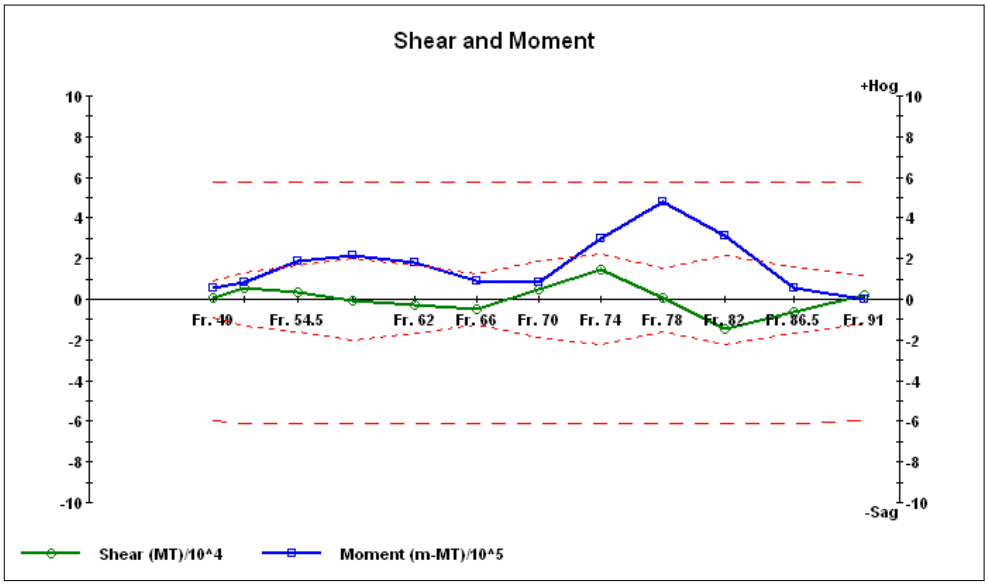
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 2C



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	10,308.52	800.04	197,063	144,469	52,594H
Fr. 51	57.990F	21,874.41	16,487.35	5,387.06	384,545	299,389	85,155H
Fr. 54.5	78.310F	34,238.85	30,597.21	3,641.64	959,842	770,920	188,922H
Fr. 58	98.625F	46,636.28	47,429.45	-793.17	1,779,079	1,560,753	218,326H
Fr. 62	121.850F	65,309.04	68,040.49	-2,731.45	3,080,883	2,900,207	180,675H
Fr. 66	145.065F	83,792.10	88,983.62	-5,191.52	4,814,618	4,723,157	91,462H
Fr. 70	168.260F	115,049.60	109,882.43	5,167.17	7,119,084	7,036,575	82,509H
Fr. 74	191.505F	145,560.55	130,684.03	14,876.51	10,143,284	9,841,549	301,735H
Fr. 78	214.730F	152,057.83	151,222.88	834.95	13,599,246	13,121,860	477,386H
Fr. 82	237.945F	156,476.00	171,398.22	-14,922.22	17,185,085	16,869,303	315,782H
Fr. 86.5	264.070F	187,015.80	193,143.87	-6,128.07	21,692,590	21,634,794	57,796H
Fr. 91	290.190F	211,075.65	209,079.39	1,996.26	26,904,784	26,908,103	3,319S

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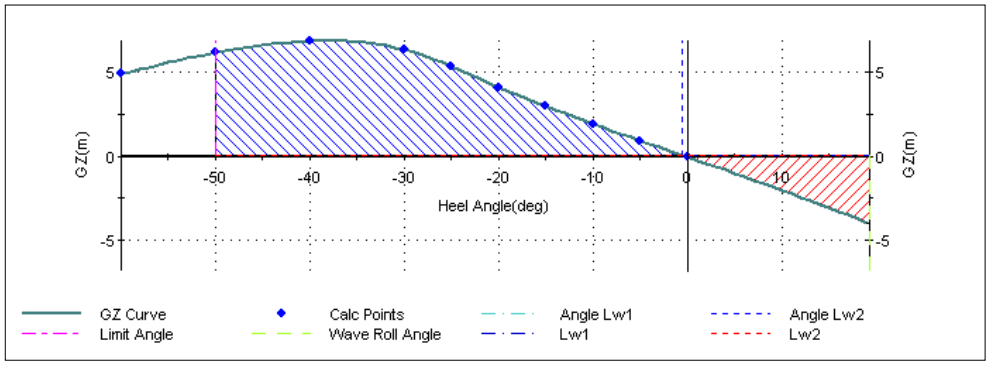
Righting Arm Summary
Tank Inspection - C.O.T. 2C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.63			
Righting Area B	m-rad	3.91			
Area Ratio B/A		6.182	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	14.574		Limiting Angle	deg
Projected Area (Hull)	m2	4,629.30			
Vertical Arm (Hull)	m	22.082		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	212,715.45		X1	
Wind Heeling Lever Lw1	m	0.034		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.052		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Tank Inspection - C.O.T. 2C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.782
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.777
		12.075
Heel from Gusting Wind		0.065
Wind Heeling Lever Lw2	m	19
Heeling Angle at Lw2	deg	

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Tank Inspection - C.O.T. 2C

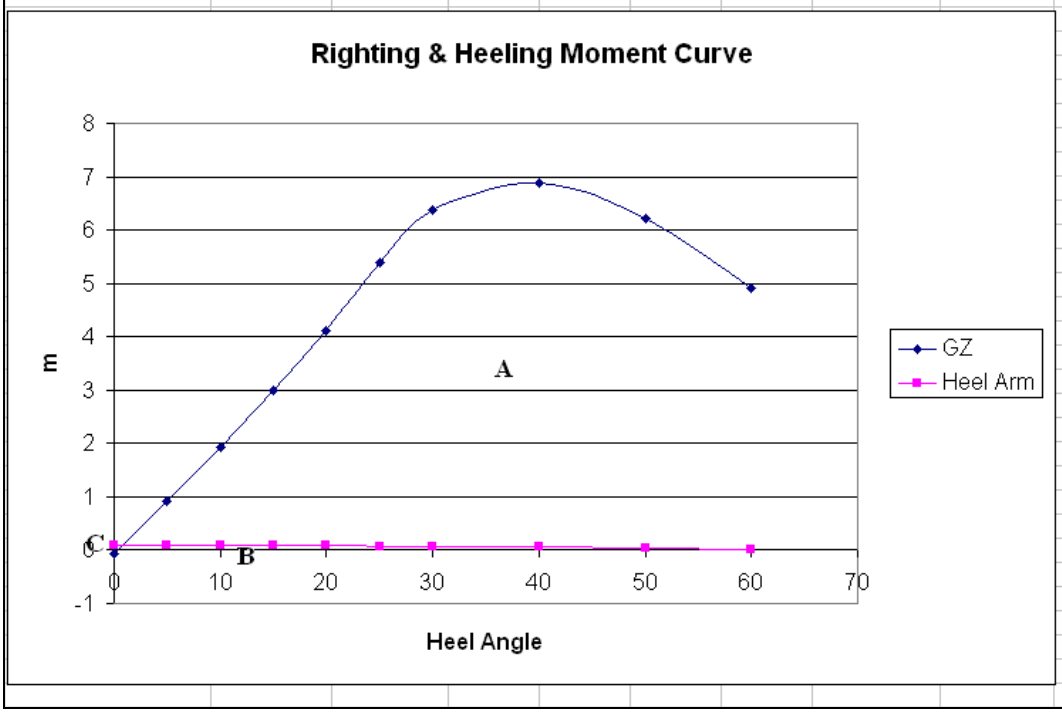
DISPLACEMENT =	212,715	MT		
FWD DRAFT =	13.714	m		
MEAN DRAFT =	14.574	m		
AFT DRAFT =	15.433	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	58123719	30.132
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	28874387.6	29.341
Projected Hull Area @ Mean Draft 14.574	Hull	4550.9605		21.512	1	1616.751	7357769.801	104664275	14.225
							sum =	191662382	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.063	0.092
5	0.917	0.091
10	1.926	0.089
15	2.985	0.086
20	4.125	0.081
25	5.38	0.075
30	6.381	0.069
40	6.876	0.054
50	6.207	0.038
60	4.916	0.023

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 3C

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	139,307.53	12.342	177.832F	1.451S	209,698
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	202,384.16	14.775	166.483F	0.013P	217,942

Stability Calculation			Trim Calculation		
KMt	27.472	m	LCF Draft	13.877	m
VCG	14.775	m	LCB (even keel)	166.564F	m-AP
GMt (Solid)	12.698	m	LCF	160.376F	m-AP
FSc	1.077	m	MT1cm	2,975	m-MT/cm
GMt (Corrected)	11.621	m	Trim	0.055	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	144.71	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	13.906	m	Shear	7,345.91	MT at 57.990F m-AP
Draft at M.S.	13.878	m	Bending Moment	458,364H	m-MT at 145.065F m-AP
Draft at F.P.	13.851	m	Shear % Allowable	54.00%	at 57.990F m-AP
			Moment % Allowable	80.00%	at 145.065F m-AP
Draft at Aft Marks	13.906	m			
Draft at Mid Marks	13.878	m			
Draft at Fwd Marks	13.851	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3C

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
1SWCARGO	8,354.51	42.0	19,891.70	6.643	260.996F	18.538S	17,709	0.8900	9,387.10	59,043.05	----	15.6
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	----	15.6
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	----	15.6
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	----	15.6
3SWCARGO	11,285.74	54.0	20,899.52	7.749	168.570F	20.895S	18,474	0.8900	12,680.61	79,758.63	----	15.6
3PWCARGO	9,406.36	50.0	18,812.72	7.228	168.285F	20.050P	13,898	0.8900	10,568.94	66,476.65	----	15.6
3CCARGO	0.00	0.0	29,380.46	0.000	168.285F	0.000P	0	0.8900	0.00	0.00	----	15.6
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	----	15.6
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	----	15.6
5CCARGO	23,205.44	71.0	32,683.72	10.611	72.972F	0.000S	54,844	0.8900	26,073.53	163,997.58	----	15.6
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	----	15.6
Totals	139,307.54	53.3	261,520.93	12.342	177.832F	1.451S	209,698.28	0.8900	156,525.32	984,514.65		

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Tankage and Cargo Summary
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Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3C

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3C

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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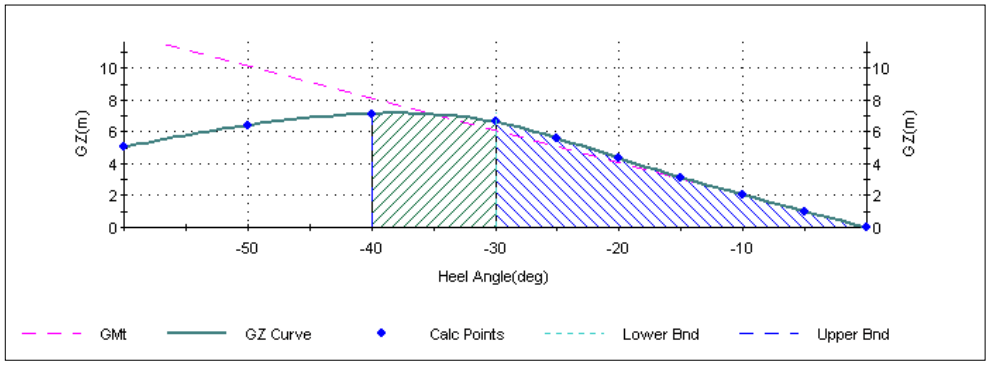
Righting Arm Summary
Tank Inspection - C.O.T. 3C

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.69	0.06
Area to 40. deg	m-rad	2.92	0.09
Area 30. to 40. deg	m-rad	1.23	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	7.157	0.200
Initial GM	m	11.621	0.150

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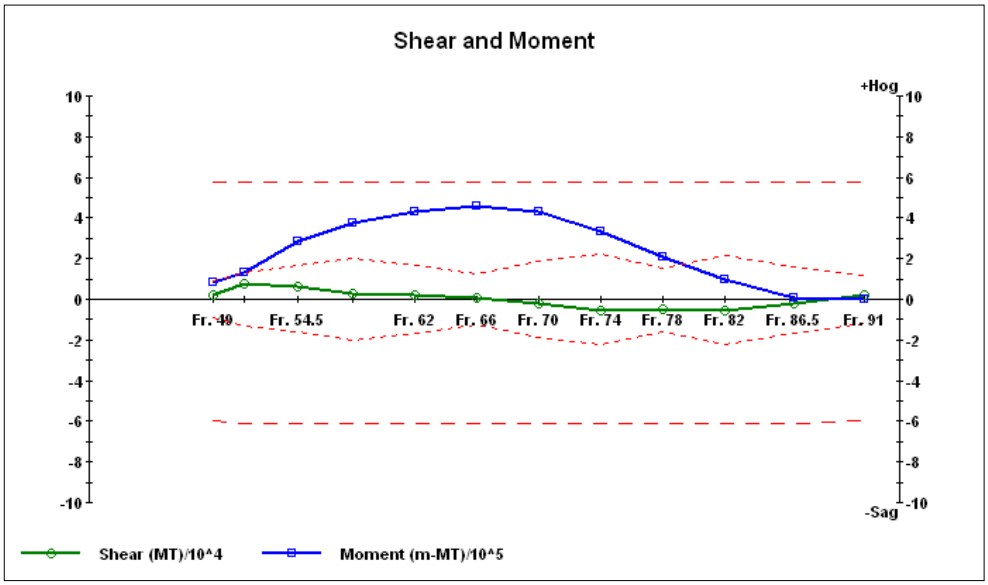
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 3C



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	8,682.20	2,426.36	197,063	115,119	81,944H
Fr. 51	57.990F	21,518.55	14,172.64	7,345.91	382,532	247,240	135,292H
Fr. 54.5	78.310F	33,243.72	26,979.24	6,264.48	944,103	658,556	285,547H
Fr. 58	98.625F	45,002.10	42,541.62	2,460.48	1,736,633	1,361,831	374,802H
Fr. 62	121.850F	63,674.85	61,845.71	1,829.14	3,000,483	2,572,231	428,252H
Fr. 66	145.065F	82,157.92	81,659.52	498.40	4,696,281	4,237,917	458,364H
Fr. 70	168.260F	99,586.59	101,607.13	-2,020.54	6,802,657	6,370,084	432,573H
Fr. 74	191.505F	116,137.38	121,633.41	-5,496.03	9,305,364	8,973,352	332,012H
Fr. 78	214.730F	137,034.21	141,575.71	-4,541.50	12,245,188	12,036,200	208,988H
Fr. 82	237.945F	155,845.73	161,332.97	-5,487.23	15,649,325	15,554,487	94,837H
Fr. 86.5	264.070F	180,673.32	182,824.76	-2,151.44	20,061,997	20,053,198	8,800H
Fr. 91	290.190F	200,744.35	198,726.57	2,017.78	25,052,684	25,056,126	3,443S

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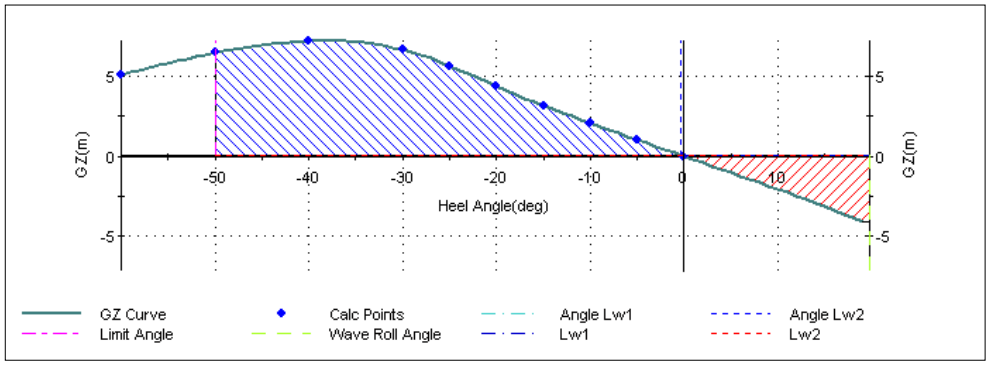
Righting Arm Summary
Tank Inspection - C.O.T. 3C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.74			
Righting Area B	m-rad	4.07			
Area Ratio B/A		5.463	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	13.878		Limiting Angle	deg
Projected Area (Hull)	m2	4,847.27			
Vertical Arm (Hull)	m	21.737		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	202,384.15		X1	
Wind Heeling Lever Lw1	m	0.037		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.056		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Righting Arm Summary
Tank Inspection - C.O.T. 3C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.781
Steady Wind Pressure	bar	0.986
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.815
		12.037
Heel from Gusting Wind		0.065
Wind Heeling Lever Lw2	m	20
Heeling Angle at Lw2	deg	

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Tank Inspection 3C

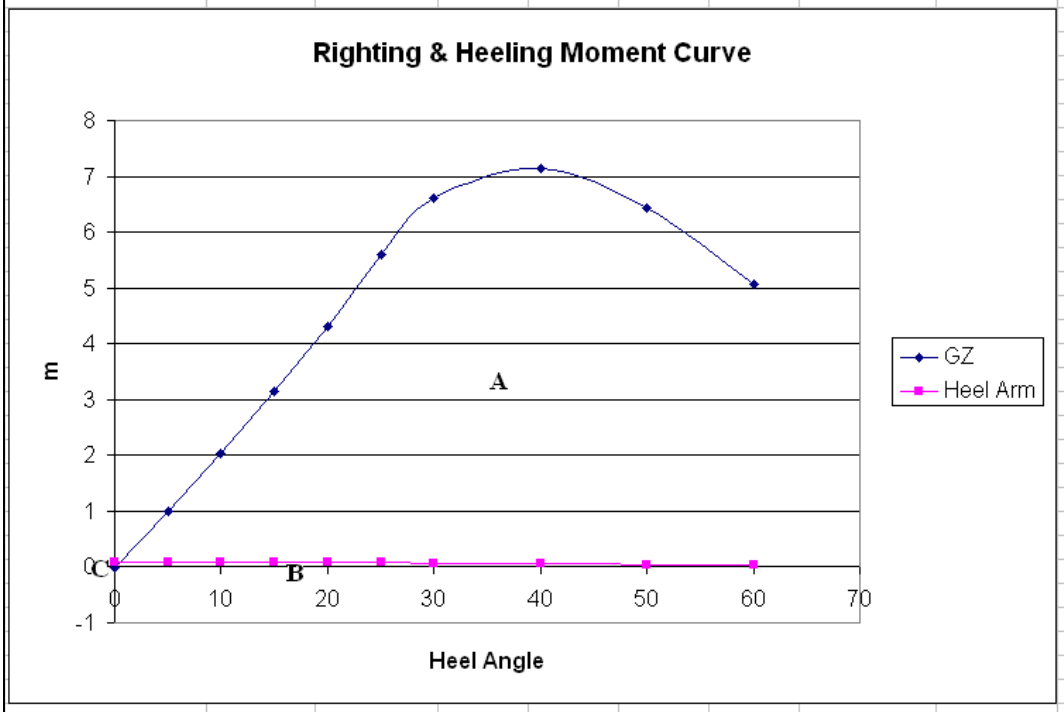
DISPLACEMENT =	202,384	MT		
FWD DRAFT =	13.851	m		
MEAN DRAFT =	13.878	m		
AFT DRAFT =	13.906	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	58936779.8	30.5535
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	29289184.41	29.7625
Projected Hull Area @ Mean Draft 13.878	Hull	4778.8145		20.597	1	1616.751	7726152.976	106087806.5	13.731
							sum =	194313770.7	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.013	0.098
5	1.002	0.097
10	2.042	0.095
15	3.134	0.091
20	4.317	0.086
25	5.604	0.080
30	6.621	0.073
40	7.13	0.057
50	6.42	0.040
60	5.061	0.024

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 4C

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	141,742.97	11.739	172.226F	1.125S	303,721
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	18,054.93	5.501	171.249F	1.369S	45,444
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	222,874.50	13.614	163.428F	0.092P	357,410

Stability Calculation			**Trim Calculation**		
KMt	26.543	m	LCF Draft	15.168	m
VCG	13.614	m	LCB (even keel)	165.906F	m-AP
GMt (Solid)	12.930	m	LCF	158.475F	m-AP
FSc	1.604	m	MT1cm	3,107	m-MT/cm
GMt (Corrected)	11.326	m	Trim	1.777	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	167.67	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	16.096	m	Shear	14,106.32	MT at 98.625F m-AP
Draft at M.S.	15.208	m	Bending Moment	544,010H	m-MT at 121.850F m-AP
Draft at F.P.	14.319	m	Shear % Allowable	99.00%	at 145.065F m-AP
			Moment % Allowable	95.00%	at 121.850F m-AP
Draft at Aft Marks	16.096	m			
Draft at Mid Marks	15.208	m			
Draft at Fwd Marks	14.319	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 4C

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	19,493.87	98.0	19,891.70	14.701	261.986F	18.704S	19,658	0.8900	21,903.22	137,767.12	---
1CCARGO	9,021.34	30.0	30,071.13	4.444	262.073F	0.000S	44,920	0.8900	10,136.33	63,755.63	---
1PWCARGO	16,185.39	80.0	20,231.74	12.192	261.455F	18.836P	19,468	0.8900	18,185.83	114,385.43	---
2CCARGO	4,994.69	17.0	29,380.51	2.513	214.725F	0.000P	49,001	0.8900	5,612.01	35,298.46	---
3SWCARGO	20,481.53	98.0	20,899.52	14.128	168.628F	20.880S	19,831	0.8900	23,012.96	144,747.13	---
3PWCARGO	18,436.46	98.0	18,812.72	14.168	168.285F	20.050P	13,898	0.8900	20,715.13	130,294.24	---
3CCARGO	10,576.97	36.0	29,380.46	5.322	168.285F	0.000S	49,001	0.8900	11,884.23	74,749.56	---
4CCARGO	0.00	0.0	29,380.49	0.000	121.845F	0.000S	0	0.8900	0.00	0.00	---
5SWCARGO	15,086.58	98.0	15,394.47	15.875	79.707F	20.020S	16,150	0.8900	16,951.22	106,619.95	---
5CCARGO	14,380.84	44.0	32,683.72	6.621	73.168F	0.000S	55,642	0.8900	16,158.24	101,632.30	---
5PWCARGO	13,085.30	85.0	15,394.47	14.199	79.875F	19.895P	16,153	0.8900	14,702.59	92,476.49	---
Totals	141,742.96	54.2	261,520.93	11.739	172.226F	1.125S	303,721.30	0.8900	159,261.76	1,001,726.31	

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Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	9,563.94	39.0	24,522.91	5.667	214.683F	21.002S	22,765	1.0250	9,330.67
4PWBAL	8,490.99	35.0	24,259.98	5.315	122.327F	20.746P	22,679	1.0250	8,283.90
Totals	18,054.93	37.0	48,782.89	5.501	171.249F	1.369S	45,444.49	1.0250	17,614.57

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 4C

deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 4C

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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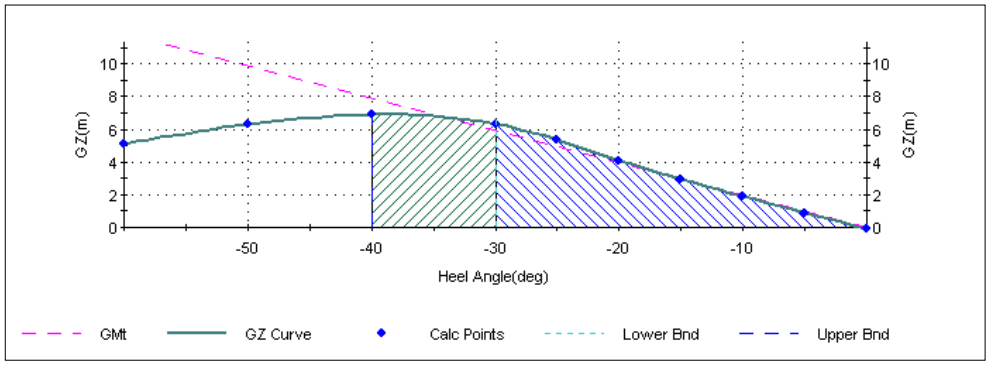
Righting Arm Summary
Tank Inspection - C.O.T. 4C

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.60	0.06
Area to 40. deg	m-rad	2.78	0.09
Area 30. to 40. deg	m-rad	1.18	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	6.901	0.200
Initial GM	m	11.326	0.150

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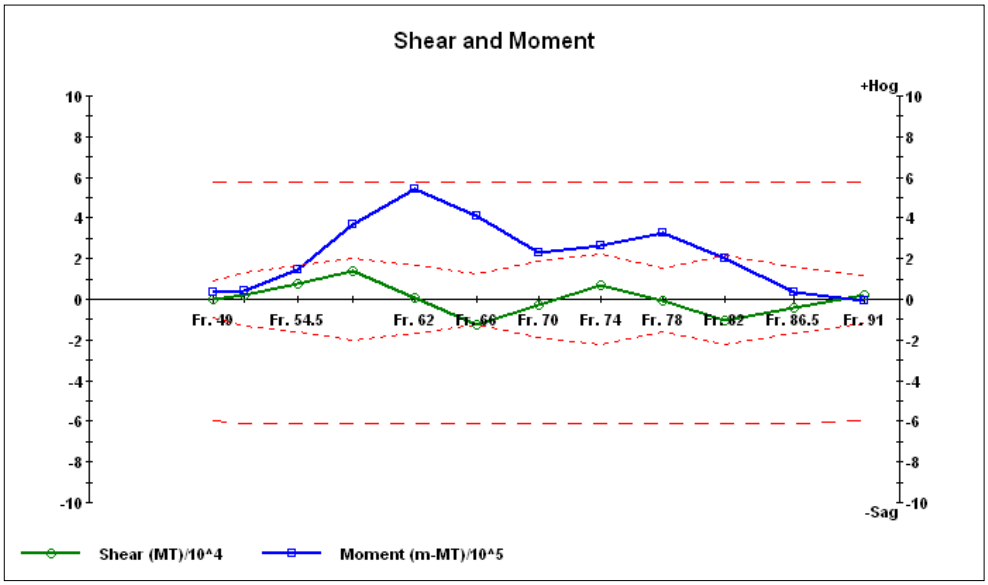
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 4C



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	11,192.99	-84.43	197,063	161,151	35,912H
Fr. 51	57.990F	19,597.23	17,746.63	1,850.60	371,667	328,459	43,208H
Fr. 54.5	78.310F	40,421.68	32,608.82	7,812.86	981,441	833,081	148,360H
Fr. 58	98.625F	64,349.38	50,243.06	14,106.32	2,038,201	1,671,894	366,307H
Fr. 62	121.850F	72,736.84	71,776.95	959.89	3,631,441	3,087,432	544,010H
Fr. 66	145.065F	81,203.31	93,636.31	-12,433.00	5,420,835	5,007,770	413,065H
Fr. 70	168.260F	112,894.91	115,444.57	-2,549.66	7,670,009	7,439,654	230,355H
Fr. 74	191.505F	143,985.64	137,150.74	6,834.90	10,650,581	10,384,416	266,165H
Fr. 78	214.730F	157,776.76	158,585.59	-808.83	14,154,716	13,825,305	329,410H
Fr. 82	237.945F	169,459.71	179,647.50	-10,187.78	17,957,696	17,753,985	203,710H
Fr. 86.5	264.070F	198,197.02	202,361.09	-4,164.07	22,779,156	22,747,773	31,384H
Fr. 91	290.190F	221,234.71	219,069.52	2,165.19	28,268,357	28,272,717	4,360S

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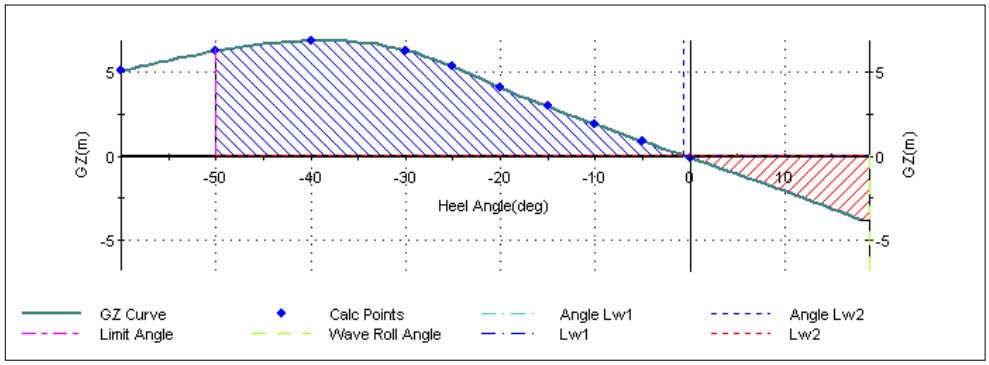
Righting Arm Summary
Tank Inspection - C.O.T. 4C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.62			
Righting Area B	m-rad	3.90			
Area Ratio B/A		6.265	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	15.208		Limiting Angle	deg
Projected Area (Hull)	m2	4,432.78			
Vertical Arm (Hull)	m	22.400		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	222,874.51		X1	
Wind Heeling Lever Lw1	m	0.032		X2	
Heeling Angle at Lw1	deg	1		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.048		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Tank Inspection - C.O.T. 4C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.785
Steady Wind Pressure	bar	0.987
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.730
		11.799
Heel from Gusting Wind		0.066
Wind Heeling Lever Lw2	m	19
Heeling Angle at Lw2	deg	

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Tank Inspection 4C

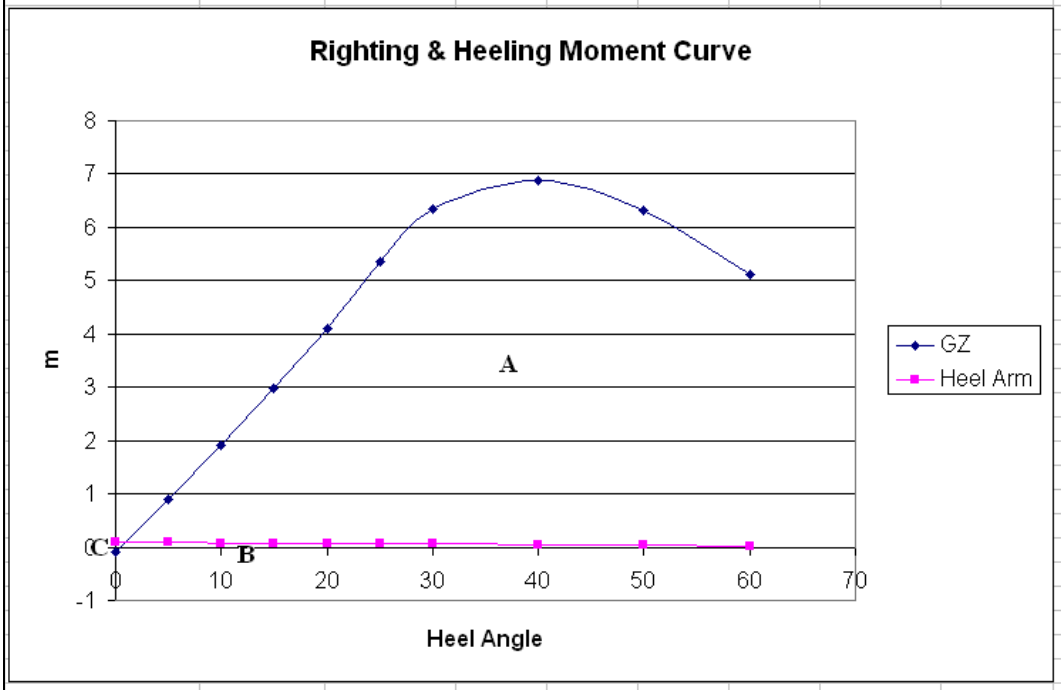
DISPLACEMENT =	222,875	MT		
FWD DRAFT =	14.319	m		
MEAN DRAFT =	15.208	m		
AFT DRAFT =	16.096	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	57512235.6	29.815
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	28562428.8	29.024
Projected Hull Area @ Mean Draft 15.208	Hull	4230.8655		21.829	1	1616.751	6840255.899	97302640.2	14.225
							sum =	183377305	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.092	0.084
5	0.891	0.083
10	1.904	0.081
15	2.968	0.078
20	4.101	0.074
25	5.348	0.069
30	6.349	0.063
40	6.888	0.049
50	6.305	0.035
60	5.118	0.021

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 5C

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	164,883.83	13.704	173.797F	1.217S	227,610
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	227,960.44	15.487	164.838F	0.017P	235,853

Stability Calculation			Trim Calculation		
KMt	26.338	m	LCF Draft	15.487	m
VCG	15.487	m	LCB (even keel)	165.738F	m-AP
GMt (Solid)	10.851	m	LCF	157.991F	m-AP
FSc	1.035	m	MT1cm	3,141	m-MT/cm
GMt (Corrected)	9.816	m	Trim	0.653	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	165.04	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	15.827	m	Shear	-4,875.96	MT at 145.065F m-AP
Draft at M.S.	15.501	m	Bending Moment	70,637H	m-MT at 121.850F m-AP
Draft at F.P.	15.174	m	Shear % Allowable	39.00%	at 145.065F m-AP
			Moment % Allowable	12.00%	at 121.850F m-AP
Draft at Aft Marks	15.827	m			
Draft at Mid Marks	15.501	m			
Draft at Fwd Marks	15.174	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5C

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	4,177.26	21.0	19,891.70	3.461	260.593F	18.476S	17,826	0.8900	4,693.55	29,521.53	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	4,653.30	23.0	20,231.74	3.818	260.568F	18.513P	18,401	0.8900	5,228.43	32,885.81	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	10,031.77	48.0	20,899.52	6.881	168.543F	20.905S	18,474	0.8900	11,271.65	70,896.56	---
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	15,086.58	98.0	15,394.47	15.875	79.707F	20.020S	16,150	0.8900	16,951.22	106,619.95	---
5CCARGO	0.00	0.0	32,683.72	0.000	76.442F	0.000S	0	0.8900	0.00	0.00	---
5PWCARGO	15,086.58	98.0	15,394.47	15.875	79.707F	20.020P	16,150	0.8900	16,951.22	106,619.96	---
Totals	164,883.82	63.0	261,520.93	13.704	173.797F	1.217S	227,609.72	0.8900	185,262.72	1,165,267.47	

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Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPORT	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPORT	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5C

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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Tankage and Cargo Summary
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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5C

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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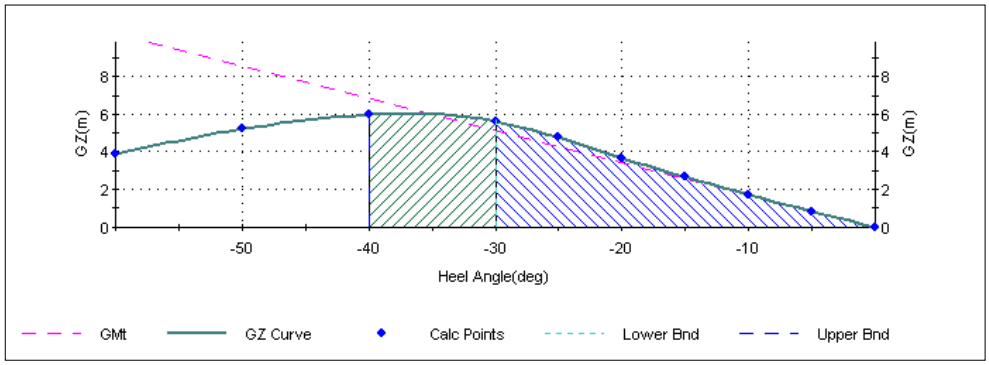
Righting Arm Summary
Tank Inspection - C.O.T. 5C

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.44	0.06
Area to 40. deg	m-rad	2.47	0.09
Area 30. to 40. deg	m-rad	1.03	0.03
Angle at Maximum GZ	deg	37P	>25
Maximum GZ above 30 deg	m	6.011	0.200
Initial GM	m	9.816	0.150

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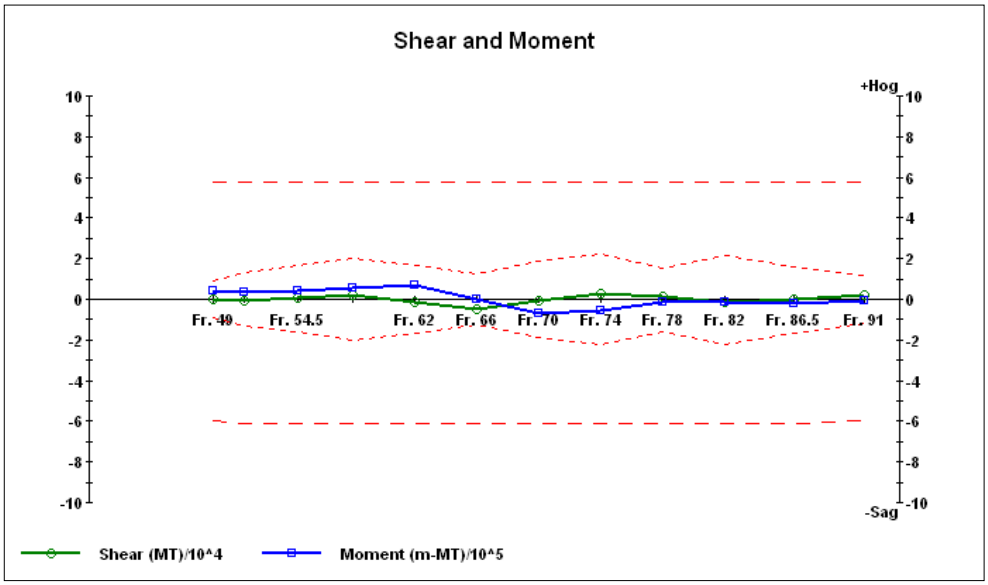
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 5C



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	10,968.11	140.45	197,063	155,827	41,236H
Fr. 51	57.990F	16,611.95	17,485.66	-873.71	354,862	320,296	34,566H
Fr. 54.5	78.310F	32,847.55	32,344.19	503.36	857,721	819,432	38,289H
Fr. 58	98.625F	51,969.82	50,064.61	1,905.22	1,712,170	1,653,587	58,583H
Fr. 62	121.850F	70,642.58	71,810.37	-1,167.79	3,137,845	3,067,208	70,637H
Fr. 66	145.065F	89,125.64	94,001.60	-4,875.96	4,995,398	4,991,941	3,457H
Fr. 70	168.260F	115,631.05	116,261.76	-630.71	7,368,737	7,437,294	68,558S
Fr. 74	191.505F	141,237.63	138,540.61	2,697.01	10,349,727	10,407,445	57,718S
Fr. 78	214.730F	162,134.46	160,666.42	1,468.04	13,872,504	13,888,376	15,872S
Fr. 82	237.945F	180,945.98	182,536.22	-1,590.24	17,859,343	17,874,518	15,175S
Fr. 86.5	264.070F	206,159.22	206,278.07	-118.85	22,933,440	22,957,014	23,574S
Fr. 91	290.190F	226,320.64	223,929.60	2,391.03	28,591,641	28,597,279	5,638S

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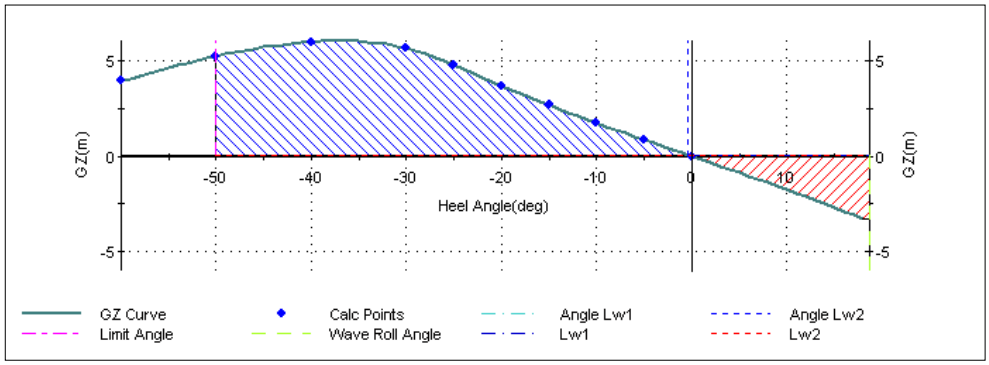
Righting Arm Summary
Tank Inspection - C.O.T. 5C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.57			
Righting Area B	m-rad	3.42			
Area Ratio B/A		6.030	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	15.501		Limiting Angle	deg
Projected Area (Hull)	m2	4,344.59			
Vertical Arm (Hull)	m	22.551		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	227,960.44		X1	
Wind Heeling Lever Lw1	m	0.031		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.046		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Righting Arm Summary
Tank Inspection - C.O.T. 5C - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.788
Steady Wind Pressure	bar	0.987
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.770
		12.608
Heel from Gusting Wind		0.061
Wind Heeling Lever Lw2	m	19
Heeling Angle at Lw2	deg	

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Tank Inspection 5C

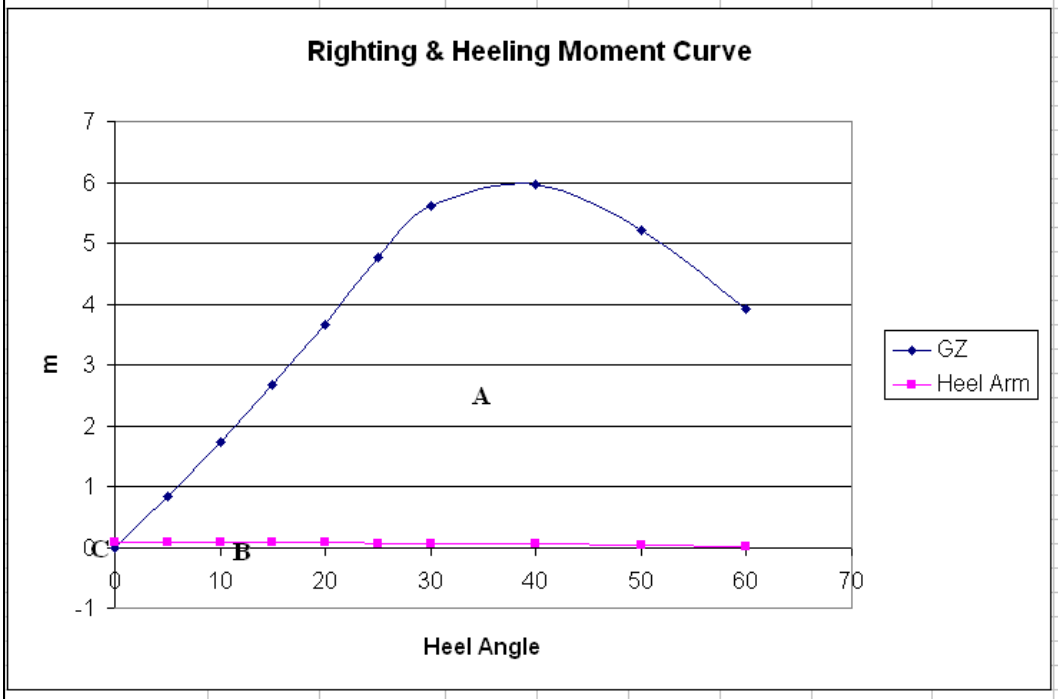
DISPLACEMENT =	227,960	MT		
FWD DRAFT =	15.174	m		
MEAN DRAFT =	15.501	m		
AFT DRAFT =	15.827	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	57229641.49	29.6685
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	28418258.64	28.8775
Projected Hull Area @ Mean Draft 15.501	Hull	4284.369		21.986	1	1616.751	6926757.735	98602396.36	14.235
							sum =	184250296.5	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.017	0.082
5	0.838	0.082
10	1.724	0.080
15	2.661	0.077
20	3.668	0.073
25	4.768	0.068
30	5.623	0.062
40	5.955	0.048
50	5.215	0.034
60	3.915	0.021

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 1S

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	198,932.42	14.080	170.143F	1.013S	246,249
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	262,009.03	15.541	163.228F	0.012P	254,492

Stability Calculation			**Trim Calculation**		
KMt	25.471	m	LCF Draft	17.588	m
VCG	15.541	m	LCB (even keel)	164.533F	m-AP
GMt (Solid)	9.930	m	LCF	154.993F	m-AP
FSc	0.971	m	MT1cm	3,361	m-MT/cm
GMt (Corrected)	8.959	m	Trim	1.018	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	189.22	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	18.107	m	Shear	-7,008.32	MT at 145.065F m-AP
Draft at M.S.	17.598	m	Bending Moment	179,585H	m-MT at 121.850F m-AP
Draft at F.P.	17.090	m	Shear % Allowable	56.00%	at 145.065F m-AP
			Moment % Allowable	31.00%	at 121.850F m-AP
Draft at Aft Marks	18.107	m			
Draft at Mid Marks	17.598	m			
Draft at Fwd Marks	17.090	m			

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Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	0.00	0.0	19,891.70	0.000	257.231F	17.224S	0	0.8900	0.00	0.00	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	18,410.88	91.0	20,231.74	13.744	261.585F	18.861P	19,620	0.8900	20,686.38	130,113.42	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	20,481.53	98.0	20,899.52	14.128	168.628F	20.880S	19,831	0.8900	23,012.96	144,747.13	---
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	9,082.74	59.0	15,394.47	10.738	80.418F	19.491S	15,661	0.8900	10,205.32	64,189.56	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	3,078.89	20.0	15,394.47	4.768	82.105F	18.149P	10,168	0.8900	3,459.43	21,759.17	---
Totals	198,932.42	76.1	261,520.93	14.080	170.143F	1.013S	246,248.53	0.8900	223,519.57	1,405,895.81	

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Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1S

FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
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Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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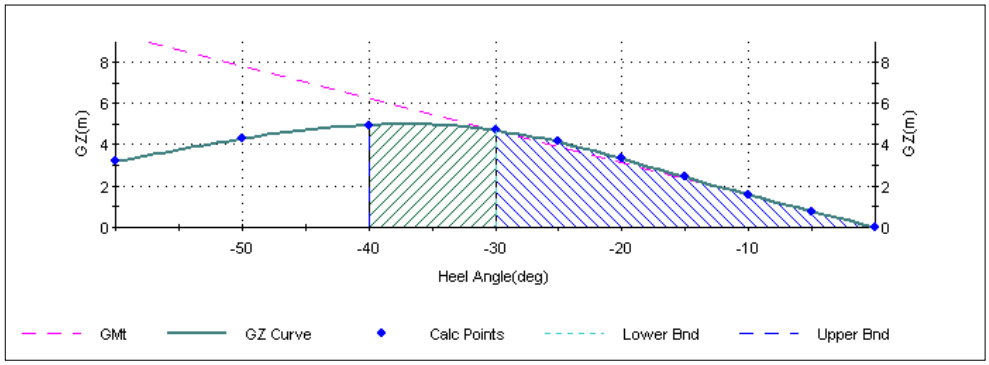
Righting Arm Summary
Tank Inspection - C.O.T. 1S

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.27	0.06
Area to 40. deg	m-rad	2.13	0.09
Area 30. to 40. deg	m-rad	0.86	0.03
Angle at Maximum GZ	deg	37P	>25
Maximum GZ above 30 deg	m	4.978	0.200
Initial GM	m	8.959	0.150

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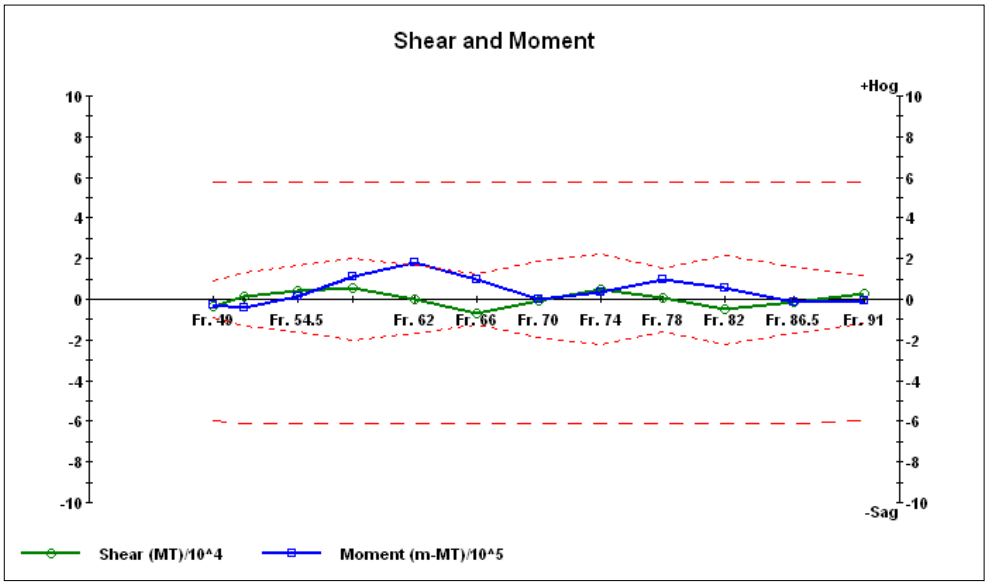
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 1S



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	14,431.66	-3,323.09	197,063	225,359	28,296S
Fr. 51	57.990F	23,440.13	22,273.02	1,167.11	393,399	437,558	44,159S
Fr. 54.5	78.310F	43,559.56	39,708.41	3,851.15	1,075,443	1,059,804	15,639H
Fr. 58	98.625F	65,988.34	60,120.73	5,867.61	2,182,067	2,070,860	111,207H
Fr. 62	121.850F	84,661.09	84,932.51	-271.42	3,933,322	3,753,737	179,585H
Fr. 66	145.065F	103,144.15	110,152.47	-7,008.32	6,116,316	6,018,321	97,995H
Fr. 70	168.260F	134,725.58	135,405.28	-679.70	8,873,130	8,873,029	101H
Fr. 74	191.505F	165,705.90	160,647.07	5,058.83	12,359,873	12,322,585	37,288H
Fr. 78	214.730F	186,602.73	185,693.93	908.81	16,450,926	16,350,838	100,088H
Fr. 82	237.945F	205,414.25	210,439.95	-5,025.70	21,005,795	20,951,474	54,322H
Fr. 86.5	264.070F	235,846.27	237,305.57	-1,459.29	26,789,161	26,804,251	15,090S
Fr. 91	290.190F	260,369.23	257,438.53	2,930.70	33,281,613	33,289,914	8,301S

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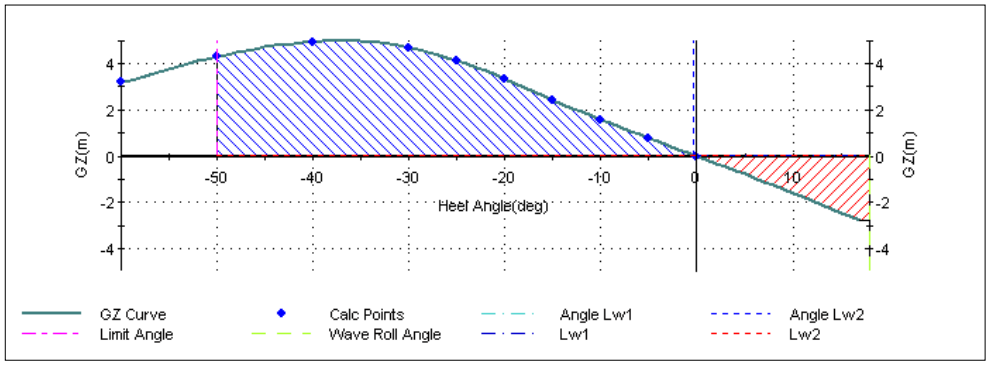
Righting Arm Summary
Tank Inspection - C.O.T. 1S - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.46			
Righting Area B	m-rad	2.91			
Area Ratio B/A		6.320	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	17.598		Limiting Angle	deg
Projected Area (Hull)	m2	3,694.16			
Vertical Arm (Hull)	m	23.604		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	262,009.03		X1	
Wind Heeling Lever Lw1	m	0.025		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.037		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Righting Arm Summary
Tank Inspection - C.O.T. 1S - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.798
Steady Wind Pressure	bar	0.987
Displacement	MT	0.818
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.693
		12.772
Heel from Gusting Wind		0.060
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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Tank Inspection 1S

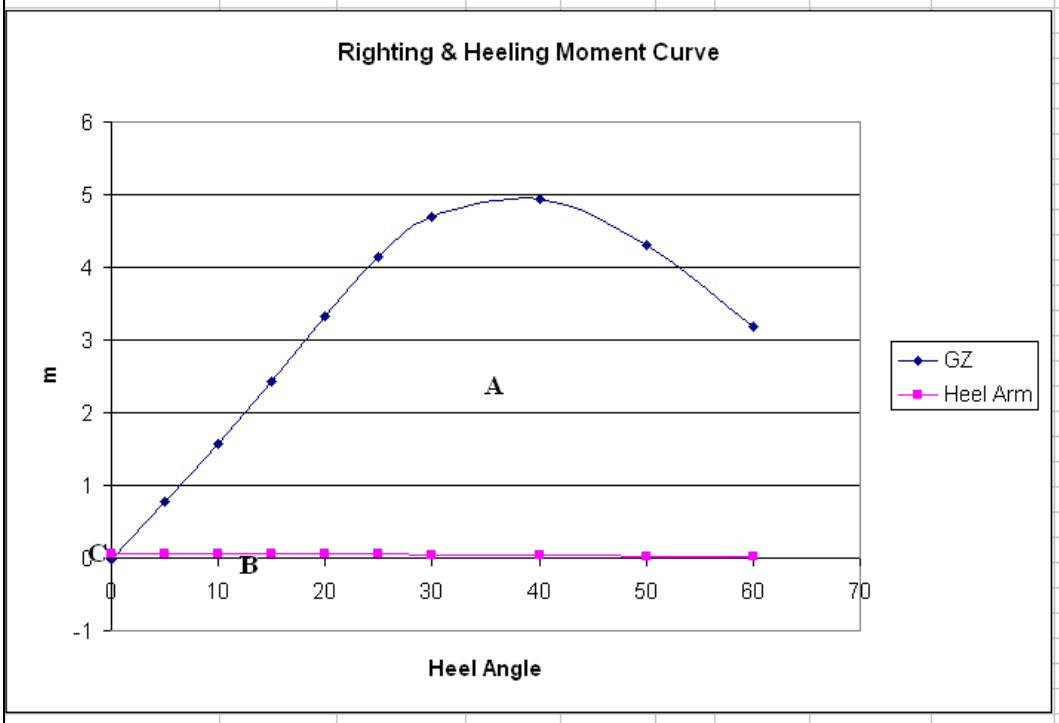
DISPLACEMENT =	260,466	MT		
FWD DRAFT =	17.009	m		
MEAN DRAFT =	17.505	m		
AFT DRAFT =	18.001	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	55296813.72	28.6665
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27432193.53	27.8755
Projected Hull Area @ Mean Draft 17.505	Hull	3591.147		22.978	1	1616.751	5805990.394	82590213.36	14.225
							sum =	165319220.6	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.012	0.065
5	0.769	0.064
10	1.573	0.063
15	2.42	0.060
20	3.324	0.057
25	4.136	0.053
30	4.698	0.049
40	4.94	0.038
50	4.298	0.027
60	3.179	0.016

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 1P

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	198,859.83	14.295	170.150F	0.993S	238,294
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	261,936.44	15.705	163.232F	0.028P	246,538

Stability Calculation			**Trim Calculation**		
KMt	25.472	m	LCF Draft	17.583	m
VCG	15.705	m	LCB (even keel)	164.536F	m-AP
GMt (Solid)	9.767	m	LCF	154.999F	m-AP
FSc	0.941	m	MT1cm	3,360	m-MT/cm
GMt (Corrected)	8.826	m	Trim	1.017	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	189.17	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	18.102	m	Shear	6,967.58	MT at 98.625F m-AP
Draft at M.S.	17.594	m	Bending Moment	231,611H	m-MT at 121.850F m-AP
Draft at F.P.	17.086	m	Shear % Allowable	47.00%	at 145.065F m-AP
			Moment % Allowable	40.00%	at 121.850F m-AP
Draft at Aft Marks	18.102	m			
Draft at Mid Marks	17.594	m			
Draft at Fwd Marks	17.086	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1P

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	19,493.87	98.0	19,891.70	14.701	261.986F	18.704S	19,658	0.8900	21,903.22	137,767.12	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	0.00	0.0	20,231.74	0.000	257.231F	17.224P	0	0.8900	0.00	0.00	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	0.00	0.0	20,899.52	0.000	168.288F	20.294S	0	0.8900	0.00	0.00	---
3PWCARGO	18,248.34	97.0	18,812.72	14.023	168.285F	20.050P	13,898	0.8900	20,503.75	128,964.70	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	11,545.85	75.0	15,394.47	12.891	80.043F	19.770S	16,148	0.8900	12,972.87	81,596.90	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	1,693.39	11.0	15,394.47	3.068	82.602F	17.458P	7,621	0.8900	1,902.69	11,967.55	---
Totals	198,859.83	76.0	261,520.93	14.295	170.150F	0.993S	238,293.79	0.8900	223,438.01	1,405,382.79	

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1P

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 1P

HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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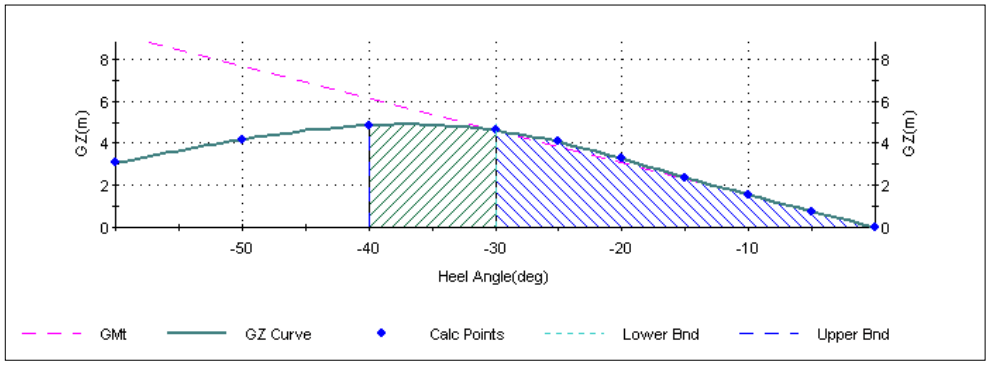
Righting Arm Summary
Tank Inspection - C.O.T. 1P

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.25	0.06
Area to 40. deg	m-rad	2.09	0.09
Area 30. to 40. deg	m-rad	0.84	0.03
Angle at Maximum GZ	deg	37P	>25
Maximum GZ above 30 deg	m	4.887	0.200
Initial GM	m	8.826	0.150

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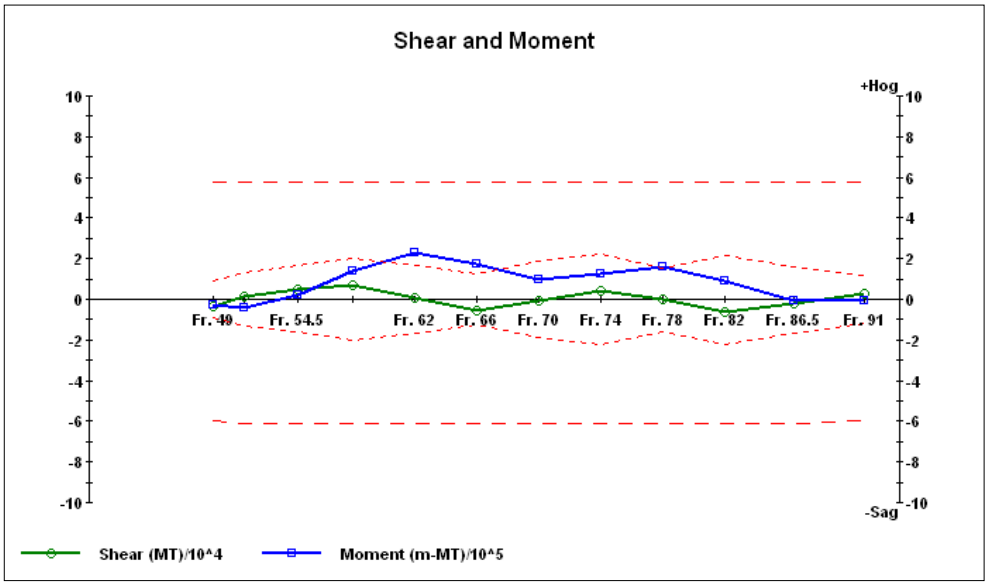
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 1P



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	14,423.50	-3,314.94	197,063	225,189	28,125S
Fr. 51	57.990F	23,440.13	22,261.96	1,178.17	393,399	437,276	43,877S
Fr. 54.5	78.310F	44,229.53	39,691.79	4,537.73	1,082,694	1,059,242	23,452H
Fr. 58	98.625F	67,065.95	60,098.37	6,967.58	2,207,513	2,069,903	137,611H
Fr. 62	121.850F	85,738.70	84,903.65	835.05	3,983,796	3,752,184	231,611H
Fr. 66	145.065F	104,221.77	110,117.22	-5,895.45	6,191,806	6,016,024	175,782H
Fr. 70	168.260F	134,914.79	135,363.73	-448.94	8,964,188	8,869,841	94,347H
Fr. 74	191.505F	164,550.32	160,599.30	3,951.02	12,440,580	12,318,359	122,221H
Fr. 78	214.730F	185,447.15	185,640.05	-192.90	16,504,794	16,345,431	159,363H
Fr. 82	237.945F	204,258.67	210,380.08	-6,121.41	21,032,837	20,944,747	88,091H
Fr. 86.5	264.070F	235,084.78	237,239.21	-2,154.44	26,790,519	26,795,874	5,355S
Fr. 91	290.190F	260,296.64	257,367.05	2,929.59	33,271,436	33,279,732	8,296S

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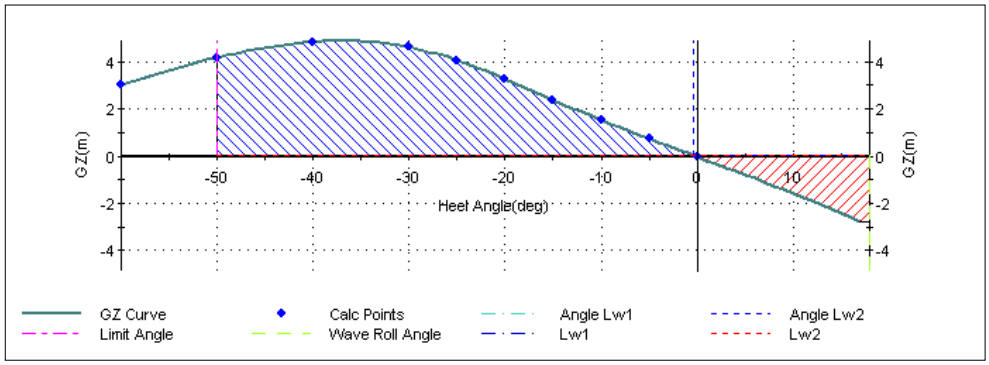
Righting Arm Summary
Tank Inspection - C.O.T. 1P - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.45			
Righting Area B	m-rad	2.86			
Area Ratio B/A		6.348	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	17.594		Limiting Angle	deg
Projected Area (Hull)	m2	3,695.52			
Vertical Arm (Hull)	m	23.602		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	261,936.44		X1	
Wind Heeling Lever Lw1	m	0.025		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.037		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Tank Inspection - C.O.T. 1P - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.798
Steady Wind Pressure	bar	0.987
Displacement	MT	0.818
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.698
		12.869
Heel from Gusting Wind		0.060
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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Tank Inspection 1P

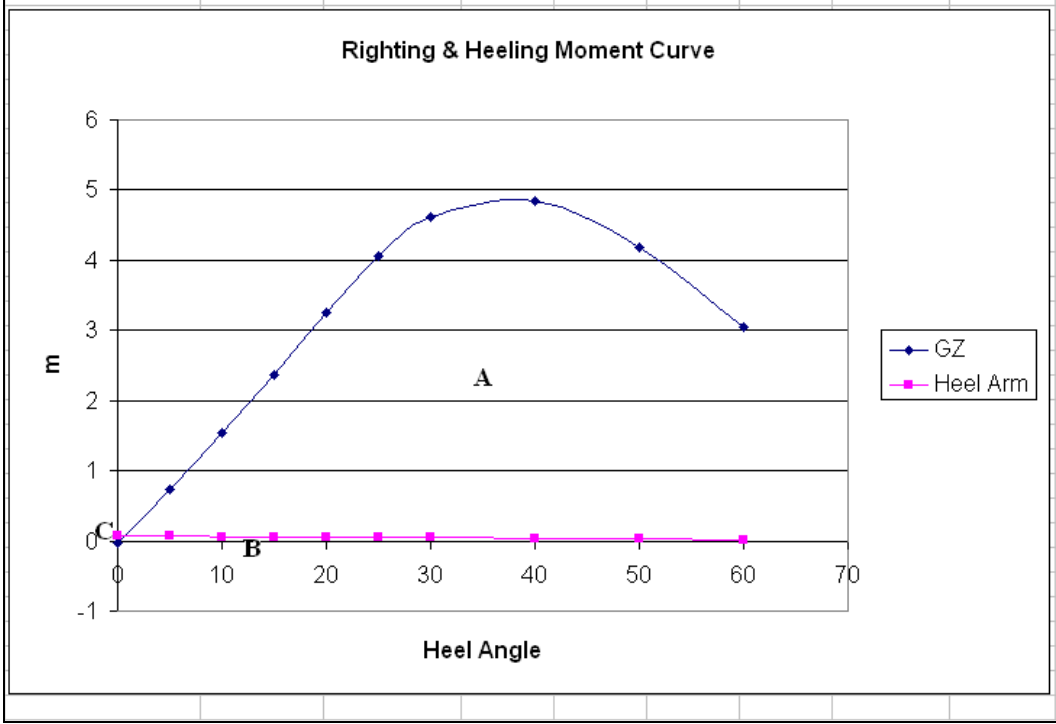
DISPLACEMENT =	261,936	MT		
FWD DRAFT =	17.086	m		
MEAN DRAFT =	17.594	m		
AFT DRAFT =	18.101	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	55210975	28.622
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27388401	27.831
Projected Hull Area @ Mean Draft 17.594	Hull	3622.5085		23.022	1	1616.751	5856694.130	83311474	14.225
							sum =	165910850	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.028	0.065
5	0.742	0.064
10	1.534	0.063
15	2.371	0.060
20	3.264	0.057
25	4.067	0.053
30	4.62	0.048
40	4.844	0.038
50	4.187	0.027
60	3.056	0.016

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 3S

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	198,778.63	13.557	171.421F	0.960S	261,334
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	261,855.25	15.145	164.194F	0.053P	269,578

Stability Calculation			**Trim Calculation**		
KMt	25.473	m	LCF Draft	17.578	m
VCG	15.145	m	LCB (even keel)	164.539F	m-AP
GMt (Solid)	10.328	m	LCF	155.005F	m-AP
FSc	1.029	m	MT1cm	3,360	m-MT/cm
GMt (Corrected)	9.299	m	Trim	0.269	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	185.19	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	17.715	m	Shear	11,196.72	MT at 98.625F m-AP
Draft at M.S.	17.581	m	Bending Moment	491,123H	m-MT at 145.065F m-AP
Draft at F.P.	17.447	m	Shear % Allowable	56.00%	at 98.625F m-AP
			Moment % Allowable	86.00%	at 145.065F m-AP
Draft at Aft Marks	17.715	m			
Draft at Mid Marks	17.581	m			
Draft at Fwd Marks	17.447	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3S

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	18,499.28	93.0	19,891.70	13.998	261.941F	18.683S	19,648	0.8900	20,785.71	130,738.19	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	6,676.47	33.0	20,231.74	5.347	260.537F	18.596P	18,894	0.8900	7,501.65	47,183.99	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	0.00	0.0	20,899.52	0.000	168.288F	20.294S	0	0.8900	0.00	0.00	---
3PWCARGO	9,406.36	50.0	18,812.72	7.228	168.285F	20.050P	13,898	0.8900	10,568.94	66,476.65	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	12,007.69	78.0	15,394.47	13.286	79.988F	19.811S	16,150	0.8900	13,491.79	84,860.78	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	4,310.45	28.0	15,394.47	6.143	81.725F	18.563P	11,774	0.8900	4,843.21	30,462.84	---
Totals	198,778.63	76.0	261,520.93	13.557	171.421F	0.960S	261,334.10	0.8900	223,346.78	1,404,808.97	

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3S

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
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SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST COV	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3S

HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed p	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMP	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AI	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CO	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contro	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
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Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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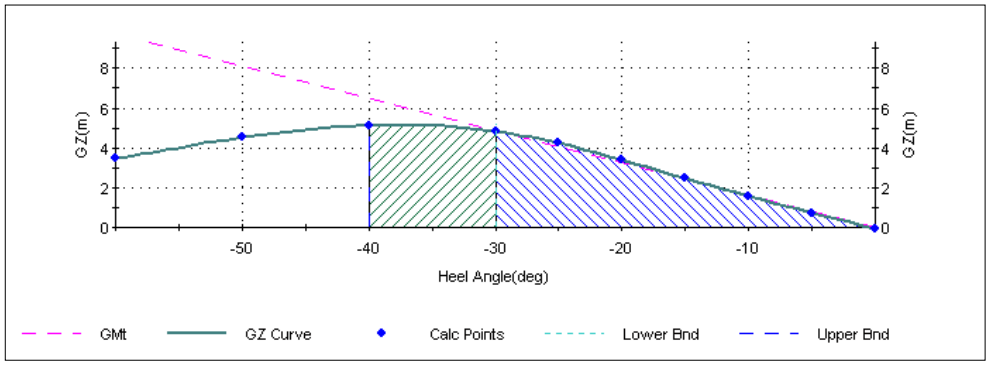
Righting Arm Summary
Tank Inspection - C.O.T. 3S

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.30	0.06
Area to 40. deg	m-rad	2.18	0.09
Area 30. to 40. deg	m-rad	0.89	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	5.155	0.200
Initial GM	m	9.299	0.150

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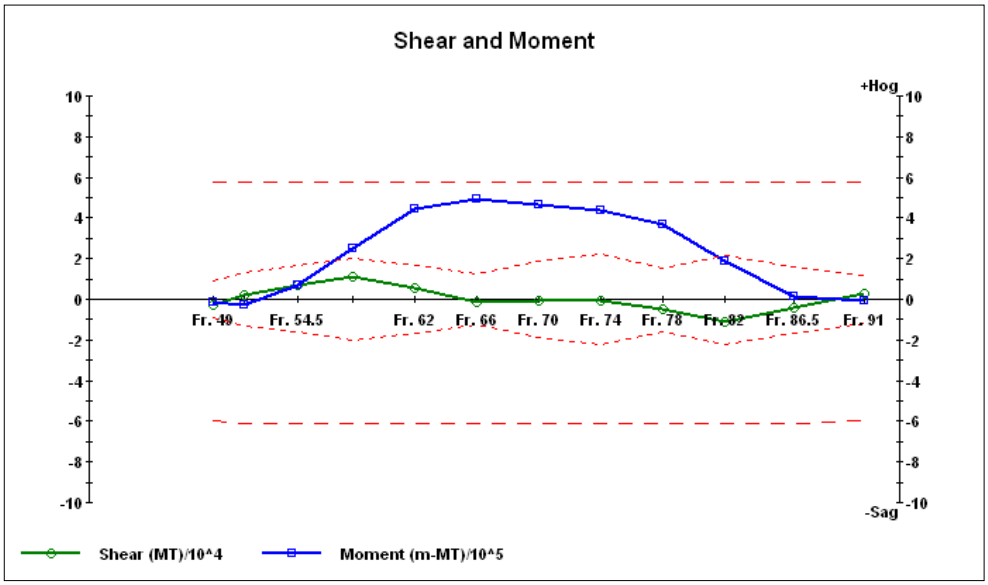
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 3S



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	13,885.81	-2,777.25	197,063	213,236	16,173S
Fr. 51	57.990F	23,440.13	21,569.21	1,870.92	393,399	418,182	24,783S
Fr. 54.5	78.310F	45,489.01	38,745.56	6,743.45	1,094,541	1,023,430	71,111H
Fr. 58	98.625F	70,144.84	58,948.13	11,196.72	2,262,479	2,012,696	249,783H
Fr. 62	121.850F	88,817.60	83,594.29	5,223.31	4,110,269	3,666,258	444,011H
Fr. 66	145.065F	107,300.66	108,729.21	-1,428.55	6,389,756	5,898,633	491,123H
Fr. 70	168.260F	133,577.46	133,977.54	-400.08	9,182,336	8,720,117	462,219H
Fr. 74	191.505F	158,787.24	159,295.24	-508.01	12,576,203	12,137,200	439,003H
Fr. 78	214.730F	179,684.07	184,498.02	-4,813.95	16,506,570	16,135,702	370,868H
Fr. 82	237.945F	198,495.59	209,479.39	-10,983.80	20,900,823	20,711,155	189,668H
Fr. 86.5	264.070F	232,803.93	236,697.36	-3,893.42	26,556,222	26,543,269	12,953H
Fr. 91	290.190F	260,215.45	257,191.50	3,023.95	33,009,081	33,017,955	8,874S

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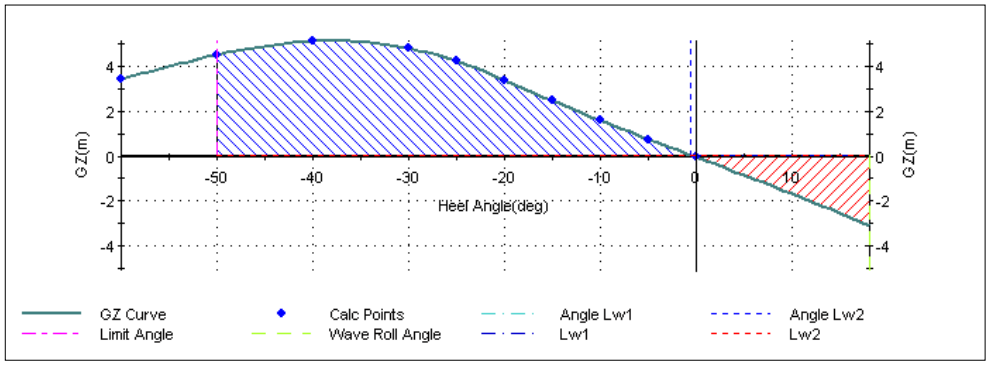
Righting Arm Summary
Tank Inspection - C.O.T. 3S - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.47			
Righting Area B	m-rad	3.01			
Area Ratio B/A		6.461	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	17.581		Limiting Angle	deg
Projected Area (Hull)	m2	3,701.55			
Vertical Arm (Hull)	m	23.596		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	261,855.24		X1	
Wind Heeling Lever Lw1	m	0.025		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.037		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Tank Inspection - C.O.T. 3S - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.798
Steady Wind Pressure	bar	0.987
Displacement	MT	0.817
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.682
		12.540
Heel from Gusting Wind		0.062
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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Tank Inspection 3S

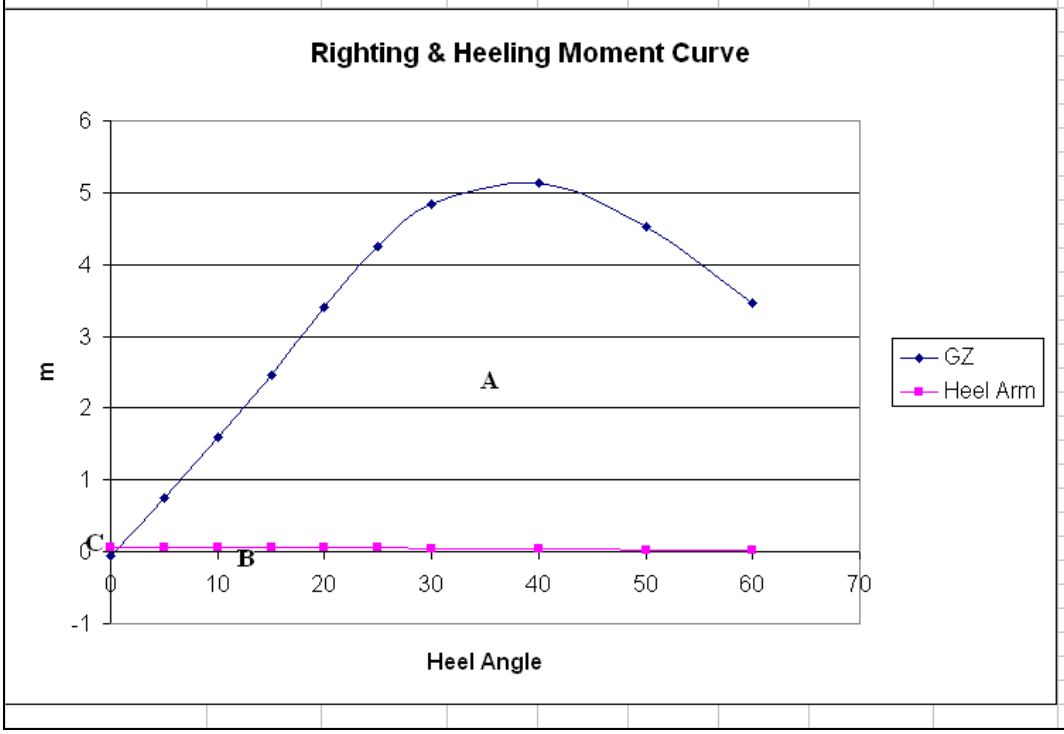
DISPLACEMENT =	261,855	MT		
FWD DRAFT =	17.447	m		
MEAN DRAFT =	17.581	m		
AFT DRAFT =	17.715	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	55355647.3	28.697
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27462208.49	27.906
Projected Hull Area @ Mean Draft 17.581	Hull	3629.1795		22.947	1	1616.751	5867479.475	83464895.54	14.225
							sum =	166282751.3	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.053	0.065
5	0.757	0.064
10	1.591	0.063
15	2.469	0.060
20	3.402	0.057
25	4.244	0.053
30	4.835	0.049
40	5.13	0.038
50	4.534	0.027
60	3.454	0.016

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 3P

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	193,914.94	13.168	171.778F	1.035S	278,430
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	256,991.55	14.881	164.327F	0.016P	286,674

Stability Calculation			Trim Calculation		
KMt	25.550	m	LCF Draft	17.283	m
VCG	14.881	m	LCB (even keel)	164.716F	m-AP
GMt (Solid)	10.669	m	LCF	155.390F	m-AP
FSc	1.115	m	MT1cm	3,330	m-MT/cm
GMt (Corrected)	9.553	m	Trim	0.301	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	182.22	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	17.436	m	Shear	9,425.78	MT at 98.625F m-AP
Draft at M.S.	17.286	m	Bending Moment	386,953H	m-MT at 145.065F m-AP
Draft at F.P.	17.136	m	Shear % Allowable	47.00%	at 98.625F m-AP
			Moment % Allowable	67.00%	at 145.065F m-AP
Draft at Aft Marks	17.436	m			
Draft at Mid Marks	17.286	m			
Draft at Fwd Marks	17.136	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3P

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	16,311.20	82.0	19,891.70	12.439	261.814F	18.655S	17,808	0.8900	18,327.19	115,274.53	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	6,069.52	30.0	20,231.74	4.888	260.514F	18.575P	18,609	0.8900	6,819.69	42,894.53	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	10,449.76	50.0	20,899.52	7.170	168.553F	20.901S	18,474	0.8900	11,741.30	73,850.58	---
3PWCARGO	0.00	0.0	18,812.72	0.000	168.286F	20.041P	0	0.8900	0.00	0.00	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	4,464.40	29.0	15,394.47	6.305	81.664F	18.606S	11,943	0.8900	5,016.18	31,550.80	---
5CCARGO	26,146.98	80.0	32,683.72	11.935	72.936F	0.000S	54,830	0.8900	29,378.63	184,786.00	---
5PWCARGO	14,624.75	95.0	15,394.47	15.490	79.742F	19.994P	16,155	0.8900	16,432.30	103,356.08	---
Totals	193,914.93	74.1	261,520.93	13.168	171.778F	1.035S	278,429.78	0.8900	217,881.94	1,370,436.20	

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3P

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 3P

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
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Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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Tankage and Cargo Summary
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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed p	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMP	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AI	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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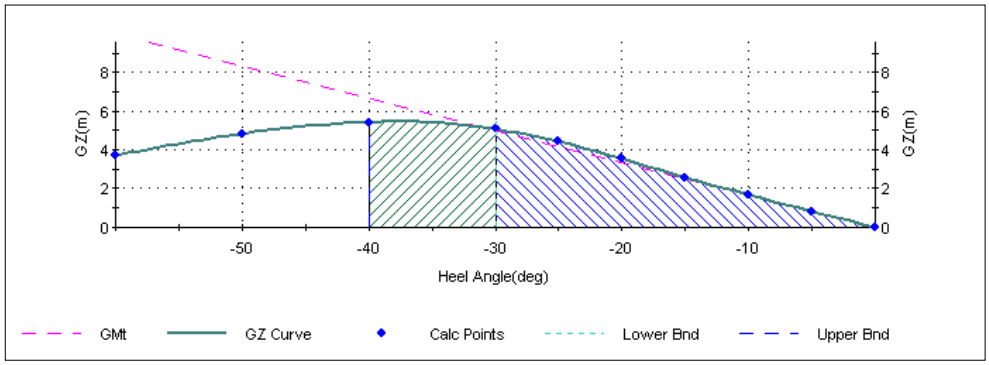
Righting Arm Summary
Tank Inspection - C.O.T. 3P

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.36	0.06
Area to 40. deg	m-rad	2.30	0.09
Area 30. to 40. deg	m-rad	0.93	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	5.445	0.200
Initial GM	m	9.553	0.150

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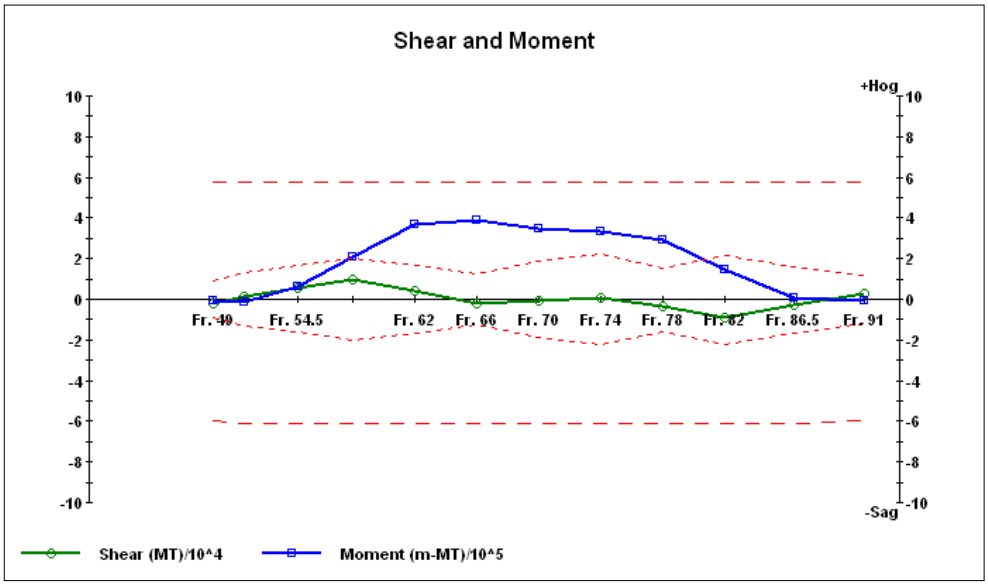
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 3P



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	13,413.14	-2,304.58	197,063	203,470	6,407S
Fr. 51	57.990F	22,159.18	20,922.95	1,236.23	386,155	401,942	15,787S
Fr. 54.5	78.310F	43,253.28	37,761.22	5,492.06	1,051,435	990,674	60,762H
Fr. 58	98.625F	67,032.78	57,607.00	9,425.78	2,164,921	1,956,333	208,588H
Fr. 62	121.850F	85,705.53	81,839.00	3,866.53	3,940,433	3,573,944	366,489H
Fr. 66	145.065F	104,188.60	106,555.35	-2,366.75	6,147,673	5,760,720	386,953H
Fr. 70	168.260F	130,896.18	131,380.47	-484.29	8,872,716	8,526,888	345,828H
Fr. 74	191.505F	156,718.57	156,269.47	449.11	12,211,027	11,878,644	332,383H
Fr. 78	214.730F	177,615.41	181,039.81	-3,424.40	16,093,349	15,801,873	291,476H
Fr. 82	237.945F	196,426.93	205,585.50	-9,158.57	20,439,578	20,291,991	147,587H
Fr. 86.5	264.070F	229,206.45	232,318.61	-3,112.16	26,020,392	26,015,995	4,397H
Fr. 91	290.190F	255,351.74	252,417.67	2,934.07	32,362,177	32,370,764	8,587S

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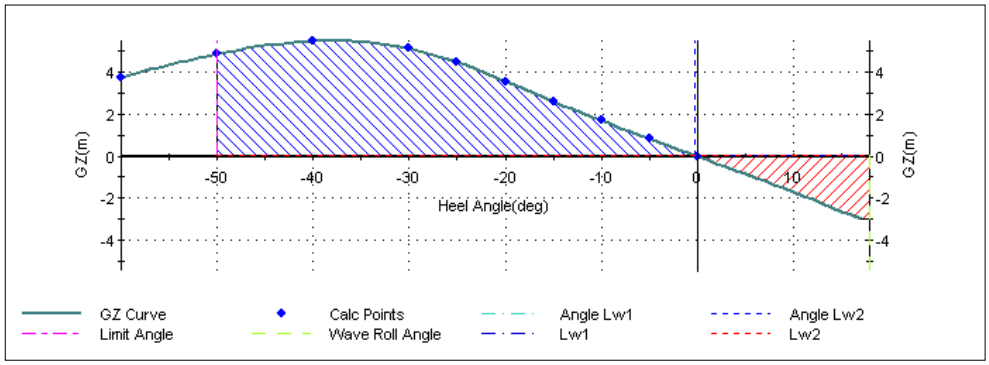
Righting Arm Summary
Tank Inspection - C.O.T. 3P - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.49			
Righting Area B	m-rad	3.17			
Area Ratio B/A		6.464	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	17.286		Limiting Angle	deg
Projected Area (Hull)	m2	3,792.74			
Vertical Arm (Hull)	m	23.448		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	256,991.54		X1	
Wind Heeling Lever Lw1	m	0.025		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.038		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Righting Arm Summary
Tank Inspection - C.O.T. 3P - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.797
Steady Wind Pressure	bar	0.987
Displacement	MT	0.806
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.685
		12.424
Heel from Gusting Wind		0.062
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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Tank Inspection 3P

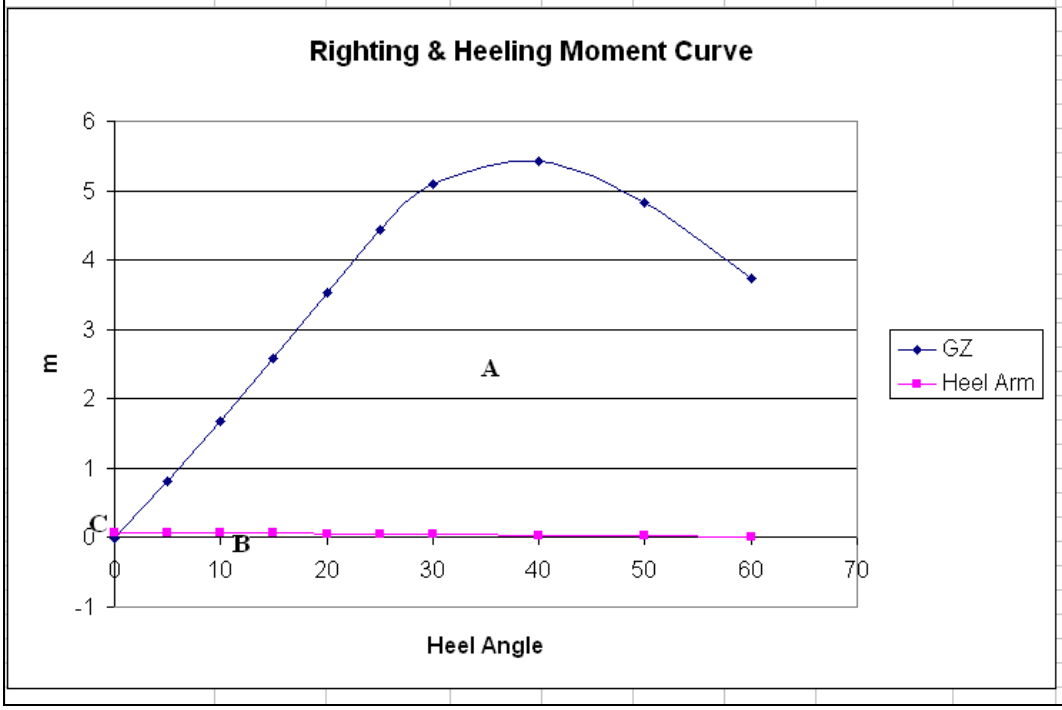
DISPLACEMENT =	256,992	MT		
FWD DRAFT =	17.136	m		
MEAN DRAFT =	17.286	m		
AFT DRAFT =	17.436	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	55508036	28.776
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27539952	27.985
Projected Hull Area @ Mean Draft 17.286	Hull	3720.9865		22.868	1	1616.751	6015908.532	85576299	14.225
							sum =	168624287	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.016	0.067
5	0.817	0.066
10	1.674	0.065
15	2.576	0.062
20	3.537	0.059
25	4.443	0.055
30	5.091	0.050
40	5.422	0.039
50	4.828	0.028
60	3.733	0.017

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 5S

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	195,012.61	13.331	170.536F	1.029S	265,212
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	258,089.22	14.997	163.420F	0.015P	273,456

Stability Calculation			Trim Calculation		
KMt	25.526	m	LCF Draft	17.350	m
VCG	14.997	m	LCB (even keel)	164.677F	m-AP
GMt (Solid)	10.528	m	LCF	155.296F	m-AP
FSc	1.060	m	MT1cm	3,337	m-MT/cm
GMt (Corrected)	9.469	m	Trim	0.972	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	186.47	%
Hull calcs from tables			Tank calcs from tables		

Drafts			Strength Calculations		
Draft at A.P.	17.847	m	Shear	-10,504.91	MT at 145.065F m-AP
Draft at M.S.	17.361	m	Bending Moment	267,836S	m-MT at 168.260F m-AP
Draft at F.P.	16.875	m	Shear % Allowable	84.00%	at 145.065F m-AP
			Moment % Allowable	44.00%	at 168.260F m-AP
Draft at Aft Marks	17.847	m			
Draft at Mid Marks	17.361	m			
Draft at Fwd Marks	16.875	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5S

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	7,558.85	38.0	19,891.70	6.041	260.848F	18.515S	17,547	0.8900	8,493.09	53,419.90	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	6,676.47	33.0	20,231.74	5.347	260.537F	18.596P	18,894	0.8900	7,501.65	47,183.99	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	20,481.53	98.0	20,899.52	14.128	168.628F	20.880S	19,831	0.8900	23,012.96	144,747.13	---
3PWCARGO	5,643.82	30.0	18,812.72	4.337	168.285F	20.050P	13,898	0.8900	6,341.37	39,885.99	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778S	0	0.8900	0.00	0.00	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	6,773.57	44.0	15,394.47	8.611	80.914F	19.127P	14,073	0.8900	7,610.75	47,870.18	---
Totals	195,012.61	74.6	261,520.93	13.331	170.536F	1.029S	265,212.36	0.8900	219,115.29	1,378,193.72	

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5S

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5S

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5S

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G/	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL/	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR(	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO\	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F(	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN(	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE(	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feed	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feed	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed p	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feed	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMP	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AI	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CO	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING F	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AIF	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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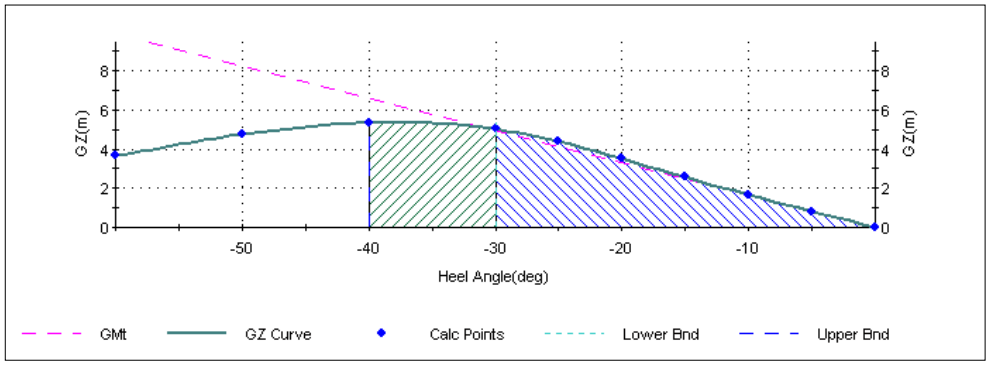
Righting Arm Summary
Tank Inspection - C.O.T. 5S

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.35	0.06
Area to 40. deg	m-rad	2.27	0.09
Area 30. to 40. deg	m-rad	0.92	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	5.374	0.200
Initial GM	m	9.469	0.150

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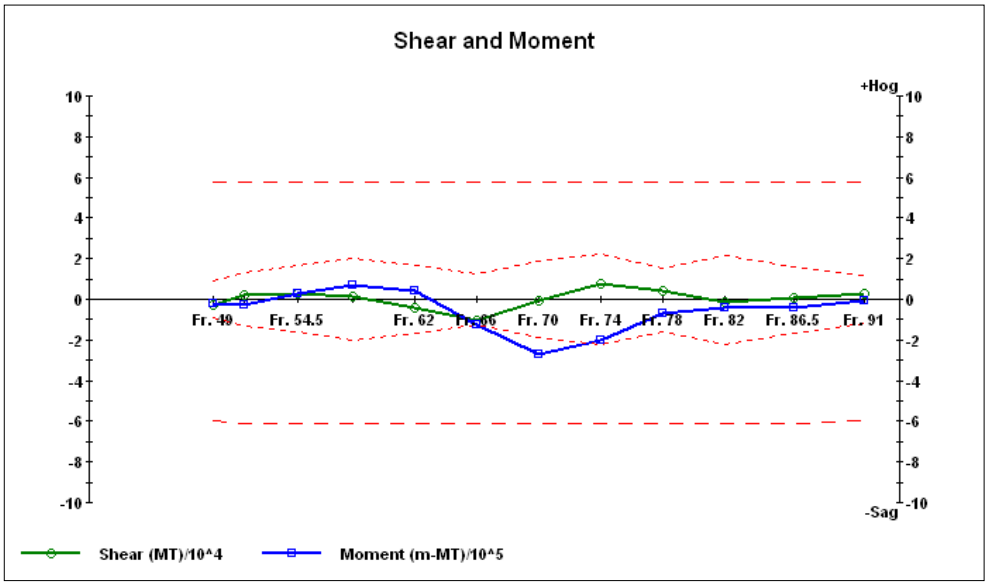
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 5S



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	13,996.19	-2,887.62	197,063	216,275	19,212S
Fr. 51	57.990F	23,440.13	21,681.96	1,758.17	393,399	422,532	29,133S
Fr. 54.5	78.310F	41,352.82	38,819.33	2,533.48	1,054,674	1,029,774	24,900H
Fr. 58	98.625F	60,600.27	58,923.65	1,676.62	2,085,805	2,019,641	66,164H
Fr. 62	121.850F	79,273.02	83,385.88	-4,112.86	3,711,922	3,670,646	41,277H
Fr. 66	145.065F	97,756.09	108,261.00	-10,504.91	5,769,832	5,895,314	125,482S
Fr. 70	168.260F	132,156.38	133,173.49	-1,017.10	8,434,362	8,702,198	267,836S
Fr. 74	191.505F	165,961.65	158,078.77	7,882.88	11,894,216	12,095,966	201,750S
Fr. 78	214.730F	186,858.48	182,794.32	4,064.16	15,991,209	16,060,724	69,515S
Fr. 82	237.945F	205,670.00	207,214.56	-1,544.56	20,552,016	20,590,253	38,237S
Fr. 86.5	264.070F	234,077.11	233,726.89	350.22	26,315,887	26,354,095	38,208S
Fr. 91	290.190F	256,449.42	253,579.64	2,869.79	32,734,316	32,742,335	8,019S

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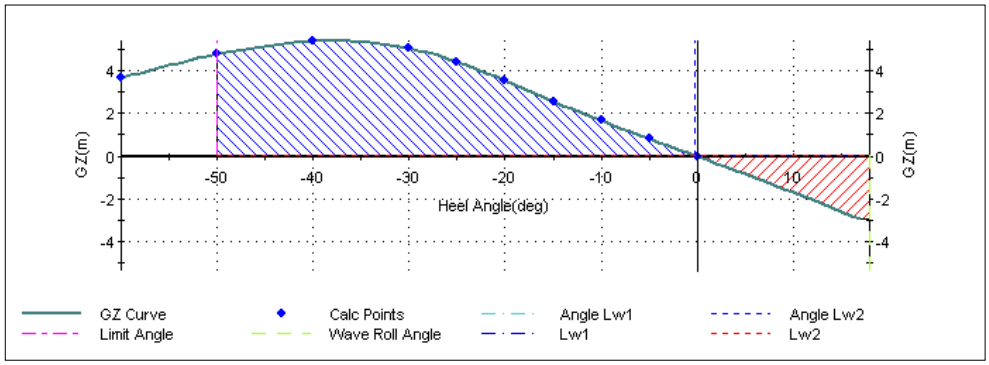
Righting Arm Summary
Tank Inspection - C.O.T. 5S - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.49			
Righting Area B	m-rad	3.13			
Area Ratio B/A		6.439	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	17.361		Limiting Angle	deg
Projected Area (Hull)	m2	3,767.68			
Vertical Arm (Hull)	m	23.485		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	258,089.22		X1	
Wind Heeling Lever Lw1	m	0.025		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.038		Roll Angle	deg
Heeling Angle at Lw2	deg	0			

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Righting Arm Summary
Tank Inspection - C.O.T. 5S - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.796
Steady Wind Pressure	bar	0.987
Displacement	MT	0.809
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.685
		12.465
Heel from Gusting Wind		0.062
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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Tank Inspection 5S

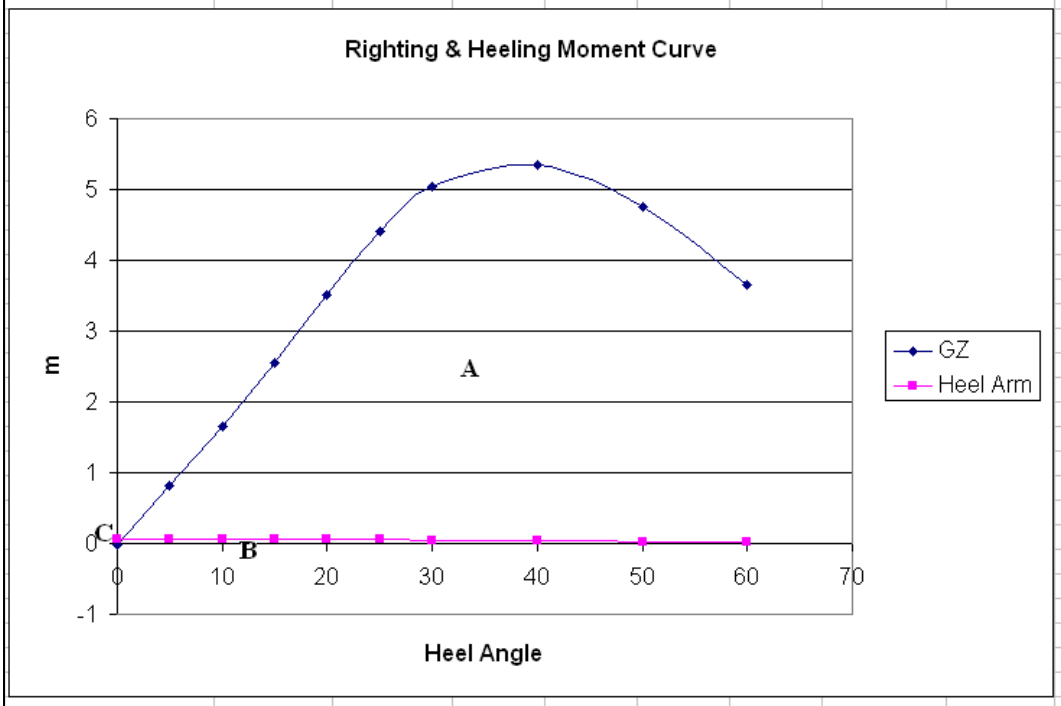
DISPLACEMENT =	258,089	MT		
FWD DRAFT =	16.875	m		
MEAN DRAFT =	17.361	m		
AFT DRAFT =	17.847	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	55561082.6	28.8035
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27567014.8	28.0125
Projected Hull Area @ Mean Draft 17.361	Hull	3691.125		22.841	1	1616.751	5967629.923	84889535.6	14.225
							sum =	168017633	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.015	0.066
5	0.811	0.066
10	1.661	0.064
15	2.555	0.062
20	3.508	0.059
25	4.398	0.055
30	5.031	0.050
40	5.35	0.039
50	4.752	0.027
60	3.657	0.017

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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Intact Trim and Stability Summary
Tank Inspection - C.O.T. 5P

Item	Weight MT	VCG m	LCG m-AP	TCG m-CL	FSMom m-MT
Light Ship	31,841.00	14.840	139.260F	0.000	----
Constant	0.00	0.000	151.750F	0.000	0
Dry Compartments	0.00	----	----	----	----
Cargo Oil	190,114.80	12.855	172.078F	0.998S	264,579
Fuel Oil	2,268.49	17.312	40.038F	0.007S	2,379
Diesel Oil	189.22	20.978	26.806F	18.980S	40
Fresh Water	368.85	22.823	21.328F	2.775P	126
SW Ballast	0.00	----	----	----	----
Void	0.00	----	----	----	----
Slop Tanks	2,888.12	13.867	52.792F	0.000P	5,699
Misc. Weights	658.83	55.400	42.280F	8.660S	0
Marine Hull	4,119.12	19.941	171.143F	6.171P	0
Topside Modules	11,562.00	37.785	166.919F	4.064P	0
Piping & Mech	419.53	25.873	124.090F	1.164S	0
Outfiting	485.39	35.891	104.444F	7.304S	0
Accommodation	128.25	36.628	34.419F	0.595P	0
Electrical	202.06	36.399	124.749F	1.460S	0
Mechnical Item Added	350.24	19.859	117.339F	0.871S	0
MFE Outfitting Added	1,246.28	23.794	165.489F	9.852P	0
Rip out weight	-655.77	22.869	141.986F	0.809S	0
Mooring & Risers	7,005.00	12.733	182.807F	18.889P	0
Displacement	253,191.41	14.672	164.440F	0.059P	272,823

Stability Calculation			**Trim Calculation**		
KMt	25.644	m	LCF Draft	17.048	m
VCG	14.672	m	LCB (even keel)	164.852F	m-AP
GMt (Solid)	10.972	m	LCF	155.727F	m-AP
FSc	1.078	m	MT1cm	3,305	m-MT/cm
GMt (Corrected)	9.895	m	Trim	0.315	m-A
			List	0P	deg
Specific Gravity	1.0250		Propeller Immersion	179.81	%
Hull calcs from tables			Tank calcs from tables		
Drafts			**Strength Calculations**		
Draft at A.P.	17.210	m	Shear	-6,933.33	MT at 145.065F m-AP
Draft at M.S.	17.052	m	Bending Moment	216,510H	m-MT at 121.850F m-AP
Draft at F.P.	16.895	m	Shear % Allowable	55.00%	at 145.065F m-AP
			Moment % Allowable	38.00%	at 121.850F m-AP
Draft at Aft Marks	17.210	m			
Draft at Mid Marks	17.052	m			
Draft at Fwd Marks	16.895	m			

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5P

Dry Compartments

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
Engine Compartr	0.00	0.0	25,766.07	0.000	36.159F	0.000P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 1S	0.00	0.0	382.03	6.600	243.602F	28.820S	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3P	0.00	0.0	2,607.98	0.013	168.361F	28.309P	0	1.0000	0.00	0.00	---	15.6
Cofferdam 3S	0.00	0.0	453.48	6.600	150.870F	29.000S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811S	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.88	12.976	53.235F	22.872P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.59	12.976	56.178F	23.796P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	13.11	13.350	59.077F	24.799P	0	1.0000	0.00	0.00	---	15.6
Fairlead Pipe AF	0.00	0.0	12.35	13.961	61.996F	25.811P	0	1.0000	0.00	0.00	---	15.6
Totals	0.00	0.0	29,315.44	0.000	151.750F	0.000	0.00	1.0000	0.00	0.00		

Cargo Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity
1SWCARGO	9,548.02	48.0	19,891.70	7.533	261.196F	18.567S	17,714	0.8900	10,728.11	67,477.77	---
1CCARGO	29,469.70	98.0	30,071.13	14.518	262.073F	0.000P	33,232	0.8900	33,112.03	208,268.38	---
1PWCARGO	7,890.38	39.0	20,231.74	6.258	260.683F	18.647P	19,324	0.8900	8,865.59	55,762.90	---
2CCARGO	28,792.90	98.0	29,380.51	14.487	214.725F	0.000S	35,802	0.8900	32,351.57	203,485.24	---
3SWCARGO	9,404.78	45.0	20,899.52	6.448	168.527F	20.910S	18,474	0.8900	10,567.17	66,465.52	---
3PWCARGO	8,465.72	45.0	18,812.72	6.506	168.285F	20.050P	13,898	0.8900	9,512.05	59,828.99	---
3CCARGO	28,792.85	98.0	29,380.46	14.487	168.285F	0.000S	35,836	0.8900	32,351.52	203,484.92	---
4CCARGO	28,792.88	98.0	29,380.49	14.489	121.845F	0.000S	35,740	0.8900	32,351.55	203,485.12	---
5SWCARGO	6,927.51	45.0	15,394.47	8.758	80.873F	19.156S	14,200	0.8900	7,783.72	48,958.14	---
5CCARGO	32,030.05	98.0	32,683.72	14.580	72.884F	0.000S	40,360	0.8900	35,988.82	226,362.85	---
5PWCARGO	0.00	0.0	15,394.47	0.000	88.939F	14.778P	0	0.8900	0.00	0.00	---
Totals	190,114.79	72.7	261,520.93	12.855	172.078F	0.998S	264,579.38	0.8900	213,612.12	1,343,579.84	

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5P

Fuel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
No.1 F.O.T. (S)	464.87	50.0	929.74	14.412	44.712F	16.523S	849	0.9700	479.25	3,014.38	---	15.6
No.1 F.O.T. (P)	464.87	50.0	929.74	14.412	44.712F	16.523P	849	0.9700	479.25	3,014.38	---	15.6
No.2 F.O.T. (S)	623.76	50.0	1,247.52	19.122	36.674F	19.879S	252	0.9700	643.05	4,044.67	---	15.6
No.2 F.O.T. (P)	669.40	50.0	1,338.80	19.348	36.802F	19.737P	415	0.9700	690.10	4,340.61	---	15.6
H.F.O. SETT.T.	25.32	50.0	50.64	21.788	36.430F	18.155S	7	0.9700	26.10	164.17	---	15.6
H.F.O. SERV. T.	20.27	50.0	40.55	21.788	40.480F	18.155S	6	0.9700	20.90	131.46	---	15.6
Totals	2,268.49	50.0	4,536.98	17.312	40.038F	0.007S	2,378.84	0.9700	2,338.65	14,709.67		

Diesel Oil

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3	Volume bbls	API Gravity	Temp deg C
DIESEL OIL TK.	174.55	50.0	349.09	20.894	26.716F	19.087S	38	0.9000	193.94	1,219.84	---	15.6
D.O. SERV. T. (S	14.67	50.0	29.34	21.975	27.880F	17.705S	2	0.9000	16.30	102.52	---	15.6
Totals	189.22	50.0	378.43	20.978	26.806F	18.980S	39.79	0.9000	210.24	1,322.37		

Fresh Water

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
FRWATERP	88.95	50.0	177.90	22.816	22.097F	18.358P	20	1.0000	88.95
DRINKING P	114.55	50.0	229.09	22.808	26.645F	19.205P	44	1.0000	114.55
DRINKING S	165.35	50.0	330.70	22.838	17.230F	16.990S	62	1.0000	165.35
Totals	368.85	50.0	737.70	22.823	21.328F	2.775P	125.88	1.0000	368.85

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5P

SW Ballast

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
2SWBAL	0.00	0.0	24,522.91	0.000	214.559F	20.258S	0	1.0250	0.00
4PWBAL	0.00	0.0	24,259.98	0.000	124.026F	18.896P	0	1.0250	0.00
Totals	0.00	0.0	48,782.89	0.000	151.750F	0.000	0.00	1.0000	0.00

Void

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Void 2P	0.00	0.0	23,924.79	0.000	214.559F	20.258P	0	1.0000	0.00
Void 4S	0.00	0.0	23,667.97	0.000	124.047F	18.896S	0	1.0000	0.00
Fwd Void	0.00	0.0	7,654.74	0.000	294.482F	0.000S	0	1.0000	0.00
Aft Void	0.00	0.0	3,597.20	0.000	11.663F	0.000S	0	1.0000	0.00
Totals	0.00	0.0	58,844.70	0.000	151.750F	0.000	0.00	1.0000	0.00

Slop Tanks

	Weight MT	% Full	Capacity MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Density MT/m3	Volume m3
Slop Tank (S)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423S	2,850	0.8900	1,622.54
Slop Tank (P)	1,444.06	50.0	2,888.12	13.867	52.792F	17.423P	2,850	0.8900	1,622.54
Totals	2,888.12	50.0	5,776.23	13.867	52.792F	0.000P	5,699.26	0.8900	3,245.08

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5P

Misc. Weights

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Bound m-AP
Added Weight	658.83	55.400	42.280F	8.660S	0.00	29.680F	54.880F
Totals	658.83	55.400	42.280F	8.660S	0.00		

Marine Hull

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
HULL REINFORC	508.12	14.466	186.855F	0.000	0.00	139.260F	272.775F
THE STRUCTUR	57.00	16.439	243.872F	28.175S	0.00	237.945F	249.555F
THE STRUCTUR	55.00	16.439	150.992F	28.190S	0.00	145.065F	156.675F
THE STRUCTUR	289.40	13.857	164.400F	28.120P	0.00	145.065F	191.505F
FLARE TOWER S	121.77	60.021	262.952F	11.979P	0.00	261.165F	266.970F
S.W. LIFT CAISS	47.20	10.995	123.877F	13.795P	0.00	116.040F	133.455F
MODULE 1P OUT	15.92	25.632	243.887F	32.512P	0.00	237.945F	249.555F
TOPSIDE MODU	24.80	29.973	243.020F	17.862P	0.00	237.945F	249.555F
TOPSIDE MODU	47.08	29.950	220.560F	18.975P	0.00	208.920F	232.140F
TOPSIDE MODU	41.20	30.007	193.595F	18.761P	0.00	185.700F	203.115F
TOPSIDE MODU	50.30	29.974	167.032F	19.948P	0.00	145.065F	179.895F
TOPSIDE MODU	19.97	30.039	110.127F	16.350P	0.00	87.015F	116.040F
TOPSIDE MODU	27.62	30.002	229.368F	16.673S	0.00	220.530F	237.945F
TOPSIDE MODU	38.21	30.000	200.100F	16.782S	0.00	185.700F	214.725F
TOPSIDE MODU	26.64	30.014	171.058F	16.753S	0.00	162.480F	179.895F
TOPSIDE MODU	32.05	30.006	144.911F	16.742S	0.00	133.455F	156.675F
TOPSIDE MODU	19.50	29.966	121.859F	16.862S	0.00	116.040F	127.650F
TOPSIDE MODU	26.52	30.002	101.436F	16.925S	0.00	92.820F	110.235F
CENTER PIPER/	3.51	30.160	235.077F	0.432S	0.00	220.530F	249.555F
CENTER PIPER/	3.51	30.160	200.129F	0.432S	0.00	185.700F	272.775F
CENTER PIPER/	3.48	30.160	165.383F	0.463S	0.00	150.870F	179.895F
CENTER PIPER/	3.48	30.160	130.553F	0.463S	0.00	116.040F	145.065F
BILGE KEEL MOI	135.41	0.149	168.395F	0.172P	0.00	163.395F	173.395F
HELICOPTER DE	98.53	46.813	4.852F	14.895P	0.00	0.249A	9.751F
FWD DECK CRA	37.40	32.044	220.530F	30.007S	0.00	215.530F	225.530F
MID DECK CRAN	34.40	29.817	127.650F	30.000S	0.00	122.650F	132.650F
THE STRUCTUR	22.16	31.725	6.220F	10.125S	0.00	3.100F	9.340F
AFT OFFLOADIN	70.20	25.755	0.916A	14.987S	0.00	4.084A	5.916F
FWD OFFLOADII	102.70	26.257	306.485F	5.267P	0.00	301.485F	311.485F
SUPPORT STRU	209.95	24.656	278.711F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	116.80	29.309	57.849F	0.000	0.00	52.185F	63.795F
SUPPORT STRU	336.67	8.360	278.501F	0.000	0.00	272.775F	284.385F
SUPPORT STRU	295.34	7.760	57.990F	0.000	0.00	52.185F	63.795F
RISER SUPPOR	350.58	22.655	188.602F	32.350P	0.00	183.602F	193.602F
RISER SUPPOR	234.76	3.275	188.602F	31.654P	0.00	183.602F	193.602F
CHAIN HANDLIN	8.76	29.693	56.728F	0.000	0.00	52.185F	63.795F
CHAIN HANDLIN	20.02	27.212	275.883F	0.000	0.00	266.970F	284.385F
CHAIN HANDLIN	13.12	33.341	57.386F	0.000	0.00	52.185F	63.795F

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CHAIN HANDLIN	15.48	32.102	279.060F	0.000	0.00	266.970F	284.385F
AFT CHAIN LOCI	45.80	31.455	61.495F	0.000	0.00	52.185F	63.795F
FWD CHAIN LOC	57.29	30.656	275.962F	0.000	0.00	266.970F	284.385F
DECK COAMING	4.18	29.612	182.453F	8.490P	0.00	177.453F	187.453F
NEW STRUCTUF	14.51	40.200	35.823F	11.950S	0.00	29.680F	42.280F
NAV.BRI DECK S	28.03	44.709	24.833F	0.520P	0.00	19.833F	29.833F
NEW STRUCTUF	0.17	37.110	31.911F	3.630P	0.00	11.680F	42.280F
CONSTRUCTION	2.58	35.877	15.993F	9.600S	0.00	10.993F	20.993F
CONSTRUCTION	5.13	31.332	292.248F	15.640P	0.00	290.190F	295.460F
FWD FIRE PUMF	16.75	32.056	297.677F	8.510S	0.00	292.825F	301.960F
NEW STRUCTUF	37.63	32.413	25.775F	1.990S	0.00	11.680F	42.280F
UPPER DECK G	2.72	31.789	10.529F	1.960P	0.00	9.340F	11.680F
FABRICATION D	2.64	27.886	294.608F	4.650S	0.00	290.190F	301.960F
FWD PORTSIDE	0.93	30.835	289.259F	15.180P	0.00	284.259F	294.259F
WORKBOAT PL	2.17	29.808	4.294F	14.120P	0.00	0.000	9.340F
BOILER FUNDAT	1.66	29.388	12.759F	10.870P	0.00	9.340F	15.280F
BOILER CONTR	14.48	37.483	21.571F	10.760P	0.00	18.880F	24.280F
Boom Rest of For	0.00	0.000	151.750F	0.000	0.00	151.750F	208.500F
Boom Rest of Mic	3.04	37.044	130.810F	20.380S	0.00	125.000F	135.000F
Boom Rest of Aft	0.67	44.079	11.657F	4.360S	0.00	6.657F	21.580F
FOUNDATION O	0.39	0.301	292.156F	3.320S	0.00	290.190F	292.825F
FND OF BALLAS	1.75	10.089	194.326F	26.360S	0.00	189.326F	199.326F
FND OF BALLAS	1.84	10.181	101.481F	24.510P	0.00	96.481F	106.481F
SEA WATER LIF	7.79	0.702	125.170F	18.470S	0.00	116.040F	133.455F
ZINC ARRANGEI	103.50	10.842	142.928F	0.000	0.00	137.928F	147.928F
SEA CHEST CO	1.41	0.000	81.169F	1.330S	0.00	76.169F	86.169F
MDO TANK AND	2.33	30.350	295.583F	8.830S	0.00	295.460F	301.960F
FOUNDATION F	1.92	29.961	18.134F	19.220P	0.00	17.080F	20.680F
CLOSED DRAIN	10.06	29.446	228.844F	14.770P	0.00	226.335F	232.140F
OPENED DRAIN	10.30	29.550	134.781F	12.010P	0.00	127.650F	139.260F
CABLE TRAY SU	5.18	40.160	40.480F	15.750S	0.00	35.480F	45.480F
O.D.1067x25 THI	101.80	20.837	57.502F	0.000	0.00	52.502F	62.502F
FAIRLEAD BRAC	42.72	8.530	180.540F	0.000	0.00	151.750F	185.540F
EMERG GEN MD	2.21	28.750	18.237F	8.490S	0.00	13.237F	151.750F
AFT FIRE PUMP	2.56	20.775	29.250F	14.190P	0.00	24.250F	151.750F
CHAIN JACK SUI	12.30	28.676	180.544F	0.000	0.00	151.750F	185.544F
EXHAUST FLAN	6.12	37.650	96.025F	12.000S	0.00	91.025F	151.750F
Totals	4,119.12	19.941	171.143F	6.171P	0.00		

Topside Modules

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
CENTRAL PIPEF	203.00	38.494	234.272F	0.210P	0.00	214.725F	255.360F
CENTRAL PIPEF	422.00	40.424	199.876F	0.283P	0.00	179.895F	220.530F
CENTRAL PIPEF	235.00	40.060	165.270F	0.423P	0.00	145.065F	185.700F
CENTRAL PIPEF	226.00	39.786	130.046F	0.498P	0.00	110.235F	150.870F
CHEMICAL INJE	493.00	36.427	225.639F	13.962S	0.00	220.530F	237.945F

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HP COMPRESSI	1,251.00	38.919	199.515F	14.593S	0.00	185.700F	214.725F
BOOSTER COMI	684.00	37.219	171.752F	12.953S	0.00	162.480F	179.895F
WATER INJECTI	639.00	36.972	146.516F	15.495S	0.00	133.455F	156.675F
MIDSHIP LAYDO	122.00	33.905	123.650F	15.269S	0.00	116.040F	127.650F
POWER GENER	1,165.00	39.539	103.304F	15.541S	0.00	92.820F	110.235F
COIL TUBING & I	530.00	35.320	242.450F	18.830P	0.00	237.945F	249.555F
LP SEPARATION	836.00	40.158	206.520F	13.846P	0.00	200.420F	210.420F
PRODUCTION &	1,511.00	39.746	158.552F	14.293P	0.00	146.000F	163.415F
UTILITIES MODU	734.00	35.215	133.812F	14.482P	0.00	128.000F	145.415F
LAB/WORKSHOI	423.00	33.826	122.625F	12.274P	0.00	117.056F	127.056F
E-HOUSE	610.00	37.876	109.858F	14.313P	0.00	104.430F	116.040F
INLET MANIFOLI	837.00	35.315	196.703F	28.879P	0.00	180.700F	228.140F
INLET,MANIFOLI	641.00	35.089	155.930F	29.029P	0.00	145.065F	179.895F
Totals	11,562.00	37.785	166.919F	4.064P	0.00		

Piping & Mech

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
Jockey pump sea	0.41	3.300	27.500F	5.010P	0.00	24.280F	30.300F
MDO circle pump	0.28	3.500	34.398F	6.438P	0.00	34.180F	35.080F
MDO purifier feec	0.06	3.500	34.398F	7.445P	0.00	34.180F	35.080F
MDO purifier feec	0.32	3.500	34.398F	8.045P	0.00	34.180F	35.080F
slop water feed pı	0.15	5.900	37.780F	1.385S	0.00	32.780F	39.580F
FDN of remote fe	0.15	5.900	37.780F	0.460S	0.00	32.780F	39.580F
FND OF OIL WA	0.90	5.950	39.880F	9.250S	0.00	37.780F	44.880F
foundation of feec	0.80	2.700	41.235F	7.500S	0.00	40.480F	41.380F
FND OF DECK B	0.30	11.120	36.355F	11.300P	0.00	35.080F	38.680F
FND OF GTG MD	0.35	9.650	25.400F	10.680S	0.00	25.180F	26.080F
FDN OF MDO BU	0.20	9.650	23.760F	9.130S	0.00	23.380F	24.280F
sewage treat unit	0.30	21.500	38.955F	3.965P	0.00	38.680F	41.380F
sewage treat unit	0.30	21.500	38.955F	3.760S	0.00	38.680F	41.380F
foundation of ster	0.12	14.220	21.130F	9.850S	0.00	19.780F	21.580F
FOUNDATION O	0.25	17.700	28.280F	14.600P	0.00	24.280F	33.280F
FWD FIRE PUMF	1.10	30.100	294.330F	8.040S	0.00	292.825F	295.460F
FDN of FWD fire	6.90	29.917	298.054F	7.952S	0.00	295.460F	301.960F
FDN of AFT fire p	6.90	18.200	33.580F	11.060P	0.00	29.680F	36.880F
AFT FIRE PUMP	1.10	18.500	38.480F	15.200P	0.00	33.480F	43.480F
HELIDECK DRAI	1.00	29.200	1.276F	8.800P	0.00	3.724A	6.276F
FND OF EMERG	0.08	16.974	19.780F	12.600S	0.00	14.780F	24.780F
FDN of fuel gas v	0.09	38.017	10.868F	12.737P	0.00	5.868F	15.868F
VENT FAN ARR.	0.60	32.262	302.284F	9.632S	0.00	297.284F	307.284F
FDN OF MOORIN	0.44	30.917	296.050F	8.767S	0.00	291.050F	301.050F
FDN OF MOORIN	10.73	30.917	8.813F	10.218S	0.00	3.813F	13.813F
FDN OF NEW AII	0.30	44.327	23.830F	4.736S	0.00	18.830F	28.830F
FDN OF AIR CON	0.65	33.492	36.982F	4.013S	0.00	31.982F	41.982F
FDN OF FUEL G	0.25	38.087	9.130F	13.150P	0.00	4.130F	14.130F
OIL STEAM AND	0.25	38.087	12.580F	14.640P	0.00	7.580F	17.580F

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FDN OF COMBU	0.26	33.781	17.364F	12.000P	0.00	12.364F	22.364F
FND OF EXTRAC	0.15	43.487	17.980F	6.472P	0.00	12.980F	22.980F
AIR CONDITION	0.25	30.117	32.855F	0.290S	0.00	27.855F	37.855F
BACKUP AIR CO	0.18	30.117	24.556F	3.090P	0.00	19.556F	29.556F
FND OF AIR CON	0.13	43.517	26.819F	6.867P	0.00	21.819F	31.819F
FND OF EXTEND	0.32	43.517	24.430F	5.500S	0.00	19.430F	29.430F
FND OF EXTEND	0.20	46.237	24.895F	1.462S	0.00	19.895F	29.895F
Rip out of ventilat	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. OF NEW A	0.50	32.150	37.780F	4.650P	0.00	32.780F	42.780F
ARR. OF NEW A	0.30	32.417	39.580F	2.059P	0.00	34.580F	44.580F
ARR. OF NEW A	0.30	45.572	35.510F	10.584P	0.00	30.510F	40.510F
ARR. of ventilatio	0.02	35.290	33.280F	4.980P	0.00	28.280F	38.280F
ARR.OF VENTIL	0.08	38.217	35.461F	0.000	0.00	30.461F	40.461F
ARR.OF VENTIL	1.25	42.817	33.285F	2.114P	0.00	28.285F	38.285F
RR.OF VENTILA	0.16	45.572	35.289F	0.300P	0.00	30.289F	40.289F
ARR. Of H/C wate	0.12	32.467	38.136F	7.194S	0.00	33.136F	43.136F
ARR. Of H/C wate	0.08	32.467	38.500F	5.574P	0.00	33.500F	43.500F
ARR. Of H/C wate	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
ARR. Of H/C wate	0.12	32.467	32.496F	11.283P	0.00	27.496F	37.496F
pipe support of Fi	0.06	20.315	31.838F	8.572P	0.00	26.838F	36.838F
ARR. Of fire ring l	58.47	30.739	149.270F	4.898P	0.00	144.270F	154.270F
Form piping syste	5.05	30.624	128.799F	1.256P	0.00	123.799F	133.799F
Ballast Related Pi	17.80	7.135	173.200F	19.384S	0.00	168.200F	178.200F
pipe piece on sea	0.02	16.500	192.294F	18.500S	0.00	187.294F	197.294F
Piping Arrangeme	17.80	7.135	145.065F	19.384P	0.00	140.065F	150.065F
pipe piece on sea	0.02	16.500	99.037F	18.500P	0.00	94.037F	104.037F
Tank Cleaning Pi	2.12	29.710	259.099F	6.000S	0.00	254.099F	264.099F
Piping arrangeme	0.80	19.130	170.034F	0.150S	0.00	165.034F	175.034F
Cargo oil piping a	61.04	32.200	136.817F	1.816S	0.00	131.817F	141.817F
pipe support of Pi	38.50	31.560	165.300F	1.329P	0.00	160.300F	170.300F
New pipe in slop(	3.84	8.205	47.380F	5.825P	0.00	42.380F	52.380F
piping arr't of aft f	17.78	14.572	34.648F	9.100P	0.00	29.648F	39.648F
FABRICATION D	0.30	18.853	36.312F	14.431P	0.00	31.312F	41.312F
Water Spray Pipi	0.50	33.852	32.881F	0.000	0.00	27.881F	37.881F
Pipe piece for FW	0.01	1.895	292.217F	3.269P	0.00	287.217F	297.217F
Fire Pump Relate	2.60	29.540	297.933F	10.536S	0.00	292.933F	302.933F
Fire Pump Relate	5.20	16.080	294.037F	7.863S	0.00	289.037F	299.037F
Fabrication drawi	0.30	30.858	294.467F	7.930S	0.00	289.467F	299.467F
piping arrangeme	1.50	31.438	81.215F	1.555P	0.00	76.215F	86.215F
New pipe for cool	0.08	7.800	35.857F	6.512S	0.00	30.857F	40.857F
New line of contr	0.20	20.715	27.844F	6.986P	0.00	22.844F	32.844F
New line of startin	0.12	23.721	42.130F	9.907P	0.00	37.130F	47.130F
Arrangement for F	1.52	20.582	15.983F	1.080P	0.00	10.983F	20.983F
Distance piece fo	0.01	8.417	27.280F	7.486S	0.00	22.280F	32.280F
ARR of sewage s	2.50	24.873	37.780F	0.500P	0.00	32.780F	42.780F
F.O Filling and tra	0.36	28.625	38.852F	7.612S	0.00	33.852F	43.852F
F.O Filling and tra	0.53	17.075	36.719F	15.225S	0.00	31.719F	41.719F
F.O FILLING AND	0.52	4.438	38.280F	8.195S	0.00	33.280F	43.280F
Piping arrangeme	5.78	30.732	107.351F	0.939S	0.00	102.351F	112.351F

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deck boiler filling	0.50	12.846	33.060F	9.833P	0.00	28.060F	38.060F
New pipe for cool	0.38	16.304	34.774F	0.316S	0.00	29.774F	39.774F
Piping diagram in	1.34	17.768	37.378F	11.416S	0.00	32.378F	42.378F
Distance piece for	0.14	6.250	28.503F	17.398P	0.00	23.503F	33.503F
Distance piece for	0.27	21.112	148.032F	0.000	0.00	143.032F	153.032F
Pump R/M sea ch	0.01	3.742	45.750F	10.189S	0.00	40.750F	50.750F
MDO PING SYST	2.76	31.363	91.249F	2.767S	0.00	86.249F	96.249F
Exhaust pipe For	0.50	32.797	298.710F	10.797S	0.00	293.710F	303.710F
Fabrication drawir	0.30	28.449	174.090F	1.250S	0.00	169.090F	179.090F
PIPING ARR. FO	8.55	46.890	8.565F	1.233P	0.00	3.565F	13.565F
Heating Media Pi	0.91	32.215	81.856F	0.625P	0.00	76.856F	86.856F
Sounding, Drain &	0.76	29.650	203.150F	2.530S	0.00	198.150F	208.150F
IGS Piping Syster	36.74	31.425	163.191F	0.550P	0.00	158.191F	168.191F
Deck Boiler Relat	2.50	34.256	12.820F	11.465P	0.00	7.820F	17.820F
Accom External D	0.40	35.317	28.880F	1.500S	0.00	23.880F	33.880F
UPPER deck grey	0.65	28.653	31.480F	11.484P	0.00	26.480F	36.480F
NAV & A deck gre	0.15	32.369	31.073F	6.480P	0.00	26.073F	36.073F
C deck grey and b	1.50	65.614	35.080F	1.200P	0.00	30.080F	40.080F
Accom Front Wal	2.09	39.001	43.465F	3.329P	0.00	38.465F	48.465F
Air cooled packag	1.34	36.550	137.579F	8.087P	0.00	132.579F	142.579F
Piping arrangeme	0.25	32.461	106.607F	0.772P	0.00	101.607F	111.607F
"Helideck Drain P	6.85	44.516	5.235F	14.864P	0.00	0.235F	10.235F
FDN of fuel gas v	0.33	38.307	10.447F	12.177P	0.00	5.447F	15.447F
oil steam and air v	0.29	38.307	12.810F	13.978P	0.00	7.810F	17.810F
FDN of combustic	0.35	3.108	17.480F	12.400P	0.00	12.480F	22.480F
4s wing space du	0.12	18.422	130.772F	14.152S	0.00	125.772F	135.772F
fab.drawing of em	0.45	32.630	16.854F	11.698S	0.00	11.854F	21.854F
ARR.OF VENTIL	0.30	31.710	298.130F	10.087S	0.00	293.130F	303.130F
fab.drawing of air	0.14	7.365	15.254F	12.258P	0.00	10.254F	20.254F
FOUNDATION O	0.10	37.720	18.020F	6.745P	0.00	13.020F	23.020F
ARR. OF SEAWA	45.64	10.830	127.713F	18.924S	0.00	122.713F	132.713F
DUCT ARR. IN S	1.27	19.233	130.513F	13.875S	0.00	125.513F	135.513F
NEW DUCTING I	0.01	20.021	31.554F	8.100P	0.00	26.554F	36.554F
PIPING FOR MO	0.00	0.000	151.750F	0.000	0.00	151.750F	151.750F
MODIFY FOR AII	0.36	37.740	37.251F	0.000	0.00	32.251F	42.251F
FIRE FIGHTING	0.02	45.982	38.685F	15.075P	0.00	33.685F	43.685F
ARR OF 4TH DE	0.03	36.667	35.980F	14.825S	0.00	30.980F	40.980F
PIPING ARRANG	2.60	32.054	32.846F	16.566P	0.00	27.846F	37.846F
PIPING ARRANG	7.74	34.050	20.255F	10.830S	0.00	15.255F	25.255F
PIPING ARRANG	0.72	33.486	171.187F	0.336P	0.00	166.187F	176.187F
PIPING ARRANG	0.18	32.503	149.846F	0.540P	0.00	144.846F	154.846F
PIPING ARR. FO	1.10	25.590	17.980F	12.700S	0.00	12.980F	22.980F
EXHaust pipe For	2.84	20.329	23.395F	4.625P	0.00	18.395F	28.395F
HYPOCHLORITE	0.05	2.940	40.042F	16.114S	0.00	35.042F	45.042F
FOUNDATION F	0.21	29.000	19.000F	12.500P	0.00	14.000F	24.000F
VENTILATION F	0.50	32.600	2.300F	12.700P	0.00	2.700A	7.300F
BILGE PIPING AI	0.30	15.600	290.000F	7.630P	0.00	285.000F	295.000F
Totals	419.53	25.873	124.090F	1.164S	0.00		

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Tankage and Cargo Summary
Tank Inspection - C.O.T. 5P

Mooring & Risers

	Weight MT	VCG m-BL	LCG m-AP	TCG m-CL	FSmom m-MT	Aft Bound m-AP	Fwd Boun m-AP
RiserLoad	4,708.00	14.750	188.603F	31.500P	0.00	145.065F	232.140F
FwdPortMooring	427.00	8.600	278.580F	24.580P	0.00	272.775F	284.385F
FwdStbdMooring	749.00	8.600	278.580F	24.580S	0.00	272.775F	284.385F
AftPortMooring	396.00	8.600	57.990F	24.520P	0.00	52.185F	63.795F
AftStbdMooring	725.00	8.600	57.990F	24.520S	0.00	52.185F	63.795F
Totals	7,005.00	12.733	182.807F	18.889P	0.00		

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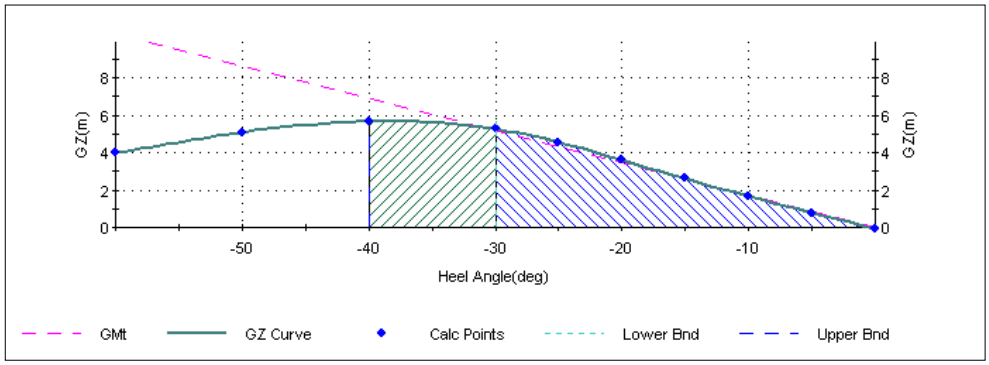
Righting Arm Summary
Tank Inspection - C.O.T. 5P

IMO A.749(18)-3.1 General Criteria



Parameter	Units	Available	Required
Area to 30. deg	m-rad	1.39	0.06
Area to 40. deg	m-rad	2.36	0.09
Area 30. to 40. deg	m-rad	0.97	0.03
Angle at Maximum GZ	deg	38P	>25
Maximum GZ above 30 deg	m	5.681	0.200
Initial GM	m	9.895	0.150

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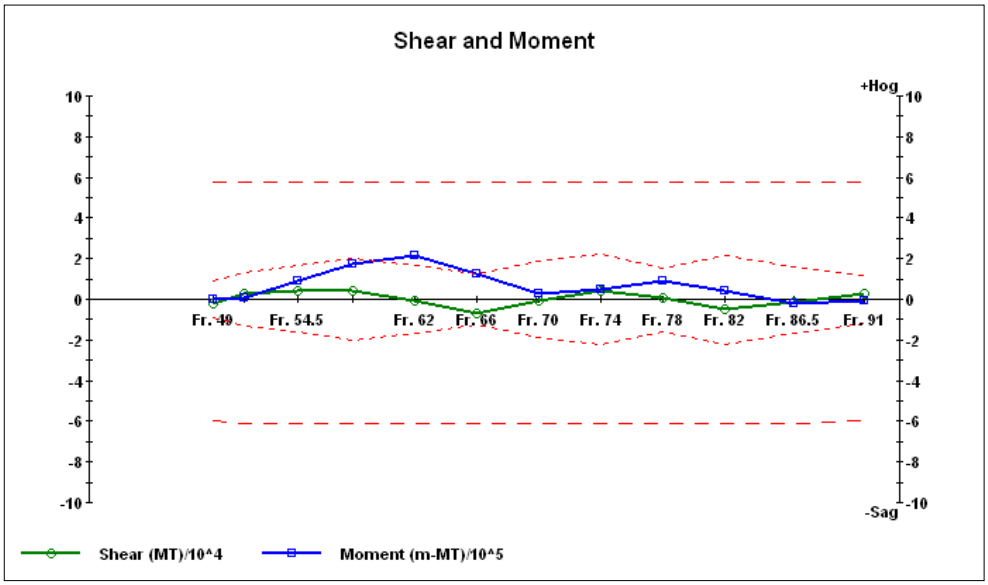
Longitudinal Shear and Bending Moment Summary
Tank Inspection - C.O.T. 5P



Name	Location m-AP	Weight MT	Buoyancy MT	Shear MT	Wt. Moment m-MT	Buoy. Moment m-MT	Bending Moment m-MT
Fr. 49	46.380F	11,108.56	13,050.35	-1,941.79	197,063	196,080	984H
Fr. 51	57.990F	23,440.13	20,423.31	3,016.82	393,399	389,563	3,836H
Fr. 54.5	78.310F	41,425.46	36,993.23	4,432.23	1,055,397	965,457	89,940H
Fr. 58	98.625F	60,754.22	56,554.89	4,199.33	2,088,815	1,912,640	176,175H
Fr. 62	121.850F	79,426.97	80,457.94	-1,030.97	3,718,508	3,501,997	216,510H
Fr. 66	145.065F	97,910.03	104,843.37	-6,933.33	5,779,991	5,652,876	127,115H
Fr. 70	168.260F	128,340.95	129,335.48	-994.54	8,402,649	8,375,482	27,168H
Fr. 74	191.505F	157,860.76	153,888.69	3,972.07	11,724,603	11,675,814	48,789H
Fr. 78	214.730F	178,757.59	178,321.82	435.77	15,633,452	15,539,849	93,603H
Fr. 82	237.945F	197,569.11	202,529.28	-4,960.17	20,006,197	19,962,943	43,253H
Fr. 86.5	264.070F	227,756.26	228,887.70	-1,131.44	25,582,461	25,602,167	19,706S
Fr. 91	290.190F	251,551.60	248,682.94	2,868.66	31,855,150	31,863,054	7,904S

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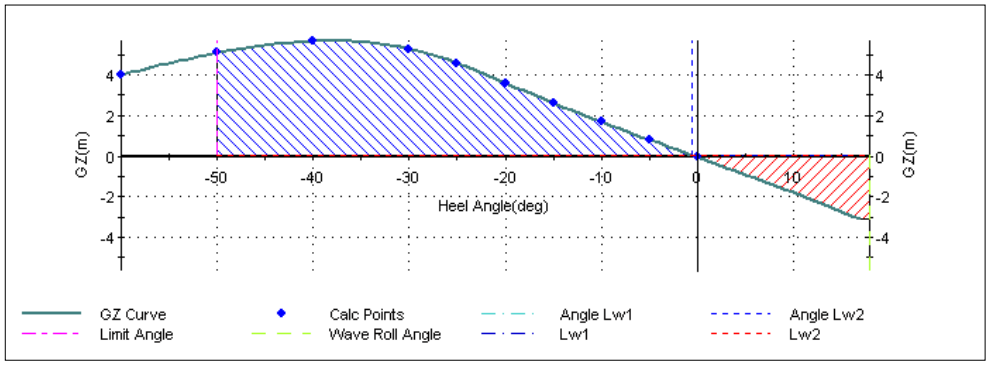
Righting Arm Summary
Tank Inspection - C.O.T. 5P - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion



Parameter	Units	Value	Required	Parameter	Units
Capsizing Area A	m-rad	0.49			
Righting Area B	m-rad	3.28			
Area Ratio B/A		6.653	1		
Heel from Steady Wind				Extreme Angle for Righting Energy	
Mean Draft	m	17.052		Limiting Angle	deg
Projected Area (Hull)	m2	3,865.08			
Vertical Arm (Hull)	m	23.330		Roll Angle due to Wave Action	
Projected Area(Cargo)	m2	2,495.77		Bilge Area	m2
Vertical Arm (Cargo)	m	37.024		Cb	
Steady Wind Pressure	bar	0.01		k	
Displacement	MT	253,191.40		X1	
Wind Heeling Lever Lw1	m	0.026		X2	
Heeling Angle at Lw1	deg	0		r	
				T	sec
Heel from Gusting Wind				S	
Wind Heeling Lever Lw2	m	0.039		Roll Angle	deg
Heeling Angle at Lw2	deg	1			

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Righting Arm Summary
Tank Inspection - C.O.T. 5P - Weather Criteria

IMO A.749(18)-3.2 Weather Criterion

Parameter	Units	Value
Capsizing Area A	m-rad	
Righting Area B	m-rad	
Area Ratio B/A		
Heel from Steady Wind		
Mean Draft	m	50
Projected Area (Hull)	m2	
Vertical Arm (Hull)	m	
Projected Area(Cargo)	m2	125.00
Vertical Arm (Cargo)	m	0.795
Steady Wind Pressure	bar	0.987
Displacement	MT	0.800
Wind Heeling Lever Lw1	m	1.000
Heeling Angle at Lw1	deg	0.684
		12.249
Heel from Gusting Wind		0.064
Wind Heeling Lever Lw2	m	18
Heeling Angle at Lw2	deg	

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Tank Inspection 5P

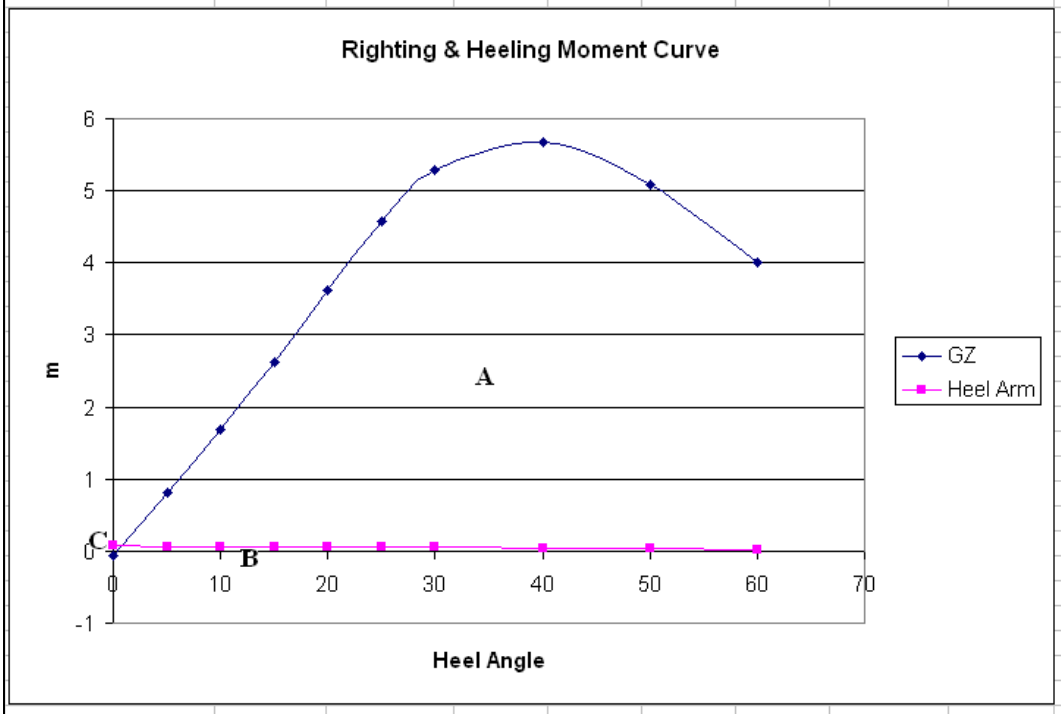
DISPLACEMENT =	253,191	MT		
FWD DRAFT =	16.895	m		
MEAN DRAFT =	17.052	m		
AFT DRAFT =	17.21	m		
Presure, P =	$f V_f^2 C_h C_s$	(N/m^2)		
Wind Velocity, Vf =	100	(Kts)	51.44	m/s
f =	0.611			

Description	Shape Factor	Effective Area m^2	Center Long (m)	Center Vert (m)	C_h	Pressure, P (N/m^2)	Force = PA (N)	Heel Vert Moment (N-m)	Heel Ver. Arm (m)
Topsides	Cylinder	1988.525	166.919	37.419	1.2	970.051	1928969.833	55733725	28.893
Accomidations	Deck House	507.24	34.419	36.628	1.2	1940.101	984096.914	27655091	28.102
Projected Hull Area @ Mean Draft 17.052	Hull	3800.705		22.751	1	1616.751	6144793.494	87409687	14.225
							sum =	170798504	

Heel Moment with resp. angle = ∑moment * cos(θ)^2

Angle (deg)	GZ m	Heel Arm m
0	-0.059	0.069
5	0.801	0.068
10	1.687	0.067
15	2.618	0.064
20	3.613	0.061
25	4.578	0.056
30	5.282	0.052
40	5.665	0.040
50	5.094	0.028
60	4.009	0.017

ABS REQUIREMENT: Area A + B > 1.4 Area B+C



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