BITUMEN PRINCESS 2

TRIM AND STABILITY BOOKLET

IMO NO: 9440289

PRS 1936
C/010/E

POLSKI REJESTR STATKÓW S.A.
Zatwierdzono
APPROVED
Gdańsk 2023-11-10

C/629/01 Polski Rejestr Statków S.A.
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Prepared By:

NAVTECH

0	**ISSUED FOR APPROVAL**	**JPV**	**MRD**	**DKD**	**05.10.2023**
REV	DESCRIPTION	PREPARED	CHKD	APRD	DATE

NAVTECH

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Vessel Name:	BITUMEN PRINCESS 2		
Client:	**SAFE SEAS**	Title:	**TRIM AND STABILITY BOOKLET**
Prepared	Project No.	Scale	
JPV	**N1220**	**N T S**	
Checked	Doc No.	Sheet	Rev.
MRD	**N1220-BP2-001**	**2 OF 212**	**0**

CONTENTS

1 INTRODUCTION

This Trim and Stability Booklet has been meticulously crafted to address vital modifications made to existing vessels. Specifically, this documentation pertains to the incorporation of Plate renewal and the installation of a Ballast Water Treatment System (BWTS). These significant alterations have resulted in a noteworthy increase in the vessel's weight of lightship (1.85% increase in lightship), prompting the need for a comprehensive re-evaluation of its stability characteristics .

2 GENERAL

2.1 GENERAL PARTICULARS

Name of ship	:	BITUMEN PRINCESS 2
IMO. No	:	9440289
Port of registry	:	MALAKAL HARBOR
Builder's name	:	NINGBO DONGFANG SHIPBUILDING CO. LTD
Year of manufacture	:	2008
Official No.	:	P046077
Type	:	OIL TANKER
Classification Society	:	POLISH REGISTER OF SHIPPING (PRS)
Call Sign	:	TBA3465

2.2 PRINCIPAL DIMENSIONS

Length O. A	:	101.90 m
Length B.P	:	96.59 m
Breadth (MLD)	:	16.00 m
Depth (MLD)	:	8.000 m
Design Draft (MLD)	:	5.912 m
Draft, Freeboard (MLD)	:	2.088 m
Net Tonnage	:	1419 t
Gross Tonnage	:	3757 t
LIGHTSHIP	:	2474.92 t
LCG	:	41.805 m (FROM AP)
VCG	:	5.992 m (FROM BL)
TCG	:	-0.031 m (FROM CL)

2.3 SPEED

Service speed at design draft at C.S.R of main engine With 10% sea margin	:	11.50 knots
Cruising range	:	3500 n.miles

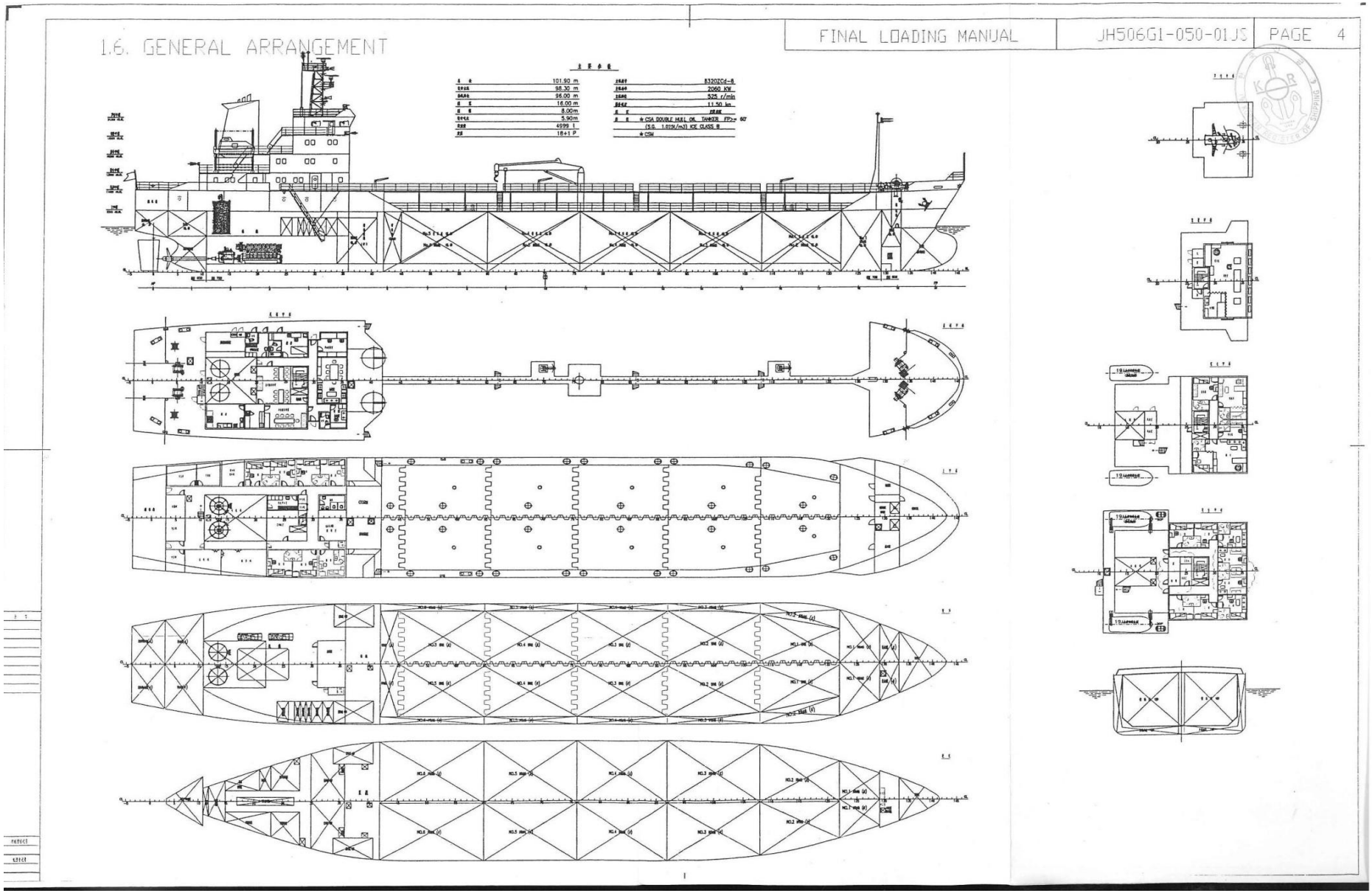
2.4 COMPLEMENT

COMPLEMENT	:	18

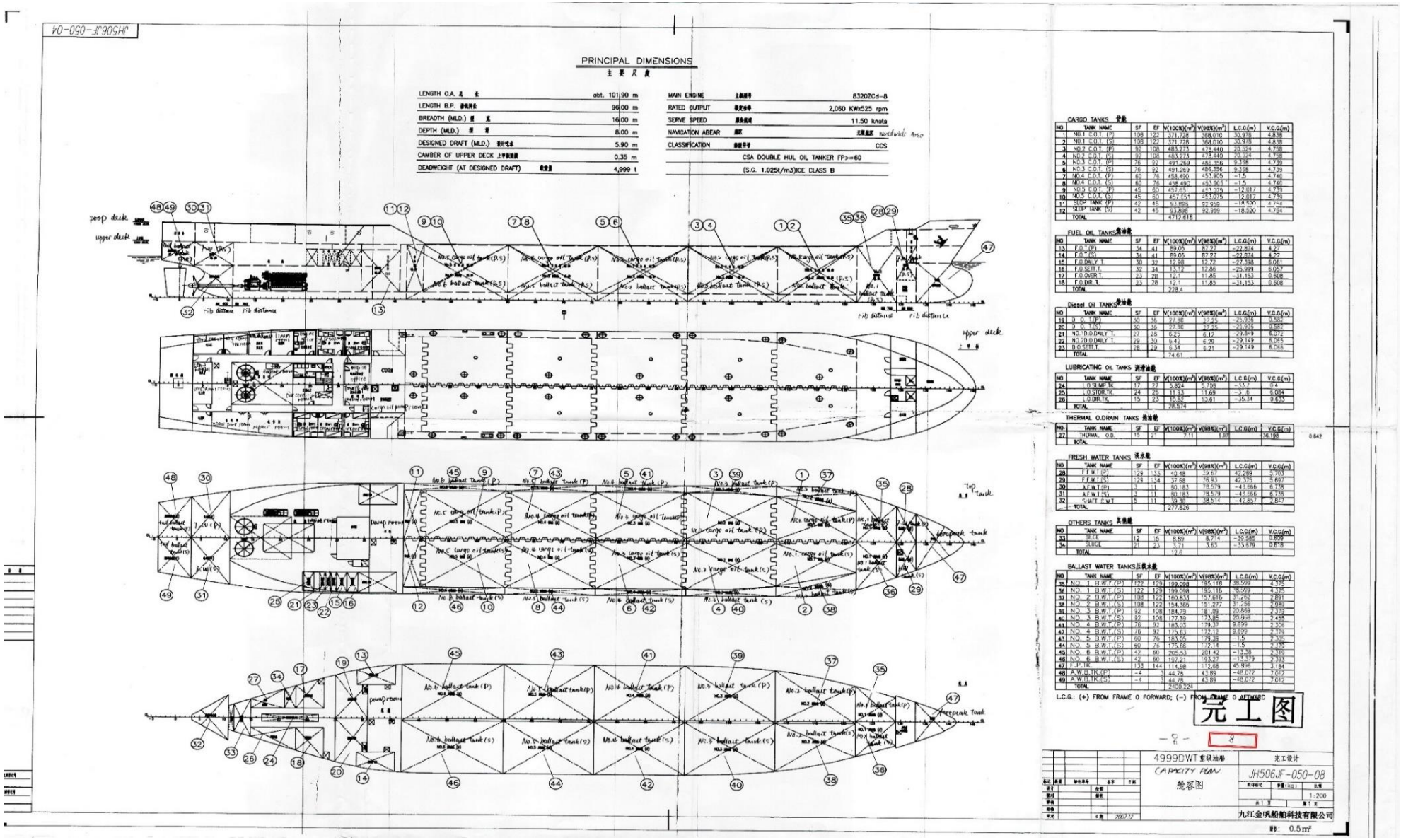
2.5 MAIN ENGINE

Type	:	DIESEL
M.C.R.	:	2060KW×W×525 rpm

2.6 GENERAL ARRANGEMENT

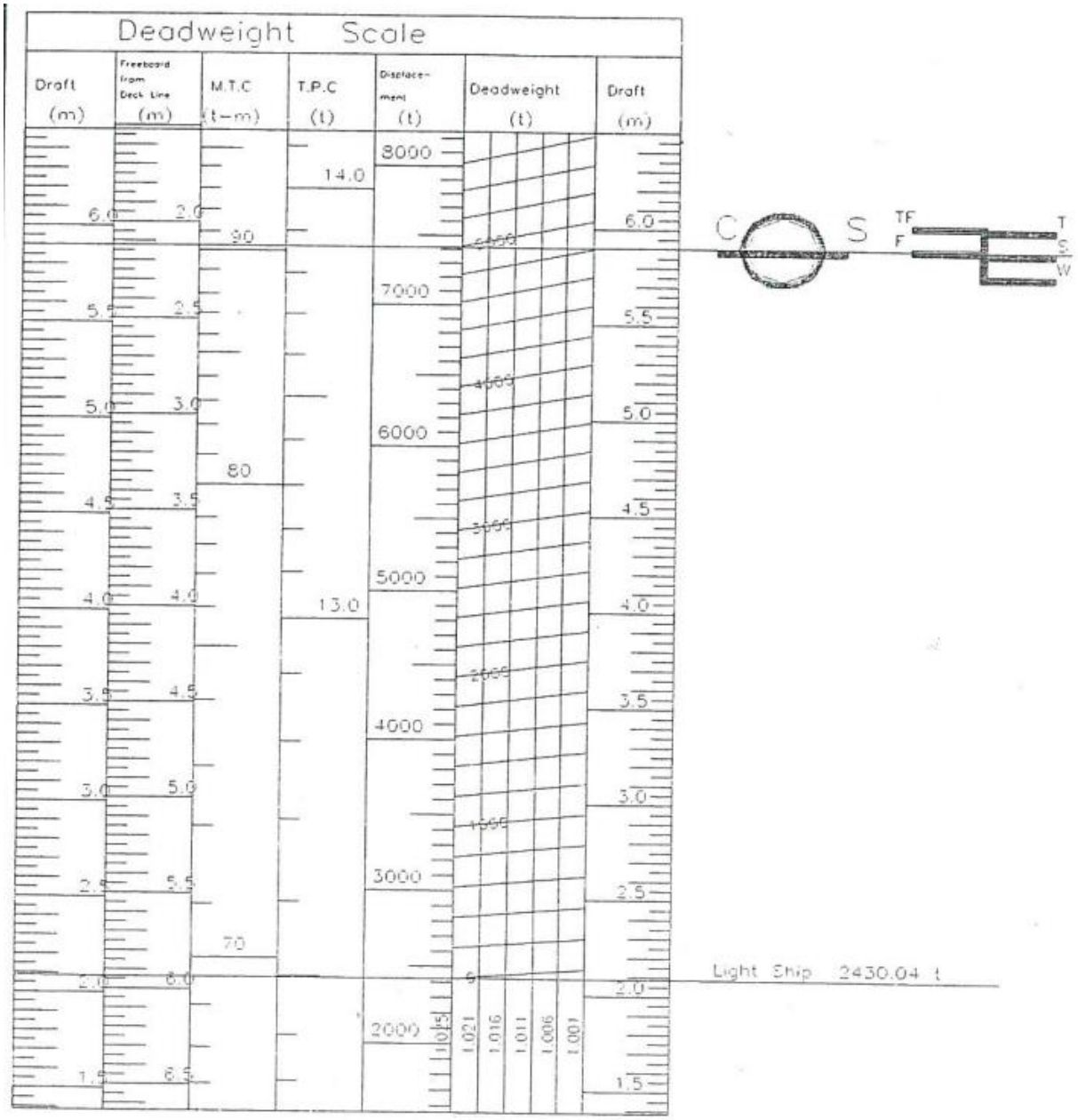


2.7 CAPACITY PLAN



2.8 FREEBOARD MARK

FREEBOARD MARK AND DEADWIEGHT SCALE



2.9 PREVIOUS LIGHTSHIP (refer Final Loading manual dwg:JH506G1-050-05JS)

Light ship weight : 2430.04 t

LCG : -6.400 m

VCG : 6.02 m

TCG : 0.00 m

2.10 UPDATED LIGHTSHIP RESULT

Light Ship Updation

Item	Weight (t)	LCG (m)	VCG (m)	TCG (m)	Moment (LCG)	Moment (VCG)	Moment (TCG)
Light Ship	2430	41.6	6.02	0	101088	14628.6	0
Added Weight	44.92	52.911	4.497	-1.69	2376.78	201.99	-75.933
Removed Weight	0	0	0	0	0	0	0
Σ	2474.92				103464.78	14830.59	-75.933

	Weight (t)	LCG (m)	VCG (m)	TCG (m)
New Lightship	2474.92	41.805	5.992	-0.031

Reference

LCG *:- Measured from AP(Fr.0)*

VCG *:- Measured from base line*

TCG *:- Measured from Ship centre line (port -ve & stbd +ve)*

Where,

New added weights to go onboard							
Item	**Weight (t)**	**LCG (m)**	**VCG (m)**	**TCG (m)**	**Moment (LCG)**	**Moment (VCG)**	**Moment (TCG)**
BWTS							
Electrical Cabinet	0.246	20.6	5	-4.05	5.068	1.23	-0.996
UV Reactor	0.112	21.3	5.1	-5.3	2.386	0.571	-0.594
FIlter	0.227	22.7	5.2	-5.25	5.153	1.18	-1.192
Back Flush Pump	0.137	20.8	4.95	-5.47	2.85	0.678	-0.749
Pipe & Fittings Including Pipe Support	2.718	21.5	5.3	-5.19	58.437	14.405	-14.106
Electrical Cabinet Foundation	0.083	20.4	4.91	-4.02	1.693	0.408	-0.334
UV Reactor Foundation	0.061	21.6	4.9	-5.28	1.318	0.299	-0.322
Filter Foundation	0.009	22.3	4.93	-5.27	0.201	0.044	-0.047
Back Flush Pump Foundation	0.019	20.65	4.92	-5.41	0.392	0.093	-0.103
Platform	0.232	21.48	4.91	-5.25	4.983	1.139	-1.218
PLATE RENEWAL							
Doubler Plate added on longi. bulkhead	27.521	55.62	4.371	-1.521	1530.718	120.294	-41.859
Additional Stiffeners added on longi bulkheads	10.419	56.576	4.594	-0.902	589.465	47.865	-9.398
Additional vertical flat bars added on longi bulkheads	3.136	55.522	4.395	-1.599	174.117	13.783	-5.014

TOTAL	44.92				2376.78	201.99	-75.933

Conclusion:

Net Addition of Light Ship Wt.	44.920	t
% Change in Light Ship	1.849	%
% Change in LCG	0.196	%
% Change in VCG	-0.459	%

New lightship

lightship: 2474.92t
lcg: 41.805 m (from ap)
tcg: -0.031 m (from cl)
vcg: 5.992 m (from bl)

3 MASTER'S INSTRUCTION

3.1 GENERAL

1. This booklet is made for the guidance of master for the safe operation and proper loading of the vessel.
2. This booklet presents the necessary data and instructions to arrange cargoes, fuel oil, ballast water etc., in such a way that the vessel can be free from the creation of unacceptable stress in the hull structure and also can maintain sufficient stability and loading condition in service.
3. The master of the vessel should read the whole of this booklet and be familiar with the characteristics of the vessel before placing it into service. Any ignorance of the instructions in this booklet may jeopardize the safety of the crew and vessel.
4. It should be noted that, however, this booklet cannot cover unusual conditions or contingencies.
5. No modification or removal can be allowed for door sills, oil-tight hatch covers, air pipes, ventilators, and other piping systems without authorization by the classification society.

3.2 DESIGN CONDITION

The vessel is to be a single-screw diesel driver with double skin, and double bottom in the cargo area. The vessel is designed to be suitable for worldwide service transporting clean and dirty petroleum products and crude oils with special epoxy series coating in cargo tanks, slop tanks and residual tanks.

3.3 GENERAL PRECAUTIONS AGAINST CAPSIZING

Compliance with the stability criteria does not ensure immunity against capsizing regardless of the circumstances or absolve the master from his responsibilities. Master should therefore exercise prudence and good seamanship having regarded to the season of the year, weather forecasts and the navigational zone and should take appropriate action as to speed and course warranted by prevailing circumstances as well as IMO (MARPOL) regulation for subdivision and damage stability.

1. In all loading conditions, the initial metacentric height should be corrected for the free surface effect of each consumable tank which has a larger free surface and selecting the greatest free surface moment of these tanks. In addition, selecting the greatest free surface moment for cargo oil tanks.
2. The correction of stability curves to be adopted the method by increasing the gravity center of the ship, the increasing value is the corrective value for the sum of the free surface of cargo oil tanks and other tanks.
3. Weathertight or watertight closing devices such as doors, hatches, etc. shall be kept closed during navigation.

3.4 Design criteria

The standard loading conditions deviate from these standards conditions, the master shall comply with the criteria of longitudinal strength and stability.

In case the loading conditions deviate from these standard conditions, the master shall comply with the criteria of longitudinal strength and stability in any conditions.

3.5 Longitudinal strength in ballast conditions

Care should be taken to increase of bending moment and shearing force at shifting ballast water between tanks.

3.6 Stability in ballast conditions

Care should be taken to increase of free water surface at shifting ballast water tanks.

3.7 Instruction at loading condition

- The scantling is approved for operation in heavy weather with a draught at the F.P. of not less than 3.50 meters. If, in the opinion of the Mater, sea conditions are likely to cause regular slamming, then other appropriate measures such as a change in speed, heading or an increase in the draught forward may also need to be taken.
- b. allowance bending moments (Ms) and shearing force (Fs) in still water.

Unrestricted area

FR NO	MS +VE ALLOWABLE	MS -VE ALLOWABLE	FS +VE ALLOWABLE	FS -VE ALLOWABLE
	KN-M	KN-M	KN	KN
FRAME 29	59120	-25080	12770	-12390
FRAME 36	63510	-34820	12990	-12600
FRAME 42	215580	-107000	12340	-11950
FRAME 57	173260	-70190	25750	-25750
FRAME 60	170690	-70190	25750	-25750
FRAME 71	173260	-70190	25750	-25750
FRAME 76	173260	-70190	25750	-25750
FRAME 84	173260	-70190	25750	-25750
FRAME 92	176750	-73970	24830	-25070
FRAME 108	244340	-148980	24120	-24540
FRAME 118	120300	-107750	25710	-26130
FRAME 122	33810	-20430	15310	-15660

In harbour condition

FR NO	MS +VE ALLOWABLE	MS -VE ALLOWABLE	FS +VE ALLOWABLE	FS -VE ALLOWABLE
	KN-M	KN-M	KN	KN
FRAME 29	101180	-70740	14980	-14790
FRAME 36	116680	-92540	15270	-15070
FRAME 42	278280	-175050	14620	-14420
FRAME 57	259740	-164060	27630	-27630
FRAME 60	257170	-164060	27630	-27630
FRAME 71	259740	-164060	27630	-27630
FRAME 76	259740	-164060	27630	-27630
FRAME 84	259740	-164060	27630	-27630
FRAME 92	261480	-165960	27170	-27290
FRAME 108	300060	-209460	26800	-27010
FRAME 118	157870	-148540	28390	-28600
FRAME 122	64120	-53340	17510	-17680

3.8 TRIM OF EACH DRAFT FOR BLIND ZONE

DRAFT (m)	TRIM WITH MAX.ALLOWANCE (m)
4	5.44
4.5	5.63
5	5.82
5.5	6.01

4 HYDROSTATIC TABLE

Hydrostatic Properties

Draft is from Baseline.
No Trim, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1088.873	50.066f	0.521	50.071f	11.867	61.062	541.655	19.290
1.100	1208.013	50.068f	0.573	50.090f	11.959	62.079	496.368	17.746
1.200	1328.032	50.071f	0.626	50.104f	12.041	62.992	458.152	16.456
1.300	1448.804	50.075f	0.678	50.117f	12.109	63.731	424.884	15.350
1.400	1570.187	50.079f	0.730	50.149f	12.166	64.424	396.307	14.385
1.500	1692.102	50.085f	0.782	50.176f	12.216	65.045	371.298	13.545
1.600	1814.487	50.092f	0.834	50.196f	12.261	65.627	349.349	12.811
1.700	1937.293	50.099f	0.885	50.220f	12.301	66.154	329.831	12.167
1.800	2060.481	50.107f	0.937	50.246f	12.337	66.640	312.390	11.597
1.900	2184.015	50.116f	0.989	50.266f	12.369	67.070	296.622	11.093
2.000	2307.866	50.124f	1.040	50.285f	12.400	67.470	282.379	10.646
2.100	2432.020	50.133f	1.092	50.304f	12.430	67.846	269.458	10.248
2.200	2556.458	50.142f	1.143	50.327f	12.456	68.177	257.591	9.892
2.300	2681.147	50.151f	1.195	50.345f	12.479	68.443	246.570	9.571
2.400	2806.055	50.160f	1.246	50.368f	12.501	68.715	236.531	9.279
2.500	2931.178	50.169f	1.298	50.384f	12.523	68.986	227.326	9.015
2.600	3056.523	50.178f	1.349	50.395f	12.545	69.271	218.905	8.777
2.700	3182.084	50.187f	1.401	50.400f	12.567	69.556	211.133	8.560
2.800	3307.870	50.195f	1.452	50.400f	12.589	69.858	203.987	8.364
2.900	3433.876	50.202f	1.503	50.398f	12.611	70.156	197.340	8.184
3.000	3560.102	50.209f	1.554	50.392f	12.633	70.466	191.183	8.020
3.100	3686.561	50.215f	1.606	50.376f	12.657	70.808	185.520	7.872
3.200	3813.264	50.220f	1.657	50.353f	12.682	71.159	180.246	7.737
3.300	3940.215	50.224f	1.708	50.324f	12.707	71.527	175.342	7.614
3.400	4067.430	50.226f	1.760	50.287f	12.734	71.933	170.820	7.502
3.500	4194.914	50.227f	1.811	50.239f	12.762	72.367	166.630	7.398
3.600	4322.692	50.227f	1.863	50.175f	12.793	72.861	162.806	7.303
3.700	4450.778	50.224f	1.914	50.103f	12.824	73.364	159.213	7.217
3.800	4579.186	50.220f	1.966	50.020f	12.857	73.912	155.905	7.138
3.900	4707.928	50.213f	2.017	49.926f	12.891	74.485	152.816	7.067
4.000	4837.031	50.204f	2.069	49.820f	12.929	75.125	150.015	7.003
4.100	4966.525	50.192f	2.120	49.700f	12.969	75.821	147.459	6.945
4.200	5096.439	50.178f	2.172	49.567f	13.013	76.576	145.130	6.894
4.300	5226.796	50.161f	2.224	49.431f	13.056	77.332	142.908	6.847
4.400	5357.567	50.141f	2.276	49.285f	13.098	78.062	140.735	6.804
4.500	5488.771	50.119f	2.328	49.123f	13.143	78.850	138.759	6.766
4.600	5620.416	50.093f	2.380	48.945f	13.186	79.629	136.847	6.732
4.700	5752.506	50.065f	2.432	48.757f	13.229	80.399	134.997	6.702
4.800	5884.993	50.033f	2.485	48.563f	13.269	81.114	133.132	6.674
4.900	6017.892	49.999f	2.537	48.357f	13.311	81.868	131.401	6.651
5.000	6151.224	49.961f	2.589	48.162f	13.352	82.597	129.699	6.631
5.100	6284.951	49.920f	2.642	47.966f	13.394	83.369	128.125	6.614
5.200	6419.119	49.877f	2.694	47.766f	13.438	84.192	126.685	6.599
5.300	6553.732	49.832f	2.747	47.560f	13.485	85.073	125.382	6.588
5.400	6688.841	49.784f	2.799	47.361f	13.533	86.026	124.225	6.579
5.500	6824.474	49.733f	2.852	47.162f	13.585	87.054	123.211	6.571
5.600	6960.545	49.681f	2.905	46.996f	13.630	87.912	121.994	6.567
5.700	7097.068	49.628f	2.958	46.841f	13.674	88.770	120.814	6.565
5.800	7234.030	49.574f	3.011	46.701f	13.718	89.639	119.687	6.564

5.900	7371.430	49.519f	3.064	46.567f	13.762	90.485	118.565	6.565
6.000	7509.276	49.464f	3.117	46.449f	13.807	91.375	117.533	6.568
6.100	7647.586	49.409f	3.170	46.348f	13.855	92.333	116.618	6.573
6.200	7786.379	49.353f	3.223	46.260f	13.904	93.317	115.760	6.580
6.300	7925.658	49.298f	3.276	46.179f	13.952	94.292	114.914	6.589
6.400	8065.407	49.243f	3.330	46.104f	13.999	95.246	114.065	6.599
6.500	8205.627	49.189f	3.383	46.038f	14.045	96.189	113.226	6.611
6.600	8346.309	49.136f	3.437	45.980f	14.091	97.137	112.414	6.624
6.700	8487.452	49.083f	3.490	45.930f	14.138	98.106	111.648	6.638
6.800	8629.071	49.031f	3.544	45.889f	14.186	99.108	110.937	6.654
6.900	8771.159	48.979f	3.597	45.853f	14.233	100.104	110.237	6.671

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.500/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1079.318	47.260f	0.524	49.619f	11.832	60.546	541.833	19.404
1.100	1198.126	47.497f	0.576	49.692f	11.926	61.565	496.317	17.848
1.200	1317.793	47.700f	0.627	49.761f	12.006	62.432	457.600	16.541
1.300	1438.219	47.875f	0.679	49.827f	12.077	63.230	424.641	15.422
1.400	1559.303	48.029f	0.730	49.883f	12.138	63.955	396.157	14.456
1.500	1680.969	48.166f	0.782	49.937f	12.191	64.624	371.333	13.613
1.600	1803.094	48.287f	0.833	49.976f	12.234	65.152	349.006	12.873
1.700	1925.643	48.396f	0.885	50.021f	12.275	65.691	329.501	12.222
1.800	2048.588	48.495f	0.936	50.062f	12.313	66.181	312.036	11.651
1.900	2171.895	48.585f	0.988	50.101f	12.348	66.627	296.305	11.146
2.000	2295.538	48.668f	1.039	50.139f	12.380	67.032	282.049	10.697
2.100	2419.482	48.744f	1.090	50.175f	12.409	67.394	269.046	10.294
2.200	2543.708	48.814f	1.142	50.209f	12.435	67.726	257.165	9.933
2.300	2668.193	48.880f	1.193	50.238f	12.461	68.059	246.372	9.608
2.400	2792.946	48.941f	1.244	50.260f	12.488	68.402	236.555	9.317
2.500	2917.962	48.998f	1.295	50.277f	12.513	68.745	227.557	9.053
2.600	3043.223	49.051f	1.347	50.280f	12.538	69.062	219.197	8.812
2.700	3168.727	49.100f	1.398	50.286f	12.562	69.402	211.552	8.594
2.800	3294.480	49.145f	1.449	50.288f	12.587	69.752	204.503	8.396
2.900	3420.488	49.187f	1.500	50.279f	12.614	70.123	198.016	8.217
3.000	3546.766	49.225f	1.552	50.263f	12.641	70.513	192.027	8.053
3.100	3673.317	49.261f	1.603	50.241f	12.669	70.927	186.499	7.904
3.200	3800.159	49.293f	1.654	50.211f	12.699	71.380	181.428	7.768
3.300	3927.310	49.322f	1.706	50.170f	12.731	71.877	176.775	7.645
3.400	4054.793	49.348f	1.757	50.115f	12.765	72.433	172.542	7.532
3.500	4182.625	49.370f	1.808	50.052f	12.801	73.007	168.594	7.429
3.600	4310.821	49.389f	1.860	49.979f	12.838	73.624	164.962	7.334
3.700	4439.394	49.405f	1.912	49.896f	12.876	74.275	161.601	7.248
3.800	4568.368	49.417f	1.963	49.797f	12.918	74.990	158.550	7.170
3.900	4697.773	49.426f	2.015	49.684f	12.962	75.760	155.766	7.099
4.000	4827.634	49.432f	2.067	49.556f	13.010	76.587	153.232	7.035
4.100	4957.964	49.433f	2.119	49.427f	13.055	77.389	150.765	6.977
4.200	5088.750	49.431f	2.171	49.289f	13.103	78.234	148.495	6.925
4.300	5220.028	49.426f	2.223	49.140f	13.153	79.145	146.446	6.877
4.400	5351.817	49.417f	2.276	48.980f	13.205	80.093	144.551	6.835
4.500	5484.134	49.404f	2.328	48.820f	13.257	81.045	142.740	6.797
4.600	5616.952	49.388f	2.381	48.650f	13.307	81.985	140.980	6.762
4.700	5750.282	49.369f	2.433	48.463f	13.359	82.972	139.370	6.732
4.800	5884.099	49.347f	2.486	48.291f	13.403	83.785	137.535	6.704
4.900	6018.372	49.321f	2.539	48.096f	13.450	84.660	135.871	6.680
5.000	6153.095	49.292f	2.592	47.893f	13.495	85.510	134.230	6.659
5.100	6288.292	49.259f	2.645	47.673f	13.542	86.407	132.722	6.642
5.200	6423.980	49.223f	2.698	47.454f	13.588	87.279	131.229	6.626
5.300	6560.104	49.184f	2.751	47.251f	13.631	88.123	129.749	6.613
5.400	6696.614	49.143f	2.804	47.066f	13.671	88.871	128.183	6.603
5.500	6833.509	49.099f	2.858	46.889f	13.709	89.576	126.611	6.596
5.600	6970.776	49.054f	2.911	46.725f	13.745	90.255	125.060	6.590
5.700	7108.413	49.008f	2.964	46.574f	13.783	90.983	123.627	6.586
5.800	7246.425	48.960f	3.017	46.433f	13.820	91.687	122.211	6.585
5.900	7384.811	48.911f	3.071	46.298f	13.857	92.398	120.850	6.586
6.000	7523.574	48.862f	3.124	46.176f	13.896	93.132	119.564	6.589
6.100	7662.717	48.812f	3.177	46.063f	13.933	93.862	118.313	6.594

6.200	7802.234	48.762f	3.231	45.961f	13.971	94.599	117.110	6.600
6.300	7942.140	48.712f	3.284	45.878f	14.011	95.397	116.017	6.608
6.400	8082.457	48.662f	3.338	45.807f	14.053	96.253	115.026	6.618
6.500	8223.202	48.613f	3.391	45.743f	14.096	97.124	114.080	6.629
6.600	8364.370	48.564f	3.445	45.685f	14.138	97.985	113.149	6.641
6.700	8505.953	48.515f	3.499	45.632f	14.179	98.851	112.250	6.655
6.800	8647.954	48.468f	3.552	45.588f	14.221	99.722	111.379	6.670
6.900	8790.369	48.421f	3.606	45.549f	14.262	100.589	110.527	6.687

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.000/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1072.640	44.458f	0.543	49.150f	11.759	59.451	535.318	19.426
1.100	1190.738	44.930f	0.592	49.282f	11.860	60.534	491.016	17.882
1.200	1309.779	45.331f	0.642	49.398f	11.948	61.518	453.639	16.580
1.300	1429.639	45.677f	0.692	49.500f	12.024	62.386	421.471	15.467
1.400	1550.208	45.978f	0.742	49.591f	12.090	63.159	393.510	14.503
1.500	1671.389	46.243f	0.793	49.675f	12.146	63.862	369.041	13.660
1.600	1793.104	46.479f	0.843	49.750f	12.196	64.493	347.390	12.922
1.700	1915.297	46.690f	0.894	49.820f	12.240	65.060	328.086	12.274
1.800	2037.906	46.880f	0.944	49.873f	12.278	65.508	310.468	11.703
1.900	2160.872	47.052f	0.995	49.932f	12.315	65.980	294.912	11.197
2.000	2284.198	47.209f	1.046	49.985f	12.349	66.417	280.838	10.745
2.100	2407.847	47.353f	1.096	50.031f	12.381	66.831	268.077	10.341
2.200	2531.812	47.485f	1.147	50.067f	12.412	67.244	256.526	9.977
2.300	2656.081	47.606f	1.198	50.098f	12.443	67.660	246.035	9.652
2.400	2780.659	47.718f	1.249	50.119f	12.473	68.075	236.457	9.358
2.500	2905.534	47.822f	1.299	50.138f	12.502	68.474	227.619	9.092
2.600	3030.702	47.918f	1.350	50.150f	12.531	68.880	219.512	8.852
2.700	3156.166	48.006f	1.401	50.153f	12.561	69.304	212.082	8.633
2.800	3281.929	48.088f	1.452	50.141f	12.590	69.713	205.159	8.435
2.900	3407.980	48.164f	1.503	50.126f	12.621	70.175	198.882	8.255
3.000	3534.354	48.234f	1.554	50.103f	12.654	70.678	193.144	8.091
3.100	3661.069	48.298f	1.605	50.067f	12.689	71.215	187.877	7.942
3.200	3788.144	48.356f	1.657	50.016f	12.726	71.807	183.085	7.805
3.300	3915.591	48.409f	1.708	49.958f	12.764	72.433	178.667	7.680
3.400	4043.435	48.457f	1.759	49.893f	12.805	73.102	174.618	7.567
3.500	4171.694	48.500f	1.811	49.817f	12.847	73.814	170.898	7.464
3.600	4300.396	48.538f	1.862	49.726f	12.894	74.599	167.547	7.370
3.700	4429.573	48.571f	1.914	49.620f	12.942	75.436	164.484	7.285
3.800	4559.244	48.599f	1.966	49.501f	12.993	76.330	161.699	7.207
3.900	4689.421	48.623f	2.018	49.382f	13.043	77.218	159.040	7.137
4.000	4820.106	48.641f	2.070	49.249f	13.096	78.159	156.614	7.072
4.100	4951.326	48.656f	2.123	49.105f	13.150	79.151	154.399	7.014
4.200	5083.102	48.665f	2.175	48.950f	13.206	80.182	152.356	6.961
4.300	5215.431	48.670f	2.228	48.793f	13.261	81.203	150.380	6.913
4.400	5348.307	48.671f	2.280	48.629f	13.316	82.247	148.529	6.869
4.500	5481.749	48.668f	2.333	48.469f	13.370	83.269	146.715	6.830
4.600	5615.713	48.662f	2.386	48.305f	13.424	84.286	144.963	6.796
4.700	5750.232	48.651f	2.439	48.131f	13.480	85.362	143.381	6.765
4.800	5885.306	48.637f	2.492	47.949f	13.536	86.463	141.897	6.738
4.900	6020.961	48.619f	2.546	47.751f	13.592	87.570	140.474	6.714
5.000	6157.189	48.597f	2.599	47.561f	13.644	88.593	138.971	6.692
5.100	6293.855	48.573f	2.653	47.372f	13.689	89.480	137.316	6.673
5.200	6430.933	48.545f	2.706	47.194f	13.729	90.235	135.522	6.656
5.300	6568.403	48.515f	2.760	47.016f	13.766	90.926	133.702	6.643
5.400	6706.220	48.483f	2.813	46.842f	13.798	91.513	131.799	6.632
5.500	6844.355	48.448f	2.867	46.673f	13.830	92.093	129.958	6.623
5.600	6982.808	48.411f	2.921	46.515f	13.862	92.672	128.183	6.617
5.700	7121.578	48.373f	2.974	46.361f	13.893	93.242	126.457	6.613
5.800	7260.656	48.333f	3.028	46.216f	13.924	93.790	124.764	6.611
5.900	7400.037	48.291f	3.081	46.081f	13.955	94.364	123.163	6.612
6.000	7539.728	48.249f	3.135	45.960f	13.985	94.935	121.613	6.614
6.100	7679.727	48.207f	3.189	45.846f	14.016	95.504	120.112	6.618

6.200	7820.033	48.163f	3.242	45.741f	14.048	96.112	118.708	6.624
6.300	7960.667	48.120f	3.296	45.643f	14.080	96.741	117.373	6.632
6.400	8101.623	48.076f	3.350	45.553f	14.112	97.368	116.079	6.641
6.500	8242.907	48.032f	3.403	45.478f	14.146	98.054	114.893	6.651
6.600	8384.547	47.988f	3.457	45.420f	14.183	98.817	113.831	6.663
6.700	8526.559	47.945f	3.511	45.372f	14.221	99.598	112.820	6.676
6.800	8668.946	47.902f	3.565	45.328f	14.258	100.372	111.830	6.690
6.900	8811.694	47.860f	3.618	45.291f	14.294	101.139	110.858	6.705

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.500/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1068.952	41.708f	0.577	48.634f	11.653	57.877	522.910	19.350
1.100	1186.059	42.402f	0.623	48.827f	11.768	59.122	481.419	17.853
1.200	1304.199	42.991f	0.670	48.989f	11.863	60.196	445.759	16.571
1.300	1423.249	43.499f	0.717	49.135f	11.947	61.163	415.036	15.472
1.400	1543.077	43.942f	0.766	49.271f	12.021	62.051	388.363	14.520
1.500	1663.589	44.333f	0.814	49.391f	12.083	62.808	364.625	13.688
1.600	1784.688	44.679f	0.863	49.498f	12.139	63.501	343.636	12.958
1.700	1906.319	44.990f	0.912	49.593f	12.189	64.130	324.898	12.318
1.800	2028.434	45.269f	0.961	49.674f	12.234	64.710	308.101	11.750
1.900	2150.986	45.523f	1.010	49.748f	12.276	65.255	292.991	11.242
2.000	2273.949	45.753f	1.060	49.811f	12.316	65.793	279.433	10.791
2.100	2397.269	45.963f	1.110	49.851f	12.351	66.238	266.852	10.387
2.200	2520.957	46.154f	1.160	49.893f	12.388	66.755	255.742	10.026
2.300	2645.002	46.330f	1.210	49.927f	12.422	67.235	245.497	9.698
2.400	2769.387	46.492f	1.260	49.952f	12.456	67.716	236.148	9.402
2.500	2894.109	46.642f	1.310	49.970f	12.490	68.206	227.609	9.135
2.600	3019.181	46.780f	1.360	49.977f	12.526	68.728	219.849	8.895
2.700	3144.610	46.907f	1.411	49.975f	12.562	69.249	212.681	8.677
2.800	3270.406	47.025f	1.461	49.959f	12.599	69.811	206.158	8.479
2.900	3396.582	47.133f	1.512	49.932f	12.637	70.413	200.212	8.298
3.000	3523.158	47.233f	1.563	49.890f	12.678	71.061	194.795	8.134
3.100	3650.136	47.325f	1.613	49.834f	12.719	71.711	189.739	7.984
3.200	3777.536	47.408f	1.664	49.776f	12.763	72.432	185.184	7.847
3.300	3905.381	47.485f	1.716	49.704f	12.808	73.193	181.003	7.722
3.400	4033.697	47.554f	1.767	49.615f	12.857	74.018	177.220	7.608
3.500	4162.513	47.616f	1.819	49.514f	12.909	74.908	173.801	7.505
3.600	4291.864	47.671f	1.870	49.404f	12.963	75.847	170.676	7.412
3.700	4421.754	47.721f	1.922	49.289f	13.018	76.813	167.773	7.328
3.800	4552.205	47.764f	1.974	49.162f	13.075	77.833	165.129	7.250
3.900	4683.234	47.801f	2.026	49.022f	13.134	78.906	162.720	7.179
4.000	4814.865	47.832f	2.079	48.876f	13.193	79.999	160.465	7.114
4.100	4947.082	47.858f	2.131	48.724f	13.253	81.122	158.369	7.055
4.200	5079.904	47.879f	2.184	48.563f	13.314	82.290	156.448	7.001
4.300	5213.317	47.894f	2.237	48.417f	13.370	83.330	154.372	6.952
4.400	5347.297	47.905f	2.290	48.256f	13.428	84.455	152.535	6.908
4.500	5481.867	47.912f	2.343	48.086f	13.488	85.613	150.832	6.869
4.600	5617.048	47.914f	2.397	47.905f	13.549	86.812	149.262	6.833
4.700	5752.871	47.911f	2.450	47.715f	13.612	88.071	147.853	6.803
4.800	5889.266	47.904f	2.504	47.548f	13.667	89.172	146.233	6.775
4.900	6026.174	47.894f	2.557	47.394f	13.717	90.155	144.487	6.749
5.000	6163.570	47.882f	2.611	47.246f	13.765	91.088	142.727	6.727
5.100	6301.425	47.866f	2.665	47.095f	13.809	91.937	140.906	6.707
5.200	6439.702	47.848f	2.719	46.948f	13.849	92.716	139.049	6.691
5.300	6578.365	47.827f	2.773	46.799f	13.886	93.408	137.134	6.676
5.400	6717.368	47.805f	2.827	46.648f	13.919	94.030	135.190	6.664
5.500	6856.696	47.780f	2.881	46.499f	13.950	94.601	133.249	6.655
5.600	6996.324	47.752f	2.934	46.345f	13.978	95.085	131.257	6.649
5.700	7136.215	47.723f	2.988	46.194f	14.003	95.514	129.265	6.644
5.800	7276.353	47.693f	3.042	46.056f	14.028	95.945	127.347	6.642
5.900	7416.734	47.660f	3.096	45.924f	14.053	96.382	125.506	6.641
6.000	7557.371	47.627f	3.150	45.794f	14.078	96.819	123.728	6.643
6.100	7698.251	47.592f	3.204	45.671f	14.102	97.256	122.012	6.647

6.200	7839.389	47.557f	3.258	45.563f	14.129	97.753	120.428	6.652
6.300	7980.794	47.520f	3.312	45.462f	14.155	98.240	118.883	6.659
6.400	8122.451	47.484f	3.365	45.370f	14.181	98.742	117.407	6.667
6.500	8264.376	47.447f	3.419	45.287f	14.208	99.268	116.005	6.677
6.600	8406.569	47.409f	3.473	45.212f	14.234	99.794	114.648	6.688
6.700	8549.032	47.372f	3.527	45.147f	14.262	100.349	113.364	6.700
6.800	8691.786	47.335f	3.581	45.100f	14.293	101.004	112.230	6.713
6.900	8834.867	47.299f	3.634	45.063f	14.326	101.706	111.180	6.728

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: aft 2.000/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1068.649	39.058f	0.625	48.008f	11.504	55.596	502.394	19.189
1.100	1184.369	39.947f	0.667	48.296f	11.640	57.183	466.247	17.747
1.200	1301.346	40.709f	0.710	48.542f	11.755	58.546	434.453	16.509
1.300	1419.291	41.367f	0.754	48.730f	11.843	59.548	405.167	15.434
1.400	1538.117	41.943f	0.799	48.903f	11.924	60.498	379.830	14.505
1.500	1657.729	42.451f	0.845	49.063f	11.999	61.415	357.769	13.693
1.600	1778.037	42.903f	0.892	49.203f	12.066	62.262	338.160	12.979
1.700	1898.970	43.308f	0.939	49.322f	12.124	63.012	320.439	12.345
1.800	2020.461	43.673f	0.986	49.425f	12.178	63.729	304.598	11.784
1.900	2142.471	44.003f	1.034	49.512f	12.228	64.398	290.266	11.283
2.000	2264.970	44.302f	1.082	49.581f	12.275	65.037	277.292	10.835
2.100	2387.931	44.576f	1.131	49.641f	12.320	65.655	265.515	10.435
2.200	2511.326	44.826f	1.179	49.691f	12.361	66.253	254.766	10.071
2.300	2635.137	45.056f	1.228	49.720f	12.400	66.781	244.731	9.744
2.400	2759.327	45.266f	1.277	49.745f	12.442	67.394	235.861	9.451
2.500	2883.928	45.460f	1.327	49.758f	12.483	68.001	227.702	9.185
2.600	3008.944	45.638f	1.376	49.755f	12.525	68.650	220.325	8.944
2.700	3134.394	45.803f	1.426	49.740f	12.569	69.327	213.594	8.725
2.800	3260.294	45.954f	1.476	49.714f	12.616	70.061	207.521	8.527
2.900	3386.664	46.094f	1.526	49.673f	12.663	70.816	201.929	8.347
3.000	3513.505	46.222f	1.577	49.621f	12.710	71.589	196.765	8.181
3.100	3640.829	46.340f	1.627	49.558f	12.759	72.415	192.074	8.031
3.200	3768.670	46.448f	1.678	49.475f	12.813	73.315	187.864	7.894
3.300	3897.057	46.546f	1.729	49.382f	12.869	74.273	184.048	7.770
3.400	4025.992	46.635f	1.781	49.277f	12.924	75.209	180.399	7.657
3.500	4155.496	46.715f	1.832	49.162f	12.983	76.244	177.182	7.554
3.600	4285.599	46.788f	1.884	49.035f	13.043	77.321	174.232	7.460
3.700	4416.320	46.852f	1.936	48.897f	13.106	78.463	171.571	7.374
3.800	4547.674	46.909f	1.988	48.756f	13.170	79.624	169.080	7.296
3.900	4679.666	46.959f	2.040	48.611f	13.234	80.822	166.784	7.225
4.000	4812.312	47.003f	2.093	48.465f	13.296	81.987	164.525	7.160
4.100	4945.554	47.040f	2.146	48.318f	13.357	83.144	162.351	7.099
4.200	5079.420	47.072f	2.199	48.159f	13.421	84.370	160.403	7.045
4.300	5213.932	47.097f	2.252	47.992f	13.486	85.640	158.617	6.996
4.400	5349.118	47.118f	2.305	47.818f	13.552	86.952	156.977	6.952
4.500	5484.964	47.132f	2.359	47.645f	13.615	88.215	155.312	6.912
4.600	5621.384	47.143f	2.412	47.489f	13.673	89.350	153.494	6.876
4.700	5758.348	47.149f	2.466	47.348f	13.725	90.376	151.564	6.843
4.800	5895.820	47.152f	2.520	47.208f	13.775	91.354	149.631	6.813
4.900	6033.776	47.152f	2.574	47.073f	13.822	92.271	147.678	6.787
5.000	6172.198	47.149f	2.628	46.943f	13.868	93.156	145.751	6.765
5.100	6311.061	47.143f	2.682	46.817f	13.910	93.991	143.821	6.745
5.200	6450.337	47.135f	2.736	46.694f	13.951	94.781	141.899	6.727
5.300	6590.006	47.124f	2.790	46.572f	13.989	95.517	139.969	6.713
5.400	6730.044	47.111f	2.844	46.445f	14.025	96.191	138.024	6.702
5.500	6870.417	47.096f	2.898	46.320f	14.055	96.772	136.020	6.692
5.600	7011.078	47.079f	2.952	46.192f	14.082	97.270	133.978	6.684
5.700	7152.003	47.061f	3.007	46.067f	14.109	97.746	131.980	6.679
5.800	7293.186	47.040f	3.061	45.933f	14.133	98.148	129.958	6.676
5.900	7434.586	47.018f	3.115	45.798f	14.153	98.487	127.927	6.676
6.000	7576.189	46.994f	3.169	45.668f	14.173	98.809	125.947	6.677

6.100	7717.991	46.968f	3.223	45.550f	14.193	99.163	124.075	6.679
6.200	7859.992	46.942f	3.277	45.436f	14.213	99.503	122.251	6.683
6.300	8002.183	46.914f	3.331	45.328f	14.232	99.831	120.474	6.689
6.400	8144.567	46.885f	3.385	45.233f	14.252	100.198	118.804	6.696
6.500	8287.159	46.856f	3.438	45.147f	14.272	100.592	117.218	6.705
6.600	8429.951	46.827f	3.492	45.066f	14.293	100.997	115.697	6.715
6.700	8572.969	46.797f	3.546	44.994f	14.316	101.431	114.255	6.727
6.800	8716.206	46.766f	3.600	44.930f	14.339	101.890	112.887	6.740
6.900	8859.678	46.736f	3.654	44.872f	14.362	102.361	111.572	6.754

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: aft 2.500/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1073.466	36.625f	0.684	46.499f	11.098	49.074	441.417	18.840
1.100	1186.517	37.629f	0.722	47.462f	11.414	53.560	435.868	17.542
1.200	1301.563	38.521f	0.761	47.931f	11.586	55.855	414.368	16.378
1.300	1418.041	39.308f	0.801	48.243f	11.710	57.443	391.142	15.357
1.400	1535.637	40.001f	0.843	48.484f	11.812	58.741	369.352	14.459
1.500	1654.151	40.616f	0.886	48.672f	11.897	59.775	348.922	13.673
1.600	1773.482	41.163f	0.930	48.842f	11.975	60.786	330.949	12.979
1.700	1893.545	41.655f	0.975	48.988f	12.045	61.709	314.674	12.356
1.800	2014.296	42.098f	1.020	49.112f	12.111	62.587	300.017	11.806
1.900	2135.680	42.500f	1.066	49.218f	12.172	63.419	286.728	11.317
2.000	2257.641	42.865f	1.112	49.304f	12.227	64.192	274.545	10.873
2.100	2380.146	43.198f	1.159	49.379f	12.280	64.949	263.483	10.475
2.200	2503.171	43.503f	1.207	49.432f	12.331	65.681	253.358	10.118
2.300	2626.702	43.783f	1.254	49.470f	12.381	66.411	244.128	9.794
2.400	2750.737	44.040f	1.302	49.487f	12.432	67.180	235.819	9.501
2.500	2875.291	44.276f	1.351	49.495f	12.484	67.987	228.314	9.237
2.600	3000.345	44.493f	1.399	49.471f	12.533	68.736	221.206	8.997
2.700	3125.903	44.693f	1.448	49.445f	12.586	69.581	214.931	8.778
2.800	3251.988	44.876f	1.498	49.408f	12.639	70.442	209.154	8.579
2.900	3378.611	45.045f	1.547	49.355f	12.694	71.355	203.926	8.398
3.000	3505.808	45.200f	1.597	49.286f	12.753	72.344	199.253	8.234
3.100	3633.604	45.342f	1.648	49.202f	12.814	73.381	194.998	8.084
3.200	3762.001	45.472f	1.698	49.109f	12.874	74.410	190.986	7.948
3.300	3891.016	45.591f	1.749	49.000f	12.938	75.521	187.409	7.824
3.400	4020.685	45.699f	1.800	48.878f	13.003	76.687	184.166	7.710
3.500	4151.025	45.797f	1.852	48.748f	13.070	77.893	181.189	7.607
3.600	4282.021	45.885f	1.904	48.605f	13.137	79.095	178.355	7.512
3.700	4413.688	45.964f	1.956	48.458f	13.205	80.373	175.831	7.426
3.800	4546.025	46.035f	2.008	48.323f	13.269	81.547	173.207	7.346
3.900	4679.006	46.098f	2.060	48.178f	13.334	82.778	170.825	7.274
4.000	4812.649	46.153f	2.113	48.021f	13.403	84.090	168.712	7.208
4.100	4946.999	46.201f	2.166	47.857f	13.472	85.450	166.786	7.148
4.200	5082.077	46.243f	2.219	47.681f	13.544	86.868	165.046	7.094
4.300	5217.779	46.278f	2.273	47.529f	13.607	88.098	163.030	7.044
4.400	5354.100	46.308f	2.326	47.389f	13.665	89.242	160.943	6.999
4.500	5490.988	46.334f	2.380	47.258f	13.721	90.320	158.825	6.957
4.600	5628.411	46.355f	2.434	47.133f	13.773	91.350	156.715	6.920
4.700	5766.348	46.372f	2.488	47.009f	13.823	92.328	154.604	6.886
4.800	5904.775	46.385f	2.542	46.888f	13.871	93.261	152.504	6.856
4.900	6043.668	46.395f	2.596	46.772f	13.916	94.153	150.425	6.829
5.000	6182.999	46.403f	2.650	46.661f	13.959	94.987	148.338	6.806
5.100	6322.745	46.407f	2.704	46.549f	14.000	95.782	146.274	6.786
5.200	6462.897	46.409f	2.758	46.440f	14.039	96.540	144.233	6.769
5.300	6603.430	46.409f	2.812	46.336f	14.076	97.255	142.210	6.754
5.400	6744.316	46.406f	2.866	46.235f	14.111	97.929	140.204	6.741
5.500	6885.540	46.401f	2.920	46.133f	14.144	98.571	138.229	6.731
5.600	7027.091	46.395f	2.975	46.027f	14.175	99.159	136.252	6.724
5.700	7168.932	46.387f	3.029	45.917f	14.202	99.675	134.251	6.719
5.800	7311.029	46.376f	3.083	45.804f	14.226	100.117	132.225	6.715
5.900	7453.360	46.364f	3.137	45.695f	14.249	100.521	130.224	6.713
6.000	7595.904	46.351f	3.191	45.583f	14.269	100.865	128.218	6.713
6.100	7738.620	46.336f	3.245	45.467f	14.284	101.105	126.152	6.715
6.200	7881.480	46.319f	3.299	45.350f	14.298	101.315	124.124	6.718

6.300	8024.480	46.301f	3.353	45.244f	14.312	101.556	122.201	6.723
6.400	8167.634	46.281f	3.407	45.145f	14.327	101.811	120.360	6.729
6.500	8310.925	46.261f	3.461	45.049f	14.342	102.055	118.569	6.737
6.600	8454.371	46.239f	3.515	44.959f	14.357	102.319	116.859	6.746
6.700	8597.978	46.217f	3.569	44.883f	14.374	102.649	115.278	6.757
6.800	8741.747	46.195f	3.623	44.815f	14.390	102.961	113.726	6.769
6.900	8885.689	46.172f	3.677	44.755f	14.407	103.308	112.261	6.782

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: aft 3.000/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1087.102	34.610f	0.749	44.828f	10.613	42.421	376.733	18.244
1.100	1195.148	35.588f	0.785	45.905f	10.973	46.823	378.237	17.169
1.200	1306.644	36.515f	0.821	46.543f	11.197	49.657	366.901	16.111
1.300	1420.517	37.369f	0.858	47.390f	11.476	53.641	364.563	15.206
1.400	1536.196	38.144f	0.896	47.875f	11.650	56.106	352.601	14.377
1.500	1653.274	38.844f	0.936	48.176f	11.769	57.738	337.164	13.619
1.600	1771.416	39.474f	0.977	48.404f	11.869	59.079	321.985	12.952
1.700	1890.497	40.042f	1.019	48.565f	11.950	60.128	307.060	12.355
1.800	2010.362	40.556f	1.062	48.724f	12.030	61.246	294.120	11.816
1.900	2130.966	41.021f	1.106	48.853f	12.102	62.253	282.039	11.333
2.000	2252.292	41.446f	1.150	48.963f	12.172	63.237	271.063	10.902
2.100	2374.285	41.835f	1.195	49.044f	12.236	64.179	260.966	10.512
2.200	2496.917	42.190f	1.241	49.100f	12.301	65.131	251.831	10.160
2.300	2620.189	42.516f	1.287	49.139f	12.364	66.090	243.516	9.843
2.400	2744.089	42.815f	1.334	49.151f	12.426	67.041	235.867	9.554
2.500	2868.603	43.090f	1.381	49.146f	12.487	68.002	228.863	9.291
2.600	2993.726	43.343f	1.429	49.131f	12.548	68.977	222.442	9.051
2.700	3119.478	43.576f	1.477	49.096f	12.612	70.036	216.753	8.834
2.800	3245.885	43.790f	1.526	49.032f	12.674	71.039	211.294	8.636
2.900	3372.897	43.986f	1.575	48.960f	12.740	72.161	206.549	8.455
3.000	3500.567	44.166f	1.625	48.880f	12.807	73.306	202.174	8.292
3.100	3628.923	44.331f	1.675	48.781f	12.876	74.509	198.223	8.143
3.200	3757.990	44.482f	1.725	48.667f	12.949	75.786	194.695	8.007
3.300	3887.783	44.619f	1.776	48.547f	13.021	77.078	191.405	7.882
3.400	4018.289	44.745f	1.827	48.415f	13.093	78.394	188.349	7.768
3.500	4149.526	44.859f	1.878	48.284f	13.164	79.682	185.388	7.664
3.600	4281.455	44.962f	1.930	48.150f	13.234	80.971	182.584	7.568
3.700	4414.093	45.056f	1.982	48.006f	13.305	82.312	180.029	7.480
3.800	4547.455	45.140f	2.034	47.851f	13.378	83.716	177.731	7.400
3.900	4681.557	45.215f	2.087	47.684f	13.449	85.108	175.510	7.327
4.000	4816.367	45.282f	2.140	47.526f	13.520	86.492	173.372	7.261
4.100	4951.839	45.341f	2.193	47.384f	13.586	87.747	171.077	7.201
4.200	5087.943	45.394f	2.246	47.254f	13.647	88.917	168.719	7.146
4.300	5224.640	45.441f	2.299	47.133f	13.705	90.032	166.365	7.095
4.400	5361.896	45.483f	2.353	47.016f	13.759	91.089	164.009	7.048
4.500	5499.686	45.520f	2.407	46.901f	13.811	92.105	161.684	7.006
4.600	5637.986	45.552f	2.460	46.791f	13.862	93.089	159.403	6.968
4.700	5776.781	45.581f	2.514	46.686f	13.910	94.026	157.139	6.933
4.800	5916.042	45.606f	2.568	46.586f	13.955	94.914	154.889	6.902
4.900	6055.744	45.627f	2.622	46.486f	13.999	95.769	152.679	6.875
5.000	6195.871	45.645f	2.676	46.389f	14.040	96.577	150.485	6.851
5.100	6336.407	45.661f	2.730	46.294f	14.080	97.350	148.325	6.831
5.200	6477.326	45.674f	2.784	46.203f	14.117	98.083	146.191	6.812
5.300	6618.613	45.684f	2.839	46.111f	14.153	98.780	144.088	6.797
5.400	6760.246	45.692f	2.893	46.017f	14.187	99.450	142.026	6.785
5.500	6902.213	45.698f	2.947	45.928f	14.220	100.085	139.992	6.774
5.600	7044.503	45.701f	3.001	45.840f	14.251	100.697	138.003	6.766
5.700	7187.096	45.703f	3.055	45.755f	14.280	101.265	136.028	6.761
5.800	7329.967	45.704f	3.109	45.669f	14.307	101.772	134.045	6.756
5.900	7473.081	45.702f	3.163	45.579f	14.329	102.202	132.034	6.753
6.000	7616.397	45.699f	3.218	45.484f	14.349	102.566	130.010	6.752
6.100	7759.907	45.694f	3.272	45.391f	14.367	102.896	128.016	6.753

6.200	7903.584	45.688f	3.326	45.298f	14.383	103.176	126.031	6.756
6.300	8047.409	45.680f	3.380	45.196f	14.395	103.373	124.015	6.760
6.400	8191.342	45.670f	3.434	45.091f	14.405	103.519	122.008	6.765
6.500	8335.376	45.659f	3.488	44.992f	14.415	103.647	120.048	6.772
6.600	8479.506	45.647f	3.541	44.906f	14.425	103.819	118.204	6.780
6.700	8623.742	45.634f	3.595	44.822f	14.435	103.987	116.414	6.790
6.800	8768.075	45.620f	3.649	44.744f	14.445	104.155	114.683	6.800
6.900	8912.518	45.605f	3.703	44.676f	14.458	104.381	113.069	6.813

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 0.500/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1101.187	52.837f	0.534	50.512f	11.873	61.190	536.720	19.088
1.100	1220.363	52.607f	0.585	50.468f	11.964	62.169	492.055	17.582
1.200	1340.424	52.415f	0.637	50.453f	12.045	63.053	454.348	16.317
1.300	1461.242	52.252f	0.689	50.431f	12.118	63.888	422.300	15.238
1.400	1582.734	52.111f	0.740	50.417f	12.179	64.632	394.426	14.298
1.500	1704.778	51.990f	0.792	50.412f	12.229	65.306	370.006	13.462
1.600	1827.295	51.884f	0.844	50.417f	12.274	65.890	348.288	12.738
1.700	1950.231	51.792f	0.895	50.419f	12.313	66.407	328.892	12.102
1.800	2073.541	51.710f	0.947	50.420f	12.349	66.888	311.572	11.539
1.900	2197.197	51.638f	0.998	50.426f	12.382	67.332	295.991	11.041
2.000	2321.174	51.574f	1.050	50.434f	12.413	67.740	281.879	10.599
2.100	2445.432	51.516f	1.101	50.436f	12.440	68.088	268.930	10.205
2.200	2569.971	51.464f	1.152	50.444f	12.468	68.440	257.223	9.852
2.300	2694.768	51.416f	1.204	50.450f	12.492	68.759	246.454	9.532
2.400	2819.802	51.374f	1.255	50.458f	12.515	69.042	236.496	9.244
2.500	2945.048	51.335f	1.307	50.471f	12.534	69.281	227.222	8.983
2.600	3070.489	51.300f	1.358	50.483f	12.553	69.508	218.653	8.746
2.700	3196.119	51.268f	1.409	50.492f	12.572	69.741	210.761	8.531
2.800	3321.941	51.239f	1.460	50.497f	12.592	69.990	203.504	8.335
2.900	3447.956	51.211f	1.512	50.494f	12.611	70.240	196.766	8.157
3.000	3574.166	51.186f	1.563	50.487f	12.630	70.500	190.519	7.994
3.100	3700.569	51.162f	1.614	50.476f	12.650	70.754	184.676	7.846
3.200	3827.169	51.139f	1.665	50.461f	12.670	71.022	179.242	7.711
3.300	3953.975	51.117f	1.716	50.437f	12.691	71.314	174.207	7.589
3.400	4080.991	51.095f	1.768	50.405f	12.711	71.605	169.475	7.475
3.500	4208.212	51.073f	1.819	50.365f	12.732	71.910	165.052	7.372
3.600	4335.651	51.052f	1.870	50.315f	12.755	72.239	160.933	7.277
3.700	4463.317	51.030f	1.921	50.257f	12.778	72.599	157.109	7.191
3.800	4591.236	51.007f	1.972	50.185f	12.805	73.022	153.621	7.113
3.900	4719.431	50.984f	2.024	50.105f	12.833	73.466	150.356	7.042
4.000	4847.913	50.959f	2.075	50.016f	12.863	73.958	147.352	6.977
4.100	4976.702	50.934f	2.126	49.913f	12.894	74.458	144.510	6.919
4.200	5105.806	50.906f	2.178	49.796f	12.927	75.002	141.885	6.867
4.300	5235.250	50.877f	2.229	49.659f	12.961	75.571	139.426	6.820
4.400	5365.040	50.846f	2.281	49.508f	12.996	76.155	137.105	6.778
4.500	5495.185	50.812f	2.332	49.341f	13.031	76.730	134.868	6.739
4.600	5625.646	50.776f	2.384	49.169f	13.062	77.247	132.628	6.705
4.700	5756.442	50.737f	2.435	48.986f	13.098	77.844	130.617	6.675
4.800	5887.616	50.696f	2.487	48.800f	13.137	78.524	128.821	6.650
4.900	6019.192	50.653f	2.539	48.612f	13.178	79.233	127.143	6.627
5.000	6151.172	50.607f	2.591	48.425f	13.217	79.945	125.533	6.607
5.100	6283.557	50.559f	2.643	48.234f	13.260	80.721	124.082	6.590
5.200	6416.398	50.509f	2.695	48.044f	13.308	81.631	122.883	6.576
5.300	6549.703	50.457f	2.747	47.876f	13.352	82.423	121.550	6.566
5.400	6683.468	50.403f	2.799	47.700f	13.400	83.330	120.427	6.558
5.500	6817.728	50.348f	2.851	47.527f	13.452	84.312	119.447	6.552
5.600	6952.523	50.292f	2.903	47.353f	13.506	85.379	118.614	6.548
5.700	7087.888	50.234f	2.956	47.185f	13.561	86.481	117.850	6.546
5.800	7223.827	50.175f	3.008	47.033f	13.619	87.636	117.177	6.546
5.900	7360.293	50.115f	3.061	46.909f	13.674	88.753	116.470	6.548
6.000	7497.305	50.056f	3.114	46.803f	13.729	89.854	115.760	6.552

6.100	7634.859	49.996f	3.166	46.701f	13.783	90.952	115.063	6.557
6.200	7772.954	49.937f	3.219	46.606f	13.836	92.029	114.357	6.565
6.300	7911.574	49.878f	3.272	46.520f	13.888	93.087	113.646	6.573
6.400	8050.715	49.819f	3.325	46.442f	13.941	94.159	112.968	6.584
6.500	8190.390	49.761f	3.379	46.375f	13.995	95.273	112.354	6.596
6.600	8330.602	49.703f	3.432	46.318f	14.047	96.362	111.726	6.610
6.700	8471.336	49.647f	3.485	46.265f	14.100	97.442	111.102	6.625
6.800	8612.582	49.591f	3.539	46.220f	14.150	98.486	110.451	6.641
6.900	8754.331	49.536f	3.592	46.179f	14.200	99.536	109.821	6.658

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 1.000/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1116.224	55.528f	0.561	50.986f	11.838	60.658	524.867	18.804
1.100	1235.130	55.086f	0.611	50.887f	11.942	61.839	483.571	17.367
1.200	1354.987	54.711f	0.661	50.810f	12.029	62.857	448.050	16.135
1.300	1475.654	54.390f	0.712	50.750f	12.105	63.761	417.332	15.086
1.400	1597.050	54.111f	0.762	50.697f	12.173	64.595	390.650	14.178
1.500	1719.038	53.868f	0.813	50.670f	12.225	65.236	366.533	13.373
1.600	1841.515	53.655f	0.863	50.642f	12.270	65.861	345.433	12.654
1.700	1964.431	53.465f	0.914	50.616f	12.313	66.459	326.760	12.029
1.800	2087.747	53.296f	0.965	50.596f	12.350	66.942	309.690	11.479
1.900	2211.413	53.145f	1.016	50.587f	12.384	67.400	294.373	10.991
2.000	2335.406	53.009f	1.067	50.580f	12.416	67.826	280.506	10.554
2.100	2459.702	52.886f	1.118	50.573f	12.445	68.218	267.870	10.163
2.200	2584.275	52.775f	1.169	50.567f	12.471	68.571	256.277	9.813
2.300	2709.106	52.673f	1.220	50.562f	12.496	68.902	245.650	9.498
2.400	2834.178	52.580f	1.271	50.560f	12.519	69.206	235.846	9.212
2.500	2959.477	52.494f	1.321	50.558f	12.542	69.500	226.817	8.954
2.600	3084.995	52.415f	1.372	50.559f	12.562	69.761	218.406	8.720
2.700	3210.696	52.343f	1.423	50.563f	12.579	69.962	210.460	8.506
2.800	3336.564	52.276f	1.474	50.566f	12.595	70.147	203.056	8.311
2.900	3462.589	52.213f	1.525	50.566f	12.611	70.332	196.182	8.134
3.000	3588.781	52.155f	1.576	50.562f	12.627	70.531	189.819	7.973
3.100	3715.136	52.101f	1.627	50.552f	12.644	70.736	183.897	7.826
3.200	3841.658	52.049f	1.678	50.534f	12.660	70.940	178.352	7.691
3.300	3968.336	52.001f	1.729	50.512f	12.675	71.131	173.125	7.566
3.400	4095.165	51.954f	1.780	50.482f	12.691	71.331	168.234	7.453
3.500	4222.158	51.909f	1.831	50.447f	12.708	71.549	163.673	7.351
3.600	4349.320	51.866f	1.882	50.405f	12.725	71.779	159.398	7.257
3.700	4476.659	51.824f	1.933	50.357f	12.743	72.031	155.409	7.171
3.800	4604.187	51.782f	1.984	50.301f	12.762	72.308	151.684	7.093
3.900	4731.904	51.741f	2.035	50.230f	12.782	72.588	148.162	7.021
4.000	4859.833	51.700f	2.085	50.147f	12.804	72.911	144.905	6.957
4.100	4987.979	51.659f	2.136	50.046f	12.825	73.226	141.792	6.899
4.200	5116.341	51.617f	2.187	49.933f	12.847	73.551	138.848	6.846
4.300	5244.923	51.574f	2.238	49.803f	12.869	73.869	136.030	6.798
4.400	5373.716	51.530f	2.289	49.656f	12.891	74.202	133.368	6.754
4.500	5502.766	51.484f	2.340	49.503f	12.920	74.646	131.020	6.717
4.600	5632.115	51.437f	2.391	49.346f	12.951	75.144	128.865	6.684
4.700	5761.789	51.388f	2.442	49.180f	12.984	75.706	126.906	6.654
4.800	5891.795	51.337f	2.494	49.018f	13.017	76.254	125.005	6.628
4.900	6022.148	51.285f	2.545	48.852f	13.056	76.909	123.348	6.606
5.000	6152.908	51.232f	2.596	48.684f	13.098	77.648	121.887	6.588
5.100	6284.101	51.177f	2.647	48.516f	13.142	78.430	120.544	6.572
5.200	6415.739	51.121f	2.699	48.351f	13.187	79.260	119.320	6.559
5.300	6547.840	51.063f	2.750	48.192f	13.235	80.153	118.231	6.549
5.400	6680.444	51.004f	2.802	48.028f	13.287	81.128	117.294	6.541
5.500	6813.591	50.945f	2.854	47.879f	13.340	82.111	116.395	6.536
5.600	6947.259	50.884f	2.906	47.743f	13.395	83.186	115.651	6.533
5.700	7081.514	50.823f	2.958	47.608f	13.456	84.368	115.070	6.532
5.800	7216.376	50.762f	3.010	47.475f	13.518	85.611	114.583	6.533
5.900	7351.886	50.700f	3.062	47.340f	13.582	86.909	114.176	6.535
6.000	7488.063	50.637f	3.114	47.201f	13.648	88.260	113.842	6.540

6.100	7624.849	50.575f	3.167	47.089f	13.707	89.464	113.325	6.546
6.200	7762.204	50.512f	3.219	46.995f	13.766	90.668	112.818	6.553
6.300	7900.162	50.450f	3.272	46.909f	13.826	91.908	112.363	6.563
6.400	8038.711	50.388f	3.325	46.830f	13.885	93.117	111.880	6.574
6.500	8177.845	50.327f	3.378	46.759f	13.942	94.298	111.371	6.586
6.600	8317.543	50.267f	3.431	46.692f	13.999	95.467	110.858	6.600
6.700	8457.813	50.207f	3.484	46.630f	14.056	96.643	110.363	6.615
6.800	8598.646	50.148f	3.538	46.579f	14.112	97.799	109.853	6.632
6.900	8740.035	50.090f	3.591	46.533f	14.167	98.947	109.345	6.651

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 1.500/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1134.291	58.104f	0.603	51.515f	11.772	59.676	508.104	18.442
1.100	1252.573	57.474f	0.650	51.360f	11.883	60.963	470.050	17.076
1.200	1371.911	56.935f	0.698	51.220f	11.983	62.173	437.678	15.914
1.300	1492.158	56.470f	0.746	51.109f	12.068	63.211	409.125	14.904
1.400	1613.207	56.064f	0.794	51.013f	12.142	64.128	383.920	14.031
1.500	1734.922	55.708f	0.843	50.934f	12.201	64.889	361.221	13.251
1.600	1857.196	55.391f	0.893	50.868f	12.256	65.644	341.365	12.566
1.700	1979.950	55.110f	0.942	50.837f	12.297	66.194	322.885	11.955
1.800	2103.115	54.858f	0.992	50.799f	12.339	66.768	306.607	11.416
1.900	2226.685	54.632f	1.042	50.761f	12.377	67.315	291.965	10.937
2.000	2350.617	54.427f	1.092	50.733f	12.411	67.791	278.528	10.509
2.100	2474.863	54.241f	1.142	50.714f	12.440	68.190	266.102	10.123
2.200	2599.391	54.072f	1.192	50.697f	12.468	68.569	254.763	9.776
2.300	2724.189	53.917f	1.242	50.682f	12.495	68.939	244.402	9.465
2.400	2849.246	53.775f	1.292	50.668f	12.519	69.264	234.776	9.184
2.500	2974.530	53.643f	1.343	50.654f	12.541	69.554	225.830	8.928
2.600	3100.021	53.522f	1.393	50.643f	12.561	69.815	217.502	8.696
2.700	3225.710	53.410f	1.443	50.631f	12.580	70.064	209.773	8.485
2.800	3351.588	53.305f	1.494	50.621f	12.598	70.284	202.527	8.293
2.900	3477.626	53.208f	1.544	50.616f	12.612	70.445	195.635	8.117
3.000	3603.802	53.117f	1.595	50.610f	12.625	70.576	189.136	7.957
3.100	3730.101	53.032f	1.645	50.598f	12.637	70.699	183.050	7.809
3.200	3856.521	52.952f	1.696	50.581f	12.649	70.820	177.352	7.674
3.300	3983.057	52.876f	1.746	50.557f	12.661	70.956	172.050	7.550
3.400	4109.720	52.804f	1.797	50.529f	12.674	71.101	167.088	7.438
3.500	4236.512	52.735f	1.847	50.499f	12.687	71.251	162.428	7.335
3.600	4363.431	52.670f	1.898	50.458f	12.699	71.392	158.015	7.241
3.700	4490.479	52.606f	1.948	50.412f	12.712	71.536	153.856	7.156
3.800	4617.646	52.545f	1.999	50.353f	12.724	71.659	149.874	7.078
3.900	4744.929	52.485f	2.049	50.283f	12.735	71.777	146.094	7.006
4.000	4872.322	52.427f	2.100	50.200f	12.746	71.878	142.475	6.941
4.100	4999.824	52.369f	2.150	50.100f	12.757	71.986	139.051	6.882
4.200	5127.435	52.311f	2.201	49.990f	12.768	72.115	135.834	6.828
4.300	5255.199	52.253f	2.251	49.877f	12.786	72.358	132.977	6.781
4.400	5383.141	52.195f	2.302	49.758f	12.805	72.622	130.290	6.738
4.500	5511.289	52.137f	2.352	49.632f	12.827	72.948	127.832	6.701
4.600	5639.669	52.078f	2.403	49.499f	12.852	73.324	125.567	6.667
4.700	5768.329	52.019f	2.453	49.364f	12.883	73.845	123.638	6.638
4.800	5897.322	51.960f	2.504	49.223f	12.917	74.411	121.860	6.613
4.900	6026.669	51.899f	2.554	49.076f	12.955	75.053	120.273	6.591
5.000	6156.400	51.838f	2.605	48.939f	12.994	75.730	118.801	6.573
5.100	6286.543	51.777f	2.656	48.799f	13.038	76.491	117.510	6.558
5.200	6417.141	51.715f	2.707	48.656f	13.085	77.330	116.382	6.546
5.300	6548.226	51.652f	2.758	48.520f	13.136	78.263	115.428	6.536
5.400	6679.839	51.589f	2.809	48.395f	13.189	79.277	114.620	6.529
5.500	6812.011	51.526f	2.860	48.271f	13.247	80.376	113.954	6.524
5.600	6944.770	51.462f	2.912	48.146f	13.308	81.534	113.386	6.521
5.700	7078.148	51.399f	2.964	48.012f	13.372	82.780	112.950	6.521
5.800	7212.141	51.335f	3.015	47.906f	13.429	83.876	112.319	6.522
5.900	7346.723	51.271f	3.067	47.786f	13.491	85.097	111.866	6.526
6.000	7481.942	51.207f	3.119	47.677f	13.556	86.408	111.537	6.531

6.100	7617.840	51.143f	3.171	47.563f	13.625	87.809	111.324	6.538
6.200	7754.445	51.078f	3.224	47.450f	13.693	89.218	111.117	6.546
6.300	7891.762	51.014f	3.276	47.346f	13.759	90.578	110.849	6.556
6.400	8029.669	50.950f	3.329	47.252f	13.824	91.921	110.560	6.567
6.500	8168.204	50.887f	3.381	47.171f	13.887	93.208	110.206	6.580
6.600	8307.365	50.824f	3.434	47.098f	13.949	94.487	109.847	6.595
6.700	8447.138	50.762f	3.487	47.034f	14.009	95.745	109.468	6.610
6.800	8587.516	50.700f	3.540	46.976f	14.070	96.992	109.081	6.628
6.900	8728.497	50.640f	3.593	46.921f	14.130	98.237	108.697	6.646

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 2.000/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1155.421	60.537f	0.658	52.068f	11.681	58.379	487.927	18.018
1.100	1272.881	59.744f	0.701	51.832f	11.808	59.935	454.706	16.733
1.200	1391.455	59.063f	0.745	51.684f	11.905	61.011	423.427	15.636
1.300	1510.988	58.472f	0.791	51.516f	12.001	62.161	397.278	14.696
1.400	1631.394	57.953f	0.837	51.374f	12.083	63.245	374.377	13.851
1.500	1752.573	57.494f	0.884	51.251f	12.156	64.208	353.796	13.114
1.600	1874.431	57.084f	0.931	51.152f	12.219	65.057	335.169	12.458
1.700	1996.857	56.718f	0.979	51.074f	12.271	65.787	318.149	11.872
1.800	2119.792	56.389f	1.027	51.002f	12.320	66.471	302.816	11.350
1.900	2243.155	56.091f	1.075	50.962f	12.356	66.967	288.298	10.879
2.000	2366.874	55.822f	1.124	50.916f	12.393	67.493	275.375	10.460
2.100	2490.955	55.576f	1.173	50.872f	12.428	68.007	263.650	10.084
2.200	2615.371	55.352f	1.222	50.834f	12.459	68.453	252.755	9.744
2.300	2740.067	55.145f	1.271	50.806f	12.485	68.816	242.530	9.435
2.400	2865.012	54.956f	1.320	50.780f	12.509	69.151	233.083	9.157
2.500	2990.197	54.780f	1.370	50.753f	12.533	69.469	224.353	8.905
2.600	3115.606	54.618f	1.419	50.730f	12.554	69.750	216.193	8.676
2.700	3241.213	54.467f	1.469	50.708f	12.573	69.993	208.540	8.467
2.800	3367.000	54.326f	1.519	50.686f	12.590	70.206	201.359	8.277
2.900	3492.952	54.194f	1.569	50.661f	12.606	70.396	194.622	8.104
3.000	3619.051	54.071f	1.618	50.636f	12.619	70.553	188.260	7.943
3.100	3745.267	53.954f	1.668	50.617f	12.629	70.647	182.159	7.796
3.200	3871.580	53.845f	1.718	50.600f	12.639	70.726	176.412	7.662
3.300	3997.987	53.742f	1.768	50.578f	12.648	70.803	171.022	7.540
3.400	4124.485	53.645f	1.818	50.551f	12.656	70.854	165.896	7.427
3.500	4251.063	53.552f	1.868	50.514f	12.664	70.917	161.099	7.324
3.600	4377.718	53.463f	1.918	50.466f	12.671	70.945	156.498	7.230
3.700	4504.434	53.378f	1.968	50.410f	12.676	70.945	152.097	7.145
3.800	4631.199	53.296f	2.018	50.342f	12.681	70.928	147.898	7.067
3.900	4758.007	53.216f	2.068	50.265f	12.684	70.889	143.877	6.995
4.000	4884.850	53.139f	2.118	50.186f	12.689	70.886	140.136	6.930
4.100	5011.755	53.063f	2.168	50.105f	12.697	70.938	136.687	6.871
4.200	5138.745	52.989f	2.218	50.019f	12.706	71.014	133.453	6.817
4.300	5265.840	52.916f	2.267	49.926f	12.718	71.152	130.485	6.770
4.400	5393.073	52.844f	2.317	49.832f	12.734	71.362	127.782	6.728
4.500	5520.492	52.773f	2.367	49.733f	12.754	71.664	125.362	6.690
4.600	5648.123	52.703f	2.417	49.631f	12.777	72.002	123.107	6.657
4.700	5775.998	52.634f	2.467	49.524f	12.803	72.421	121.082	6.628
4.800	5904.162	52.565f	2.517	49.418f	12.835	72.932	119.288	6.603
4.900	6032.661	52.497f	2.568	49.304f	12.870	73.533	117.710	6.582
5.000	6161.543	52.429f	2.618	49.189f	12.911	74.229	116.338	6.564
5.100	6290.853	52.361f	2.668	49.081f	12.957	75.046	115.202	6.549
5.200	6420.643	52.294f	2.719	48.975f	13.006	75.926	114.197	6.537
5.300	6550.943	52.227f	2.769	48.871f	13.059	76.889	113.344	6.528
5.400	6681.776	52.160f	2.820	48.768f	13.114	77.893	112.576	6.521
5.500	6813.167	52.094f	2.871	48.659f	13.170	78.953	111.907	6.517
5.600	6945.128	52.027f	2.922	48.551f	13.227	80.039	111.291	6.514
5.700	7077.683	51.961f	2.973	48.441f	13.288	81.187	110.773	6.514
5.800	7210.857	51.895f	3.025	48.339f	13.353	82.446	110.413	6.516
5.900	7344.688	51.829f	3.076	48.231f	13.420	83.764	110.134	6.520
6.000	7479.203	51.764f	3.128	48.133f	13.484	85.016	109.770	6.526
6.100	7614.333	51.698f	3.180	48.035f	13.548	86.287	109.435	6.533

6.200	7750.128	51.633f	3.232	47.935f	13.615	87.638	109.200	6.542
6.300	7886.594	51.568f	3.284	47.833f	13.684	89.031	109.016	6.553
6.400	8023.775	51.503f	3.336	47.729f	13.754	90.482	108.899	6.565
6.500	8161.686	51.438f	3.389	47.627f	13.826	91.973	108.823	6.579
6.600	8300.299	51.374f	3.441	47.543f	13.894	93.375	108.636	6.594
6.700	8439.535	51.310f	3.494	47.469f	13.959	94.736	108.402	6.610
6.800	8579.425	51.247f	3.547	47.402f	14.025	96.088	108.156	6.628
6.900	8719.958	51.184f	3.600	47.343f	14.088	97.410	107.877	6.646

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 2.500/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1180.276	62.779f	0.723	52.975f	11.476	55.040	450.279	17.509
1.100	1296.233	61.871f	0.763	52.452f	11.677	57.927	431.504	16.344
1.200	1413.635	61.077f	0.803	52.178f	11.805	59.564	406.846	15.323
1.300	1532.255	60.378f	0.846	51.938f	11.920	61.023	384.545	14.438
1.400	1651.893	59.759f	0.889	51.787f	12.005	62.022	362.533	13.656
1.500	1772.328	59.212f	0.933	51.626f	12.087	63.120	343.883	12.957
1.600	1893.514	58.722f	0.978	51.488f	12.158	64.096	326.848	12.330
1.700	2015.401	58.280f	1.023	51.362f	12.223	65.002	311.422	11.776
1.800	2137.872	57.881f	1.070	51.260f	12.278	65.803	297.203	11.269
1.900	2260.858	57.518f	1.116	51.176f	12.327	66.499	284.006	10.818
2.000	2384.301	57.188f	1.163	51.101f	12.369	67.111	271.781	10.411
2.100	2508.132	56.886f	1.211	51.039f	12.405	67.642	260.408	10.042
2.200	2632.276	56.609f	1.258	50.996f	12.435	68.043	249.595	9.709
2.300	2756.741	56.355f	1.306	50.943f	12.466	68.502	239.937	9.409
2.400	2881.499	56.119f	1.354	50.896f	12.493	68.897	230.872	9.134
2.500	3006.509	55.901f	1.403	50.856f	12.517	69.223	222.320	8.886
2.600	3131.743	55.699f	1.451	50.819f	12.538	69.509	214.308	8.660
2.700	3257.183	55.510f	1.500	50.781f	12.558	69.762	206.808	8.454
2.800	3382.801	55.334f	1.549	50.744f	12.574	69.979	199.745	8.264
2.900	3508.576	55.169f	1.598	50.709f	12.589	70.160	193.084	8.091
3.000	3634.495	55.014f	1.647	50.676f	12.603	70.327	186.838	7.933
3.100	3760.543	54.868f	1.696	50.639f	12.615	70.451	180.894	7.788
3.200	3886.702	54.730f	1.745	50.604f	12.625	70.554	175.277	7.655
3.300	4012.944	54.599f	1.794	50.567f	12.631	70.564	169.788	7.533
3.400	4139.228	54.476f	1.843	50.527f	12.634	70.519	164.502	7.421
3.500	4265.531	54.358f	1.893	50.477f	12.635	70.439	159.451	7.318
3.600	4391.843	54.246f	1.942	50.422f	12.635	70.329	154.622	7.224
3.700	4518.154	54.138f	1.991	50.357f	12.635	70.230	150.090	7.138
3.800	4644.473	54.034f	2.041	50.293f	12.637	70.171	145.883	7.060
3.900	4770.815	53.934f	2.090	50.228f	12.639	70.126	141.931	6.989
4.000	4897.192	53.838f	2.139	50.160f	12.643	70.107	138.230	6.924
4.100	5023.612	53.744f	2.188	50.091f	12.648	70.110	134.757	6.866
4.200	5150.104	53.654f	2.238	50.029f	12.658	70.198	131.613	6.813
4.300	5276.697	53.566f	2.287	49.961f	12.669	70.321	128.680	6.765
4.400	5403.409	53.480f	2.336	49.891f	12.682	70.482	125.950	6.723
4.500	5530.270	53.397f	2.386	49.817f	12.699	70.727	123.488	6.685
4.600	5657.331	53.316f	2.435	49.747f	12.721	71.052	121.270	6.652
4.700	5784.629	53.236f	2.485	49.671f	12.747	71.457	119.277	6.623
4.800	5912.206	53.159f	2.534	49.596f	12.777	71.944	117.498	6.599
4.900	6040.115	53.082f	2.584	49.528f	12.813	72.564	116.001	6.578
5.000	6168.406	53.008f	2.634	49.457f	12.853	73.254	114.669	6.560
5.100	6297.119	52.934f	2.684	49.381f	12.898	74.047	113.541	6.545
5.200	6426.301	52.862f	2.734	49.297f	12.947	74.915	112.562	6.533
5.300	6555.980	52.791f	2.784	49.212f	12.997	75.815	111.662	6.524
5.400	6686.173	52.720f	2.835	49.119f	13.050	76.780	110.881	6.517
5.500	6816.908	52.650f	2.885	49.031f	13.106	77.807	110.209	6.513
5.600	6948.218	52.581f	2.936	48.951f	13.165	78.914	109.665	6.511
5.700	7080.126	52.512f	2.987	48.862f	13.226	80.068	109.195	6.512
5.800	7212.647	52.445f	3.038	48.772f	13.287	81.236	108.753	6.514
5.900	7345.792	52.377f	3.089	48.676f	13.351	82.459	108.389	6.518
6.000	7479.588	52.310f	3.141	48.584f	13.416	83.728	108.089	6.525
6.100	7614.036	52.243f	3.192	48.488f	13.483	85.047	107.853	6.533

6.200	7749.177	52.177f	3.244	48.382f	13.555	86.462	107.735	6.543
6.300	7885.001	52.111f	3.296	48.311f	13.618	87.705	107.401	6.554
6.400	8021.483	52.046f	3.348	48.223f	13.687	89.091	107.242	6.567
6.500	8158.659	51.981f	3.400	48.136f	13.757	90.505	107.113	6.581
6.600	8296.555	51.916f	3.452	48.042f	13.829	91.995	107.067	6.597
6.700	8435.188	51.851f	3.505	47.952f	13.902	93.500	107.029	6.614
6.800	8574.574	51.787f	3.557	47.856f	13.976	95.067	107.054	6.632
6.900	8714.621	51.723f	3.610	47.792f	14.041	96.416	106.829	6.651

Water Specific Gravity = 1.025.
Trim is per 96.59m

Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 3.000/96.590, No heel, VCG = 0.000

Draft at 48.295f (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	KML (m)	KMT (m)
1.000	1212.110	64.672f	0.795	54.629f	11.050	48.404	385.537	16.834
1.100	1324.224	63.780f	0.832	53.718f	11.360	52.691	384.148	15.864
1.200	1439.180	62.943f	0.870	53.002f	11.609	56.342	377.956	14.966
1.300	1556.346	62.169f	0.909	52.512f	11.789	59.011	366.059	14.153
1.400	1674.766	61.477f	0.949	52.245f	11.903	60.546	349.020	13.423
1.500	1794.292	60.853f	0.990	52.012f	12.006	61.923	333.184	12.778
1.600	1914.754	60.290f	1.033	51.874f	12.077	62.809	316.686	12.187
1.700	2035.852	59.785f	1.076	51.710f	12.151	63.862	302.846	11.655
1.800	2157.645	59.324f	1.120	51.566f	12.216	64.778	289.849	11.181
1.900	2280.053	58.904f	1.164	51.442f	12.272	65.600	277.770	10.745
2.000	2402.980	58.519f	1.210	51.329f	12.324	66.363	266.624	10.354
2.100	2526.378	58.166f	1.255	51.237f	12.367	66.994	256.012	9.998
2.200	2650.181	57.840f	1.301	51.157f	12.404	67.533	246.016	9.675
2.300	2774.327	57.540f	1.348	51.086f	12.437	68.015	236.684	9.380
2.400	2898.769	57.261f	1.394	51.032f	12.463	68.363	227.682	9.114
2.500	3023.476	57.003f	1.441	50.970f	12.489	68.740	219.495	8.869
2.600	3148.431	56.763f	1.489	50.909f	12.513	69.080	211.827	8.646
2.700	3273.604	56.538f	1.536	50.856f	12.534	69.366	204.572	8.442
2.800	3398.969	56.327f	1.584	50.807f	12.551	69.590	197.661	8.255
2.900	3524.490	56.130f	1.632	50.758f	12.566	69.779	191.139	8.083
3.000	3650.154	55.944f	1.680	50.707f	12.579	69.933	184.966	7.927
3.100	3775.931	55.769f	1.728	50.652f	12.589	70.013	179.011	7.783
3.200	3901.792	55.603f	1.776	50.593f	12.595	70.038	173.297	7.652
3.300	4027.700	55.445f	1.824	50.530f	12.599	70.003	167.796	7.530
3.400	4153.635	55.295f	1.873	50.465f	12.601	69.947	162.578	7.419
3.500	4279.585	55.152f	1.921	50.406f	12.601	69.858	157.594	7.317
3.600	4405.521	55.016f	1.970	50.351f	12.599	69.736	152.821	7.223
3.700	4531.452	54.885f	2.018	50.296f	12.599	69.638	148.364	7.137
3.800	4657.380	54.760f	2.066	50.243f	12.599	69.543	144.157	7.059
3.900	4783.324	54.641f	2.115	50.190f	12.602	69.517	140.308	6.988
4.000	4909.317	54.526f	2.164	50.139f	12.608	69.534	136.741	6.924
4.100	5035.367	54.415f	2.212	50.087f	12.614	69.568	133.384	6.866
4.200	5161.490	54.309f	2.261	50.035f	12.622	69.636	130.251	6.813
4.300	5287.710	54.206f	2.310	49.989f	12.634	69.767	127.381	6.766
4.400	5414.059	54.107f	2.358	49.945f	12.648	69.947	124.729	6.724
4.500	5540.563	54.012f	2.407	49.902f	12.665	70.198	122.319	6.686
4.600	5667.263	53.919f	2.456	49.864f	12.687	70.541	120.168	6.653
4.700	5794.213	53.830f	2.505	49.826f	12.715	70.980	118.267	6.624
4.800	5921.457	53.743f	2.555	49.789f	12.746	71.492	116.561	6.600
4.900	6049.032	53.660f	2.604	49.749f	12.781	72.078	115.038	6.578
5.000	6176.968	53.578f	2.654	49.702f	12.818	72.723	113.663	6.560
5.100	6305.290	53.499f	2.703	49.651f	12.858	73.415	112.410	6.546
5.200	6434.030	53.421f	2.753	49.594f	12.901	74.175	111.300	6.533
5.300	6563.223	53.345f	2.803	49.537f	12.950	75.043	110.387	6.524
5.400	6692.928	53.271f	2.853	49.474f	13.003	76.017	109.652	6.518
5.500	6823.177	53.197f	2.903	49.408f	13.058	77.004	108.956	6.514
5.600	6953.982	53.125f	2.954	49.331f	13.115	78.057	108.368	6.513
5.700	7085.362	53.054f	3.004	49.256f	13.173	79.135	107.828	6.514
5.800	7217.331	52.984f	3.055	49.182f	13.233	80.253	107.352	6.516
5.900	7349.904	52.915f	3.106	49.104f	13.295	81.431	106.962	6.521
6.000	7483.110	52.846f	3.157	49.025f	13.359	82.645	106.624	6.528
6.100	7616.962	52.778f	3.208	48.945f	13.425	83.915	106.360	6.537

6.200	7751.489	52.711f	3.260	48.863f	13.492	85.225	106.147	6.547
6.300	7886.689	52.644f	3.311	48.778f	13.561	86.579	105.984	6.559
6.400	8022.597	52.578f	3.363	48.687f	13.633	88.010	105.911	6.573
6.500	8159.226	52.512f	3.415	48.615f	13.700	89.340	105.711	6.588
6.600	8296.506	52.447f	3.467	48.538f	13.769	90.716	105.563	6.604
6.700	8434.496	52.382f	3.519	48.455f	13.840	92.154	105.482	6.622
6.800	8573.194	52.318f	3.572	48.374f	13.913	93.642	105.451	6.641
6.900	8712.633	52.254f	3.624	48.291f	13.986	95.182	105.469	6.660

Water Specific Gravity = 1.025.
Trim is per 96.59m

5 TANKS AND CARGO OIL HOLD CAPACITY DATA

5.1 SUMMARY OF CARGO OIL TANKS

CARGO TANKS						
TANK	**FRAMES**	**CAPACITY**	**LCG**	**TCG**	**VCG**	**Ix max**
NO.1 CARGO TANK (P)	108-122	371.728	78.878	2.942	4.838	189.949
NO.1 CARGO TANK (S)	108-123	371.728	78.878	2.942	4.838	189.949
NO.2 CARGO TANK (P)	92-108	483.273	68.424	3.380	4.758	294.344
NO.2 CARGO TANK (S)	92-109	483.273	68.424	3.380	4.758	294.344
NO.3 CARGO TANK (P)	76-92	491.269	57.268	3.424	4.739	299.188
NO.3 CARGO TANK (S)	76-93	491.269	57.268	3.424	4.739	299.188
NO.4 CARGO TANK (P)	60-76	458.490	46.400	3.425	4.740	279.635
NO.4 CARGO TANK (S)	60-77	458.490	46.400	3.425	4.740	279.635
NO.5 CARGO TANK (P)	45-60	457.651	35.883	3.425	4.739	279.635
NO.5 CARGO TANK (S)	45-61	457.651	35.883	3.425	4.739	279.635
SLOP TANK (P)	42-45	93.898	29.380	3.381	4.745	59.926
SLOP TANK (S)	42-46	93.898	29.380	3.381	4.745	59.926

5.2 SUMMARY OF OTHER TANKS

BALLAST TANK		SPGR	1.025 T/M3			
TANK	FRAMES	CAPACITY	LCG	TCG	VCG	Ix max
NO. 1 B.W.T.(P)	122-129	199.098	86.499	2.537	4.375	57.460
NO. 1 B.W.T.(S)	122-130	199.098	86.499	2.537	4.375	57.460
NO. 2 B.W.T.(P)	108-122	160.833	79.162	4.974	2.891	255.660
NO. 2 B.W.T.(S)	108-122	154.365	79.156	5.176	2.989	194.720
NO. 3 B.W.T.(P)	92-108	184.786	68.769	5.405	2.379	486.730
NO. 3 B.W.T.(S)	92-108	177.394	68.768	5.624	2.455	385.900
NO. 4 B.W.T.(P)	76-92	183.026	57.599	5.418	2.306	522.750
NO. 4 B.W.T.(S)	76-92	175.634	57.599	5.640	2.379	416.700
NO. 5 B.W.T.(P)	60-76	183.049	46.400	5.419	2.305	523.230
NO. 5 B.W.T.(S)	60-76	175.657	46.400	5.641	2.379	417.120
NO. 6 B.W.T.(P)	42-60	205.527	34.520	5.413	2.319	583.800
NO. 6 B.W.T.(S)	42-60	197.211	34.521	5.635	2.393	465.110
F.P.TK.	133-144	114.981	93.796	0.000	3.184	54.120
A.W.B.TK.(P)	-4-3	44.784	-0.172	2.010	7.012	54.730
A.W.B.TK.(S)	-4-3	44.784	-0.172	2.010	7.012	54.730

FRESH WATER		SPGR	1.00 T/M3			
TANK	FRAMES	CAPACITY	LCG	TCG	VCG	Ix max
FFWT(P)	129-133	40.476	90.169	1.890	5.703	16.250
FFWT(S)	129-134	37.684	90.275	2.028	5.697	15.610
AFWT(P)	3-11	75.462	4.460	2.459	6.547	87.950
AFWT(S)	45233	75.462	4.460	2.459	6.547	87.950
SHAFT CWT	45235	27.079	5.136	0.000	2.173	7.000

FO		**SPGR**	0.96 T/M3			
TANK	**FRAMES**	**CAPACITY**	**LCG**	**TCG**	**VCG**	**Ix max**
FOT (P)	34-41	89.047	25.026	6.328	4.270	11.910
F.O.T (S)	34-41	89.047	25.026	6.328	4.27	11.910
FO DAILY T	30-32	12.975	20.502	6.054	6.061	6.310
FO SETT T	32-34	13.121	21.901	6.075	6.057	6.380
FO OVER T	23-28	12.096	16.747	**3.043**	0.608	17.730
FO DIR T	23-28	12.096	16.747	**3.043**	0.608	17.730

DO		**SPGR**	0.85 T/M3			
TANK	**FRAMES**	**CAPACITY**	**LCG**	**TCG**	**VCG**	**Ix max**
D.O.T (P)	30-36	27.802	21.964	3.052	0.582	111.920
D.O.T (S)	30-36	27.802	21.964	3.052	0.582	111.920
NO.1 D.O.DAY.T(P)	27-28	6.247	18.051	6.072	6.072	2.990
NO.2 D.O.DAY.T(P)	29-30	6.415	18.751	6.065	6.065	3.120
D.O.SETT.T(P)	28-29	6.339	18.751	6.012	6.068	3.060

LUB OIL		**SPGR**	0.91 T/M3			
TANK	**FRAMES**	**CAPACITY**	**LCG**	**TCG**	**VCG**	**Ix max**
LO SUMP TK	17-27	5.824	14.200	0.000	0.400	0.660
LO STOR TK	24-26	11.929	16.300	5.908	6.084	5.570
LO DIR TK	15-23	10.822	12.560	2.419	0.633	7.770

OTHER TANKS						
TANK	**FRAMES**	**CAPACITY**	**LCG**	**TCG**	**VCG**	**Ix max**
THERMAL ODT	15-21	7.111	11.702	2.290	0.642	3.880
BILGE T	12-15	8.892	8.315	0.000	0.609	18.720
SLUGE T.	21-23	3.706	14.221	2.668	0.618	3.880

5.3 DETAILED CAPACITY TABLE

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FFWT.P	5.000	0.000	100.000	40.468	40.468	90.340	-1.896	5.738	0.000
	4.400	0.000	99.998	40.467	40.467	90.340	-1.896	5.738	18.036
	4.325	0.075	98.000	39.659	39.659	90.340	-1.890	5.694	17.412
	4.321	0.079	97.900	39.619	39.619	90.340	-1.889	5.692	17.381
	4.200	0.200	94.710	38.328	38.328	90.340	-1.880	5.623	16.402
	4.000	0.400	89.596	36.258	36.258	90.339	-1.866	5.510	14.956
	3.800	0.600	84.641	34.253	34.253	90.339	-1.855	5.399	13.705
	3.600	0.800	79.829	32.306	32.306	90.339	-1.846	5.290	12.670
	3.400	1.000	75.145	30.410	30.410	90.339	-1.839	5.184	11.796
	3.200	1.200	70.574	28.560	28.560	90.340	-1.835	5.079	11.035
	3.000	1.400	66.112	26.754	26.754	90.340	-1.834	4.976	10.361
	2.800	1.600	61.737	24.984	24.984	90.341	-1.834	4.876	9.896
	2.600	1.800	57.437	23.244	23.244	90.343	-1.837	4.776	9.454
	2.400	2.000	53.196	21.527	21.527	90.344	-1.842	4.679	9.175
	2.200	2.200	48.975	19.819	19.819	90.346	-1.849	4.582	9.119
	2.000	2.400	44.751	18.110	18.110	90.348	-1.858	4.486	9.143
	1.800	2.600	40.490	16.386	16.386	90.349	-1.866	4.390	9.398
	1.600	2.800	36.171	14.638	14.638	90.351	-1.875	4.294	9.709
	1.400	3.000	31.784	12.862	12.862	90.352	-1.882	4.196	10.107
	1.200	3.200	27.335	11.062	11.062	90.352	-1.888	4.098	10.450
	1.000	3.400	22.835	9.241	9.241	90.353	-1.892	3.999	10.768
	0.800	3.600	18.295	7.404	7.404	90.353	-1.895	3.900	10.945
	0.600	3.800	13.734	5.558	5.558	90.354	-1.897	3.800	11.049
	0.400	4.000	9.162	3.708	3.708	90.354	-1.898	3.700	11.093
	0.200	4.200	4.584	1.855	1.855	90.354	-1.899	3.600	11.133
	0.044	4.356	1.000	0.405	0.405	90.354	-1.899	3.522	11.142
	0.000	4.400	0.000	0.000	0.000	90.354	-1.898	3.500	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FFWT.S	5.000	0.000	100.000	37.674	37.674	90.335	2.048	5.690	0.000
	4.424	0.076	98.000	36.921	36.921	90.335	2.042	5.645	14.144
	4.421	0.079	97.900	36.883	36.883	90.335	2.041	5.643	14.117
	4.400	0.100	97.359	36.679	36.679	90.335	2.040	5.631	13.970
	4.200	0.300	92.220	34.743	34.743	90.335	2.025	5.516	12.623
	4.000	0.500	87.258	32.874	32.874	90.334	2.012	5.403	11.465
	3.800	0.700	82.458	31.065	31.065	90.334	2.003	5.292	10.498
	3.600	0.900	77.801	29.311	29.311	90.334	1.995	5.184	9.671
	3.400	1.100	73.271	27.604	27.604	90.335	1.990	5.078	8.994
	3.200	1.300	68.859	25.942	25.942	90.335	1.988	4.974	8.378
	3.000	1.500	64.554	24.320	24.320	90.336	1.987	4.873	7.909
	2.800	1.700	60.332	22.729	22.729	90.337	1.989	4.773	7.529
	2.600	1.900	56.185	21.167	21.167	90.339	1.993	4.675	7.206
	2.400	2.100	52.081	19.621	19.621	90.341	1.999	4.578	7.070
	2.200	2.300	47.981	18.076	18.076	90.343	2.006	4.482	7.051
	2.000	2.500	43.866	16.526	16.526	90.344	2.015	4.387	7.177
	1.800	2.700	39.694	14.954	14.954	90.346	2.023	4.291	7.407
	1.600	2.900	35.456	13.358	13.358	90.347	2.031	4.194	7.715
	1.400	3.100	31.145	11.734	11.734	90.348	2.037	4.097	8.016
	1.200	3.300	26.777	10.088	10.088	90.349	2.042	3.998	8.304
	1.000	3.500	22.357	8.423	8.423	90.349	2.045	3.899	8.523
	0.800	3.700	17.906	6.746	6.746	90.350	2.047	3.800	8.620
	0.600	3.900	13.439	5.063	5.063	90.350	2.048	3.700	8.683
	0.400	4.100	8.964	3.377	3.377	90.350	2.049	3.600	8.717
	0.200	4.300	4.481	1.688	1.688	90.350	2.048	3.500	8.746
	0.045	4.455	1.000	0.377	0.377	90.350	2.047	3.422	8.706
	0.000	4.500	0.000	0.000	0.000	90.350	2.046	3.400	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FOT.P	6.200	0.000	100.000	88.988	88.988	25.171	-6.365	4.253	0.000
	6.079	0.121	98.000	87.208	87.208	25.171	-6.364	4.192	10.916
	6.073	0.127	97.900	87.119	87.119	25.171	-6.364	4.189	10.916
	6.000	0.200	96.702	86.053	86.053	25.171	-6.364	4.152	10.916
	5.750	0.450	92.577	82.382	82.382	25.172	-6.362	4.026	10.916
	5.500	0.700	88.453	78.712	78.712	25.173	-6.361	3.901	10.916
	5.250	0.950	84.329	75.042	75.042	25.174	-6.359	3.775	10.916
	5.000	1.200	80.204	71.372	71.372	25.176	-6.357	3.649	10.916
	4.750	1.450	76.080	67.702	67.702	25.177	-6.355	3.523	10.916
	4.500	1.700	71.956	64.032	64.032	25.179	-6.353	3.396	10.916
	4.250	1.950	67.831	60.361	60.361	25.180	-6.350	3.270	10.916
	4.000	2.200	63.707	56.691	56.691	25.182	-6.347	3.143	10.916
	3.750	2.450	59.583	53.021	53.021	25.185	-6.344	3.016	10.916
	3.500	2.700	55.458	49.351	49.351	25.187	-6.340	2.889	10.916
	3.250	2.950	51.337	45.684	45.684	25.190	-6.336	2.762	10.856
	3.000	3.200	47.225	42.025	42.025	25.193	-6.331	2.635	10.782
	2.750	3.450	43.123	38.374	38.374	25.196	-6.326	2.507	10.712
	2.500	3.700	39.031	34.733	34.733	25.200	-6.320	2.379	10.645
	2.250	3.950	34.948	31.100	31.100	25.203	-6.313	2.251	10.581
	2.000	4.200	30.880	27.479	27.479	25.207	-6.304	2.123	10.412
	1.750	4.450	26.841	23.885	23.885	25.211	-6.295	1.995	10.192
	1.500	4.700	22.833	20.319	20.319	25.216	-6.285	1.866	9.978
	1.250	4.950	18.860	16.783	16.783	25.221	-6.273	1.738	9.708
	1.000	5.200	14.930	13.286	13.286	25.226	-6.259	1.610	9.419
	0.750	5.450	11.053	9.836	9.836	25.231	-6.241	1.481	9.006
	0.500	5.700	7.250	6.452	6.452	25.235	-6.220	1.353	8.463
	0.250	5.950	3.557	3.165	3.165	25.241	-6.195	1.226	7.678
	0.071	6.128	1.000	0.890	0.890	25.246	-6.174	1.136	7.080
	0.000	6.200	0.000	0.000	0.000	25.249	-6.165	1.100	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FOT.S	6.200	0.000	100.000	88.988	85.428	25.171	6.365	4.253	0.000
	6.079	0.121	98.000	87.208	83.720	25.171	6.364	4.192	10.479
	6.073	0.127	97.900	87.119	83.634	25.171	6.364	4.189	10.479
	6.000	0.200	96.702	86.053	82.610	25.171	6.364	4.152	10.479
	5.750	0.450	92.577	82.382	79.087	25.172	6.362	4.026	10.479
	5.500	0.700	88.453	78.712	75.564	25.173	6.361	3.901	10.479
	5.250	0.950	84.329	75.042	72.040	25.174	6.359	3.775	10.479
	5.000	1.200	80.204	71.372	68.517	25.176	6.357	3.649	10.479
	4.750	1.450	76.080	67.702	64.994	25.177	6.355	3.523	10.479
	4.500	1.700	71.956	64.032	61.470	25.179	6.353	3.396	10.479
	4.250	1.950	67.831	60.361	57.947	25.180	6.350	3.270	10.479
	4.000	2.200	63.707	56.691	54.424	25.182	6.347	3.143	10.479
	3.750	2.450	59.583	53.021	50.900	25.185	6.344	3.016	10.479
	3.500	2.700	55.458	49.351	47.377	25.187	6.340	2.889	10.479
	3.250	2.950	51.337	45.684	43.856	25.190	6.336	2.762	10.421
	3.000	3.200	47.225	42.025	40.344	25.193	6.331	2.635	10.351
	2.750	3.450	43.123	38.375	36.840	25.196	6.326	2.507	10.284
	2.500	3.700	39.031	34.733	33.344	25.200	6.320	2.379	10.219
	2.250	3.950	34.948	31.100	29.856	25.203	6.313	2.251	10.158
	2.000	4.200	30.880	27.479	26.380	25.207	6.304	2.123	9.996
	1.750	4.450	26.841	23.885	22.930	25.211	6.295	1.995	9.784
	1.500	4.700	22.833	20.319	19.506	25.216	6.285	1.866	9.579
	1.250	4.950	18.860	16.783	16.112	25.221	6.273	1.738	9.319
	1.000	5.200	14.930	13.286	12.755	25.226	6.259	1.610	9.042
	0.750	5.450	11.053	9.836	9.443	25.231	6.241	1.481	8.646
	0.500	5.700	7.250	6.452	6.194	25.235	6.220	1.353	8.124
	0.250	5.950	3.557	3.165	3.038	25.241	6.195	1.226	7.370
	0.071	6.128	1.000	0.890	0.854	25.246	6.174	1.136	6.796
	0.000	6.200	0.000	0.000	0.000	25.249	6.165	1.100	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FODAILYTK.S	2.500	0.000	100.000	12.988	12.468	20.572	6.046	6.061	0.000
	2.451	0.049	98.000	12.728	12.219	20.572	6.046	6.036	6.228
	2.448	0.051	97.900	12.715	12.206	20.572	6.046	6.035	6.228
	2.400	0.100	95.922	12.458	11.960	20.572	6.045	6.010	6.224
	2.300	0.200	91.846	11.929	11.451	20.572	6.043	5.960	6.215
	2.200	0.300	87.771	11.399	10.943	20.573	6.041	5.909	6.206
	2.100	0.400	83.699	10.871	10.436	20.573	6.040	5.859	6.189
	2.000	0.500	79.631	10.342	9.928	20.573	6.038	5.808	6.171
	1.900	0.600	75.567	9.814	9.422	20.573	6.036	5.757	6.147
	1.800	0.700	71.511	9.288	8.916	20.573	6.034	5.707	6.102
	1.700	0.800	67.465	8.762	8.412	20.573	6.032	5.656	6.060
	1.600	0.900	63.428	8.238	7.908	20.573	6.030	5.606	6.020
	1.500	1.000	59.399	7.715	7.406	20.573	6.028	5.555	5.983
	1.400	1.100	55.379	7.192	6.905	20.573	6.026	5.505	5.954
	1.300	1.200	51.364	6.671	6.404	20.573	6.024	5.454	5.925
	1.200	1.300	47.357	6.151	5.904	20.573	6.021	5.404	5.896
	1.100	1.400	43.356	5.631	5.406	20.573	6.019	5.353	5.867
	1.000	1.500	39.361	5.112	4.908	20.573	6.017	5.303	5.838
	0.900	1.600	35.373	4.594	4.410	20.574	6.014	5.253	5.809
	0.800	1.700	31.392	4.077	3.914	20.574	6.011	5.202	5.781
	0.700	1.800	27.418	3.561	3.418	20.574	6.008	5.152	5.752
	0.600	1.900	23.451	3.046	2.924	20.574	6.004	5.101	5.705
	0.500	2.000	19.498	2.532	2.431	20.574	6.000	5.051	5.642
	0.400	2.100	15.565	2.022	1.941	20.574	5.996	5.001	5.548
	0.300	2.200	11.651	1.513	1.453	20.574	5.992	4.950	5.482
	0.200	2.300	7.752	1.007	0.966	20.574	5.989	4.900	5.418
	0.100	2.400	3.868	0.502	0.482	20.575	5.985	4.850	5.354
	0.026	2.474	1.000	0.130	0.125	20.575	5.982	4.813	5.308
	0.000	2.500	0.000	0.000	0.000	20.575	5.982	4.800	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FOSETTTK.S	2.500	0.000	100.000	13.080	12.557	21.986	6.077	6.056	0.000
	2.450	0.050	98.000	12.819	12.306	21.986	6.076	6.031	6.219
	2.448	0.052	97.900	12.806	12.294	21.986	6.076	6.029	6.218
	2.400	0.100	95.963	12.552	12.050	21.986	6.076	6.005	6.216
	2.300	0.200	91.927	12.024	11.543	21.986	6.075	5.955	6.210
	2.200	0.300	87.891	11.497	11.037	21.987	6.074	5.905	6.204
	2.100	0.400	83.857	10.969	10.530	21.987	6.073	5.855	6.198
	2.000	0.500	79.824	10.441	10.024	21.987	6.072	5.804	6.192
	1.900	0.600	75.793	9.914	9.517	21.987	6.071	5.754	6.184
	1.800	0.700	71.764	9.387	9.012	21.987	6.070	5.704	6.165
	1.700	0.800	67.740	8.861	8.506	21.987	6.069	5.653	6.149
	1.600	0.900	63.719	8.335	8.001	21.987	6.068	5.603	6.134
	1.500	1.000	59.701	7.809	7.497	21.987	6.067	5.553	6.119
	1.400	1.100	55.686	7.284	6.993	21.987	6.066	5.503	6.104
	1.300	1.200	51.675	6.759	6.489	21.987	6.065	5.452	6.087
	1.200	1.300	47.668	6.235	5.986	21.987	6.063	5.402	6.067
	1.100	1.400	43.666	5.712	5.483	21.987	6.062	5.352	6.047
	1.000	1.500	39.668	5.189	4.981	21.987	6.061	5.302	6.028
	0.900	1.600	35.674	4.666	4.480	21.987	6.059	5.251	6.008
	0.800	1.700	31.684	4.144	3.979	21.987	6.058	5.201	5.988
	0.700	1.800	27.699	3.623	3.478	21.987	6.056	5.151	5.968
	0.600	1.900	23.719	3.103	2.978	21.987	6.054	5.101	5.949
	0.500	2.000	19.742	2.582	2.479	21.987	6.052	5.051	5.928
	0.400	2.100	15.773	2.063	1.981	21.987	6.050	5.000	5.888
	0.300	2.200	11.813	1.545	1.483	21.987	6.047	4.950	5.843
	0.200	2.300	7.864	1.029	0.988	21.988	6.045	4.900	5.794
	0.100	2.400	3.926	0.514	0.493	21.988	6.042	4.850	5.744
	0.025	2.474	1.000	0.131	0.126	21.988	6.040	4.813	5.707
	0.000	2.500	0.000	0.000	0.000	21.988	6.039	4.800	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FOOVERTK.P	1.100	0.000	100.000	12.068	11.585	16.794	-3.034	0.610	0.000
	1.100	0.000	99.997	12.068	11.585	16.794	-3.034	0.610	18.630

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	1.082	0.018	98.000	11.827	11.354	16.794	-3.028	0.600	18.414
	1.081	0.019	97.900	11.815	11.342	16.794	-3.028	0.600	18.403
	1.050	0.050	94.378	11.390	10.934	16.794	-3.017	0.582	18.024
	1.000	0.100	88.820	10.719	10.290	16.794	-2.999	0.554	17.413
	0.950	0.150	83.327	10.056	9.654	16.794	-2.980	0.527	16.814
	0.900	0.200	77.901	9.401	9.025	16.795	-2.960	0.499	16.219
	0.850	0.250	72.546	8.755	8.405	16.795	-2.939	0.471	15.562
	0.800	0.300	67.267	8.118	7.793	16.795	-2.917	0.443	14.909
	0.750	0.350	62.067	7.490	7.191	16.796	-2.894	0.415	14.271
	0.700	0.400	56.952	6.873	6.598	16.796	-2.869	0.387	13.563
	0.650	0.450	51.931	6.267	6.016	16.797	-2.844	0.360	12.867
	0.600	0.500	47.005	5.673	5.446	16.797	-2.816	0.332	12.146
	0.550	0.550	42.183	5.091	4.887	16.798	-2.787	0.304	11.384
	0.500	0.600	37.474	4.522	4.342	16.799	-2.756	0.276	10.646
	0.450	0.650	32.885	3.969	3.810	16.800	-2.723	0.248	9.838
	0.400	0.700	28.421	3.430	3.293	16.801	-2.687	0.220	9.067
	0.350	0.750	24.093	2.908	2.791	16.802	-2.647	0.192	8.224
	0.300	0.800	19.924	2.404	2.308	16.804	-2.604	0.164	7.365
	0.250	0.850	15.937	1.923	1.846	16.807	-2.556	0.136	6.405
	0.200	0.900	12.152	1.467	1.408	16.810	-2.502	0.109	5.447
	0.150	0.950	8.609	1.039	0.997	16.815	-2.443	0.081	4.475
	0.100	1.000	5.329	0.643	0.617	16.822	-2.372	0.054	3.548
	0.050	1.050	2.379	0.287	0.276	16.831	-2.276	0.027	2.557
	0.024	1.076	1.000	0.121	0.116	16.837	-2.193	0.013	1.910
	0.000	1.100	0.000	0.000	0.000	16.758	-1.453	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FODIRTK.S	1.100	0.000	100.000	12.093	11.609	16.794	3.034	0.610	0.000
	1.100	0.000	99.997	12.093	11.609	16.794	3.034	0.610	18.630
	1.082	0.018	98.000	11.851	11.377	16.794	3.028	0.600	18.414
	1.081	0.019	97.900	11.839	11.366	16.794	3.028	0.600	18.403
	1.050	0.050	94.378	11.413	10.957	16.794	3.017	0.582	18.024
	1.000	0.100	88.820	10.741	10.311	16.794	2.999	0.554	17.413
	0.950	0.150	83.327	10.077	9.674	16.794	2.980	0.527	16.814
	0.900	0.200	77.901	9.421	9.044	16.795	2.960	0.499	16.219
	0.850	0.250	72.546	8.773	8.422	16.795	2.939	0.471	15.562
	0.800	0.300	67.267	8.135	7.809	16.795	2.917	0.443	14.909
	0.750	0.350	62.067	7.506	7.206	16.796	2.894	0.415	14.271
	0.700	0.400	56.952	6.887	6.612	16.796	2.869	0.387	13.563
	0.650	0.450	51.931	6.280	6.029	16.797	2.844	0.360	12.867
	0.600	0.500	47.005	5.684	5.457	16.797	2.816	0.332	12.146
	0.550	0.550	42.183	5.101	4.897	16.798	2.787	0.304	11.384
	0.500	0.600	37.474	4.532	4.351	16.799	2.756	0.276	10.646
	0.450	0.650	32.885	3.977	3.818	16.800	2.723	0.248	9.838
	0.400	0.700	28.421	3.437	3.299	16.801	2.687	0.220	9.067
	0.350	0.750	24.093	2.914	2.797	16.802	2.647	0.192	8.224
	0.300	0.800	19.924	2.409	2.313	16.804	2.604	0.164	7.365
	0.250	0.850	15.937	1.927	1.850	16.807	2.556	0.136	6.405
	0.200	0.900	12.152	1.470	1.411	16.810	2.502	0.109	5.447
	0.150	0.950	8.609	1.041	1.000	16.815	2.443	0.081	4.475
	0.100	1.000	5.329	0.644	0.619	16.822	2.372	0.054	3.548
	0.050	1.050	2.379	0.288	0.276	16.831	2.276	0.027	2.557
	0.024	1.076	1.000	0.121	0.116	16.837	2.193	0.013	1.910
	0.000	1.100	0.000	0.000	0.000	16.758	1.453	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
DOT.P	1.100	0.000	100.000	27.805	23.634	22.165	-3.079	0.585	0.000
	1.100	0.000	99.998	27.804	23.634	22.165	-3.079	0.585	112.951
	1.081	0.019	98.000	27.249	23.162	22.166	-3.072	0.574	112.265
	1.080	0.020	97.900	27.221	23.138	22.166	-3.071	0.574	112.231
	1.050	0.050	94.847	26.372	22.416	22.166	-3.060	0.558	111.139
	1.000	0.100	89.728	24.949	21.206	22.167	-3.039	0.531	109.145
	0.950	0.150	84.642	23.535	20.005	22.168	-3.018	0.505	106.918
	0.900	0.200	79.594	22.131	18.811	22.169	-2.996	0.478	104.658

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.850	0.250	74.583	20.738	17.627	22.171	-2.972	0.451	102.434
	0.800	0.300	69.611	19.355	16.452	22.172	-2.947	0.425	100.058
	0.750	0.350	64.683	17.985	15.287	22.173	-2.921	0.398	97.213
	0.700	0.400	59.804	16.629	14.134	22.174	-2.893	0.371	94.416
	0.650	0.450	54.976	15.286	12.993	22.176	-2.864	0.344	91.482
	0.600	0.500	50.204	13.959	11.865	22.177	-2.833	0.318	88.417
	0.550	0.550	45.493	12.649	10.752	22.178	-2.801	0.291	85.136
	0.500	0.600	40.845	11.357	9.653	22.180	-2.766	0.264	82.030
	0.450	0.650	36.255	10.081	8.569	22.181	-2.727	0.238	78.975
	0.400	0.700	31.734	8.824	7.500	22.182	-2.685	0.211	75.389
	0.350	0.750	27.299	7.590	6.452	22.183	-2.639	0.184	70.889
	0.300	0.800	22.962	6.385	5.427	22.183	-2.589	0.158	66.155
	0.250	0.850	18.726	5.207	4.426	22.184	-2.534	0.131	61.618
	0.200	0.900	14.598	4.059	3.450	22.185	-2.469	0.105	56.231
	0.150	0.950	10.624	2.954	2.511	22.186	-2.397	0.078	49.512
	0.100	1.000	6.824	1.897	1.613	22.187	-2.314	0.052	43.315
	0.050	1.050	3.218	0.895	0.760	22.181	-2.196	0.026	35.596
	0.017	1.083	1.000	0.278	0.236	22.159	-2.059	0.009	29.415
	0.000	1.100	0.000	0.000	0.000	21.844	-0.072	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
DOT.S	1.100	0.000	100.000	27.805	23.634	22.165	3.079	0.585	0.000
	1.100	0.000	99.998	27.804	23.634	22.165	3.079	0.585	112.951
	1.081	0.019	98.000	27.249	23.162	22.166	3.072	0.574	112.265
	1.080	0.020	97.900	27.221	23.138	22.166	3.071	0.574	112.231
	1.050	0.050	94.847	26.372	22.416	22.166	3.060	0.558	111.139
	1.000	0.100	89.728	24.949	21.206	22.167	3.039	0.531	109.145
	0.950	0.150	84.642	23.535	20.005	22.168	3.018	0.505	106.918
	0.900	0.200	79.594	22.131	18.811	22.169	2.996	0.478	104.658
	0.850	0.250	74.583	20.738	17.627	22.171	2.972	0.451	102.434
	0.800	0.300	69.611	19.355	16.452	22.172	2.947	0.425	100.058
	0.750	0.350	64.683	17.985	15.287	22.173	2.921	0.398	97.213
	0.700	0.400	59.804	16.629	14.134	22.174	2.893	0.371	94.416
	0.650	0.450	54.976	15.286	12.993	22.176	2.864	0.344	91.482
	0.600	0.500	50.204	13.959	11.865	22.177	2.833	0.318	88.417
	0.550	0.550	45.493	12.649	10.752	22.178	2.801	0.291	85.136
	0.500	0.600	40.845	11.357	9.653	22.180	2.766	0.264	82.030
	0.450	0.650	36.255	10.081	8.569	22.181	2.727	0.238	78.975
	0.400	0.700	31.734	8.824	7.500	22.182	2.685	0.211	75.389
	0.350	0.750	27.299	7.590	6.452	22.183	2.639	0.184	70.889
	0.300	0.800	22.962	6.385	5.427	22.183	2.589	0.158	66.155
	0.250	0.850	18.726	5.207	4.426	22.184	2.534	0.131	61.618
	0.200	0.900	14.598	4.059	3.450	22.185	2.469	0.105	56.231
	0.150	0.950	10.624	2.954	2.511	22.186	2.397	0.078	49.512
	0.100	1.000	6.824	1.897	1.613	22.187	2.314	0.052	43.315
	0.050	1.050	3.218	0.895	0.760	22.181	2.196	0.026	35.596
	0.017	1.083	1.000	0.278	0.236	22.159	2.059	0.009	29.415
	0.000	1.100	0.000	0.000	0.000	21.844	0.072	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
NO1DODAYTK.S	2.500	0.000	100.000	6.285	5.343	18.151	6.029	6.060	0.000
	3.000	0.050	98.288	6.178	5.251	18.151	6.027	6.035	2.345
	2.992	0.058	98.000	6.160	5.236	18.151	6.027	6.031	2.344
	2.989	0.061	97.900	6.153	5.230	18.151	6.027	6.029	2.344
	2.800	0.250	91.422	5.746	4.884	18.151	6.021	5.932	2.332
	2.600	0.450	84.575	5.316	4.519	18.151	6.015	5.830	2.308
	2.400	0.650	77.751	4.887	4.154	18.151	6.008	5.727	2.285
	2.200	0.850	70.950	4.459	3.791	18.151	6.000	5.624	2.262
	2.000	1.050	64.175	4.034	3.429	18.151	5.991	5.521	2.227
	1.800	1.250	57.445	3.611	3.069	18.151	5.982	5.418	2.181
	1.600	1.450	50.761	3.191	2.712	18.152	5.972	5.315	2.136

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	1.400	1.650	44.130	2.774	2.358	18.152	5.961	5.212	2.077
	1.200	1.850	37.566	2.361	2.007	18.152	5.949	5.109	2.014
	1.000	2.050	31.072	1.953	1.660	18.152	5.936	5.007	1.942
	0.800	2.250	24.663	1.550	1.318	18.152	5.923	4.905	1.865
	0.600	2.450	18.341	1.153	0.980	18.152	5.909	4.803	1.787
	0.400	2.650	12.118	0.762	0.647	18.152	5.895	4.701	1.699
	0.200	2.850	6.000	0.377	0.321	18.152	5.879	4.600	1.613
	0.034	3.016	1.000	0.063	0.053	18.152	5.865	4.517	1.530
	0.000	3.050	0.000	0.000	0.000	18.152	5.862	4.500	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
DOSETTTK.S	2.500	0.000	100.000	6.334	5.384	18.851	6.050	6.055	0.000
	3.000	0.050	98.301	6.226	5.292	18.851	6.049	6.029	2.379
	2.991	0.059	98.000	6.207	5.276	18.851	6.049	6.025	2.379
	2.988	0.062	97.900	6.201	5.271	18.851	6.048	6.023	2.379
	2.800	0.250	91.488	5.795	4.925	18.851	6.044	5.927	2.369
	2.600	0.450	84.686	5.364	4.559	18.851	6.038	5.825	2.356
	2.400	0.650	77.900	4.934	4.194	18.851	6.032	5.722	2.334
	2.200	0.850	71.136	4.506	3.830	18.851	6.025	5.620	2.313
	2.000	1.050	64.397	4.079	3.467	18.851	6.018	5.517	2.277
	1.800	1.250	57.701	3.655	3.106	18.851	6.010	5.415	2.232
	1.600	1.450	51.048	3.233	2.748	18.851	6.002	5.312	2.189
	1.400	1.650	44.439	2.815	2.392	18.851	5.993	5.210	2.144
	1.200	1.850	37.877	2.399	2.039	18.851	5.983	5.108	2.099
	1.000	2.050	31.363	1.986	1.689	18.851	5.973	5.006	2.046
	0.800	2.250	24.922	1.579	1.342	18.851	5.961	4.904	1.968
	0.600	2.450	18.564	1.176	0.999	18.851	5.950	4.802	1.893
	0.400	2.650	12.289	0.778	0.662	18.851	5.938	4.701	1.818
	0.200	2.850	6.099	0.386	0.328	18.852	5.926	4.600	1.746
	0.033	3.017	1.000	0.063	0.054	18.852	5.913	4.517	1.674
	0.000	3.050	0.000	0.000	0.000	18.852	5.910	4.500	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
NO2DODAYTK.P	2.500	0.000	100.000	6.373	5.417	18.751	-6.048	6.055	0.000
	3.000	0.050	98.300	6.264	5.325	18.751	-6.046	6.030	2.376
	2.991	0.059	98.000	6.245	5.308	18.751	-6.046	6.025	2.376
	2.988	0.062	97.900	6.239	5.303	18.751	-6.046	6.024	2.376
	2.800	0.250	91.481	5.830	4.955	18.751	-6.041	5.928	2.366
	2.600	0.450	84.674	5.396	4.586	18.751	-6.036	5.825	2.352
	2.400	0.650	77.884	4.963	4.219	18.751	-6.029	5.723	2.330
	2.200	0.850	71.115	4.532	3.852	18.751	-6.023	5.621	2.308
	2.000	1.050	64.372	4.102	3.487	18.751	-6.015	5.518	2.274
	1.800	1.250	57.669	3.675	3.124	18.751	-6.007	5.415	2.230
	1.600	1.450	51.010	3.251	2.763	18.751	-5.998	5.313	2.188
	1.400	1.650	44.396	2.829	2.405	18.751	-5.989	5.210	2.139
	1.200	1.850	37.832	2.411	2.049	18.751	-5.979	5.108	2.091
	1.000	2.050	31.321	1.996	1.697	18.751	-5.968	5.006	2.033
	0.800	2.250	24.885	1.586	1.348	18.751	-5.956	4.904	1.956
	0.600	2.450	18.533	1.181	1.004	18.751	-5.945	4.802	1.880
	0.400	2.650	12.265	0.782	0.664	18.751	-5.932	4.701	1.804
	0.200	2.850	6.086	0.388	0.330	18.751	-5.920	4.600	1.729
	0.033	3.017	1.000	0.064	0.054	18.751	-5.907	4.517	1.656
	0.000	3.050	0.000	0.000	0.000	18.751	-5.904	4.500	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
LOSUMPTK.C	1.000	0.000	100.000	5.825	5.301	14.300	0.000	0.400	0.000
	0.800	0.000	99.988	5.825	5.300	14.300	0.000	0.400	0.711
	0.784	0.016	98.000	5.709	5.195	14.300	0.000	0.392	0.711

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.783	0.017	97.900	5.703	5.190	14.300	0.000	0.392	0.711
	0.750	0.050	93.738	5.461	4.969	14.300	0.000	0.375	0.711
	0.700	0.100	87.488	5.097	4.638	14.300	0.000	0.350	0.711
	0.650	0.150	81.238	4.732	4.307	14.300	0.000	0.325	0.711
	0.600	0.200	74.989	4.368	3.975	14.300	0.000	0.300	0.711
	0.550	0.250	68.739	4.004	3.644	14.300	0.000	0.275	0.711
	0.500	0.300	62.489	3.640	3.313	14.300	0.000	0.250	0.711
	0.450	0.350	56.239	3.276	2.981	14.301	0.000	0.225	0.711
	0.400	0.400	49.990	2.912	2.650	14.301	0.000	0.200	0.711
	0.350	0.450	43.740	2.548	2.319	14.301	0.000	0.175	0.711
	0.300	0.500	37.490	2.184	1.987	14.301	0.000	0.150	0.711
	0.250	0.550	31.241	1.820	1.656	14.301	0.000	0.125	0.711
	0.200	0.600	24.991	1.456	1.325	14.301	0.000	0.100	0.711
	0.150	0.650	18.741	1.092	0.993	14.302	0.000	0.075	0.711
	0.100	0.700	12.491	0.728	0.662	14.302	0.000	0.050	0.711
	0.050	0.750	6.242	0.364	0.331	14.305	0.000	0.025	0.711
	0.008	0.792	1.000	0.058	0.053	14.328	0.000	0.004	0.711
	0.000	0.800	0.000	0.000	0.000	14.420	0.000	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
LOSTORTK.P	2.500	0.000	100.000	11.940	10.865	16.407	-5.947	6.087	0.000
	2.453	0.047	98.000	11.701	10.648	16.407	-5.945	6.062	5.238
	2.451	0.049	97.900	11.689	10.637	16.407	-5.945	6.061	5.237
	2.400	0.100	95.730	11.430	10.402	16.407	-5.942	6.035	5.204
	2.300	0.200	91.476	10.922	9.939	16.407	-5.937	5.983	5.150
	2.200	0.300	87.236	10.416	9.479	16.407	-5.932	5.931	5.096
	2.100	0.400	83.012	9.912	9.020	16.408	-5.927	5.879	5.043
	2.000	0.500	78.802	9.409	8.562	16.408	-5.922	5.827	4.990
	1.900	0.600	74.608	8.908	8.107	16.408	-5.916	5.775	4.937
	1.800	0.700	70.429	8.409	7.652	16.408	-5.910	5.723	4.884
	1.700	0.800	66.267	7.912	7.200	16.408	-5.904	5.672	4.814
	1.600	0.900	62.128	7.418	6.750	16.408	-5.898	5.620	4.737
	1.500	1.000	58.010	6.926	6.303	16.409	-5.891	5.568	4.661
	1.400	1.100	53.916	6.438	5.858	16.409	-5.884	5.516	4.586
	1.300	1.200	49.844	5.951	5.416	16.409	-5.877	5.464	4.511
	1.200	1.300	45.797	5.468	4.976	16.409	-5.869	5.412	4.418
	1.100	1.400	41.780	4.989	4.540	16.410	-5.862	5.361	4.318
	1.000	1.500	37.796	4.513	4.107	16.410	-5.854	5.309	4.219
	0.900	1.600	33.842	4.041	3.677	16.410	-5.846	5.258	4.122
	0.800	1.700	29.921	3.573	3.251	16.410	-5.837	5.206	4.014
	0.700	1.800	26.037	3.109	2.829	16.411	-5.829	5.155	3.899
	0.600	1.900	22.193	2.650	2.411	16.411	-5.820	5.104	3.787
	0.500	2.000	18.386	2.195	1.998	16.411	-5.811	5.053	3.676
	0.400	2.100	14.619	1.746	1.588	16.412	-5.802	5.002	3.562
	0.300	2.200	10.895	1.301	1.184	16.412	-5.792	4.951	3.439
	0.200	2.300	7.217	0.862	0.784	16.412	-5.783	4.900	3.317
	0.100	2.400	3.584	0.428	0.389	16.413	-5.773	4.850	3.198
	0.028	2.472	1.000	0.119	0.109	16.413	-5.765	4.814	3.105
	0.000	2.500	0.000	0.000	0.000	16.413	-5.762	4.800	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BILGETK.C	1.100	0.000	100.000	8.901	8.100	8.355	0.000	0.617	0.000
	1.100	0.000	99.997	8.901	8.100	8.355	0.000	0.617	16.770
	1.083	0.017	98.000	8.723	7.938	8.355	0.000	0.607	16.605
	1.082	0.018	97.900	8.714	7.930	8.355	0.000	0.607	16.597
	1.050	0.050	94.289	8.393	7.637	8.355	0.000	0.589	16.280
	1.000	0.100	88.636	7.890	7.180	8.355	0.000	0.561	15.785
	0.950	0.150	83.041	7.392	6.726	8.356	0.000	0.534	15.298

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.900	0.200	77.504	6.899	6.278	8.356	0.000	0.506	14.796
	0.850	0.250	72.031	6.412	5.834	8.357	0.000	0.478	14.282
	0.800	0.300	66.627	5.931	5.397	8.358	0.000	0.449	13.682
	0.750	0.350	61.308	5.457	4.966	8.359	0.000	0.421	12.998
	0.700	0.400	56.085	4.992	4.543	8.359	0.000	0.393	12.287
	0.650	0.450	50.965	4.536	4.128	8.360	0.000	0.364	11.561
	0.600	0.500	45.962	4.091	3.723	8.361	0.000	0.336	10.702
	0.550	0.550	41.094	3.658	3.329	8.362	0.000	0.307	9.876
	0.500	0.600	36.365	3.237	2.946	8.363	0.000	0.279	9.107
	0.450	0.650	31.784	2.829	2.575	8.365	0.000	0.251	8.015
	0.400	0.700	27.381	2.437	2.218	8.367	0.000	0.223	7.317
	0.350	0.750	23.108	2.057	1.872	8.368	0.000	0.195	6.718
	0.300	0.800	18.984	1.690	1.538	8.370	0.000	0.166	5.882
	0.250	0.850	15.086	1.343	1.222	8.372	0.000	0.138	4.837
	0.200	0.900	11.436	1.018	0.926	8.377	0.000	0.110	3.915
	0.150	0.950	8.045	0.716	0.652	8.386	0.000	0.083	3.105
	0.100	1.000	4.922	0.438	0.399	8.400	0.000	0.056	2.465
	0.050	1.050	2.093	0.186	0.170	8.421	0.000	0.029	1.807
	0.028	1.072	1.000	0.089	0.081	8.404	0.000	0.016	1.493
	0.000	1.100	0.000	0.000	0.000	8.358	0.000	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
THERMALODTK.P	1.100	0.000	100.000	7.076	6.014	11.675	-2.320	0.654	0.000
	1.113	0.017	98.000	6.934	5.894	11.676	-2.316	0.645	4.551
	1.112	0.018	97.900	6.927	5.888	11.676	-2.315	0.644	4.548
	1.100	0.030	96.504	6.828	5.804	11.676	-2.312	0.638	4.509
	1.050	0.080	90.717	6.419	5.456	11.678	-2.300	0.610	4.350
	1.000	0.130	85.003	6.014	5.112	11.681	-2.287	0.581	4.194
	0.950	0.180	79.364	5.615	4.773	11.683	-2.273	0.553	4.042
	0.900	0.230	73.798	5.222	4.438	11.686	-2.258	0.525	3.894
	0.850	0.280	68.317	4.834	4.109	11.689	-2.243	0.497	3.679
	0.800	0.330	62.928	4.452	3.785	11.692	-2.227	0.469	3.474
	0.750	0.380	57.640	4.078	3.467	11.697	-2.210	0.441	3.275
	0.700	0.430	52.460	3.712	3.155	11.701	-2.192	0.412	3.085
	0.650	0.480	47.398	3.354	2.851	11.707	-2.173	0.384	2.879
	0.600	0.530	42.462	3.004	2.554	11.713	-2.154	0.356	2.682
	0.550	0.580	37.653	2.664	2.265	11.720	-2.133	0.328	2.495
	0.500	0.630	32.970	2.333	1.983	11.728	-2.109	0.300	2.317
	0.450	0.680	28.415	2.010	1.709	11.737	-2.084	0.271	2.148
	0.400	0.730	23.986	1.697	1.443	11.749	-2.053	0.242	1.987
	0.350	0.780	19.684	1.393	1.184	11.765	-2.016	0.213	1.835
	0.300	0.830	15.508	1.097	0.933	11.787	-1.967	0.183	1.691
	0.250	0.880	11.639	0.824	0.700	11.816	-1.909	0.152	1.204
	0.200	0.930	8.258	0.584	0.497	11.856	-1.852	0.121	0.823
	0.150	0.980	5.364	0.380	0.323	11.910	-1.796	0.090	0.535
	0.100	1.030	2.958	0.209	0.178	11.999	-1.739	0.060	0.325
	0.050	1.080	1.060	0.075	0.064	12.219	-1.669	0.030	0.174
	0.048	1.082	1.000	0.071	0.060	12.233	-1.666	0.029	0.169
	0.000	1.130	0.000	0.000	0.000	12.752	-1.445	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
SLUGETK.P	1.100	0.000	100.000	3.717	3.346	14.348	-2.700	0.617	0.000
	1.100	0.000	99.997	3.717	3.346	14.348	-2.700	0.616	3.693
	1.082	0.018	98.000	3.643	3.279	14.348	-2.694	0.607	3.652
	1.082	0.018	97.900	3.639	3.275	14.348	-2.694	0.606	3.650
	1.050	0.050	94.318	3.506	3.156	14.348	-2.685	0.589	3.577
	1.000	0.100	88.701	3.297	2.968	14.348	-2.669	0.561	3.463
	0.950	0.150	83.147	3.091	2.782	14.348	-2.652	0.534	3.352
	0.900	0.200	77.654	2.887	2.598	14.349	-2.635	0.506	3.243
	0.850	0.250	72.224	2.685	2.416	14.349	-2.616	0.478	3.137

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.800	0.300	66.857	2.485	2.237	14.349	-2.596	0.450	3.033
	0.750	0.350	61.564	2.289	2.060	14.349	-2.575	0.422	2.881
	0.700	0.400	56.360	2.095	1.886	14.350	-2.553	0.394	2.736
	0.650	0.450	51.258	1.905	1.715	14.350	-2.529	0.366	2.557
	0.600	0.500	46.273	1.720	1.548	14.350	-2.505	0.339	2.387
	0.550	0.550	41.405	1.539	1.385	14.351	-2.479	0.311	2.224
	0.500	0.600	36.653	1.363	1.226	14.351	-2.451	0.283	2.070
	0.450	0.650	32.018	1.190	1.071	14.352	-2.421	0.255	1.922
	0.400	0.700	27.500	1.022	0.920	14.352	-2.388	0.227	1.782
	0.350	0.750	23.131	0.860	0.774	14.353	-2.351	0.199	1.584
	0.300	0.800	18.945	0.704	0.634	14.353	-2.310	0.171	1.402
	0.250	0.850	14.944	0.556	0.500	14.352	-2.265	0.143	1.228
	0.200	0.900	11.132	0.414	0.372	14.350	-2.208	0.115	1.069
	0.150	0.950	7.582	0.282	0.254	14.347	-2.139	0.087	0.791
	0.100	1.000	4.364	0.162	0.146	14.344	-2.050	0.060	0.568
	0.050	1.050	1.576	0.059	0.053	14.321	-1.887	0.031	0.352
	0.038	1.062	1.000	0.037	0.033	14.294	-1.796	0.023	0.219
	0.000	1.100	0.000	0.000	0.000	14.052	-1.356	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
SHAFTCWT	4.000	0.000	100.000	27.083	27.083	5.166	0.000	2.213	0.000
	3.804	0.061	98.000	26.541	26.541	5.164	0.000	2.177	7.467
	3.801	0.064	97.900	26.514	26.514	5.164	0.000	2.176	7.410
	3.800	0.065	97.884	26.510	26.510	5.164	0.000	2.175	7.401
	3.600	0.265	92.107	24.945	24.945	5.154	0.000	2.072	5.036
	3.400	0.465	87.198	23.616	23.616	5.142	0.000	1.984	3.434
	3.200	0.665	82.681	22.392	22.392	5.130	0.000	1.906	2.976
	3.000	0.865	78.097	21.151	21.151	5.119	0.000	1.828	2.928
	2.800	1.065	73.258	19.841	19.841	5.111	0.000	1.749	3.267
	2.600	1.265	68.012	18.420	18.420	5.105	0.000	1.665	3.838
	2.400	1.465	62.342	16.884	16.884	5.101	0.000	1.577	4.377
	2.200	1.665	56.217	15.225	15.225	5.104	0.000	1.484	4.991
	2.000	1.865	49.624	13.440	13.440	5.114	0.000	1.384	5.756
	1.800	2.065	42.679	11.559	11.559	5.135	0.000	1.277	6.021
	1.600	2.265	35.639	9.652	9.652	5.168	0.000	1.166	6.094
	1.400	2.465	28.656	7.761	7.761	5.214	0.000	1.051	5.775
	1.200	2.665	21.920	5.937	5.937	5.279	0.000	0.932	5.277
	1.000	2.865	15.637	4.235	4.235	5.368	0.000	0.807	4.351
	0.800	3.065	10.228	2.770	2.770	5.463	0.000	0.681	3.193
	0.600	3.265	5.762	1.561	1.561	5.593	0.000	0.545	1.957
	0.400	3.465	2.372	0.643	0.643	5.861	0.000	0.418	0.967
	0.270	3.595	1.000	0.271	0.271	6.051	0.000	0.329	0.490
	0.200	3.665	0.529	0.143	0.143	6.129	0.000	0.270	0.312
	0.000	3.865	0.000	0.000	0.000	6.265	0.000	0.135	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FPTK.C	5.800	0.000	100.000	115.002	117.877	93.977	0.000	3.163	0.000
	5.750	0.030	99.663	114.614	117.480	93.980	0.000	3.154	16.752
	5.608	0.171	98.000	112.702	115.519	93.990	0.000	3.111	18.058
	5.600	0.180	97.900	112.587	115.401	93.991	0.000	3.109	18.173
	5.500	0.280	96.656	111.156	113.935	93.998	0.000	3.077	19.702
	5.250	0.530	93.249	107.238	109.919	94.016	0.000	2.993	24.432
	5.000	0.780	89.306	102.703	105.270	94.030	0.000	2.899	30.602
	4.750	1.030	84.743	97.456	99.893	94.038	0.000	2.792	38.060
	4.500	1.280	79.615	91.558	93.847	94.036	0.000	2.673	44.541
	4.250	1.530	74.129	85.249	87.380	94.029	0.000	2.545	48.674
	4.000	1.780	68.483	78.756	80.725	94.017	0.000	2.413	50.366
	3.750	2.030	62.755	72.169	73.973	94.002	0.000	2.278	51.844
	3.500	2.280	56.994	65.544	67.183	93.983	0.000	2.139	51.820
	3.250	2.530	51.267	58.958	60.432	93.961	0.000	1.998	50.639
	3.000	2.780	45.620	52.464	53.776	93.936	0.000	1.855	48.827
	2.750	3.030	40.096	46.111	47.264	93.907	0.000	1.711	46.126

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	2.500	3.280	34.719	39.927	40.925	93.873	0.000	1.566	43.173
	2.250	3.530	29.520	33.948	34.797	93.832	0.000	1.418	39.573
	2.000	3.780	24.536	28.216	28.922	93.784	0.000	1.269	35.583
	1.750	4.030	19.810	22.782	23.352	93.724	0.000	1.119	30.788
	1.500	4.280	15.409	17.720	18.163	93.649	0.000	0.966	25.706
	1.250	4.530	11.399	13.109	13.437	93.559	0.000	0.812	20.474
	1.000	4.780	7.845	9.022	9.248	93.448	0.000	0.651	15.424
	0.750	5.030	4.781	5.498	5.636	93.282	0.000	0.497	10.214
	0.500	5.280	2.385	2.742	2.811	93.074	0.000	0.340	5.718
	0.299	5.481	1.000	1.150	1.179	92.877	0.000	0.212	2.847
	0.250	5.530	0.741	0.853	0.874	92.817	0.000	0.183	2.240
	0.000	5.780	0.000	0.000	0.000	92.232	0.000	0.020	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
AWBTK.P	3.710	0.000	100.000	44.752	45.871	-0.172	-2.033	7.054	0.000
	3.661	0.040	98.000	43.857	44.954	-0.170	-2.019	7.030	55.620
	3.659	0.042	97.900	43.812	44.908	-0.170	-2.018	7.028	55.570
	3.600	0.100	94.976	42.504	43.567	-0.166	-1.996	6.992	54.073
	3.400	0.300	85.204	38.131	39.084	-0.153	-1.919	6.869	48.925
	3.200	0.500	75.792	33.919	34.767	-0.138	-1.837	6.744	43.502
	3.000	0.700	66.780	29.885	30.633	-0.121	-1.752	6.619	38.230
	2.800	0.900	58.192	26.042	26.693	-0.102	-1.663	6.493	33.084
	2.600	1.100	50.060	22.403	22.963	-0.079	-1.571	6.366	28.131
	2.400	1.300	42.416	18.982	19.457	-0.052	-1.475	6.239	23.460
	2.200	1.500	35.292	15.794	16.189	-0.020	-1.375	6.111	19.085
	2.000	1.700	28.720	12.853	13.174	0.019	-1.273	5.982	15.146
	1.800	1.900	22.716	10.166	10.420	0.070	-1.167	5.852	11.701
	1.600	2.100	17.325	7.753	7.947	0.137	-1.058	5.720	8.696
	1.400	2.300	12.599	5.638	5.779	0.224	-0.948	5.587	6.196
	1.200	2.500	8.575	3.837	3.933	0.345	-0.837	5.450	4.183
	1.000	2.700	5.302	2.373	2.432	0.516	-0.725	5.309	2.548
	0.800	2.900	2.841	1.271	1.303	0.761	-0.618	5.158	1.282
	0.600	3.100	1.303	0.583	0.598	1.001	-0.503	5.008	0.488
	0.540	3.160	1.000	0.448	0.459	1.049	-0.465	4.932	0.366
	0.400	3.300	0.473	0.212	0.217	1.152	-0.362	4.541	0.141
	0.200	3.500	0.080	0.036	0.037	1.379	-0.203	4.701	0.026
	0.000	3.700	0.000	0.000	0.000	1.407	-0.038	4.570	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
AWBTK.S	3.710	0.000	100.000	44.752	45.871	-0.172	2.033	7.054	0.000
	3.661	0.040	98.000	43.857	44.954	-0.170	2.019	7.030	55.620
	3.659	0.042	97.900	43.812	44.908	-0.170	2.018	7.028	55.570
	3.600	0.100	94.976	42.504	43.567	-0.166	1.996	6.992	54.073
	3.400	0.300	85.204	38.131	39.084	-0.153	1.919	6.869	48.925
	3.200	0.500	75.792	33.919	34.767	-0.138	1.837	6.744	43.502
	3.000	0.700	66.780	29.885	30.633	-0.121	1.752	6.619	38.230
	2.800	0.900	58.192	26.042	26.693	-0.102	1.663	6.493	33.084
	2.600	1.100	50.060	22.403	22.963	-0.079	1.571	6.366	28.131
	2.400	1.300	42.416	18.982	19.457	-0.052	1.475	6.239	23.460
	2.200	1.500	35.292	15.794	16.189	-0.020	1.375	6.111	19.085
	2.000	1.700	28.720	12.853	13.174	0.019	1.273	5.982	15.146
	1.800	1.900	22.716	10.166	10.420	0.070	1.167	5.852	11.701
	1.600	2.100	17.325	7.753	7.947	0.137	1.058	5.720	8.696
	1.400	2.300	12.599	5.638	5.779	0.224	0.948	5.587	6.196
	1.200	2.500	8.575	3.837	3.933	0.345	0.837	5.450	4.183
	1.000	2.700	5.302	2.373	2.432	0.516	0.725	5.309	2.548
	0.800	2.900	2.841	1.271	1.303	0.761	0.618	5.158	1.282
	0.600	3.100	1.303	0.583	0.598	1.001	0.503	5.008	0.488
	0.540	3.160	1.000	0.448	0.459	1.049	0.465	4.932	0.366
	0.400	3.300	0.473	0.212	0.217	1.152	0.362	4.541	0.141
	0.200	3.500	0.080	0.036	0.037	1.379	0.203	4.701	0.026
	0.000	3.700	0.000	0.000	0.000	1.407	0.038	4.570	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
AFWT.S	4.300	0.000	100.000	75.428	75.428	4.423	2.463	6.505	0.000
	3.549	0.051	98.000	73.919	73.919	4.425	2.449	6.475	95.984
	3.546	0.054	97.900	73.844	73.844	4.425	2.449	6.473	95.916
	3.400	0.200	92.270	69.597	69.597	4.431	2.409	6.388	92.008
	3.200	0.400	84.698	63.886	63.886	4.441	2.352	6.271	86.384
	3.000	0.600	77.299	58.305	58.305	4.451	2.292	6.153	80.600
	2.800	0.800	70.084	52.863	52.863	4.462	2.229	6.035	74.786
	2.600	1.000	63.070	47.573	47.573	4.475	2.162	5.916	68.687
	2.400	1.200	56.281	42.452	42.452	4.489	2.093	5.797	62.290
	2.200	1.400	49.737	37.515	37.515	4.504	2.020	5.678	55.989
	2.000	1.600	43.448	32.772	32.772	4.522	1.944	5.559	49.944
	1.800	1.800	37.434	28.236	28.236	4.541	1.865	5.440	43.996
	1.600	2.000	31.716	23.923	23.923	4.563	1.781	5.321	38.130
	1.400	2.200	26.316	19.849	19.849	4.589	1.694	5.202	32.500
	1.200	2.400	21.254	16.031	16.031	4.620	1.603	5.083	27.262
	1.000	2.600	16.556	12.488	12.488	4.657	1.508	4.964	22.285
	0.800	2.800	12.268	9.254	9.254	4.701	1.409	4.845	17.557
	0.600	3.000	8.439	6.365	6.365	4.755	1.310	4.728	13.251
	0.400	3.200	5.102	3.848	3.848	4.822	1.215	4.614	9.592
	0.200	3.400	2.281	1.720	1.720	4.909	1.131	4.504	6.597
	0.094	3.506	1.000	0.754	0.754	4.965	1.092	4.448	5.241
	0.000	3.600	0.000	0.000	0.000	5.015	1.061	4.400	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
AFWT.P	4.300	0.000	100.000	75.428	75.428	4.423	-2.463	6.505	0.000
	3.549	0.051	98.000	73.919	73.919	4.425	-2.449	6.475	95.984
	3.546	0.054	97.900	73.844	73.844	4.425	-2.449	6.473	95.916
	3.400	0.200	92.270	69.597	69.597	4.431	-2.409	6.388	92.008
	3.200	0.400	84.698	63.886	63.886	4.441	-2.352	6.271	86.384
	3.000	0.600	77.299	58.305	58.305	4.451	-2.292	6.153	80.600
	2.800	0.800	70.084	52.863	52.863	4.462	-2.229	6.035	74.786
	2.600	1.000	63.070	47.573	47.573	4.475	-2.162	5.916	68.687
	2.400	1.200	56.281	42.452	42.452	4.489	-2.093	5.797	62.290
	2.200	1.400	49.737	37.515	37.515	4.504	-2.020	5.678	55.989
	2.000	1.600	43.448	32.772	32.772	4.522	-1.944	5.559	49.944
	1.800	1.800	37.434	28.236	28.236	4.541	-1.865	5.440	43.996
	1.600	2.000	31.716	23.923	23.923	4.563	-1.781	5.321	38.130
	1.400	2.200	26.316	19.849	19.849	4.589	-1.694	5.202	32.500
	1.200	2.400	21.254	16.031	16.031	4.620	-1.603	5.083	27.262
	1.000	2.600	16.556	12.488	12.488	4.657	-1.508	4.964	22.285
	0.800	2.800	12.268	9.254	9.254	4.701	-1.409	4.845	17.557
	0.600	3.000	8.439	6.365	6.365	4.755	-1.310	4.728	13.251
	0.400	3.200	5.102	3.848	3.848	4.822	-1.215	4.614	9.592
	0.200	3.400	2.281	1.720	1.720	4.909	-1.131	4.504	6.597
	0.094	3.506	1.000	0.754	0.754	4.965	-1.092	4.448	5.241
	0.000	3.600	0.000	0.000	0.000	5.015	-1.061	4.400	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
LODIRTK.S	1.100	0.000	100.000	10.788	9.817	12.677	2.452	0.631	0.000
	1.073	0.017	98.000	10.572	9.620	12.679	2.448	0.621	9.913
	1.072	0.017	97.900	10.561	9.611	12.679	2.448	0.621	9.908
	1.050	0.039	95.257	10.276	9.351	12.682	2.442	0.608	9.762
	1.000	0.089	89.288	9.632	8.765	12.689	2.429	0.580	9.425
	0.950	0.139	83.388	8.996	8.186	12.698	2.416	0.552	9.077
	0.900	0.189	77.563	8.367	7.614	12.707	2.401	0.523	8.738
	0.850	0.239	71.825	7.748	7.051	12.717	2.386	0.495	8.401
	0.800	0.289	66.183	7.140	6.497	12.728	2.369	0.466	8.073
	0.750	0.339	60.655	6.543	5.954	12.740	2.352	0.437	7.630
	0.700	0.389	55.248	5.960	5.423	12.752	2.334	0.408	7.197

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.650	0.439	49.956	5.389	4.904	12.767	2.315	0.379	6.773
	0.600	0.489	44.802	4.833	4.398	12.783	2.294	0.351	6.350
	0.550	0.539	39.808	4.294	3.908	12.799	2.273	0.322	5.865
	0.500	0.589	34.973	3.773	3.433	12.818	2.250	0.293	5.400
	0.450	0.639	30.298	3.268	2.974	12.840	2.226	0.264	4.956
	0.400	0.689	25.789	2.782	2.532	12.866	2.199	0.234	4.532
	0.350	0.739	21.483	2.318	2.109	12.896	2.169	0.205	3.945
	0.300	0.789	17.442	1.882	1.712	12.928	2.138	0.176	3.372
	0.250	0.839	13.676	1.475	1.343	12.962	2.105	0.147	2.857
	0.200	0.889	10.174	1.098	0.999	13.000	2.067	0.118	2.401
	0.150	0.939	6.952	0.750	0.682	13.048	2.021	0.089	1.883
	0.100	0.989	4.084	0.441	0.401	13.105	1.906	0.055	1.462
	0.050	1.039	1.649	0.178	0.162	13.205	1.829	0.028	0.899
	0.034	1.055	1.000	0.108	0.098	13.251	1.794	0.019	0.661
	0.000	1.089	0.000	0.000	0.000	13.647	0.979	0.001	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT1.S	6.900	0.000	100.000	371.599	390.179	79.141	2.934	4.798	0.000
	6.578	0.123	98.000	364.167	382.375	79.139	2.929	4.734	219.403
	6.571	0.129	97.900	363.795	381.985	79.139	2.929	4.731	219.332
	6.500	0.200	96.738	359.476	377.449	79.138	2.926	4.694	218.505
	6.000	0.700	88.642	329.391	345.861	79.131	2.906	4.433	212.788
	5.500	1.200	80.625	299.601	314.581	79.123	2.885	4.173	207.205
	5.000	1.700	72.687	270.104	283.610	79.116	2.863	3.913	201.754
	4.500	2.200	64.829	240.902	252.947	79.107	2.840	3.654	196.433
	4.000	2.700	57.049	211.994	222.594	79.098	2.815	3.395	191.240
	3.500	3.200	49.349	183.380	192.549	79.089	2.786	3.137	186.174
	3.000	3.700	41.728	155.061	162.814	79.078	2.752	2.879	181.231
	2.500	4.200	34.186	127.035	133.387	79.064	2.711	2.620	176.410
	2.000	4.700	26.723	99.303	104.268	79.048	2.654	2.360	171.710
	1.500	5.200	19.340	71.866	75.459	79.023	2.567	2.097	167.128
	1.000	5.700	12.100	44.964	47.212	78.979	2.408	1.825	143.361
	0.500	6.200	5.605	20.828	21.869	78.924	2.233	1.557	99.322
	0.095	6.605	1.000	3.716	3.902	78.872	2.098	1.348	71.757
	0.000	6.700	0.000	0.000	0.000	78.859	2.068	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT1.P	6.900	0.000	100.000	371.599	390.179	79.141	-2.934	4.798	0.000
	6.578	0.123	98.000	364.167	382.375	79.139	-2.929	4.734	219.403
	6.571	0.129	97.900	363.795	381.985	79.139	-2.929	4.731	219.332
	6.500	0.200	96.738	359.476	377.449	79.138	-2.926	4.694	218.505
	6.000	0.700	88.642	329.391	345.861	79.131	-2.906	4.433	212.788
	5.500	1.200	80.625	299.601	314.581	79.123	-2.885	4.173	207.205
	5.000	1.700	72.687	270.104	283.610	79.116	-2.863	3.913	201.754
	4.500	2.200	64.829	240.902	252.947	79.107	-2.840	3.654	196.433
	4.000	2.700	57.049	211.994	222.594	79.098	-2.815	3.395	191.240
	3.500	3.200	49.349	183.380	192.549	79.089	-2.786	3.137	186.174
	3.000	3.700	41.728	155.061	162.814	79.078	-2.752	2.879	181.231
	2.500	4.200	34.186	127.035	133.387	79.064	-2.711	2.620	176.410
	2.000	4.700	26.723	99.303	104.268	79.048	-2.654	2.360	171.710
	1.500	5.200	19.340	71.866	75.459	79.023	-2.567	2.097	167.128
	1.000	5.700	12.100	44.964	47.212	78.979	-2.408	1.825	143.361
	0.500	6.200	5.605	20.828	21.869	78.924	-2.233	1.557	99.322
	0.095	6.605	1.000	3.716	3.902	78.872	-2.098	1.348	71.757
	0.000	6.700	0.000	0.000	0.000	78.859	-2.068	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT2.S	6.900	0.000	100.000	483.223	507.384	68.867	3.344	4.777	0.000
	6.557	0.143	98.000	473.558	497.236	68.876	3.344	4.712	332.628
	6.551	0.150	97.900	473.075	496.729	68.876	3.344	4.709	332.589
	6.500	0.200	97.099	469.205	492.666	68.876	3.343	4.683	332.223
	6.000	0.700	89.187	430.972	452.521	68.875	3.331	4.429	328.541
	5.500	1.200	81.304	392.881	412.525	68.873	3.317	4.175	324.887
	5.000	1.700	73.451	354.931	372.678	68.871	3.303	3.921	321.261
	4.500	2.200	65.627	317.124	332.980	68.868	3.286	3.667	317.663
	4.000	2.700	57.832	279.457	293.430	68.864	3.267	3.413	314.093
	3.500	3.200	50.067	241.933	254.030	68.860	3.244	3.160	310.550
	3.000	3.700	42.330	204.550	214.778	68.853	3.215	2.905	307.034
	2.500	4.200	34.624	167.310	175.675	68.843	3.177	2.651	303.546
	2.000	4.700	26.946	130.210	136.721	68.828	3.120	2.394	300.085
	1.500	5.200	19.298	93.253	97.916	68.799	3.023	2.134	296.651
	1.000	5.700	11.758	56.817	59.657	68.743	2.835	1.867	256.833
	0.500	6.200	4.861	23.487	24.662	68.575	2.546	1.600	185.309
	0.178	6.522	1.000	4.832	5.074	68.241	2.010	1.423	124.215
	0.000	6.700	0.000	0.000	0.000	68.909	0.001	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT2.P	6.900	0.000	100.000	483.223	507.384	68.867	-3.344	4.777	0.000
	6.557	0.143	98.000	473.558	497.236	68.876	-3.344	4.712	332.628
	6.551	0.150	97.900	473.075	496.729	68.876	-3.344	4.709	332.589
	6.500	0.200	97.099	469.205	492.666	68.876	-3.343	4.683	332.223
	6.000	0.700	89.187	430.972	452.521	68.875	-3.331	4.429	328.541
	5.500	1.200	81.304	392.881	412.525	68.873	-3.317	4.175	324.887
	5.000	1.700	73.451	354.931	372.678	68.871	-3.303	3.921	321.261
	4.500	2.200	65.627	317.124	332.980	68.868	-3.286	3.667	317.663
	4.000	2.700	57.832	279.457	293.430	68.864	-3.267	3.413	314.093
	3.500	3.200	50.067	241.933	254.030	68.860	-3.244	3.160	310.550
	3.000	3.700	42.330	204.550	214.778	68.853	-3.215	2.905	307.034
	2.500	4.200	34.624	167.310	175.675	68.843	-3.177	2.651	303.546
	2.000	4.700	26.946	130.210	136.721	68.828	-3.120	2.394	300.085
	1.500	5.200	19.298	93.253	97.916	68.799	-3.023	2.134	296.651
	1.000	5.700	11.758	56.817	59.657	68.743	-2.835	1.867	256.833
	0.500	6.200	4.861	23.487	24.662	68.575	-2.546	1.600	185.309
	0.178	6.522	1.000	4.832	5.074	68.241	-2.010	1.423	124.215
	0.000	6.700	0.000	0.000	0.000	68.909	-0.001	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT3.S	6.900	0.000	100.000	491.439	516.011	57.676	3.380	4.728	0.000
	6.571	0.129	98.000	481.610	505.690	57.676	3.377	4.662	335.454
	6.565	0.135	97.900	481.118	505.174	57.676	3.377	4.659	335.416
	6.500	0.200	96.899	476.197	500.007	57.676	3.376	4.626	335.037
	6.000	0.700	89.165	438.192	460.102	57.674	3.366	4.373	332.119
	5.500	1.200	81.454	400.298	420.313	57.672	3.355	4.119	329.222
	5.000	1.700	73.766	362.515	380.641	57.669	3.343	3.866	326.344
	4.500	2.200	66.100	324.843	341.085	57.667	3.329	3.613	323.486
	4.000	2.700	58.457	287.281	301.645	57.664	3.314	3.359	320.649
	3.500	3.200	50.837	249.831	262.322	57.660	3.295	3.106	317.831
	3.000	3.700	43.239	212.491	223.116	57.656	3.271	2.852	315.033
	2.500	4.200	35.663	175.263	184.026	57.651	3.239	2.598	312.254
	2.000	4.700	28.110	138.145	145.052	57.643	3.193	2.342	309.496
	1.500	5.200	20.580	101.138	106.195	57.631	3.117	2.083	306.756
	1.000	5.700	13.132	64.536	67.763	57.611	2.978	1.817	272.455
	0.500	6.200	6.237	30.651	32.184	57.587	2.824	1.554	205.721
	0.084	6.616	1.000	4.914	5.160	57.566	2.701	1.342	159.991
	0.000	6.700	0.000	0.000	0.000	57.561	2.676	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT3.P	6.900	0.000	100.000	491.439	516.011	57.676	-3.380	4.728	0.000
	6.571	0.129	98.000	481.610	505.690	57.676	-3.377	4.662	335.454
	6.565	0.135	97.900	481.118	505.174	57.676	-3.377	4.659	335.416
	6.500	0.200	96.899	476.197	500.007	57.676	-3.376	4.626	335.037
	6.000	0.700	89.165	438.192	460.102	57.674	-3.366	4.373	332.119
	5.500	1.200	81.454	400.298	420.313	57.672	-3.355	4.119	329.222
	5.000	1.700	73.766	362.515	380.641	57.669	-3.343	3.866	326.344
	4.500	2.200	66.100	324.843	341.085	57.667	-3.329	3.613	323.486
	4.000	2.700	58.457	287.281	301.645	57.664	-3.314	3.359	320.649
	3.500	3.200	50.837	249.831	262.322	57.660	-3.295	3.106	317.831
	3.000	3.700	43.239	212.491	223.116	57.656	-3.271	2.852	315.033
	2.500	4.200	35.663	175.263	184.026	57.651	-3.239	2.598	312.254
	2.000	4.700	28.110	138.145	145.052	57.643	-3.193	2.342	309.496
	1.500	5.200	20.580	101.138	106.195	57.631	-3.117	2.083	306.756
	1.000	5.700	13.132	64.536	67.763	57.611	-2.978	1.817	272.455
	0.500	6.200	6.237	30.651	32.184	57.587	-2.824	1.554	205.721
	0.084	6.616	1.000	4.914	5.160	57.566	-2.701	1.342	159.991
	0.000	6.700	0.000	0.000	0.000	57.561	-2.676	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT4.S	6.900	0.000	100.000	458.608	481.538	46.470	3.384	4.707	0.000
	6.500	0.200	98.922	453.663	476.346	46.470	3.404	4.673	99.106
	6.428	0.273	98.000	449.435	471.907	46.470	3.410	4.644	250.406
	6.421	0.279	97.900	448.977	471.426	46.470	3.410	4.641	269.419
	6.000	0.700	91.120	417.881	438.775	46.468	3.403	4.427	331.371
	5.500	1.200	83.080	381.012	400.063	46.466	3.393	4.173	327.284
	5.000	1.700	75.074	344.297	361.512	46.464	3.380	3.920	323.250
	4.500	2.200	67.102	307.736	323.123	46.463	3.365	3.667	319.267
	4.000	2.700	59.164	271.328	284.895	46.463	3.344	3.414	315.335
	3.500	3.200	51.258	235.075	246.828	46.463	3.317	3.162	311.454
	3.000	3.700	43.378	198.935	208.882	46.465	3.281	2.910	310.536
	2.500	4.200	35.494	162.778	170.917	46.466	3.232	2.656	311.186
	2.000	4.700	27.604	126.593	132.922	46.467	3.158	2.401	311.855
	1.500	5.200	19.707	90.378	94.897	46.466	3.031	2.141	312.544
	1.000	5.700	11.876	54.463	57.186	46.461	2.768	1.870	272.604
	0.500	6.200	4.772	21.884	22.978	46.434	2.270	1.594	187.240
	0.166	6.534	1.000	4.586	4.815	46.369	1.359	1.392	39.968
	0.000	6.700	0.000	0.000	0.000	46.272	0.917	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT4.P	6.900	0.000	100.000	458.608	481.538	46.470	-3.384	4.707	0.000
	6.500	0.200	98.922	453.663	476.346	46.470	-3.404	4.673	99.106
	6.428	0.273	98.000	449.435	471.907	46.470	-3.410	4.644	250.406
	6.421	0.279	97.900	448.977	471.426	46.470	-3.410	4.641	269.419
	6.000	0.700	91.120	417.881	438.775	46.468	-3.403	4.427	331.371
	5.500	1.200	83.080	381.012	400.063	46.466	-3.393	4.173	327.284
	5.000	1.700	75.074	344.297	361.512	46.464	-3.380	3.920	323.250
	4.500	2.200	67.102	307.736	323.123	46.463	-3.365	3.667	319.267
	4.000	2.700	59.164	271.328	284.895	46.463	-3.344	3.414	315.335
	3.500	3.200	51.258	235.075	246.828	46.463	-3.317	3.162	311.454
	3.000	3.700	43.378	198.935	208.882	46.465	-3.281	2.910	310.536
	2.500	4.200	35.494	162.778	170.917	46.466	-3.232	2.656	311.186
	2.000	4.700	27.604	126.593	132.922	46.467	-3.158	2.401	311.855
	1.500	5.200	19.707	90.378	94.897	46.466	-3.031	2.141	312.544
	1.000	5.700	11.876	54.463	57.186	46.461	-2.768	1.870	272.604
	0.500	6.200	4.772	21.884	22.978	46.434	-2.270	1.594	187.240
	0.166	6.534	1.000	4.586	4.815	46.369	-1.359	1.392	39.968
	0.000	6.700	0.000	0.000	0.000	46.272	-0.917	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
SLOPTANK.S	6.900	0.000	100.000	93.823	98.514	29.353	3.340	4.697	0.000
	6.614	0.186	98.000	91.947	96.544	29.353	3.349	4.630	53.893
	6.607	0.193	97.900	91.853	96.446	29.353	3.349	4.627	53.901
	6.500	0.300	96.318	90.369	94.887	29.353	3.349	4.574	54.023
	6.000	0.800	88.938	83.445	87.617	29.353	3.351	4.327	54.592
	5.500	1.300	81.533	76.497	80.321	29.353	3.352	4.080	55.166
	5.000	1.800	74.101	69.524	73.000	29.353	3.351	3.832	55.744
	4.500	2.300	66.643	62.527	65.653	29.352	3.349	3.584	56.326
	4.000	2.800	59.160	55.506	58.281	29.352	3.346	3.335	56.913
	3.500	3.300	51.650	48.460	50.883	29.352	3.339	3.086	57.504
	3.000	3.800	44.115	41.390	43.460	29.352	3.328	2.836	58.099
	2.500	4.300	36.554	34.296	36.011	29.352	3.311	2.584	58.699
	2.000	4.800	28.967	27.177	28.536	29.352	3.281	2.332	59.303
	1.500	5.300	21.353	20.034	21.036	29.351	3.225	2.076	59.912
	1.000	5.800	13.760	12.910	13.555	29.351	3.113	1.813	55.274
	0.500	6.300	6.608	6.200	6.510	29.351	2.985	1.553	43.990
	0.078	6.722	1.000	0.938	0.985	29.351	2.880	1.339	35.763
	0.000	6.800	0.000	0.000	0.000	29.351	2.860	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
SLOPTANK.P	6.900	0.000	100.000	93.823	98.514	29.353	-3.340	4.697	0.000
	6.614	0.186	98.000	91.947	96.544	29.353	-3.349	4.630	53.893
	6.607	0.193	97.900	91.853	96.446	29.353	-3.349	4.627	53.901
	6.500	0.300	96.318	90.369	94.887	29.353	-3.349	4.574	54.023
	6.000	0.800	88.938	83.445	87.617	29.353	-3.351	4.327	54.592
	5.500	1.300	81.533	76.497	80.321	29.353	-3.352	4.080	55.166
	5.000	1.800	74.101	69.524	73.000	29.353	-3.351	3.832	55.744
	4.500	2.300	66.643	62.527	65.653	29.352	-3.349	3.584	56.326
	4.000	2.800	59.160	55.506	58.281	29.352	-3.346	3.335	56.913
	3.500	3.300	51.650	48.460	50.883	29.352	-3.339	3.086	57.504
	3.000	3.800	44.115	41.390	43.460	29.352	-3.328	2.836	58.099
	2.500	4.300	36.554	34.296	36.011	29.352	-3.311	2.584	58.699
	2.000	4.800	28.967	27.177	28.536	29.352	-3.281	2.332	59.303
	1.500	5.300	21.353	20.034	21.036	29.351	-3.225	2.076	59.912
	1.000	5.800	13.760	12.910	13.555	29.351	-3.113	1.813	55.274
	0.500	6.300	6.608	6.200	6.510	29.351	-2.985	1.553	43.990
	0.078	6.722	1.000	0.938	0.985	29.351	-2.880	1.339	35.763
	0.000	6.800	0.000	0.000	0.000	29.351	-2.860	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT5.S	6.900	0.000	100.000	457.538	480.415	35.643	3.389	4.692	0.000
	6.531	0.169	98.000	448.387	470.807	35.649	3.395	4.627	314.689
	6.524	0.176	97.900	447.930	470.326	35.649	3.395	4.624	314.656
	6.500	0.200	97.524	446.211	468.522	35.649	3.394	4.611	314.536
	6.000	0.700	89.789	410.817	431.358	35.649	3.386	4.358	312.054
	5.500	1.200	82.073	375.516	394.292	35.649	3.376	4.105	309.585
	5.000	1.700	74.378	340.309	357.325	35.649	3.366	3.852	307.129
	4.500	2.200	66.704	305.196	320.455	35.649	3.355	3.599	304.687
	4.000	2.700	59.050	270.175	283.684	35.648	3.342	3.347	302.257
	3.500	3.200	51.416	235.249	247.011	35.648	3.326	3.094	299.840
	3.000	3.700	43.803	200.415	210.436	35.648	3.306	2.841	297.436
	2.500	4.200	36.210	165.675	173.959	35.647	3.281	2.587	295.045
	2.000	4.700	28.638	131.029	137.580	35.646	3.244	2.332	292.667
	1.500	5.200	21.086	96.476	101.300	35.645	3.185	2.075	290.302
	1.000	5.700	13.595	62.200	65.311	35.642	3.076	1.813	265.474
	0.500	6.200	6.536	29.904	31.399	35.639	2.953	1.553	212.553
	0.079	6.621	1.000	4.575	4.804	35.636	2.852	1.340	173.890
	0.000	6.700	0.000	0.000	0.000	35.636	2.833	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
COT5.P	6.900	0.000	100.000	457.538	480.415	35.643	-3.389	4.692	0.000
	6.531	0.169	98.000	448.387	470.807	35.649	-3.395	4.627	314.689
	6.524	0.176	97.900	447.930	470.326	35.649	-3.395	4.624	314.656
	6.500	0.200	97.524	446.211	468.522	35.649	-3.394	4.611	314.536
	6.000	0.700	89.789	410.817	431.358	35.649	-3.386	4.358	312.054
	5.500	1.200	82.073	375.516	394.292	35.649	-3.376	4.105	309.585
	5.000	1.700	74.378	340.309	357.325	35.649	-3.366	3.852	307.129
	4.500	2.200	66.704	305.196	320.455	35.649	-3.355	3.599	304.687
	4.000	2.700	59.050	270.175	283.684	35.648	-3.342	3.347	302.257
	3.500	3.200	51.416	235.249	247.011	35.648	-3.326	3.094	299.840
	3.000	3.700	43.803	200.415	210.436	35.648	-3.306	2.841	297.436
	2.500	4.200	36.210	165.675	173.959	35.647	-3.281	2.587	295.045
	2.000	4.700	28.638	131.029	137.580	35.646	-3.244	2.332	292.667
	1.500	5.200	21.086	96.476	101.300	35.645	-3.185	2.075	290.302
	1.000	5.700	13.595	62.200	65.311	35.642	-3.076	1.813	265.474
	0.500	6.200	6.536	29.904	31.399	35.639	-2.953	1.553	212.553
	0.079	6.621	1.000	4.575	4.804	35.636	-2.852	1.340	173.890
	0.000	6.700	0.000	0.000	0.000	35.636	-2.833	1.300	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT1.S	8.300	0.000	100.000	199.130	204.108	86.536	2.583	4.407	0.000
	8.019	0.281	98.000	195.147	200.026	86.540	2.593	4.331	76.632
	8.012	0.288	97.900	194.948	199.822	86.540	2.593	4.327	81.050
	8.000	0.300	97.743	194.636	199.501	86.540	2.593	4.321	88.317
	7.500	0.800	90.549	180.311	184.819	86.541	2.558	4.049	89.262
	7.000	1.300	83.433	166.140	170.293	86.542	2.521	3.776	84.841
	6.500	1.800	76.435	152.206	156.011	86.543	2.483	3.504	80.563
	6.000	2.300	69.558	138.510	141.973	86.544	2.443	3.232	76.431
	5.500	2.800	62.800	125.053	128.179	86.546	2.402	2.961	72.444
	5.000	3.300	56.161	111.834	114.629	86.547	2.359	2.690	68.598
	4.500	3.800	49.642	98.853	101.324	86.549	2.312	2.420	64.892
	4.000	4.300	43.243	86.110	88.263	86.551	2.260	2.149	61.322
	3.500	4.800	36.964	73.606	75.446	86.553	2.202	1.876	57.887
	3.000	5.300	30.805	61.343	62.877	86.557	2.132	1.602	54.551
	2.500	5.800	24.815	49.414	50.649	86.564	2.048	1.324	48.388
	2.000	6.300	19.145	38.123	39.076	86.572	1.962	1.049	39.557
	1.500	6.800	13.828	27.536	28.225	86.582	1.878	0.779	31.897
	1.000	7.300	8.865	17.654	18.095	86.592	1.795	0.513	25.325
	0.500	7.800	4.256	8.475	8.687	86.603	1.715	0.253	19.755
	0.121	8.179	1.000	1.991	2.041	86.611	1.655	0.061	16.153
	0.000	8.300	0.000	0.000	0.000	86.614	1.636	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT1.P	8.300	0.000	100.000	199.130	204.108	86.536	-2.583	4.407	0.000
	8.019	0.281	98.000	195.147	200.026	86.540	-2.593	4.331	76.632
	8.012	0.288	97.900	194.948	199.822	86.540	-2.593	4.327	81.050
	8.000	0.300	97.743	194.636	199.501	86.540	-2.593	4.321	88.317
	7.500	0.800	90.549	180.311	184.819	86.541	-2.558	4.049	89.262
	7.000	1.300	83.433	166.140	170.293	86.542	-2.521	3.776	84.841
	6.500	1.800	76.435	152.206	156.011	86.543	-2.483	3.504	80.563
	6.000	2.300	69.558	138.510	141.973	86.544	-2.443	3.232	76.431
	5.500	2.800	62.800	125.053	128.179	86.546	-2.402	2.961	72.444
	5.000	3.300	56.161	111.834	114.629	86.547	-2.359	2.690	68.598
	4.500	3.800	49.642	98.853	101.324	86.549	-2.312	2.420	64.892
	4.000	4.300	43.243	86.110	88.263	86.551	-2.260	2.149	61.322
	3.500	4.800	36.964	73.606	75.446	86.553	-2.202	1.876	57.887
	3.000	5.300	30.805	61.343	62.877	86.557	-2.132	1.602	54.551
	2.500	5.800	24.815	49.414	50.649	86.564	-2.048	1.324	48.388
	2.000	6.300	19.145	38.123	39.076	86.572	-1.962	1.049	39.557
	1.500	6.800	13.828	27.536	28.225	86.582	-1.878	0.779	31.897

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	1.000	7.300	8.865	17.654	18.095	86.592	-1.795	0.513	25.325
	0.500	7.800	4.256	8.475	8.687	86.603	-1.715	0.253	19.755
	0.121	8.179	1.000	1.991	2.041	86.611	-1.655	0.061	16.153
	0.000	8.300	0.000	0.000	0.000	86.614	-1.636	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT2.P	8.151	0.000	100.000	160.782	164.802	79.217	-4.942	2.867	0.000
	8.000	0.000	100.000	160.782	164.801	79.217	-4.942	2.867	1.934
	7.765	0.236	98.000	157.567	161.506	79.204	-4.896	2.765	2.934
	7.753	0.247	97.900	157.406	161.341	79.203	-4.894	2.760	2.930
	7.500	0.500	95.760	153.965	157.814	79.189	-4.844	2.651	2.864
	7.000	1.000	91.558	147.210	150.890	79.164	-4.743	2.440	2.752
	6.500	1.500	87.400	140.524	144.037	79.140	-4.638	2.235	2.664
	6.000	2.000	83.285	133.908	137.256	79.119	-4.529	2.037	2.598
	5.500	2.500	79.214	127.362	130.546	79.100	-4.415	1.846	2.551
	5.000	3.000	75.186	120.886	123.908	79.084	-4.295	1.664	2.523
	4.500	3.500	71.201	114.479	117.341	79.071	-4.169	1.491	2.511
	4.000	4.000	67.260	108.143	110.846	79.062	-4.036	1.329	2.510
	3.500	4.500	63.364	101.878	104.425	79.059	-3.893	1.181	2.520
	3.000	5.000	59.512	95.685	98.078	79.061	-3.741	1.047	2.540
	2.500	5.500	55.706	89.565	91.804	79.069	-3.576	0.931	2.569
	2.000	6.000	51.852	83.369	85.454	79.084	-3.393	0.833	3.213
	1.500	6.500	47.325	76.090	77.992	79.103	-3.161	0.746	5.276
	1.000	7.000	33.392	53.688	55.030	79.121	-2.987	0.561	220.136
	0.500	7.500	14.113	22.691	23.258	79.036	-2.757	0.300	199.728
	0.108	7.892	1.000	1.608	1.648	78.979	-1.072	0.072	30.258
	0.000	8.000	0.000	0.000	0.000	78.979	-0.001	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT2.S	8.151	0.000	100.000	154.355	158.214	79.281	5.145	3.031	0.000
	8.000	0.000	99.999	154.354	158.213	79.281	5.145	3.031	2.421
	7.785	0.215	98.000	151.268	155.049	79.279	5.107	2.932	3.860
	7.774	0.226	97.900	151.113	154.891	79.279	5.105	2.927	3.856
	7.500	0.500	95.355	147.185	150.865	79.277	5.055	2.801	3.772
	7.000	1.000	90.757	140.088	143.590	79.274	4.962	2.575	3.628
	6.500	1.500	86.211	133.071	136.398	79.271	4.863	2.355	3.494
	6.000	2.000	81.716	126.133	129.286	79.270	4.760	2.141	3.370
	5.500	2.500	77.273	119.275	122.257	79.270	4.651	1.933	3.258
	5.000	3.000	72.882	112.496	115.309	79.272	4.536	1.734	3.155
	4.500	3.500	68.542	105.797	108.442	79.275	4.413	1.543	3.064
	4.000	4.000	64.254	99.178	101.658	79.280	4.281	1.362	2.979
	3.500	4.500	60.018	92.641	94.957	79.288	4.138	1.194	2.903
	3.000	5.000	55.836	86.186	88.340	79.299	3.982	1.040	2.837
	2.500	5.500	51.707	79.812	81.807	79.314	3.810	0.904	2.782
	2.000	6.000	47.547	73.392	75.227	79.332	3.616	0.786	3.336
	1.500	6.500	42.803	66.069	67.721	79.352	3.370	0.680	5.104
	1.000	7.000	33.971	52.436	53.747	79.322	3.094	0.550	231.355
	0.500	7.500	14.990	23.138	23.716	79.322	2.924	0.296	221.471
	0.103	7.897	1.000	1.544	1.582	79.321	1.096	0.069	29.895
	0.000	8.000	0.000	0.000	0.000	79.321	0.001	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT4.P	8.070	0.000	100.000	183.012	187.587	57.712	-5.403	2.332	0.000
	8.000	0.000	100.000	183.011	187.586	57.712	-5.403	2.332	0.698
	7.646	0.354	98.000	179.351	183.835	57.712	-5.359	2.220	0.726

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	7.629	0.371	97.900	179.168	183.648	57.712	-5.357	2.214	0.727
	7.500	0.500	97.164	177.822	182.267	57.712	-5.340	2.174	0.738
	7.000	1.000	94.276	172.536	176.850	57.712	-5.273	2.018	0.779
	6.500	1.500	91.336	167.155	171.334	57.711	-5.202	1.866	0.822
	6.000	2.000	88.343	161.678	165.719	57.711	-5.124	1.717	0.867
	5.500	2.500	85.297	156.104	160.007	57.710	-5.041	1.573	0.914
	5.000	3.000	82.199	150.434	154.195	57.708	-4.950	1.435	0.963
	4.500	3.500	79.049	144.669	148.286	57.707	-4.852	1.303	1.013
	4.000	4.000	75.846	138.807	142.277	57.704	-4.744	1.178	1.065
	3.500	4.500	72.591	132.849	136.171	57.701	-4.625	1.063	1.119
	3.000	5.000	69.283	126.796	129.965	57.698	-4.494	0.958	1.176
	2.500	5.500	65.922	120.646	123.662	57.694	-4.349	0.867	1.234
	2.000	6.000	61.907	113.297	116.130	57.690	-4.162	0.778	3.571
	1.500	6.500	56.251	102.946	105.520	57.687	-3.882	0.682	8.647
	1.000	7.000	43.134	78.940	80.914	57.707	-3.580	0.531	416.345
	0.500	7.500	19.984	36.573	37.487	57.703	-3.430	0.276	365.602
	0.068	7.932	1.000	1.830	1.876	57.700	-1.579	0.045	101.651
	0.000	8.000	0.000	0.000	0.000	57.700	-0.002	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT4.S	8.070	0.000	100.000	175.676	180.068	57.711	5.590	2.405	0.000
	8.000	0.000	100.000	175.675	180.067	57.711	5.590	2.405	0.698
	7.645	0.355	98.000	172.162	176.466	57.711	5.550	2.294	0.748
	7.627	0.373	97.900	171.987	176.286	57.711	5.548	2.289	0.751
	7.500	0.500	97.173	170.709	174.977	57.711	5.533	2.249	0.770
	7.000	1.000	94.254	165.581	169.721	57.711	5.471	2.094	0.846
	6.500	1.500	91.242	160.291	164.298	57.711	5.404	1.941	0.928
	6.000	2.000	88.138	154.837	158.708	57.711	5.330	1.789	1.015
	5.500	2.500	84.941	149.221	152.952	57.711	5.249	1.640	1.108
	5.000	3.000	81.652	143.442	147.028	57.711	5.159	1.495	1.205
	4.500	3.500	78.270	137.501	140.939	57.710	5.060	1.354	1.308
	4.000	4.000	74.795	131.397	134.682	57.709	4.950	1.220	1.417
	3.500	4.500	71.228	125.130	128.259	57.708	4.826	1.093	1.532
	3.000	5.000	67.568	118.701	121.669	57.707	4.686	0.976	1.653
	2.500	5.500	63.816	112.109	114.912	57.706	4.527	0.872	1.781
	2.000	6.000	59.362	104.284	106.891	57.703	4.321	0.770	4.640
	1.500	6.500	53.354	93.730	96.074	57.702	4.017	0.660	10.147
	1.000	7.000	42.957	75.465	77.351	57.701	3.604	0.532	432.414
	0.500	7.500	19.831	34.838	35.709	57.700	3.440	0.276	372.118
	0.068	7.932	1.000	1.757	1.801	57.700	1.587	0.045	103.248
	0.000	8.000	0.000	0.000	0.000	57.700	0.002	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT5.P	8.070	0.000	100.000	183.013	187.589	46.546	-5.438	2.347	0.000
	8.000	0.000	100.000	183.012	187.588	46.546	-5.438	2.347	0.762
	7.656	0.344	98.000	179.353	183.837	46.547	-5.395	2.235	0.777
	7.639	0.361	97.900	179.170	183.649	46.548	-5.393	2.230	0.778
	7.500	0.500	97.089	177.686	182.128	46.548	-5.375	2.185	0.784
	7.000	1.000	94.149	172.306	176.614	46.550	-5.308	2.027	0.806
	6.500	1.500	91.180	166.871	171.043	46.552	-5.237	1.873	0.829
	6.000	2.000	88.181	161.382	165.417	46.554	-5.160	1.724	0.853
	5.500	2.500	85.152	155.839	159.735	46.556	-5.077	1.581	0.878
	5.000	3.000	82.093	150.241	153.997	46.557	-4.988	1.444	0.903
	4.500	3.500	79.005	144.590	148.204	46.559	-4.891	1.315	0.930
	4.000	4.000	75.887	138.883	142.356	46.560	-4.787	1.195	0.957
	3.500	4.500	72.740	133.123	136.451	46.561	-4.672	1.084	0.985
	3.000	5.000	69.562	127.308	130.491	46.562	-4.546	0.985	1.014
	2.500	5.500	66.355	121.439	124.475	46.563	-4.408	0.900	1.044
	2.000	6.000	62.562	114.496	117.359	46.558	-4.233	0.819	3.396
	1.500	6.500	56.742	103.845	106.441	46.552	-3.953	0.725	10.187
	1.000	7.000	41.756	76.419	78.329	46.500	-3.612	0.560	441.574

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.500	7.500	17.846	32.660	33.477	46.499	-3.344	0.303	406.593
	0.101	7.899	1.000	1.830	1.876	46.495	-1.055	0.067	30.317
	0.000	8.000	0.000	0.000	0.000	46.495	-0.001	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT5.S	8.070	0.000	100.000	175.717	180.110	46.524	5.651	2.388	0.000
	8.000	0.000	100.000	175.716	180.109	46.524	5.651	2.388	0.328
	7.553	0.447	98.000	172.203	176.508	46.525	5.610	2.278	0.426
	7.532	0.468	97.900	172.027	176.328	46.525	5.608	2.273	0.431
	7.500	0.500	97.751	171.766	176.060	46.525	5.605	2.265	0.439
	7.000	1.000	95.286	167.435	171.620	46.525	5.554	2.136	0.571
	6.500	1.500	92.605	162.722	166.790	46.526	5.495	2.003	0.728
	6.000	2.000	89.706	157.629	161.570	46.527	5.430	1.865	0.911
	5.500	2.500	86.591	152.156	155.960	46.527	5.356	1.726	1.123
	5.000	3.000	83.260	146.301	149.959	46.528	5.272	1.585	1.366
	4.500	3.500	79.711	140.066	143.567	46.529	5.176	1.444	1.641
	4.000	4.000	75.946	133.450	136.786	46.529	5.067	1.305	1.951
	3.500	4.500	71.964	126.453	129.614	46.530	4.941	1.170	2.297
	3.000	5.000	67.765	119.075	122.052	46.532	4.794	1.041	2.682
	2.500	5.500	63.350	111.316	114.099	46.533	4.621	0.922	3.109
	2.000	6.000	58.649	103.056	105.632	46.533	4.413	0.816	5.012
	1.500	6.500	52.050	91.462	93.748	46.534	4.097	0.700	16.438
	1.000	7.000	40.641	71.413	73.199	46.511	3.637	0.559	383.213
	0.500	7.500	17.405	30.583	31.348	46.499	3.348	0.304	409.587
	0.102	7.898	1.000	1.757	1.801	46.495	1.069	0.068	31.516
	0.000	8.000	0.000	0.000	0.000	46.495	0.001	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT6.P	8.070	0.000	100.000	205.453	210.589	34.570	-5.406	2.364	0.000
	8.000	0.000	100.000	205.452	210.588	34.570	-5.406	2.364	0.643
	7.615	0.385	98.000	201.344	206.377	34.573	-5.362	2.253	0.710
	7.596	0.404	97.900	201.138	206.167	34.573	-5.360	2.247	0.713
	7.500	0.500	97.387	200.084	205.086	34.574	-5.349	2.219	0.731
	7.000	1.000	94.659	194.479	199.341	34.576	-5.286	2.075	0.827
	6.500	1.500	91.815	188.635	193.351	34.578	-5.218	1.930	0.931
	6.000	2.000	88.855	182.555	187.118	34.579	-5.143	1.786	1.045
	5.500	2.500	85.779	176.236	180.642	34.580	-5.062	1.644	1.169
	5.000	3.000	82.588	169.679	173.921	34.579	-4.972	1.505	1.303
	4.500	3.500	79.281	162.885	166.957	34.578	-4.873	1.369	1.447
	4.000	4.000	75.859	155.853	159.750	34.576	-4.763	1.239	1.602
	3.500	4.500	72.320	148.584	152.298	34.573	-4.641	1.117	1.768
	3.000	5.000	68.666	141.077	144.603	34.568	-4.503	1.003	1.946
	2.500	5.500	64.896	133.331	136.665	34.561	-4.346	0.902	2.136
	2.000	6.000	60.970	125.265	128.397	34.552	-4.166	0.815	3.270
	1.500	6.500	55.273	113.559	116.398	34.538	-3.895	0.721	12.883
	1.000	7.000	40.748	83.718	85.811	34.562	-3.601	0.555	471.294
	0.500	7.500	17.710	36.387	37.296	34.523	-3.377	0.301	453.248
	0.099	7.901	1.000	2.055	2.106	34.356	-1.112	0.066	41.210
	0.000	8.000	0.000	0.000	0.000	34.356	-0.001	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT6.S	8.070	0.000	100.000	197.170	202.099	34.599	5.593	2.372	0.000
	8.000	0.000	100.000	197.169	202.098	34.599	5.593	2.371	0.993
	7.665	0.335	98.000	193.226	198.057	34.593	5.554	2.260	1.065
	7.649	0.351	97.900	193.029	197.855	34.593	5.552	2.255	1.071

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	7.500	0.500	96.966	191.187	195.967	34.593	5.534	2.203	1.103
	7.000	1.000	93.808	184.962	189.586	34.593	5.468	2.033	1.133
	6.500	1.500	90.622	178.679	183.146	34.592	5.398	1.868	1.164
	6.000	2.000	87.407	172.340	176.648	34.592	5.322	1.706	1.196
	5.500	2.500	84.163	165.943	170.092	34.591	5.240	1.550	1.228
	5.000	3.000	80.890	159.490	163.478	34.590	5.152	1.401	1.261
	4.500	3.500	77.588	152.980	156.805	34.590	5.055	1.258	1.295
	4.000	4.000	74.258	146.414	150.074	34.589	4.950	1.124	1.329
	3.500	4.500	70.898	139.790	143.285	34.589	4.834	1.000	1.363
	3.000	5.000	67.510	133.110	136.437	34.588	4.706	0.887	1.399
	2.500	5.500	64.093	126.372	129.532	34.587	4.565	0.787	1.434
	2.000	6.000	60.489	119.265	122.247	34.587	4.400	0.701	2.734
	1.500	6.500	55.295	109.025	111.751	34.586	4.153	0.603	7.932
	1.000	7.000	47.451	93.559	95.898	34.601	3.805	0.502	495.009
	0.500	7.500	23.554	46.441	47.603	34.601	3.778	0.251	474.163
	0.021	7.979	1.000	1.972	2.021	34.601	3.751	0.011	454.764
	0.000	8.000	0.000	0.000	0.000	34.602	3.750	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT3.P	8.070	0.000	100.000	184.943	189.567	68.884	-5.444	2.369	0.000
	8.000	0.000	100.000	184.942	189.566	68.884	-5.444	2.369	0.494
	7.588	0.412	98.000	181.244	185.775	68.882	-5.400	2.258	0.581
	7.568	0.432	97.900	181.059	185.586	68.882	-5.398	2.253	0.585
	7.500	0.500	97.561	180.432	184.943	68.882	-5.391	2.235	0.599
	7.000	1.000	94.969	175.638	180.029	68.880	-5.332	2.098	0.707
	6.500	1.500	92.223	170.561	174.825	68.878	-5.268	1.959	0.830
	6.000	2.000	89.325	165.200	169.330	68.878	-5.197	1.820	0.967
	5.500	2.500	86.272	159.555	163.544	68.878	-5.118	1.681	1.120
	5.000	3.000	83.067	153.626	157.467	68.879	-5.031	1.544	1.290
	4.500	3.500	79.708	147.414	151.099	68.882	-4.935	1.409	1.477
	4.000	4.000	76.196	140.920	144.443	68.885	-4.826	1.278	1.680
	3.500	4.500	72.533	134.144	137.498	68.891	-4.704	1.153	1.905
	3.000	5.000	68.718	127.089	130.266	68.898	-4.566	1.037	2.139
	2.500	5.500	64.761	119.770	122.765	68.908	-4.408	0.932	2.388
	2.000	6.000	60.426	111.754	114.548	68.918	-4.216	0.839	4.517
	1.500	6.500	54.397	100.603	103.118	68.930	-3.934	0.739	12.272
	1.000	7.000	39.557	73.158	74.987	68.866	-3.639	0.571	445.065
	0.500	7.500	16.270	30.090	30.843	68.864	-3.310	0.314	441.783
	0.114	7.886	1.000	1.849	1.896	68.863	-0.975	0.076	23.946
	0.000	8.000	0.000	0.000	0.000	68.863	-0.001	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
BWT3.S	8.070	0.000	100.000	177.053	181.479	68.833	5.667	2.442	0.000
	7.526	0.374	98.000	173.512	177.849	68.834	5.633	2.336	1.507
	7.513	0.388	97.900	173.335	177.668	68.834	5.631	2.330	1.506
	7.500	0.400	97.808	173.172	177.501	68.834	5.629	2.325	1.505
	7.000	0.900	94.175	166.740	170.908	68.836	5.560	2.136	1.470
	6.500	1.400	90.569	160.356	164.365	68.837	5.486	1.952	1.436
	6.000	1.900	86.990	154.019	157.869	68.838	5.407	1.775	1.403
	5.500	2.400	83.438	147.730	151.423	68.840	5.321	1.606	1.371
	5.000	2.900	79.913	141.488	145.025	68.841	5.228	1.445	1.339
	4.500	3.400	76.415	135.294	138.676	68.842	5.127	1.294	1.309
	4.000	3.900	72.943	129.148	132.376	68.843	5.018	1.153	1.279
	3.500	4.400	69.502	123.055	126.131	68.844	4.898	1.024	1.242
	3.000	4.900	66.102	117.036	119.962	68.846	4.768	0.910	1.188
	2.500	5.400	62.762	111.121	113.899	68.849	4.627	0.812	1.120
	2.000	5.900	58.936	104.348	106.957	68.852	4.452	0.720	3.076
	1.500	6.400	53.480	94.688	97.055	68.856	4.187	0.616	7.551
	1.000	6.900	45.305	80.213	82.219	68.860	3.780	0.507	131.911
	0.500	7.400	22.092	39.114	40.092	68.828	3.570	0.260	409.399

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.034	7.866	1.000	1.771	1.815	68.433	2.829	0.020	249.536
	0.000	7.900	0.000	0.000	0.000	67.150	0.046	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
POOP.C	2.862	0.000	100.000	1079.031	1079.031	11.490	0.000	9.426	0.000
	2.800	0.062	99.387	1072.413	1072.413	11.536	0.000	9.417	5539.852
	2.761	0.100	98.000	1057.450	1057.450	11.542	0.000	9.398	7763.972
	2.759	0.103	97.900	1056.371	1056.371	11.542	0.000	9.396	7763.059
	2.600	0.262	92.107	993.861	993.861	11.557	0.000	9.316	7710.413
	2.400	0.462	84.823	915.262	915.262	11.576	0.000	9.214	7644.954
	2.200	0.662	77.563	836.928	836.928	11.595	0.000	9.112	7577.624
	2.000	0.862	70.329	758.869	758.869	11.616	0.000	9.010	7508.958
	1.800	1.062	63.122	681.106	681.106	11.638	0.000	8.909	7433.029
	1.600	1.262	55.945	603.669	603.669	11.661	0.000	8.807	7351.105
	1.400	1.462	48.801	526.582	526.582	11.686	0.000	8.706	7266.955
	1.200	1.662	41.692	449.872	449.872	11.712	0.000	8.605	7176.343
	1.000	1.862	34.620	373.566	373.566	11.740	0.000	8.503	7083.855
	0.800	2.062	27.590	297.710	297.710	11.769	0.000	8.402	6974.056
	0.600	2.262	20.609	222.372	222.372	11.802	0.000	8.301	6857.936
	0.400	2.462	13.679	147.599	147.599	11.836	0.000	8.201	6730.817
	0.200	2.662	6.808	73.463	73.463	11.872	0.000	8.100	6596.914
	0.029	2.832	1.000	10.790	10.790	11.905	0.000	8.015	6482.891
	0.000	2.862	0.000	0.000	0.000	11.910	0.000	8.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
FORECASTLE.C	2.825	0.000	100.000	218.758	218.758	92.243	0.000	9.563	0.000
	2.800	0.025	98.848	216.237	216.237	92.239	0.000	9.549	1231.759
	2.782	0.043	98.000	214.383	214.383	92.236	0.000	9.538	1221.594
	2.780	0.045	97.900	214.164	214.164	92.235	0.000	9.537	1220.406
	2.600	0.225	89.629	196.070	196.070	92.205	0.000	9.430	1123.272
	2.400	0.425	80.775	176.702	176.702	92.172	0.000	9.312	1022.142
	2.200	0.625	72.282	158.122	158.122	92.139	0.000	9.195	927.949
	2.000	0.825	64.140	140.312	140.312	92.107	0.000	9.080	840.942
	1.800	1.025	56.342	123.252	123.252	92.075	0.000	8.966	760.711
	1.600	1.225	48.877	106.923	106.923	92.043	0.000	8.841	686.753
	1.400	1.425	41.729	91.285	91.285	92.011	0.000	8.732	618.682
	1.200	1.625	34.889	76.321	76.321	91.977	0.000	8.624	556.520
	1.000	1.825	28.351	62.020	62.020	91.941	0.000	8.518	500.638
	0.800	2.025	22.109	48.365	48.365	91.903	0.000	8.413	451.235
	0.600	2.225	16.158	35.347	35.347	91.865	0.000	8.309	406.556
	0.400	2.425	10.501	22.972	22.972	91.831	0.000	8.204	365.586
	0.200	2.625	5.123	11.206	11.206	91.804	0.000	8.037	327.272
	0.040	2.785	1.000	2.188	2.188	91.783	0.000	7.959	298.952
	0.000	2.825	0.000	0.000	0.000	91.778	0.000	8.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
EFP_TK.C	3.500	0.000	100.000	52.141	52.141	90.342	0.000	1.949	0.000
	3.442	0.058	98.000	51.098	51.098	90.342	0.000	1.918	87.398
	3.439	0.061	97.900	51.046	51.046	90.342	0.000	1.916	87.388
	3.400	0.100	96.576	50.356	50.356	90.341	0.000	1.896	87.219
	3.200	0.300	89.745	46.794	46.794	90.340	0.000	1.789	86.335
	3.000	0.500	82.938	43.245	43.245	90.339	0.000	1.681	85.382
	2.800	0.700	76.172	39.717	39.717	90.338	0.000	1.573	83.285
	2.600	0.900	69.466	36.221	36.221	90.337	0.000	1.464	81.116
	2.400	1.100	62.824	32.757	32.757	90.335	0.000	1.354	78.648
	2.200	1.300	56.261	29.335	29.335	90.333	0.000	1.244	75.383
	2.000	1.500	49.808	25.970	25.970	90.331	0.000	1.133	71.383
	1.800	1.700	43.481	22.672	22.672	90.328	0.000	1.021	66.946

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	1.600	1.900	37.314	19.456	19.456	90.325	0.000	0.909	61.448
	1.400	2.100	31.338	16.340	16.340	90.322	0.000	0.796	55.512
	1.200	2.300	25.588	13.342	13.342	90.317	0.000	0.683	48.862
	1.000	2.500	20.117	10.489	10.489	90.312	0.000	0.569	41.386
	0.800	2.700	14.979	7.810	7.810	90.304	0.000	0.455	33.699
	0.600	2.900	10.239	5.339	5.339	90.294	0.000	0.341	25.567
	0.400	3.100	6.016	3.137	3.137	90.278	0.000	0.227	17.127
	0.200	3.300	2.446	1.275	1.275	90.239	0.000	0.115	9.353
	0.102	3.398	1.000	0.521	0.521	90.176	0.000	0.061	5.879
	0.000	3.500	0.000	0.000	0.000	89.732	0.000	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
PUMP_TK.C	8.000	0.000	100.000	426.887	426.887	26.422	-1.300	4.051	0.000
	8.000	0.000	99.999	426.881	426.881	26.422	-1.300	4.051	1434.276
	7.871	0.129	98.000	418.349	418.349	26.426	-1.326	3.972	1434.221
	7.865	0.135	97.900	417.922	417.922	26.426	-1.327	3.968	1434.219
	7.500	0.500	92.241	393.764	393.764	26.440	-1.409	3.741	1434.064
	7.000	1.000	85.515	365.052	365.052	26.446	-1.444	3.464	656.814
	6.500	1.500	79.477	339.279	339.279	26.443	-1.418	3.214	656.593
	6.000	2.000	73.440	313.507	313.507	26.438	-1.388	2.964	656.371
	5.500	2.500	67.403	287.736	287.736	26.433	-1.353	2.714	656.149
	5.000	3.000	61.367	261.968	261.968	26.427	-1.310	2.464	655.473
	4.500	3.500	55.338	236.229	236.229	26.420	-1.259	2.215	647.389
	4.000	4.000	49.322	210.550	210.550	26.411	-1.195	1.966	642.703
	3.500	4.500	43.318	184.917	184.917	26.399	-1.114	1.719	638.142
	3.000	5.000	37.325	159.334	159.334	26.384	-1.009	1.472	636.137
	2.500	5.500	31.338	133.779	133.779	26.363	-0.870	1.228	637.158
	2.000	6.000	25.371	108.304	108.304	26.335	-0.674	0.986	628.522
	1.500	6.500	19.432	82.953	82.953	26.291	-0.377	0.752	625.001
	1.000	7.000	13.256	56.588	56.588	26.237	0.000	0.523	1180.415
	0.500	7.500	6.194	26.443	26.443	26.246	0.000	0.261	977.061
	0.094	7.906	1.000	4.269	4.269	26.269	0.000	0.049	609.786
	0.000	8.000	0.000	0.000	0.000	26.472	0.000	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
O_DIR_T.P	1.100	0.000	100.000	28.701	28.701	26.419	-3.495	0.575	0.000
	1.100	0.000	99.998	28.700	28.700	26.419	-3.495	0.575	138.469
	1.080	0.020	98.000	28.127	28.127	26.419	-3.489	0.564	137.980
	1.079	0.021	97.900	28.098	28.098	26.419	-3.488	0.564	137.956
	1.050	0.050	95.041	27.278	27.278	26.420	-3.480	0.549	137.253
	1.000	0.100	90.102	25.860	25.860	26.420	-3.464	0.523	135.707
	0.950	0.150	85.182	24.448	24.448	26.421	-3.447	0.497	134.146
	0.900	0.200	80.283	23.042	23.042	26.421	-3.430	0.471	132.451
	0.850	0.250	75.408	21.643	21.643	26.422	-3.411	0.444	130.354
	0.800	0.300	70.559	20.251	20.251	26.423	-3.392	0.418	128.152
	0.750	0.350	65.742	18.869	18.869	26.423	-3.371	0.392	125.608
	0.700	0.400	60.958	17.496	17.496	26.424	-3.349	0.366	123.103
	0.650	0.450	56.207	16.132	16.132	26.425	-3.326	0.340	120.637
	0.600	0.500	51.490	14.778	14.778	26.426	-3.301	0.314	118.209
	0.550	0.550	46.806	13.434	13.434	26.426	-3.274	0.287	115.819
	0.500	0.600	42.155	12.099	12.099	26.427	-3.244	0.261	113.128
	0.450	0.650	37.551	10.778	10.778	26.428	-3.211	0.235	109.238
	0.400	0.700	33.001	9.472	9.472	26.430	-3.176	0.209	105.096
	0.350	0.750	28.513	8.183	8.183	26.432	-3.137	0.183	100.705
	0.300	0.800	24.090	6.914	6.914	26.434	-3.093	0.156	96.082
	0.250	0.850	19.745	5.667	5.667	26.437	-3.044	0.130	91.083
	0.200	0.900	15.481	4.443	4.443	26.441	-2.987	0.104	85.743
	0.150	0.950	11.329	3.252	3.252	26.445	-2.920	0.078	79.218
	0.100	1.000	7.300	2.095	2.095	26.447	-2.833	0.052	73.249
	0.050	1.050	3.438	0.987	0.987	26.448	-2.700	0.026	61.146

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
	0.016	1.084	1.000	0.287	0.287	26.465	-2.526	0.009	50.032
	0.000	1.100	0.000	0.000	0.000	26.627	-0.052	0.000	0.000

Tank Name	Sounding m	Ullage m	% Full	Capacity m^3	Capacity tonne	LCG m	TCG m	VCG m	FSM tonne.m
O_DIR_T.S	1.100	0.000	100.000	28.701	28.701	26.419	3.495	0.575	0.000
	1.100	0.000	99.998	28.700	28.700	26.419	3.495	0.575	138.469
	1.080	0.020	98.000	28.127	28.127	26.419	3.489	0.564	137.980
	1.079	0.021	97.900	28.098	28.098	26.419	3.488	0.564	137.956
	1.050	0.050	95.041	27.278	27.278	26.420	3.480	0.549	137.253
	1.000	0.100	90.102	25.860	25.860	26.420	3.464	0.523	135.707
	0.950	0.150	85.182	24.448	24.448	26.421	3.447	0.497	134.146
	0.900	0.200	80.283	23.042	23.042	26.421	3.430	0.471	132.451
	0.850	0.250	75.408	21.643	21.643	26.422	3.411	0.444	130.354
	0.800	0.300	70.559	20.251	20.251	26.423	3.392	0.418	128.152
	0.750	0.350	65.742	18.869	18.869	26.423	3.371	0.392	125.608
	0.700	0.400	60.958	17.496	17.496	26.424	3.349	0.366	123.103
	0.650	0.450	56.207	16.132	16.132	26.425	3.326	0.340	120.637
	0.600	0.500	51.490	14.778	14.778	26.426	3.301	0.314	118.209
	0.550	0.550	46.806	13.434	13.434	26.426	3.274	0.287	115.819
	0.500	0.600	42.155	12.099	12.099	26.427	3.244	0.261	113.128
	0.450	0.650	37.551	10.778	10.778	26.428	3.211	0.235	109.238
	0.400	0.700	33.001	9.472	9.472	26.430	3.176	0.209	105.096
	0.350	0.750	28.513	8.183	8.183	26.432	3.137	0.183	100.705
	0.300	0.800	24.090	6.914	6.914	26.434	3.093	0.156	96.082
	0.250	0.850	19.745	5.667	5.667	26.437	3.044	0.130	91.083
	0.200	0.900	15.481	4.443	4.443	26.441	2.987	0.104	85.743
	0.150	0.950	11.329	3.252	3.252	26.445	2.920	0.078	79.218
	0.100	1.000	7.300	2.095	2.095	26.447	2.833	0.052	73.249
	0.050	1.050	3.438	0.987	0.987	26.448	2.700	0.026	61.146
	0.016	1.084	1.000	0.287	0.287	26.465	2.526	0.009	50.032
	0.000	1.100	0.000	0.000	0.000	26.627	0.052	0.000	0.000

6 NOTE ON TRANSVERSE STABILITY

The stability of a vessel in general is its ability to maintain an upright position or to re-establish this after a disturbance. For the seaworthiness of an undamaged vessel, it is sufficient to investigate the stability in the transverse direction. This depends on the position of two points relative to each other, the center of gravity (G) and the transverse metacentre, M.

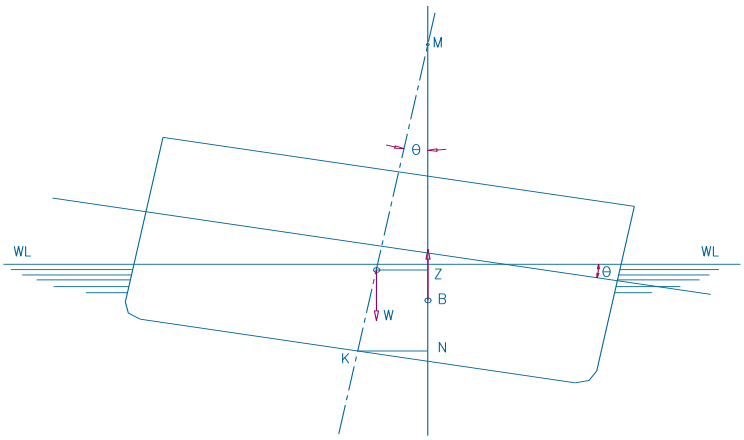
The metacentric height GM, the distance between the points G and M, means the stability for small angles and is given by the following equation:

$$\mathbf{GM = KM_T - KG}$$

The center of gravity (KG) above keel depends on the distribution of cargo in the vessel. By adding the single weights and their moments related to base line and by division of the total moments with the total weights, the center of gravity KG (=VCG) may be obtained. The transverse metacenter (M) above keel (K), only dependent on the lines of the vessel, may be obtained from the hydrostatic tables.

In order to obtain a positive stability (GM > 0) the Centre of gravity must lie below the transverse metacenter (KMT). In the event of critical loading conditions (consumed stores or "iced-up" vessel), this condition can be achieved by filling the double bottom tanks.

The Righting Lever (GZ) At larger angles of heel the righting lever GZ is more important than the initial GM. The GZ is the horizontal distance between the vertical line of action of the weight through its Centre of gravity G and the corresponding vertical line of action of the buoyancy through its Centre B. For positive stability at any angle of heel the line of action of buoyancy must be outboard of the line of action of the weight, (see above figure). To ensure that G remains in the position calculated while the vessel is in motion, all items comprising the vessel's load should be secured against movement; the movement of liquids in tanks will be mentioned later. The calculated position of B will only remain valid if care is taken to maintain the integrity of the hull and superstructures. The closure of all openings in heavy weather is therefore of great importance.



GUIDANCE NOTES FOR CALCULATING A CONDITION OF LOADING DIFFERENT FROM ANY SHOWN IN THIS BOOKLET (REFER EXISTING STABILITY BOOKLET)

All the deadweight of the desired conditions to be summarized and then added to the lightship weight

	Weight Tonnes (1)	VCG (KG) (2)	Vert. Moment. (1) x (2)	LCG (3)	*Long. Moment.* (1) x (3)	F.S.M * (4)
Lightship						
Displacement (△)	Weight Σ (1)	VCG = X/△	X = Σ (1)x(2)	LCG = Y/△	Y = Σ (1)x(3)	Σ (4)

*Note * Minimum FSM to be used 1240 t-m or the actual FSM if greater than of this minimum value*

Displacement = △

KG (Solid) = VCG

KG (Fluid) = VCG – (Total Free surface moment/Displacement)

(Allowable KG values – Refer Page 25); KG (Fluid) ≤ KG (Allowable

7 CALCULATION METHOD FOR INTACT STABILITY

7.1 DRAWING METHOD OF STATICAL STABILITY CURVE

Statical stability curve (righting lever vs. heeling angle) can be obtained by following method.

1. GZ = G'Z - KGo × sine

   Where: GZ: Righting lever

   G'Z: Righting lever when centre of gravity of the ship is assumed on the baseline, obtained from **"CROSS CURVE DATA "**

   KGo = KG + y Ix/ D yIx

   Correction for free surface effect

   D : Displacement, obtained from the result of "5.2 Trim and Stability Calculation"

   KG : Centre of gravity of the whole ship above baseline, obtained from the result of **"5.2 Trim and Stability Calculation"**

2. GZ vs. O are to be calculated using the following calculation table.

No. LOADING CONDITION

D = ------ t KGo = --------- m

Θ	SIN Θ	G'Z	Kgo SIN Θ
10°	0.17365		
20°	0.20791		
30°	0.34202		
50°	0.50000		
60°	0.64278		
70°	0.76604		
80°	0.86603		
90°	0.93969		
90°	0.98481		

3. Plot point (GZ & Θ), GZ in ordinate and Θ in abscissa, and connect these points by fair curve. Thus, the statical stability curve is obtained.

7.2 STABILITY CRITERIA:

Intact Stability Criteria in accordance with IMO RESOLUTION A.749(18) AND MARPOL Annex I regulation 27.

a. The area under the righting lever curve (GZ curve) should not be less than 0.055 meter-radians up to θ = 30° angle of heel and not less than 0.09 meter-radians up to θ = 40° or the angle of down flooding θf footnote if this angle is less than 40°. Additionally, the area under the righting lever curve (GZ curve) between the angles of heel of 30° and 40° or between 30° and θf, if this angle is less than 40°, should not be less than 0.03 meter-radians.
b. b) The righting lever GZ should be at least 0.20 m at an angle of heel equal to or greater than 30°.
c. c) The maximum righting arm should occur at an angle of heel preferably exceeding 30° but not less than 25°.
d. The initial metacentric height GM_o should not be less than 0.15 m.

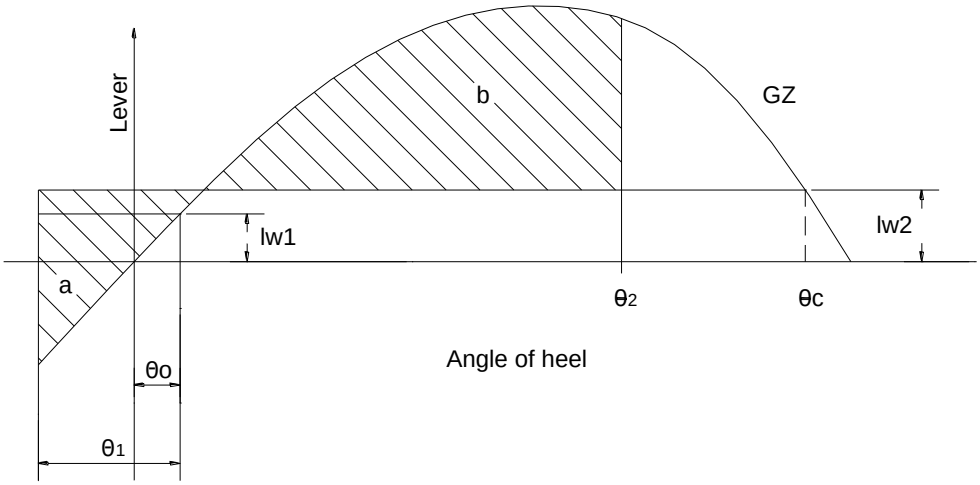
7.3 SEVERE WIND AND ROLLING CRITERION

The following stability criteria are extracts from International Code on Intact Stability,

2008 Chapter 2- 2.3:

2.3.1. The ability of a ship to withstand the combined effects of beam wind and rolling shall be demonstrated, with reference to the figure 1 as follows:

1) The ship is subjected to steady wind pressure acting perpendicular to the ship's centerline, which results in a steady wind heeling lever (Lw_1)
2) 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. *
3) The ship is then subjected to a gust wind pressure which results in a gust wind heeling lever (Lw_2)
4) Under these circumstances, Area "b" should be equal to or greater than Area "a" as indicated in figure below.



The angles in the above figure are defined as follows:

θ_0 = Angle of heel under action of steady wind

θ_1 = Angle of roll to windward due to wave action

θ_2 = Angle of down flooding or 50 or θ_c, whichever is less

Where,

θ_f *Angle of heel at which opening in the hull, superstructure or deckhouses, which can't be closed weather tight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.*

θ_c Angle *of second intercept between wind heeling lever* Lw_2 *and GZ curves.*

2.3.2. The wind heeling levers Lw_1 and Lw_2 referred to the figure are constant values at all angles of inclination and should be calculated as follows

Lw_1 = (P x A x Z) /1000*g* $\triangle$

Lw_2 = 1.5 x Lw_1

Where,

P = 504 Pa, the value of P used for ships in restricted service may be reduced subject to the approval of the Administration

A = Projected lateral area of the portion of the ship and deck cargo above the waterline

Z = Vertical distance from the center of A to the center of the underwater lateral area or approximately to a point at one half the mean draught

△ = Displacement

g = gravitational acceleration, 9.81 m/s^2

2.3.3. Alternative means for determining the wind heeling lever (*lw1)* may be accepted, to the satisfaction of the Administration, as an equivalent to calculation in 2.3.2. When such alternative tests are carried out, reference shall be made based on the Guidelines developed by the Organization [See footnote 1 on page 8], The wind velocity used in the tests shall be 26m/s in full scale with uniform velocity profile. The value of wind velocity used for ships in restricted services may be reduced to the satisfaction of the Administration.

2.3.4. The angle of roll (θ_1) * referred to the above figure should be calculated as follows

θ_1 = 109k. X1. X2 √ (r.s) (degrees)

Where X1 = Factor as shown in the table 1

X2 = Factor as shown in the table 2

k = Factor as follows

k = 1 for round bilged ship having no bilge or keel bar

k = 0.7 for ships having sharp bilges

k = as shown in the table 3 for the ships 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 (+ve, if center of gravity is above the waterline, -ve, if it is below)

d = Mean moulded draught of the ship (m)

s = factor as shown in table 4

Table 1 Values of factor **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	0.90
3.1	0.88
3.2	0.86
3.3	0.84
3.4	0.82
/3.5	0.80

Table 2 Values of factor **X2**	
C_b	X2
≤0.45	0.75
0.50	0.82
0.55	0.89
0.60	0.95
0.65	0.97
/0.70	1.0

Table 3 Values of factor **k**	
$\frac{Ak.100}{L.B}$	k
0	1
1.0	0.98
1.5	0.95
2.0	0.88
2.5	0.79
3.0	0.74
3.5	0.72
/4	0.70

Table 4 Values of factor **s**	
T	S
≤6	0.100
7	0.098
8	0.093
12	0.065
14	0.053
16	0.044
18	0.038
/20	0.035

(Intermediate values in table 1-4 should be obtained by linear interpolation)

Rolling period T = (2.C.B)/√GM Seconds

Where

C = 0.373 + 0.023 x (B/d) – 0.043 x (L/100)

L = Length of ship at waterline (m)

B = Moulded breadth of the ship

D = Mean moulded draught of the ship (m)

C_b = Block Coefficient

A_k = Total overall area of bilge keels, or area of the lateral projection of the bar keel, or sum of these areas (m^2)

GM = Metacentric height corrected for free surface effect (m)

2.3.5. The tables and formulae described in 2.3.4 are based on data from ships having:

1. *B*/*d* smaller than 3.5;

2. (KG/*d* -1) between -0.3 and 0.5; and

3. T smaller than 20*s*.

Footnote 1

Refer to the Interim Guidelines for alternative assessment of the weather criterion (MSC.1/Circ.1200).

Footnote 2

The angle of roll for ships anti-rolling devices should be determined without taking into account the operation of these devices unless the Administration is satisfied with the proof that the devices are effective even with sudden shutdown of their supplied power.

7.4 Method of Evaluation for GZ Curve etc.

a. Refer to "5.2 Trim and Stability Calculation".

Calculate the displacement (D), draught corresponding to the displacement (do), initial metacentric height with correction due to free surface effect (GoM) etc. in actual loading condition.

b. Refer to "5.1 Drawing Method of Statical Stability Curve"

Draw the statical stability curve in actual loading conditions.

c. Refer to "5.2.1 General Stability requirements (A.749(18)).

Fill up "Calculation Form of Stability Criteria (A.749(18)). (1/3)"

Check if the requirements of General Stability Requirements (A.749(18)) are satisfied or not.

d. Refer to "5.2.2 Stability Requirement in Wind and Waves (A.749(18)).

Fill up "Calculation Form of Stability Criteria (A.749(18)) (2/3 and 3/3) ".

Check if the requirements of Stability Requirement in Wind and Waves (A.749(18)) are satisfied or not.

See "7.2 Heeling Lever due to Wind Pressure". Find out the projected lateral area above the waterline (A) and vertical distance (Z) from the centre of (A) to the centre of the underwater lateral area. In case D becomes intermediate, values are to be determined by interpolation.

Calculate Iw and Iw using "Calculation Form of Stability Criteria (A.749(18)) (2/3)" and draw them in the statical stability curve.

(b) Refer to "5.2.2 Stability Requirement in Wind and Waves (A.749(18))"

Find out Θo, Θw, Θc (Ow: Angle of heel under the action of gust).

Find out Θ2, to be taken of whichever is least, down flooding angle, Θc or 50°.

(c) Refer to “5.2.2 Stability Requirement in Wind and Waves (A.749(18))"

Calculate Θ1, using "Calculation Form of Stability Criteria (A.749(I8)) (2/3)" and draw it in the statical stability curve.

(d) Fill up "Calculation Form of Stability Criteria (A.749(18)) (3/3)".

(e) Check if the Stability Requirement in Wind and Waves (A.749(18)) are satisfied or not.

8 STABILITY DATA

8.1 CROSS CURVES

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim zero at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.765s	3.208s	4.596s	5.219s	5.483s	5.533s	5.482s
1100.000	1.641s	3.047s	4.481s	5.148s	5.454s	5.545s	5.541s
1200.000	1.535s	2.897s	4.373s	5.080s	5.427s	5.557s	5.595s
1300.000	1.443s	2.757s	4.270s	5.015s	5.401s	5.569s	5.639s
1400.000	1.362s	2.626s	4.174s	4.954s	5.376s	5.581s	5.674s
1500.000	1.291s	2.505s	4.082s	4.895s	5.352s	5.592s	5.701s
1600.000	1.228s	2.395s	3.995s	4.839s	5.328s	5.604s	5.721s
1700.000	1.172s	2.296s	3.912s	4.785s	5.305s	5.617s	5.737s
1800.000	1.121s	2.206s	3.833s	4.733s	5.284s	5.629s	5.746s
1900.000	1.076s	2.124s	3.757s	4.684s	5.264s	5.636s	5.753s
2000.000	1.034s	2.049s	3.684s	4.637s	5.245s	5.639s	5.756s
2100.000	0.997s	1.981s	3.614s	4.592s	5.226s	5.638s	5.757s
2200.000	0.963s	1.917s	3.547s	4.548s	5.208s	5.634s	5.758s
2300.000	0.932s	1.859s	3.483s	4.507s	5.190s	5.626s	5.763s
2400.000	0.904s	1.805s	3.420s	4.467s	5.173s	5.617s	5.765s
2500.000	0.878s	1.756s	3.360s	4.428s	5.157s	5.608s	5.765s
2600.000	0.854s	1.710s	3.302s	4.391s	5.141s	5.598s	5.763s
2700.000	0.832s	1.668s	3.246s	4.355s	5.125s	5.585s	5.760s
2800.000	0.812s	1.629s	3.192s	4.320s	5.110s	5.571s	5.755s
2900.000	0.793s	1.592s	3.139s	4.287s	5.095s	5.556s	5.749s
3000.000	0.776s	1.558s	3.089s	4.254s	5.079s	5.541s	5.742s
3100.000	0.760s	1.527s	3.040s	4.222s	5.061s	5.525s	5.734s
3200.000	0.746s	1.498s	2.994s	4.191s	5.043s	5.510s	5.726s
3300.000	0.732s	1.471s	2.949s	4.162s	5.023s	5.494s	5.717s
3400.000	0.719s	1.446s	2.907s	4.133s	5.002s	5.479s	5.707s
3500.000	0.708s	1.422s	2.867s	4.106s	4.980s	5.463s	5.697s
3600.000	0.697s	1.401s	2.830s	4.079s	4.958s	5.447s	5.685s
3700.000	0.687s	1.380s	2.794s	4.053s	4.935s	5.430s	5.674s
3800.000	0.677s	1.362s	2.760s	4.028s	4.912s	5.413s	5.661s
3900.000	0.669s	1.344s	2.728s	4.004s	4.889s	5.397s	5.649s
4000.000	0.661s	1.328s	2.697s	3.980s	4.865s	5.381s	5.635s
4100.000	0.653s	1.313s	2.669s	3.957s	4.841s	5.365s	5.622s
4200.000	0.646s	1.299s	2.642s	3.935s	4.816s	5.348s	5.607s
4300.000	0.640s	1.285s	2.616s	3.913s	4.792s	5.331s	5.593s
4400.000	0.634s	1.273s	2.592s	3.891s	4.768s	5.314s	5.578s
4500.000	0.628s	1.262s	2.570s	3.868s	4.744s	5.297s	5.564s
4600.000	0.623s	1.251s	2.549s	3.845s	4.719s	5.279s	5.548s
4700.000	0.618s	1.242s	2.529s	3.821s	4.696s	5.261s	5.533s
4800.000	0.614s	1.233s	2.510s	3.797s	4.672s	5.242s	5.517s
4900.000	0.609s	1.224s	2.493s	3.772s	4.648s	5.224s	5.501s
5000.000	0.606s	1.216s	2.476s	3.748s	4.625s	5.206s	5.485s
5100.000	0.602s	1.209s	2.461s	3.723s	4.603s	5.187s	5.468s
5200.000	0.599s	1.203s	2.447s	3.697s	4.580s	5.168s	5.451s
5300.000	0.596s	1.197s	2.434s	3.672s	4.557s	5.148s	5.435s
5400.000	0.593s	1.191s	2.422s	3.647s	4.535s	5.129s	5.417s
5500.000	0.591s	1.186s	2.410s	3.623s	4.514s	5.109s	5.400s
5600.000	0.588s	1.181s	2.400s	3.598s	4.492s	5.090s	5.383s
5700.000	0.586s	1.177s	2.390s	3.573s	4.471s	5.070s	5.365s
5800.000	0.585s	1.173s	2.381s	3.549s	4.449s	5.050s	5.348s

5900.000	0.583s	1.169s	2.373s	3.526s	4.428s	5.030s	5.330s
6000.000	0.581s	1.166s	2.366s	3.502s	4.407s	5.009s	5.312s
6100.000	0.580s	1.163s	2.359s	3.479s	4.385s	4.989s	5.294s
6200.000	0.579s	1.161s	2.354s	3.457s	4.363s	4.969s	5.276s
6300.000	0.578s	1.158s	2.348s	3.434s	4.342s	4.947s	5.258s
6400.000	0.577s	1.156s	2.343s	3.413s	4.320s	4.927s	5.240s
6500.000	0.576s	1.155s	2.338s	3.391s	4.298s	4.905s	5.222s
6600.000	0.575s	1.153s	2.332s	3.371s	4.276s	4.884s	5.204s
6700.000	0.575s	1.152s	2.325s	3.350s	4.253s	4.862s	5.185s
6800.000	0.574s	1.151s	2.318s	3.331s	4.231s	4.841s	5.167s
6900.000	0.574s	1.150s	2.311s	3.312s	4.208s	4.818s	5.148s
7000.000	0.574s	1.150s	2.303s	3.293s	4.185s	4.796s	5.130s
7100.000	0.573s	1.149s	2.295s	3.275s	4.163s	4.774s	5.111s
7200.000	0.573s	1.149s	2.286s	3.258s	4.140s	4.751s	5.092s
7300.000	0.573s	1.149s	2.277s	3.241s	4.118s	4.729s	5.073s
7400.000	0.574s	1.150s	2.268s	3.225s	4.095s	4.706s	5.054s
7500.000	0.574s	1.150s	2.258s	3.209s	4.073s	4.683s	5.034s
7600.000	0.574s	1.151s	2.248s	3.193s	4.050s	4.660s	5.015s
7700.000	0.574s	1.151s	2.238s	3.179s	4.027s	4.637s	4.996s
7800.000	0.575s	1.152s	2.228s	3.164s	4.005s	4.614s	4.976s
7900.000	0.575s	1.153s	2.218s	3.150s	3.982s	4.590s	4.956s
8000.000	0.576s	1.154s	2.207s	3.135s	3.959s	4.566s	4.936s
8100.000	0.577s	1.156s	2.196s	3.121s	3.937s	4.543s	4.916s
8200.000	0.577s	1.157s	2.185s	3.107s	3.914s	4.519s	4.896s
8300.000	0.578s	1.159s	2.174s	3.094s	3.892s	4.495s	4.876s
8400.000	0.579s	1.160s	2.162s	3.080s	3.869s	4.470s	4.855s
8500.000	0.580s	1.160s	2.151s	3.066s	3.847s	4.446s	4.835s
8600.000	0.581s	1.159s	2.140s	3.051s	3.825s	4.422s	4.814s
8700.000	0.582s	1.157s	2.128s	3.037s	3.803s	4.397s	4.793s
8800.000	0.583s	1.153s	2.117s	3.022s	3.781s	4.373s	4.772s
8900.000	0.584s	1.148s	2.105s	3.008s	3.759s	4.349s	4.751s
9000.000	0.585s	1.141s	2.094s	2.993s	3.738s	4.324s	4.730s
9100.000	0.586s	1.134s	2.083s	2.978s	3.717s	4.300s	4.709s
9200.000	0.588s	1.125s	2.071s	2.963s	3.695s	4.276s	4.688s
9300.000	0.589s	1.116s	2.060s	2.948s	3.674s	4.252s	4.666s
9400.000	0.590s	1.105s	2.049s	2.933s	3.653s	4.228s	4.645s
9500.000	0.589s	1.094s	2.039s	2.917s	3.633s	4.204s	4.623s
9600.000	0.585s	1.081s	2.028s	2.902s	3.612s	4.181s	4.602s
9700.000	0.578s	1.068s	2.018s	2.886s	3.592s	4.158s	4.580s
9800.000	0.570s	1.055s	2.007s	2.870s	3.571s	4.135s	4.559s
9900.000	0.559s	1.040s	1.996s	2.853s	3.551s	4.112s	4.537s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim aft 0.500/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.763s	3.196s	4.581s	5.207s	5.482s	5.542s	5.515s
1100.000	1.640s	3.039s	4.469s	5.139s	5.454s	5.556s	5.572s
1200.000	1.534s	2.892s	4.364s	5.074s	5.428s	5.568s	5.625s
1300.000	1.442s	2.753s	4.263s	5.012s	5.403s	5.580s	5.671s
1400.000	1.361s	2.624s	4.169s	4.951s	5.379s	5.596s	5.708s
1500.000	1.290s	2.505s	4.077s	4.894s	5.356s	5.609s	5.736s
1600.000	1.227s	2.394s	3.992s	4.838s	5.334s	5.620s	5.758s
1700.000	1.171s	2.296s	3.910s	4.786s	5.314s	5.631s	5.775s
1800.000	1.121s	2.206s	3.832s	4.735s	5.293s	5.641s	5.787s
1900.000	1.076s	2.124s	3.756s	4.687s	5.273s	5.648s	5.795s
2000.000	1.035s	2.050s	3.685s	4.641s	5.254s	5.652s	5.800s
2100.000	0.997s	1.981s	3.616s	4.596s	5.235s	5.652s	5.803s
2200.000	0.963s	1.918s	3.549s	4.553s	5.217s	5.652s	5.804s
2300.000	0.932s	1.860s	3.485s	4.512s	5.199s	5.650s	5.804s
2400.000	0.904s	1.806s	3.423s	4.472s	5.182s	5.644s	5.804s
2500.000	0.878s	1.757s	3.364s	4.434s	5.165s	5.636s	5.806s
2600.000	0.854s	1.711s	3.306s	4.397s	5.149s	5.626s	5.804s
2700.000	0.833s	1.669s	3.250s	4.361s	5.135s	5.614s	5.800s
2800.000	0.813s	1.630s	3.196s	4.327s	5.121s	5.601s	5.793s
2900.000	0.794s	1.594s	3.144s	4.293s	5.107s	5.586s	5.785s
3000.000	0.777s	1.561s	3.093s	4.261s	5.091s	5.571s	5.777s
3100.000	0.761s	1.529s	3.046s	4.230s	5.074s	5.555s	5.768s
3200.000	0.747s	1.500s	2.999s	4.200s	5.056s	5.538s	5.758s
3300.000	0.733s	1.473s	2.955s	4.171s	5.037s	5.522s	5.748s
3400.000	0.721s	1.448s	2.913s	4.143s	5.018s	5.506s	5.738s
3500.000	0.709s	1.425s	2.873s	4.115s	4.997s	5.490s	5.727s
3600.000	0.698s	1.404s	2.836s	4.089s	4.975s	5.475s	5.715s
3700.000	0.688s	1.383s	2.800s	4.063s	4.953s	5.458s	5.702s
3800.000	0.679s	1.365s	2.766s	4.038s	4.931s	5.442s	5.689s
3900.000	0.670s	1.347s	2.735s	4.014s	4.908s	5.424s	5.675s
4000.000	0.662s	1.331s	2.704s	3.990s	4.884s	5.406s	5.660s
4100.000	0.655s	1.316s	2.676s	3.968s	4.861s	5.389s	5.646s
4200.000	0.648s	1.302s	2.649s	3.945s	4.837s	5.373s	5.631s
4300.000	0.642s	1.289s	2.624s	3.924s	4.813s	5.356s	5.615s
4400.000	0.636s	1.277s	2.600s	3.902s	4.789s	5.338s	5.600s
4500.000	0.630s	1.266s	2.578s	3.880s	4.765s	5.321s	5.584s
4600.000	0.625s	1.255s	2.557s	3.857s	4.742s	5.303s	5.568s
4700.000	0.620s	1.246s	2.537s	3.834s	4.718s	5.285s	5.552s
4800.000	0.616s	1.237s	2.518s	3.811s	4.694s	5.266s	5.535s
4900.000	0.612s	1.229s	2.501s	3.787s	4.671s	5.247s	5.519s
5000.000	0.608s	1.221s	2.485s	3.762s	4.648s	5.228s	5.502s
5100.000	0.605s	1.214s	2.469s	3.738s	4.626s	5.209s	5.485s
5200.000	0.601s	1.207s	2.455s	3.713s	4.603s	5.191s	5.468s
5300.000	0.598s	1.201s	2.442s	3.689s	4.581s	5.171s	5.450s
5400.000	0.596s	1.196s	2.430s	3.664s	4.560s	5.151s	5.433s
5500.000	0.593s	1.191s	2.419s	3.640s	4.538s	5.130s	5.415s
5600.000	0.591s	1.186s	2.408s	3.616s	4.516s	5.110s	5.398s
5700.000	0.589s	1.182s	2.399s	3.592s	4.495s	5.090s	5.380s
5800.000	0.587s	1.178s	2.390s	3.568s	4.474s	5.069s	5.362s
5900.000	0.585s	1.174s	2.382s	3.545s	4.452s	5.049s	5.344s
6000.000	0.584s	1.171s	2.374s	3.522s	4.431s	5.028s	5.326s
6100.000	0.582s	1.168s	2.368s	3.499s	4.409s	5.007s	5.308s
6200.000	0.581s	1.165s	2.362s	3.477s	4.388s	4.986s	5.290s

6300.000	0.580s	1.163s	2.356s	3.455s	4.366s	4.965s	5.271s
6400.000	0.579s	1.161s	2.351s	3.434s	4.344s	4.944s	5.253s
6500.000	0.578s	1.159s	2.346s	3.413s	4.321s	4.922s	5.235s
6600.000	0.577s	1.158s	2.340s	3.392s	4.299s	4.901s	5.216s
6700.000	0.577s	1.156s	2.334s	3.372s	4.276s	4.879s	5.198s
6800.000	0.576s	1.155s	2.328s	3.352s	4.253s	4.857s	5.179s
6900.000	0.576s	1.154s	2.321s	3.333s	4.230s	4.835s	5.161s
7000.000	0.575s	1.154s	2.314s	3.314s	4.207s	4.813s	5.142s
7100.000	0.575s	1.153s	2.306s	3.296s	4.184s	4.790s	5.123s
7200.000	0.575s	1.153s	2.298s	3.279s	4.161s	4.767s	5.104s
7300.000	0.575s	1.153s	2.290s	3.262s	4.138s	4.744s	5.085s
7400.000	0.575s	1.153s	2.281s	3.245s	4.114s	4.721s	5.066s
7500.000	0.575s	1.153s	2.272s	3.230s	4.091s	4.698s	5.047s
7600.000	0.576s	1.154s	2.263s	3.214s	4.068s	4.675s	5.028s
7700.000	0.576s	1.154s	2.253s	3.199s	4.045s	4.652s	5.008s
7800.000	0.576s	1.155s	2.243s	3.184s	4.022s	4.628s	4.989s
7900.000	0.577s	1.156s	2.233s	3.170s	3.999s	4.604s	4.969s
8000.000	0.577s	1.157s	2.222s	3.155s	3.976s	4.580s	4.949s
8100.000	0.578s	1.158s	2.212s	3.141s	3.953s	4.556s	4.929s
8200.000	0.579s	1.160s	2.201s	3.127s	3.930s	4.532s	4.909s
8300.000	0.580s	1.161s	2.190s	3.113s	3.907s	4.508s	4.889s
8400.000	0.580s	1.162s	2.179s	3.098s	3.884s	4.484s	4.868s
8500.000	0.581s	1.163s	2.168s	3.084s	3.861s	4.459s	4.848s
8600.000	0.582s	1.163s	2.157s	3.070s	3.839s	4.435s	4.827s
8700.000	0.583s	1.161s	2.145s	3.055s	3.816s	4.410s	4.807s
8800.000	0.584s	1.158s	2.134s	3.040s	3.794s	4.386s	4.786s
8900.000	0.585s	1.154s	2.123s	3.025s	3.772s	4.361s	4.765s
9000.000	0.586s	1.149s	2.111s	3.010s	3.750s	4.337s	4.744s
9100.000	0.587s	1.143s	2.100s	2.994s	3.729s	4.313s	4.723s
9200.000	0.589s	1.135s	2.089s	2.979s	3.707s	4.288s	4.701s
9300.000	0.590s	1.127s	2.077s	2.963s	3.686s	4.264s	4.680s
9400.000	0.590s	1.117s	2.066s	2.947s	3.665s	4.240s	4.659s
9500.000	0.590s	1.107s	2.056s	2.931s	3.644s	4.217s	4.637s
9600.000	0.588s	1.095s	2.045s	2.915s	3.623s	4.193s	4.616s
9700.000	0.583s	1.083s	2.035s	2.899s	3.603s	4.170s	4.594s
9800.000	0.577s	1.070s	2.024s	2.882s	3.582s	4.147s	4.573s
9900.000	0.568s	1.056s	2.013s	2.865s	3.562s	4.124s	4.552s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim aft 1.000/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.755s	3.163s	4.530s	5.164s	5.461s	5.551s	5.565s
1100.000	1.633s	3.013s	4.429s	5.103s	5.437s	5.568s	5.617s
1200.000	1.530s	2.871s	4.332s	5.044s	5.415s	5.582s	5.662s
1300.000	1.439s	2.738s	4.238s	4.987s	5.393s	5.596s	5.703s
1400.000	1.359s	2.613s	4.148s	4.932s	5.372s	5.608s	5.739s
1500.000	1.288s	2.498s	4.062s	4.879s	5.352s	5.619s	5.769s
1600.000	1.226s	2.392s	3.979s	4.828s	5.333s	5.630s	5.792s
1700.000	1.170s	2.294s	3.900s	4.778s	5.313s	5.639s	5.811s
1800.000	1.120s	2.205s	3.824s	4.730s	5.294s	5.648s	5.826s
1900.000	1.075s	2.124s	3.751s	4.684s	5.275s	5.658s	5.838s
2000.000	1.035s	2.049s	3.681s	4.639s	5.257s	5.666s	5.846s
2100.000	0.997s	1.981s	3.612s	4.596s	5.238s	5.671s	5.851s
2200.000	0.964s	1.918s	3.548s	4.555s	5.221s	5.672s	5.854s
2300.000	0.933s	1.861s	3.485s	4.515s	5.204s	5.670s	5.853s
2400.000	0.905s	1.807s	3.424s	4.475s	5.188s	5.666s	5.849s
2500.000	0.879s	1.758s	3.366s	4.437s	5.174s	5.659s	5.843s
2600.000	0.855s	1.713s	3.308s	4.401s	5.159s	5.651s	5.839s
2700.000	0.834s	1.671s	3.253s	4.366s	5.145s	5.640s	5.836s
2800.000	0.814s	1.632s	3.200s	4.332s	5.131s	5.628s	5.830s
2900.000	0.795s	1.597s	3.148s	4.300s	5.117s	5.614s	5.822s
3000.000	0.778s	1.563s	3.099s	4.268s	5.102s	5.600s	5.812s
3100.000	0.763s	1.532s	3.051s	4.238s	5.086s	5.584s	5.802s
3200.000	0.748s	1.504s	3.005s	4.208s	5.069s	5.568s	5.791s
3300.000	0.735s	1.477s	2.961s	4.179s	5.051s	5.551s	5.779s
3400.000	0.722s	1.452s	2.920s	4.152s	5.032s	5.535s	5.767s
3500.000	0.711s	1.429s	2.880s	4.125s	5.012s	5.518s	5.755s
3600.000	0.700s	1.408s	2.843s	4.099s	4.992s	5.502s	5.742s
3700.000	0.690s	1.388s	2.808s	4.073s	4.971s	5.486s	5.729s
3800.000	0.681s	1.369s	2.774s	4.049s	4.949s	5.470s	5.714s
3900.000	0.673s	1.352s	2.743s	4.025s	4.927s	5.452s	5.699s
4000.000	0.665s	1.336s	2.713s	4.001s	4.904s	5.435s	5.684s
4100.000	0.657s	1.321s	2.685s	3.979s	4.881s	5.416s	5.669s
4200.000	0.650s	1.307s	2.658s	3.957s	4.858s	5.398s	5.653s
4300.000	0.644s	1.294s	2.633s	3.935s	4.835s	5.380s	5.636s
4400.000	0.638s	1.282s	2.609s	3.914s	4.812s	5.363s	5.620s
4500.000	0.633s	1.271s	2.587s	3.892s	4.788s	5.345s	5.603s
4600.000	0.628s	1.261s	2.566s	3.870s	4.765s	5.327s	5.587s
4700.000	0.623s	1.251s	2.546s	3.847s	4.742s	5.309s	5.570s
4800.000	0.619s	1.242s	2.528s	3.824s	4.719s	5.290s	5.552s
4900.000	0.615s	1.234s	2.511s	3.801s	4.696s	5.271s	5.536s
5000.000	0.611s	1.227s	2.495s	3.778s	4.673s	5.251s	5.518s
5100.000	0.607s	1.219s	2.479s	3.754s	4.651s	5.231s	5.501s
5200.000	0.604s	1.213s	2.465s	3.730s	4.629s	5.212s	5.483s
5300.000	0.601s	1.207s	2.452s	3.706s	4.607s	5.192s	5.466s
5400.000	0.599s	1.201s	2.440s	3.682s	4.586s	5.172s	5.448s
5500.000	0.596s	1.196s	2.429s	3.659s	4.564s	5.151s	5.430s
5600.000	0.594s	1.191s	2.418s	3.635s	4.543s	5.130s	5.412s
5700.000	0.592s	1.187s	2.409s	3.612s	4.521s	5.109s	5.394s
5800.000	0.590s	1.183s	2.400s	3.589s	4.499s	5.088s	5.376s
5900.000	0.588s	1.180s	2.392s	3.566s	4.477s	5.067s	5.357s
6000.000	0.587s	1.176s	2.384s	3.543s	4.456s	5.046s	5.339s
6100.000	0.585s	1.173s	2.378s	3.521s	4.434s	5.025s	5.321s
6200.000	0.584s	1.171s	2.371s	3.499s	4.412s	5.003s	5.302s
6300.000	0.583s	1.168s	2.366s	3.477s	4.390s	4.982s	5.284s

6400.000	0.582s	1.166s	2.360s	3.456s	4.367s	4.960s	5.266s
6500.000	0.581s	1.164s	2.355s	3.435s	4.345s	4.938s	5.247s
6600.000	0.580s	1.163s	2.350s	3.415s	4.322s	4.917s	5.228s
6700.000	0.579s	1.161s	2.344s	3.395s	4.299s	4.895s	5.210s
6800.000	0.579s	1.160s	2.338s	3.375s	4.276s	4.873s	5.191s
6900.000	0.578s	1.159s	2.332s	3.356s	4.252s	4.850s	5.172s
7000.000	0.578s	1.158s	2.325s	3.338s	4.228s	4.828s	5.154s
7100.000	0.578s	1.158s	2.318s	3.320s	4.205s	4.805s	5.135s
7200.000	0.577s	1.157s	2.310s	3.302s	4.181s	4.782s	5.116s
7300.000	0.577s	1.157s	2.302s	3.285s	4.157s	4.759s	5.097s
7400.000	0.577s	1.157s	2.294s	3.268s	4.133s	4.736s	5.077s
7500.000	0.578s	1.158s	2.285s	3.252s	4.109s	4.712s	5.058s
7600.000	0.578s	1.158s	2.277s	3.236s	4.085s	4.688s	5.039s
7700.000	0.578s	1.158s	2.267s	3.221s	4.061s	4.664s	5.019s
7800.000	0.578s	1.159s	2.258s	3.206s	4.037s	4.640s	5.000s
7900.000	0.579s	1.160s	2.248s	3.191s	4.014s	4.616s	4.980s
8000.000	0.579s	1.161s	2.238s	3.176s	3.990s	4.592s	4.960s
8100.000	0.580s	1.162s	2.228s	3.161s	3.967s	4.568s	4.940s
8200.000	0.580s	1.163s	2.217s	3.146s	3.943s	4.544s	4.920s
8300.000	0.581s	1.164s	2.207s	3.131s	3.920s	4.519s	4.900s
8400.000	0.582s	1.165s	2.196s	3.116s	3.897s	4.495s	4.879s
8500.000	0.583s	1.165s	2.185s	3.101s	3.874s	4.470s	4.859s
8600.000	0.584s	1.165s	2.174s	3.086s	3.851s	4.445s	4.838s
8700.000	0.584s	1.164s	2.163s	3.071s	3.828s	4.421s	4.818s
8800.000	0.585s	1.162s	2.152s	3.056s	3.806s	4.396s	4.797s
8900.000	0.586s	1.159s	2.140s	3.040s	3.783s	4.372s	4.776s
9000.000	0.587s	1.155s	2.129s	3.024s	3.761s	4.347s	4.755s
9100.000	0.589s	1.150s	2.118s	3.008s	3.739s	4.323s	4.734s
9200.000	0.590s	1.143s	2.106s	2.992s	3.717s	4.298s	4.713s
9300.000	0.590s	1.136s	2.095s	2.976s	3.696s	4.274s	4.691s
9400.000	0.590s	1.127s	2.084s	2.960s	3.674s	4.250s	4.670s
9500.000	0.590s	1.118s	2.073s	2.943s	3.653s	4.226s	4.649s
9600.000	0.588s	1.108s	2.062s	2.926s	3.632s	4.203s	4.627s
9700.000	0.585s	1.096s	2.052s	2.909s	3.611s	4.179s	4.606s
9800.000	0.580s	1.084s	2.041s	2.892s	3.591s	4.156s	4.585s
9900.000	0.573s	1.072s	2.029s	2.875s	3.570s	4.134s	4.564s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim aft 1.500/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.740s	3.098s	4.448s	5.093s	5.423s	5.561s	5.623s
1100.000	1.623s	2.965s	4.361s	5.044s	5.408s	5.577s	5.666s
1200.000	1.521s	2.835s	4.276s	4.995s	5.391s	5.590s	5.706s
1300.000	1.433s	2.710s	4.193s	4.946s	5.374s	5.602s	5.743s
1400.000	1.354s	2.594s	4.112s	4.899s	5.357s	5.613s	5.776s
1500.000	1.285s	2.485s	4.032s	4.852s	5.340s	5.627s	5.805s
1600.000	1.224s	2.382s	3.955s	4.806s	5.322s	5.641s	5.831s
1700.000	1.169s	2.288s	3.881s	4.761s	5.304s	5.654s	5.853s
1800.000	1.119s	2.201s	3.808s	4.717s	5.287s	5.664s	5.870s
1900.000	1.075s	2.121s	3.738s	4.674s	5.270s	5.672s	5.884s
2000.000	1.034s	2.048s	3.671s	4.632s	5.254s	5.680s	5.893s
2100.000	0.998s	1.981s	3.606s	4.591s	5.238s	5.685s	5.898s
2200.000	0.964s	1.918s	3.542s	4.551s	5.224s	5.688s	5.899s
2300.000	0.934s	1.861s	3.481s	4.513s	5.209s	5.687s	5.897s
2400.000	0.906s	1.809s	3.423s	4.475s	5.195s	5.684s	5.893s
2500.000	0.880s	1.760s	3.365s	4.439s	5.181s	5.679s	5.887s
2600.000	0.857s	1.715s	3.309s	4.404s	5.167s	5.672s	5.878s
2700.000	0.836s	1.674s	3.255s	4.370s	5.154s	5.663s	5.870s
2800.000	0.816s	1.636s	3.203s	4.337s	5.140s	5.652s	5.863s
2900.000	0.797s	1.600s	3.152s	4.306s	5.126s	5.640s	5.856s
3000.000	0.781s	1.567s	3.104s	4.275s	5.112s	5.627s	5.847s
3100.000	0.765s	1.537s	3.057s	4.246s	5.097s	5.613s	5.835s
3200.000	0.750s	1.508s	3.011s	4.217s	5.081s	5.597s	5.823s
3300.000	0.737s	1.482s	2.969s	4.189s	5.064s	5.582s	5.810s
3400.000	0.725s	1.457s	2.928s	4.161s	5.046s	5.565s	5.796s
3500.000	0.713s	1.434s	2.889s	4.135s	5.027s	5.548s	5.782s
3600.000	0.703s	1.413s	2.852s	4.109s	5.008s	5.531s	5.768s
3700.000	0.693s	1.393s	2.817s	4.084s	4.988s	5.514s	5.753s
3800.000	0.684s	1.374s	2.784s	4.060s	4.967s	5.497s	5.738s
3900.000	0.675s	1.357s	2.753s	4.036s	4.946s	5.480s	5.723s
4000.000	0.667s	1.341s	2.723s	4.013s	4.924s	5.463s	5.707s
4100.000	0.660s	1.327s	2.695s	3.991s	4.903s	5.444s	5.690s
4200.000	0.653s	1.313s	2.669s	3.969s	4.880s	5.426s	5.674s
4300.000	0.647s	1.300s	2.644s	3.947s	4.858s	5.407s	5.657s
4400.000	0.641s	1.288s	2.620s	3.926s	4.835s	5.387s	5.639s
4500.000	0.636s	1.277s	2.598s	3.904s	4.813s	5.369s	5.622s
4600.000	0.631s	1.267s	2.577s	3.883s	4.790s	5.350s	5.605s
4700.000	0.626s	1.257s	2.558s	3.861s	4.768s	5.332s	5.587s
4800.000	0.622s	1.249s	2.539s	3.838s	4.745s	5.312s	5.569s
4900.000	0.618s	1.240s	2.522s	3.816s	4.723s	5.293s	5.552s
5000.000	0.614s	1.233s	2.506s	3.793s	4.701s	5.274s	5.534s
5100.000	0.611s	1.226s	2.491s	3.770s	4.679s	5.253s	5.516s
5200.000	0.608s	1.219s	2.477s	3.747s	4.657s	5.233s	5.498s
5300.000	0.605s	1.213s	2.464s	3.724s	4.635s	5.212s	5.480s
5400.000	0.602s	1.208s	2.452s	3.701s	4.613s	5.192s	5.462s
5500.000	0.599s	1.203s	2.440s	3.678s	4.591s	5.171s	5.444s
5600.000	0.597s	1.198s	2.430s	3.655s	4.569s	5.150s	5.425s
5700.000	0.595s	1.193s	2.420s	3.633s	4.548s	5.129s	5.407s
5800.000	0.593s	1.189s	2.411s	3.610s	4.526s	5.107s	5.389s
5900.000	0.591s	1.186s	2.403s	3.588s	4.504s	5.085s	5.370s
6000.000	0.590s	1.182s	2.396s	3.566s	4.481s	5.064s	5.352s
6100.000	0.588s	1.179s	2.389s	3.544s	4.459s	5.042s	5.333s
6200.000	0.587s	1.177s	2.383s	3.522s	4.436s	5.020s	5.315s
6300.000	0.586s	1.174s	2.377s	3.501s	4.414s	4.998s	5.296s

6400.000	0.585s	1.172s	2.371s	3.480s	4.391s	4.976s	5.277s
6500.000	0.584s	1.170s	2.365s	3.460s	4.367s	4.954s	5.259s
6600.000	0.583s	1.168s	2.360s	3.439s	4.344s	4.932s	5.240s
6700.000	0.582s	1.167s	2.354s	3.420s	4.320s	4.909s	5.221s
6800.000	0.581s	1.166s	2.348s	3.400s	4.296s	4.887s	5.202s
6900.000	0.581s	1.165s	2.342s	3.381s	4.272s	4.864s	5.183s
7000.000	0.581s	1.164s	2.336s	3.363s	4.248s	4.841s	5.164s
7100.000	0.580s	1.163s	2.329s	3.344s	4.224s	4.818s	5.145s
7200.000	0.580s	1.163s	2.322s	3.327s	4.199s	4.795s	5.126s
7300.000	0.580s	1.162s	2.314s	3.309s	4.175s	4.772s	5.106s
7400.000	0.580s	1.162s	2.307s	3.292s	4.150s	4.748s	5.087s
7500.000	0.580s	1.162s	2.299s	3.276s	4.126s	4.724s	5.068s
7600.000	0.580s	1.163s	2.290s	3.259s	4.101s	4.700s	5.048s
7700.000	0.580s	1.163s	2.281s	3.243s	4.076s	4.676s	5.029s
7800.000	0.581s	1.163s	2.272s	3.227s	4.052s	4.652s	5.009s
7900.000	0.581s	1.164s	2.263s	3.211s	4.028s	4.627s	4.989s
8000.000	0.581s	1.165s	2.253s	3.196s	4.003s	4.603s	4.969s
8100.000	0.582s	1.166s	2.243s	3.180s	3.979s	4.578s	4.949s
8200.000	0.582s	1.167s	2.233s	3.164s	3.955s	4.553s	4.929s
8300.000	0.583s	1.167s	2.223s	3.148s	3.932s	4.529s	4.909s
8400.000	0.584s	1.168s	2.213s	3.133s	3.908s	4.504s	4.888s
8500.000	0.585s	1.168s	2.202s	3.117s	3.884s	4.479s	4.868s
8600.000	0.585s	1.167s	2.191s	3.101s	3.861s	4.454s	4.847s
8700.000	0.586s	1.166s	2.180s	3.085s	3.838s	4.429s	4.827s
8800.000	0.587s	1.164s	2.169s	3.069s	3.815s	4.404s	4.806s
8900.000	0.588s	1.162s	2.158s	3.053s	3.792s	4.380s	4.785s
9000.000	0.589s	1.158s	2.147s	3.037s	3.770s	4.355s	4.764s
9100.000	0.590s	1.154s	2.136s	3.020s	3.747s	4.330s	4.743s
9200.000	0.591s	1.149s	2.125s	3.004s	3.725s	4.306s	4.722s
9300.000	0.591s	1.143s	2.114s	2.987s	3.703s	4.282s	4.700s
9400.000	0.590s	1.135s	2.103s	2.970s	3.681s	4.258s	4.679s
9500.000	0.589s	1.127s	2.092s	2.953s	3.660s	4.234s	4.658s
9600.000	0.587s	1.118s	2.080s	2.935s	3.638s	4.210s	4.636s
9700.000	0.584s	1.108s	2.068s	2.918s	3.617s	4.186s	4.615s
9800.000	0.580s	1.097s	2.056s	2.900s	3.596s	4.163s	4.594s
9900.000	0.574s	1.085s	2.044s	2.882s	3.575s	4.140s	4.573s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim aft 2.000/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.710s	3.004s	4.338s	5.003s	5.374s	5.562s	5.695s
1100.000	1.607s	2.890s	4.271s	4.970s	5.367s	5.582s	5.729s
1200.000	1.509s	2.779s	4.202s	4.932s	5.357s	5.600s	5.762s
1300.000	1.423s	2.669s	4.131s	4.894s	5.345s	5.616s	5.795s
1400.000	1.348s	2.564s	4.060s	4.855s	5.332s	5.631s	5.825s
1500.000	1.280s	2.462s	3.990s	4.815s	5.318s	5.645s	5.853s
1600.000	1.220s	2.367s	3.920s	4.775s	5.304s	5.657s	5.878s
1700.000	1.166s	2.278s	3.852s	4.736s	5.291s	5.669s	5.898s
1800.000	1.118s	2.194s	3.785s	4.697s	5.277s	5.679s	5.915s
1900.000	1.074s	2.117s	3.720s	4.658s	5.264s	5.687s	5.927s
2000.000	1.034s	2.046s	3.656s	4.619s	5.251s	5.693s	5.935s
2100.000	0.998s	1.979s	3.594s	4.581s	5.238s	5.697s	5.940s
2200.000	0.965s	1.918s	3.534s	4.544s	5.225s	5.701s	5.941s
2300.000	0.935s	1.862s	3.475s	4.509s	5.212s	5.702s	5.940s
2400.000	0.907s	1.810s	3.418s	4.473s	5.200s	5.701s	5.935s
2500.000	0.882s	1.763s	3.362s	4.440s	5.187s	5.697s	5.929s
2600.000	0.859s	1.719s	3.308s	4.406s	5.175s	5.691s	5.920s
2700.000	0.838s	1.678s	3.255s	4.374s	5.162s	5.684s	5.909s
2800.000	0.818s	1.640s	3.205s	4.342s	5.149s	5.676s	5.897s
2900.000	0.800s	1.605s	3.155s	4.312s	5.135s	5.665s	5.886s
3000.000	0.783s	1.572s	3.109s	4.282s	5.121s	5.654s	5.877s
3100.000	0.767s	1.541s	3.063s	4.253s	5.107s	5.641s	5.866s
3200.000	0.753s	1.513s	3.019s	4.225s	5.092s	5.627s	5.853s
3300.000	0.740s	1.487s	2.977s	4.198s	5.076s	5.612s	5.838s
3400.000	0.728s	1.463s	2.937s	4.171s	5.059s	5.596s	5.823s
3500.000	0.716s	1.440s	2.899s	4.145s	5.042s	5.579s	5.808s
3600.000	0.706s	1.419s	2.862s	4.120s	5.024s	5.562s	5.792s
3700.000	0.696s	1.399s	2.828s	4.096s	5.005s	5.544s	5.776s
3800.000	0.687s	1.381s	2.795s	4.072s	4.985s	5.526s	5.760s
3900.000	0.679s	1.364s	2.764s	4.049s	4.965s	5.508s	5.744s
4000.000	0.671s	1.348s	2.735s	4.026s	4.945s	5.490s	5.728s
4100.000	0.664s	1.333s	2.707s	4.004s	4.924s	5.472s	5.711s
4200.000	0.657s	1.320s	2.681s	3.982s	4.903s	5.453s	5.693s
4300.000	0.651s	1.307s	2.656s	3.961s	4.882s	5.434s	5.676s
4400.000	0.645s	1.295s	2.633s	3.939s	4.860s	5.414s	5.658s
4500.000	0.639s	1.284s	2.611s	3.918s	4.839s	5.393s	5.640s
4600.000	0.635s	1.274s	2.590s	3.896s	4.817s	5.373s	5.622s
4700.000	0.630s	1.265s	2.570s	3.875s	4.795s	5.354s	5.604s
4800.000	0.626s	1.256s	2.552s	3.853s	4.773s	5.334s	5.586s
4900.000	0.622s	1.248s	2.535s	3.831s	4.752s	5.314s	5.567s
5000.000	0.618s	1.240s	2.519s	3.809s	4.730s	5.294s	5.549s
5100.000	0.614s	1.233s	2.504s	3.787s	4.708s	5.274s	5.531s
5200.000	0.611s	1.226s	2.490s	3.765s	4.686s	5.253s	5.512s
5300.000	0.608s	1.220s	2.477s	3.743s	4.664s	5.232s	5.494s
5400.000	0.606s	1.215s	2.465s	3.721s	4.642s	5.211s	5.475s
5500.000	0.603s	1.210s	2.453s	3.698s	4.620s	5.190s	5.457s
5600.000	0.601s	1.205s	2.443s	3.676s	4.597s	5.168s	5.438s
5700.000	0.598s	1.200s	2.433s	3.654s	4.575s	5.147s	5.420s
5800.000	0.596s	1.196s	2.424s	3.633s	4.552s	5.125s	5.401s
5900.000	0.595s	1.193s	2.416s	3.611s	4.530s	5.104s	5.383s
6000.000	0.593s	1.189s	2.409s	3.589s	4.507s	5.081s	5.364s
6100.000	0.592s	1.186s	2.402s	3.568s	4.483s	5.059s	5.345s
6200.000	0.590s	1.183s	2.395s	3.547s	4.460s	5.036s	5.326s
6300.000	0.589s	1.181s	2.389s	3.526s	4.437s	5.014s	5.308s

6400.000	0.588s	1.179s	2.382s	3.505s	4.413s	4.991s	5.288s
6500.000	0.587s	1.177s	2.377s	3.485s	4.389s	4.968s	5.269s
6600.000	0.586s	1.175s	2.371s	3.465s	4.365s	4.946s	5.250s
6700.000	0.585s	1.173s	2.365s	3.445s	4.340s	4.923s	5.231s
6800.000	0.585s	1.172s	2.359s	3.426s	4.316s	4.900s	5.212s
6900.000	0.584s	1.171s	2.353s	3.407s	4.291s	4.877s	5.193s
7000.000	0.584s	1.170s	2.347s	3.389s	4.266s	4.853s	5.174s
7100.000	0.583s	1.169s	2.340s	3.370s	4.241s	4.830s	5.154s
7200.000	0.583s	1.168s	2.333s	3.353s	4.216s	4.806s	5.135s
7300.000	0.583s	1.168s	2.326s	3.335s	4.191s	4.782s	5.115s
7400.000	0.583s	1.168s	2.319s	3.318s	4.166s	4.759s	5.096s
7500.000	0.583s	1.168s	2.311s	3.300s	4.141s	4.735s	5.076s
7600.000	0.583s	1.168s	2.303s	3.283s	4.116s	4.711s	5.056s
7700.000	0.583s	1.168s	2.295s	3.266s	4.091s	4.686s	5.037s
7800.000	0.583s	1.168s	2.287s	3.249s	4.066s	4.662s	5.017s
7900.000	0.583s	1.169s	2.278s	3.232s	4.041s	4.637s	4.997s
8000.000	0.584s	1.170s	2.269s	3.215s	4.016s	4.612s	4.977s
8100.000	0.584s	1.170s	2.259s	3.198s	3.991s	4.587s	4.957s
8200.000	0.585s	1.171s	2.249s	3.181s	3.966s	4.562s	4.936s
8300.000	0.585s	1.171s	2.239s	3.165s	3.942s	4.537s	4.916s
8400.000	0.586s	1.171s	2.229s	3.148s	3.918s	4.511s	4.896s
8500.000	0.587s	1.170s	2.219s	3.131s	3.894s	4.486s	4.875s
8600.000	0.587s	1.170s	2.209s	3.114s	3.870s	4.461s	4.854s
8700.000	0.588s	1.168s	2.198s	3.098s	3.846s	4.436s	4.833s
8800.000	0.589s	1.167s	2.187s	3.081s	3.823s	4.411s	4.813s
8900.000	0.590s	1.164s	2.177s	3.064s	3.799s	4.386s	4.792s
9000.000	0.591s	1.161s	2.166s	3.047s	3.776s	4.361s	4.771s
9100.000	0.591s	1.157s	2.155s	3.030s	3.754s	4.336s	4.749s
9200.000	0.591s	1.153s	2.144s	3.012s	3.731s	4.311s	4.728s
9300.000	0.591s	1.147s	2.133s	2.995s	3.709s	4.287s	4.707s
9400.000	0.590s	1.141s	2.121s	2.977s	3.687s	4.262s	4.686s
9500.000	0.589s	1.134s	2.109s	2.960s	3.665s	4.238s	4.664s
9600.000	0.586s	1.126s	2.097s	2.942s	3.643s	4.215s	4.643s
9700.000	0.583s	1.117s	2.084s	2.924s	3.621s	4.191s	4.622s
9800.000	0.579s	1.108s	2.071s	2.905s	3.600s	4.168s	4.600s
9900.000	0.574s	1.097s	2.057s	2.887s	3.578s	4.145s	4.579s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim aft 2.500/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.652s	2.885s	4.214s	4.906s	5.316s	5.582s	5.784s
1100.000	1.569s	2.795s	4.165s	4.886s	5.316s	5.600s	5.810s
1200.000	1.488s	2.703s	4.111s	4.861s	5.314s	5.617s	5.836s
1300.000	1.410s	2.610s	4.055s	4.833s	5.310s	5.633s	5.860s
1400.000	1.338s	2.519s	3.996s	4.802s	5.304s	5.648s	5.885s
1500.000	1.273s	2.431s	3.936s	4.771s	5.296s	5.661s	5.907s
1600.000	1.215s	2.344s	3.875s	4.737s	5.287s	5.673s	5.927s
1700.000	1.163s	2.262s	3.815s	4.703s	5.278s	5.683s	5.944s
1800.000	1.115s	2.184s	3.755s	4.669s	5.268s	5.692s	5.958s
1900.000	1.072s	2.110s	3.695s	4.635s	5.257s	5.700s	5.968s
2000.000	1.033s	2.042s	3.636s	4.602s	5.247s	5.706s	5.976s
2100.000	0.998s	1.977s	3.578s	4.569s	5.236s	5.711s	5.980s
2200.000	0.966s	1.918s	3.521s	4.536s	5.225s	5.714s	5.981s
2300.000	0.936s	1.863s	3.465s	4.503s	5.215s	5.716s	5.979s
2400.000	0.909s	1.812s	3.410s	4.470s	5.204s	5.716s	5.974s
2500.000	0.884s	1.765s	3.357s	4.438s	5.192s	5.714s	5.967s
2600.000	0.861s	1.722s	3.305s	4.407s	5.181s	5.711s	5.957s
2700.000	0.840s	1.682s	3.255s	4.377s	5.169s	5.705s	5.946s
2800.000	0.820s	1.644s	3.206s	4.347s	5.156s	5.698s	5.933s
2900.000	0.803s	1.609s	3.159s	4.317s	5.144s	5.690s	5.918s
3000.000	0.786s	1.577s	3.113s	4.289s	5.131s	5.680s	5.903s
3100.000	0.771s	1.547s	3.069s	4.261s	5.117s	5.669s	5.891s
3200.000	0.756s	1.519s	3.027s	4.234s	5.103s	5.656s	5.878s
3300.000	0.743s	1.493s	2.986s	4.207s	5.088s	5.642s	5.864s
3400.000	0.731s	1.469s	2.947s	4.182s	5.073s	5.626s	5.848s
3500.000	0.720s	1.447s	2.909s	4.156s	5.057s	5.610s	5.832s
3600.000	0.710s	1.426s	2.873s	4.132s	5.040s	5.592s	5.815s
3700.000	0.700s	1.406s	2.839s	4.108s	5.022s	5.574s	5.798s
3800.000	0.691s	1.388s	2.807s	4.085s	5.004s	5.555s	5.781s
3900.000	0.683s	1.372s	2.777s	4.062s	4.985s	5.536s	5.764s
4000.000	0.675s	1.356s	2.748s	4.040s	4.966s	5.517s	5.747s
4100.000	0.668s	1.341s	2.720s	4.018s	4.947s	5.497s	5.729s
4200.000	0.661s	1.328s	2.694s	3.996s	4.927s	5.478s	5.712s
4300.000	0.655s	1.315s	2.670s	3.975s	4.907s	5.459s	5.694s
4400.000	0.649s	1.303s	2.646s	3.953s	4.886s	5.439s	5.676s
4500.000	0.644s	1.293s	2.625s	3.932s	4.865s	5.418s	5.657s
4600.000	0.639s	1.282s	2.604s	3.911s	4.845s	5.397s	5.639s
4700.000	0.634s	1.273s	2.585s	3.890s	4.824s	5.376s	5.620s
4800.000	0.630s	1.264s	2.567s	3.869s	4.803s	5.355s	5.601s
4900.000	0.626s	1.256s	2.550s	3.847s	4.781s	5.335s	5.582s
5000.000	0.622s	1.248s	2.534s	3.826s	4.760s	5.314s	5.564s
5100.000	0.619s	1.241s	2.519s	3.805s	4.738s	5.293s	5.545s
5200.000	0.615s	1.234s	2.505s	3.783s	4.716s	5.272s	5.526s
5300.000	0.612s	1.228s	2.492s	3.762s	4.694s	5.251s	5.507s
5400.000	0.610s	1.223s	2.480s	3.740s	4.671s	5.230s	5.488s
5500.000	0.607s	1.217s	2.468s	3.719s	4.648s	5.208s	5.469s
5600.000	0.605s	1.213s	2.458s	3.698s	4.625s	5.186s	5.451s
5700.000	0.602s	1.208s	2.448s	3.676s	4.602s	5.164s	5.432s
5800.000	0.600s	1.204s	2.439s	3.655s	4.579s	5.142s	5.413s
5900.000	0.598s	1.200s	2.431s	3.634s	4.555s	5.120s	5.394s
6000.000	0.597s	1.197s	2.423s	3.613s	4.531s	5.097s	5.375s
6100.000	0.595s	1.193s	2.416s	3.592s	4.507s	5.075s	5.356s
6200.000	0.594s	1.191s	2.408s	3.571s	4.483s	5.052s	5.337s
6300.000	0.593s	1.188s	2.402s	3.551s	4.459s	5.029s	5.318s

6400.000	0.591s	1.186s	2.395s	3.531s	4.434s	5.005s	5.299s
6500.000	0.590s	1.184s	2.389s	3.511s	4.409s	4.982s	5.279s
6600.000	0.589s	1.182s	2.383s	3.491s	4.384s	4.959s	5.260s
6700.000	0.589s	1.180s	2.377s	3.472s	4.359s	4.935s	5.241s
6800.000	0.588s	1.179s	2.370s	3.453s	4.334s	4.912s	5.221s
6900.000	0.587s	1.177s	2.364s	3.434s	4.308s	4.888s	5.202s
7000.000	0.587s	1.176s	2.358s	3.416s	4.283s	4.864s	5.182s
7100.000	0.586s	1.175s	2.351s	3.397s	4.257s	4.841s	5.162s
7200.000	0.586s	1.175s	2.345s	3.379s	4.232s	4.816s	5.143s
7300.000	0.586s	1.174s	2.338s	3.361s	4.206s	4.792s	5.123s
7400.000	0.586s	1.174s	2.331s	3.343s	4.180s	4.768s	5.103s
7500.000	0.586s	1.174s	2.324s	3.325s	4.154s	4.743s	5.083s
7600.000	0.586s	1.174s	2.316s	3.306s	4.129s	4.719s	5.063s
7700.000	0.586s	1.174s	2.308s	3.288s	4.103s	4.694s	5.043s
7800.000	0.586s	1.174s	2.300s	3.270s	4.078s	4.669s	5.023s
7900.000	0.586s	1.174s	2.292s	3.252s	4.052s	4.644s	5.003s
8000.000	0.587s	1.175s	2.283s	3.234s	4.027s	4.619s	4.983s
8100.000	0.587s	1.175s	2.274s	3.216s	4.001s	4.594s	4.962s
8200.000	0.587s	1.175s	2.265s	3.198s	3.976s	4.569s	4.942s
8300.000	0.588s	1.175s	2.255s	3.180s	3.951s	4.543s	4.921s
8400.000	0.588s	1.174s	2.246s	3.162s	3.926s	4.518s	4.901s
8500.000	0.589s	1.174s	2.236s	3.144s	3.901s	4.492s	4.880s
8600.000	0.590s	1.172s	2.226s	3.127s	3.877s	4.466s	4.859s
8700.000	0.590s	1.171s	2.216s	3.109s	3.853s	4.441s	4.838s
8800.000	0.591s	1.169s	2.205s	3.091s	3.829s	4.415s	4.817s
8900.000	0.592s	1.167s	2.195s	3.073s	3.805s	4.390s	4.796s
9000.000	0.592s	1.164s	2.184s	3.055s	3.781s	4.365s	4.775s
9100.000	0.592s	1.160s	2.173s	3.037s	3.758s	4.340s	4.754s
9200.000	0.592s	1.156s	2.162s	3.019s	3.735s	4.315s	4.733s
9300.000	0.591s	1.151s	2.150s	3.001s	3.712s	4.290s	4.711s
9400.000	0.590s	1.146s	2.138s	2.983s	3.690s	4.266s	4.690s
9500.000	0.588s	1.139s	2.125s	2.965s	3.667s	4.241s	4.669s
9600.000	0.586s	1.132s	2.112s	2.946s	3.645s	4.217s	4.647s
9700.000	0.582s	1.125s	2.098s	2.927s	3.623s	4.193s	4.626s
9800.000	0.578s	1.116s	2.083s	2.909s	3.601s	4.170s	4.604s
9900.000	0.574s	1.107s	2.068s	2.889s	3.580s	4.147s	4.583s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim aft 3.000/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.580s	2.764s	4.093s	4.813s	5.265s	5.599s	5.876s
1100.000	1.513s	2.689s	4.055s	4.801s	5.273s	5.618s	5.895s
1200.000	1.447s	2.613s	4.014s	4.785s	5.277s	5.635s	5.915s
1300.000	1.384s	2.537s	3.970s	4.766s	5.278s	5.651s	5.932s
1400.000	1.323s	2.461s	3.922s	4.744s	5.278s	5.665s	5.949s
1500.000	1.263s	2.384s	3.873s	4.720s	5.275s	5.678s	5.965s
1600.000	1.209s	2.310s	3.822s	4.694s	5.271s	5.689s	5.980s
1700.000	1.158s	2.238s	3.770s	4.668s	5.265s	5.699s	5.993s
1800.000	1.112s	2.167s	3.716s	4.640s	5.258s	5.707s	6.003s
1900.000	1.070s	2.099s	3.663s	4.611s	5.251s	5.714s	6.010s
2000.000	1.032s	2.034s	3.610s	4.582s	5.243s	5.721s	6.015s
2100.000	0.998s	1.974s	3.557s	4.553s	5.234s	5.726s	6.017s
2200.000	0.966s	1.917s	3.504s	4.523s	5.225s	5.729s	6.016s
2300.000	0.937s	1.863s	3.452s	4.494s	5.216s	5.731s	6.013s
2400.000	0.911s	1.813s	3.401s	4.465s	5.206s	5.732s	6.007s
2500.000	0.886s	1.768s	3.350s	4.436s	5.197s	5.732s	5.999s
2600.000	0.863s	1.726s	3.302s	4.407s	5.186s	5.730s	5.989s
2700.000	0.843s	1.686s	3.254s	4.378s	5.176s	5.727s	5.977s
2800.000	0.823s	1.649s	3.207s	4.350s	5.164s	5.722s	5.963s
2900.000	0.806s	1.615s	3.162s	4.322s	5.153s	5.715s	5.948s
3000.000	0.789s	1.583s	3.118s	4.295s	5.140s	5.706s	5.932s
3100.000	0.774s	1.554s	3.076s	4.269s	5.128s	5.696s	5.915s
3200.000	0.760s	1.526s	3.034s	4.243s	5.115s	5.684s	5.899s
3300.000	0.747s	1.501s	2.995s	4.217s	5.101s	5.670s	5.885s
3400.000	0.735s	1.477s	2.957s	4.192s	5.087s	5.655s	5.870s
3500.000	0.724s	1.455s	2.920s	4.168s	5.072s	5.639s	5.854s
3600.000	0.714s	1.434s	2.885s	4.144s	5.056s	5.621s	5.837s
3700.000	0.704s	1.415s	2.852s	4.121s	5.040s	5.603s	5.819s
3800.000	0.695s	1.397s	2.820s	4.098s	5.023s	5.584s	5.801s
3900.000	0.687s	1.380s	2.790s	4.076s	5.006s	5.564s	5.783s
4000.000	0.679s	1.365s	2.762s	4.054s	4.988s	5.544s	5.764s
4100.000	0.672s	1.350s	2.735s	4.033s	4.970s	5.523s	5.746s
4200.000	0.666s	1.337s	2.709s	4.011s	4.951s	5.503s	5.728s
4300.000	0.660s	1.324s	2.685s	3.990s	4.932s	5.482s	5.710s
4400.000	0.654s	1.313s	2.662s	3.969s	4.913s	5.462s	5.692s
4500.000	0.648s	1.302s	2.640s	3.948s	4.893s	5.442s	5.673s
4600.000	0.643s	1.291s	2.620s	3.927s	4.873s	5.421s	5.654s
4700.000	0.639s	1.282s	2.601s	3.906s	4.853s	5.399s	5.635s
4800.000	0.634s	1.273s	2.583s	3.885s	4.832s	5.377s	5.616s
4900.000	0.630s	1.265s	2.566s	3.865s	4.811s	5.355s	5.597s
5000.000	0.627s	1.257s	2.550s	3.844s	4.790s	5.333s	5.578s
5100.000	0.623s	1.250s	2.535s	3.823s	4.768s	5.312s	5.558s
5200.000	0.620s	1.243s	2.521s	3.802s	4.745s	5.290s	5.539s
5300.000	0.617s	1.237s	2.508s	3.782s	4.723s	5.269s	5.520s
5400.000	0.614s	1.231s	2.496s	3.761s	4.700s	5.247s	5.501s
5500.000	0.611s	1.226s	2.485s	3.740s	4.676s	5.225s	5.481s
5600.000	0.609s	1.221s	2.474s	3.719s	4.652s	5.203s	5.462s
5700.000	0.607s	1.216s	2.464s	3.698s	4.628s	5.180s	5.443s
5800.000	0.605s	1.212s	2.455s	3.678s	4.604s	5.158s	5.424s
5900.000	0.603s	1.208s	2.446s	3.657s	4.579s	5.135s	5.404s
6000.000	0.601s	1.205s	2.438s	3.637s	4.555s	5.112s	5.385s
6100.000	0.599s	1.202s	2.430s	3.616s	4.530s	5.089s	5.366s
6200.000	0.598s	1.199s	2.423s	3.596s	4.505s	5.065s	5.346s
6300.000	0.596s	1.196s	2.416s	3.576s	4.479s	5.042s	5.327s

6400.000	0.595s	1.193s	2.409s	3.557s	4.454s	5.019s	5.308s
6500.000	0.594s	1.191s	2.402s	3.537s	4.428s	4.995s	5.288s
6600.000	0.593s	1.189s	2.396s	3.518s	4.403s	4.971s	5.269s
6700.000	0.592s	1.187s	2.389s	3.499s	4.377s	4.947s	5.249s
6800.000	0.592s	1.186s	2.383s	3.480s	4.350s	4.923s	5.229s
6900.000	0.591s	1.185s	2.376s	3.461s	4.324s	4.898s	5.209s
7000.000	0.590s	1.183s	2.370s	3.442s	4.298s	4.874s	5.190s
7100.000	0.590s	1.182s	2.363s	3.424s	4.272s	4.850s	5.170s
7200.000	0.590s	1.182s	2.357s	3.405s	4.246s	4.825s	5.150s
7300.000	0.589s	1.181s	2.350s	3.386s	4.219s	4.800s	5.130s
7400.000	0.589s	1.181s	2.343s	3.367s	4.193s	4.776s	5.109s
7500.000	0.589s	1.180s	2.336s	3.348s	4.167s	4.751s	5.089s
7600.000	0.589s	1.180s	2.329s	3.328s	4.141s	4.726s	5.069s
7700.000	0.589s	1.180s	2.321s	3.309s	4.114s	4.701s	5.049s
7800.000	0.589s	1.180s	2.313s	3.290s	4.088s	4.675s	5.028s
7900.000	0.589s	1.180s	2.305s	3.271s	4.062s	4.650s	5.008s
8000.000	0.589s	1.180s	2.297s	3.252s	4.036s	4.625s	4.987s
8100.000	0.590s	1.180s	2.289s	3.233s	4.010s	4.599s	4.967s
8200.000	0.590s	1.180s	2.280s	3.214s	3.985s	4.573s	4.946s
8300.000	0.590s	1.179s	2.271s	3.195s	3.959s	4.548s	4.925s
8400.000	0.591s	1.178s	2.262s	3.176s	3.934s	4.522s	4.904s
8500.000	0.591s	1.177s	2.252s	3.157s	3.908s	4.496s	4.884s
8600.000	0.592s	1.176s	2.243s	3.138s	3.883s	4.471s	4.863s
8700.000	0.593s	1.174s	2.233s	3.119s	3.858s	4.445s	4.842s
8800.000	0.593s	1.172s	2.223s	3.100s	3.833s	4.419s	4.820s
8900.000	0.594s	1.169s	2.212s	3.081s	3.809s	4.393s	4.799s
9000.000	0.594s	1.166s	2.201s	3.063s	3.785s	4.367s	4.778s
9100.000	0.593s	1.162s	2.190s	3.044s	3.761s	4.342s	4.756s
9200.000	0.593s	1.158s	2.178s	3.025s	3.738s	4.316s	4.735s
9300.000	0.591s	1.154s	2.165s	3.006s	3.714s	4.291s	4.714s
9400.000	0.590s	1.149s	2.152s	2.987s	3.691s	4.267s	4.692s
9500.000	0.588s	1.143s	2.138s	2.967s	3.668s	4.242s	4.671s
9600.000	0.585s	1.137s	2.124s	2.948s	3.645s	4.218s	4.649s
9700.000	0.582s	1.130s	2.109s	2.929s	3.623s	4.194s	4.628s
9800.000	0.578s	1.123s	2.093s	2.909s	3.601s	4.170s	4.606s
9900.000	0.573s	1.115s	2.077s	2.890s	3.579s	4.147s	4.585s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim fwd 0.500/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.760s	3.194s	4.575s	5.196s	5.463s	5.515s	5.474s
1100.000	1.638s	3.035s	4.464s	5.127s	5.435s	5.529s	5.529s
1200.000	1.533s	2.887s	4.359s	5.061s	5.409s	5.543s	5.570s
1300.000	1.441s	2.749s	4.259s	4.998s	5.383s	5.555s	5.608s
1400.000	1.361s	2.621s	4.164s	4.938s	5.359s	5.566s	5.639s
1500.000	1.290s	2.502s	4.074s	4.881s	5.335s	5.578s	5.663s
1600.000	1.227s	2.393s	3.988s	4.826s	5.312s	5.589s	5.681s
1700.000	1.171s	2.294s	3.905s	4.774s	5.291s	5.599s	5.694s
1800.000	1.121s	2.204s	3.826s	4.723s	5.270s	5.606s	5.703s
1900.000	1.075s	2.123s	3.751s	4.674s	5.249s	5.614s	5.709s
2000.000	1.034s	2.048s	3.678s	4.628s	5.230s	5.618s	5.714s
2100.000	0.997s	1.979s	3.608s	4.583s	5.211s	5.617s	5.720s
2200.000	0.963s	1.916s	3.541s	4.539s	5.194s	5.611s	5.724s
2300.000	0.932s	1.858s	3.477s	4.498s	5.177s	5.603s	5.726s
2400.000	0.903s	1.805s	3.414s	4.458s	5.161s	5.593s	5.725s
2500.000	0.877s	1.755s	3.354s	4.420s	5.145s	5.581s	5.724s
2600.000	0.854s	1.709s	3.296s	4.383s	5.130s	5.567s	5.722s
2700.000	0.832s	1.667s	3.240s	4.347s	5.115s	5.552s	5.719s
2800.000	0.811s	1.627s	3.186s	4.312s	5.099s	5.539s	5.716s
2900.000	0.793s	1.591s	3.133s	4.278s	5.083s	5.526s	5.712s
3000.000	0.776s	1.557s	3.083s	4.246s	5.065s	5.511s	5.707s
3100.000	0.760s	1.526s	3.035s	4.214s	5.046s	5.496s	5.701s
3200.000	0.745s	1.496s	2.988s	4.184s	5.027s	5.482s	5.694s
3300.000	0.731s	1.469s	2.944s	4.154s	5.006s	5.467s	5.685s
3400.000	0.719s	1.444s	2.902s	4.125s	4.985s	5.452s	5.676s
3500.000	0.707s	1.421s	2.862s	4.097s	4.963s	5.435s	5.666s
3600.000	0.696s	1.399s	2.824s	4.070s	4.940s	5.419s	5.655s
3700.000	0.686s	1.378s	2.788s	4.044s	4.917s	5.402s	5.645s
3800.000	0.676s	1.359s	2.754s	4.019s	4.893s	5.387s	5.633s
3900.000	0.668s	1.342s	2.722s	3.995s	4.869s	5.372s	5.621s
4000.000	0.659s	1.325s	2.692s	3.971s	4.845s	5.356s	5.609s
4100.000	0.652s	1.310s	2.663s	3.948s	4.821s	5.340s	5.596s
4200.000	0.645s	1.296s	2.636s	3.925s	4.796s	5.324s	5.583s
4300.000	0.638s	1.283s	2.610s	3.902s	4.772s	5.307s	5.570s
4400.000	0.632s	1.270s	2.586s	3.879s	4.747s	5.290s	5.556s
4500.000	0.626s	1.259s	2.563s	3.856s	4.723s	5.272s	5.542s
4600.000	0.621s	1.248s	2.542s	3.832s	4.699s	5.255s	5.528s
4700.000	0.616s	1.238s	2.522s	3.808s	4.675s	5.237s	5.513s
4800.000	0.612s	1.229s	2.503s	3.783s	4.651s	5.219s	5.498s
4900.000	0.608s	1.221s	2.486s	3.758s	4.628s	5.201s	5.482s
5000.000	0.604s	1.213s	2.470s	3.733s	4.604s	5.182s	5.467s
5100.000	0.600s	1.206s	2.454s	3.707s	4.581s	5.164s	5.451s
5200.000	0.597s	1.199s	2.440s	3.682s	4.558s	5.145s	5.434s
5300.000	0.594s	1.193s	2.427s	3.656s	4.536s	5.126s	5.418s
5400.000	0.591s	1.187s	2.415s	3.631s	4.514s	5.107s	5.401s
5500.000	0.589s	1.182s	2.403s	3.606s	4.492s	5.088s	5.384s
5600.000	0.586s	1.177s	2.393s	3.581s	4.470s	5.069s	5.367s
5700.000	0.584s	1.173s	2.383s	3.556s	4.448s	5.050s	5.350s
5800.000	0.582s	1.169s	2.375s	3.532s	4.426s	5.030s	5.333s
5900.000	0.581s	1.165s	2.367s	3.508s	4.405s	5.010s	5.315s
6000.000	0.579s	1.162s	2.359s	3.484s	4.383s	4.990s	5.298s
6100.000	0.578s	1.159s	2.353s	3.461s	4.362s	4.970s	5.280s
6200.000	0.577s	1.157s	2.347s	3.438s	4.340s	4.950s	5.262s
6300.000	0.576s	1.155s	2.341s	3.415s	4.318s	4.930s	5.245s

6400.000	0.575s	1.153s	2.335s	3.393s	4.296s	4.909s	5.227s
6500.000	0.574s	1.151s	2.329s	3.372s	4.274s	4.888s	5.209s
6600.000	0.573s	1.150s	2.323s	3.351s	4.252s	4.866s	5.190s
6700.000	0.573s	1.148s	2.315s	3.331s	4.230s	4.845s	5.172s
6800.000	0.572s	1.148s	2.308s	3.311s	4.208s	4.823s	5.153s
6900.000	0.572s	1.147s	2.300s	3.292s	4.186s	4.801s	5.135s
7000.000	0.572s	1.146s	2.292s	3.274s	4.163s	4.779s	5.116s
7100.000	0.572s	1.146s	2.283s	3.256s	4.141s	4.757s	5.097s
7200.000	0.572s	1.146s	2.274s	3.239s	4.119s	4.735s	5.078s
7300.000	0.572s	1.146s	2.264s	3.222s	4.097s	4.712s	5.059s
7400.000	0.572s	1.147s	2.255s	3.205s	4.075s	4.690s	5.040s
7500.000	0.572s	1.147s	2.245s	3.189s	4.053s	4.667s	5.020s
7600.000	0.573s	1.148s	2.235s	3.174s	4.031s	4.644s	5.001s
7700.000	0.573s	1.149s	2.224s	3.159s	4.008s	4.621s	4.981s
7800.000	0.574s	1.150s	2.213s	3.144s	3.986s	4.598s	4.962s
7900.000	0.574s	1.151s	2.203s	3.130s	3.964s	4.574s	4.942s
8000.000	0.575s	1.152s	2.191s	3.115s	3.941s	4.551s	4.922s
8100.000	0.575s	1.153s	2.180s	3.101s	3.919s	4.527s	4.902s
8200.000	0.576s	1.155s	2.169s	3.087s	3.897s	4.503s	4.881s
8300.000	0.577s	1.156s	2.158s	3.073s	3.875s	4.479s	4.861s
8400.000	0.578s	1.156s	2.146s	3.059s	3.852s	4.455s	4.840s
8500.000	0.579s	1.155s	2.135s	3.045s	3.831s	4.431s	4.820s
8600.000	0.580s	1.153s	2.123s	3.031s	3.809s	4.406s	4.799s
8700.000	0.581s	1.150s	2.111s	3.017s	3.787s	4.382s	4.778s
8800.000	0.582s	1.145s	2.100s	3.003s	3.766s	4.358s	4.757s
8900.000	0.583s	1.139s	2.089s	2.989s	3.744s	4.333s	4.735s
9000.000	0.584s	1.132s	2.077s	2.974s	3.723s	4.309s	4.714s
9100.000	0.586s	1.123s	2.066s	2.960s	3.702s	4.285s	4.693s
9200.000	0.587s	1.114s	2.055s	2.946s	3.681s	4.261s	4.671s
9300.000	0.587s	1.103s	2.044s	2.931s	3.660s	4.237s	4.650s
9400.000	0.586s	1.092s	2.033s	2.916s	3.639s	4.213s	4.628s
9500.000	0.583s	1.080s	2.022s	2.901s	3.619s	4.189s	4.606s
9600.000	0.577s	1.066s	2.011s	2.885s	3.598s	4.165s	4.585s
9700.000	0.569s	1.053s	2.000s	2.870s	3.577s	4.142s	4.563s
9800.000	0.558s	1.038s	1.989s	2.854s	3.557s	4.119s	4.541s
9900.000	0.545s	1.023s	1.978s	2.837s	3.536s	4.097s	4.520s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim fwd 1.000/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.751s	3.153s	4.519s	5.139s	5.420s	5.493s	5.458s
1100.000	1.631s	3.004s	4.418s	5.078s	5.397s	5.507s	5.505s
1200.000	1.527s	2.863s	4.321s	5.019s	5.374s	5.521s	5.547s
1300.000	1.437s	2.731s	4.228s	4.962s	5.350s	5.535s	5.582s
1400.000	1.358s	2.607s	4.138s	4.906s	5.329s	5.548s	5.604s
1500.000	1.288s	2.492s	4.051s	4.853s	5.308s	5.560s	5.623s
1600.000	1.226s	2.386s	3.968s	4.801s	5.287s	5.570s	5.638s
1700.000	1.170s	2.289s	3.888s	4.751s	5.267s	5.578s	5.649s
1800.000	1.120s	2.200s	3.812s	4.703s	5.247s	5.584s	5.661s
1900.000	1.075s	2.120s	3.738s	4.657s	5.229s	5.587s	5.673s
2000.000	1.034s	2.045s	3.666s	4.612s	5.211s	5.586s	5.680s
2100.000	0.997s	1.977s	3.597s	4.569s	5.193s	5.584s	5.685s
2200.000	0.963s	1.915s	3.531s	4.526s	5.176s	5.582s	5.688s
2300.000	0.932s	1.857s	3.467s	4.486s	5.160s	5.575s	5.688s
2400.000	0.903s	1.803s	3.406s	4.446s	5.145s	5.564s	5.687s
2500.000	0.877s	1.754s	3.346s	4.408s	5.131s	5.552s	5.685s
2600.000	0.854s	1.708s	3.288s	4.372s	5.116s	5.539s	5.683s
2700.000	0.832s	1.666s	3.233s	4.336s	5.101s	5.524s	5.681s
2800.000	0.811s	1.627s	3.179s	4.302s	5.085s	5.509s	5.678s
2900.000	0.793s	1.590s	3.127s	4.269s	5.068s	5.494s	5.675s
3000.000	0.776s	1.556s	3.077s	4.237s	5.050s	5.481s	5.671s
3100.000	0.760s	1.525s	3.029s	4.205s	5.031s	5.468s	5.665s
3200.000	0.745s	1.496s	2.983s	4.175s	5.010s	5.454s	5.660s
3300.000	0.731s	1.468s	2.939s	4.146s	4.989s	5.439s	5.652s
3400.000	0.718s	1.443s	2.897s	4.117s	4.967s	5.423s	5.644s
3500.000	0.707s	1.419s	2.858s	4.089s	4.944s	5.407s	5.635s
3600.000	0.696s	1.398s	2.820s	4.062s	4.922s	5.392s	5.626s
3700.000	0.685s	1.377s	2.784s	4.036s	4.898s	5.377s	5.615s
3800.000	0.676s	1.358s	2.750s	4.010s	4.874s	5.362s	5.605s
3900.000	0.667s	1.340s	2.718s	3.986s	4.850s	5.347s	5.594s
4000.000	0.659s	1.324s	2.687s	3.962s	4.826s	5.331s	5.583s
4100.000	0.651s	1.308s	2.659s	3.938s	4.801s	5.316s	5.571s
4200.000	0.644s	1.294s	2.631s	3.915s	4.777s	5.300s	5.559s
4300.000	0.637s	1.281s	2.605s	3.892s	4.752s	5.283s	5.546s
4400.000	0.631s	1.268s	2.581s	3.868s	4.728s	5.266s	5.533s
4500.000	0.625s	1.257s	2.559s	3.844s	4.703s	5.249s	5.520s
4600.000	0.620s	1.246s	2.537s	3.820s	4.679s	5.232s	5.506s
4700.000	0.615s	1.236s	2.517s	3.795s	4.656s	5.214s	5.492s
4800.000	0.611s	1.227s	2.498s	3.770s	4.632s	5.196s	5.477s
4900.000	0.606s	1.218s	2.481s	3.744s	4.608s	5.178s	5.462s
5000.000	0.602s	1.210s	2.464s	3.719s	4.585s	5.160s	5.447s
5100.000	0.599s	1.203s	2.449s	3.693s	4.562s	5.141s	5.432s
5200.000	0.595s	1.196s	2.435s	3.667s	4.539s	5.123s	5.416s
5300.000	0.592s	1.190s	2.422s	3.641s	4.516s	5.105s	5.400s
5400.000	0.590s	1.184s	2.409s	3.616s	4.494s	5.086s	5.384s
5500.000	0.587s	1.179s	2.398s	3.590s	4.471s	5.067s	5.368s
5600.000	0.585s	1.174s	2.388s	3.565s	4.449s	5.048s	5.351s
5700.000	0.583s	1.170s	2.378s	3.540s	4.427s	5.029s	5.334s
5800.000	0.581s	1.166s	2.369s	3.515s	4.405s	5.010s	5.317s
5900.000	0.579s	1.162s	2.361s	3.491s	4.383s	4.991s	5.300s
6000.000	0.577s	1.159s	2.354s	3.467s	4.361s	4.971s	5.283s
6100.000	0.576s	1.156s	2.347s	3.444s	4.339s	4.951s	5.266s
6200.000	0.575s	1.154s	2.341s	3.421s	4.317s	4.931s	5.248s
6300.000	0.574s	1.151s	2.334s	3.398s	4.295s	4.910s	5.230s

6400.000	0.573s	1.150s	2.327s	3.376s	4.273s	4.889s	5.212s
6500.000	0.572s	1.148s	2.321s	3.355s	4.251s	4.868s	5.194s
6600.000	0.572s	1.147s	2.313s	3.334s	4.229s	4.847s	5.176s
6700.000	0.571s	1.146s	2.306s	3.314s	4.207s	4.826s	5.158s
6800.000	0.571s	1.145s	2.298s	3.294s	4.185s	4.804s	5.139s
6900.000	0.571s	1.144s	2.289s	3.275s	4.163s	4.783s	5.120s
7000.000	0.571s	1.144s	2.281s	3.257s	4.141s	4.761s	5.101s
7100.000	0.571s	1.144s	2.271s	3.239s	4.119s	4.739s	5.082s
7200.000	0.571s	1.144s	2.262s	3.221s	4.097s	4.717s	5.063s
7300.000	0.571s	1.144s	2.252s	3.204s	4.076s	4.694s	5.044s
7400.000	0.571s	1.144s	2.242s	3.187s	4.054s	4.672s	5.025s
7500.000	0.571s	1.145s	2.231s	3.171s	4.032s	4.649s	5.005s
7600.000	0.572s	1.146s	2.221s	3.156s	4.010s	4.626s	4.985s
7700.000	0.572s	1.147s	2.210s	3.140s	3.988s	4.603s	4.966s
7800.000	0.573s	1.148s	2.199s	3.125s	3.966s	4.580s	4.946s
7900.000	0.573s	1.149s	2.188s	3.110s	3.943s	4.557s	4.926s
8000.000	0.574s	1.150s	2.177s	3.095s	3.921s	4.533s	4.905s
8100.000	0.575s	1.151s	2.165s	3.081s	3.899s	4.509s	4.885s
8200.000	0.575s	1.152s	2.154s	3.067s	3.878s	4.485s	4.864s
8300.000	0.576s	1.151s	2.142s	3.052s	3.856s	4.461s	4.844s
8400.000	0.577s	1.151s	2.131s	3.038s	3.834s	4.437s	4.823s
8500.000	0.578s	1.149s	2.119s	3.024s	3.812s	4.413s	4.802s
8600.000	0.579s	1.145s	2.107s	3.010s	3.791s	4.388s	4.781s
8700.000	0.580s	1.141s	2.096s	2.996s	3.769s	4.364s	4.760s
8800.000	0.582s	1.135s	2.084s	2.982s	3.748s	4.340s	4.739s
8900.000	0.583s	1.128s	2.073s	2.968s	3.727s	4.315s	4.717s
9000.000	0.584s	1.120s	2.062s	2.954s	3.706s	4.291s	4.696s
9100.000	0.584s	1.111s	2.051s	2.940s	3.685s	4.267s	4.674s
9200.000	0.583s	1.101s	2.039s	2.926s	3.664s	4.242s	4.652s
9300.000	0.582s	1.089s	2.028s	2.911s	3.643s	4.218s	4.630s
9400.000	0.578s	1.077s	2.017s	2.896s	3.622s	4.194s	4.608s
9500.000	0.573s	1.064s	2.005s	2.881s	3.601s	4.171s	4.586s
9600.000	0.565s	1.051s	1.994s	2.866s	3.580s	4.147s	4.564s
9700.000	0.555s	1.036s	1.982s	2.850s	3.560s	4.124s	4.542s
9800.000	0.543s	1.022s	1.970s	2.834s	3.539s	4.101s	4.521s
9900.000	0.529s	1.007s	1.958s	2.819s	3.518s	4.078s	4.499s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim fwd 1.500/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.734s	3.084s	4.430s	5.053s	5.354s	5.460s	5.442s
1100.000	1.617s	2.951s	4.344s	5.005s	5.338s	5.479s	5.479s
1200.000	1.517s	2.822s	4.259s	4.956s	5.322s	5.495s	5.511s
1300.000	1.430s	2.700s	4.176s	4.907s	5.305s	5.508s	5.540s
1400.000	1.353s	2.584s	4.094s	4.859s	5.287s	5.522s	5.564s
1500.000	1.284s	2.477s	4.014s	4.811s	5.269s	5.534s	5.587s
1600.000	1.223s	2.375s	3.936s	4.764s	5.252s	5.543s	5.606s
1700.000	1.168s	2.281s	3.861s	4.719s	5.235s	5.549s	5.619s
1800.000	1.118s	2.194s	3.788s	4.675s	5.219s	5.553s	5.630s
1900.000	1.073s	2.115s	3.717s	4.631s	5.202s	5.553s	5.637s
2000.000	1.033s	2.042s	3.648s	4.589s	5.187s	5.553s	5.643s
2100.000	0.996s	1.974s	3.581s	4.548s	5.171s	5.550s	5.647s
2200.000	0.962s	1.912s	3.517s	4.508s	5.156s	5.544s	5.649s
2300.000	0.932s	1.855s	3.454s	4.469s	5.142s	5.537s	5.650s
2400.000	0.903s	1.802s	3.394s	4.431s	5.127s	5.530s	5.650s
2500.000	0.878s	1.753s	3.335s	4.394s	5.112s	5.521s	5.649s
2600.000	0.854s	1.708s	3.279s	4.359s	5.098s	5.509s	5.648s
2700.000	0.832s	1.666s	3.224s	4.324s	5.083s	5.496s	5.645s
2800.000	0.812s	1.626s	3.171s	4.290s	5.067s	5.484s	5.642s
2900.000	0.793s	1.590s	3.120s	4.258s	5.050s	5.470s	5.639s
3000.000	0.776s	1.556s	3.071s	4.226s	5.031s	5.455s	5.634s
3100.000	0.760s	1.525s	3.023s	4.195s	5.012s	5.439s	5.630s
3200.000	0.745s	1.496s	2.978s	4.165s	4.992s	5.423s	5.624s
3300.000	0.731s	1.468s	2.934s	4.137s	4.971s	5.409s	5.618s
3400.000	0.718s	1.443s	2.893s	4.108s	4.949s	5.396s	5.612s
3500.000	0.707s	1.419s	2.853s	4.081s	4.925s	5.382s	5.604s
3600.000	0.696s	1.397s	2.816s	4.054s	4.902s	5.367s	5.596s
3700.000	0.685s	1.377s	2.780s	4.028s	4.878s	5.353s	5.586s
3800.000	0.676s	1.358s	2.746s	4.003s	4.855s	5.338s	5.577s
3900.000	0.667s	1.340s	2.714s	3.978s	4.831s	5.323s	5.566s
4000.000	0.658s	1.323s	2.684s	3.953s	4.806s	5.307s	5.556s
4100.000	0.651s	1.308s	2.655s	3.929s	4.782s	5.291s	5.545s
4200.000	0.644s	1.293s	2.628s	3.905s	4.758s	5.275s	5.533s
4300.000	0.637s	1.280s	2.602s	3.881s	4.733s	5.259s	5.521s
4400.000	0.631s	1.267s	2.578s	3.856s	4.709s	5.242s	5.509s
4500.000	0.625s	1.255s	2.555s	3.832s	4.685s	5.226s	5.496s
4600.000	0.619s	1.245s	2.533s	3.807s	4.661s	5.208s	5.483s
4700.000	0.614s	1.235s	2.514s	3.782s	4.638s	5.191s	5.470s
4800.000	0.610s	1.225s	2.495s	3.756s	4.614s	5.173s	5.456s
4900.000	0.605s	1.216s	2.477s	3.731s	4.590s	5.155s	5.442s
5000.000	0.601s	1.208s	2.461s	3.705s	4.567s	5.138s	5.427s
5100.000	0.598s	1.201s	2.445s	3.679s	4.544s	5.120s	5.413s
5200.000	0.594s	1.194s	2.431s	3.653s	4.521s	5.102s	5.398s
5300.000	0.591s	1.188s	2.418s	3.627s	4.498s	5.083s	5.382s
5400.000	0.588s	1.182s	2.406s	3.601s	4.475s	5.065s	5.367s
5500.000	0.586s	1.176s	2.394s	3.575s	4.452s	5.046s	5.351s
5600.000	0.583s	1.172s	2.384s	3.550s	4.429s	5.028s	5.334s
5700.000	0.581s	1.167s	2.374s	3.525s	4.407s	5.008s	5.318s
5800.000	0.579s	1.163s	2.366s	3.500s	4.384s	4.990s	5.301s
5900.000	0.578s	1.160s	2.357s	3.476s	4.362s	4.971s	5.284s
6000.000	0.576s	1.157s	2.350s	3.452s	4.339s	4.951s	5.267s
6100.000	0.575s	1.154s	2.342s	3.429s	4.317s	4.931s	5.250s
6200.000	0.574s	1.151s	2.335s	3.406s	4.295s	4.911s	5.233s
6300.000	0.573s	1.149s	2.327s	3.383s	4.273s	4.890s	5.215s

6400.000	0.572s	1.147s	2.320s	3.361s	4.251s	4.869s	5.197s
6500.000	0.571s	1.146s	2.312s	3.340s	4.229s	4.848s	5.179s
6600.000	0.571s	1.145s	2.304s	3.319s	4.207s	4.828s	5.161s
6700.000	0.570s	1.144s	2.296s	3.299s	4.185s	4.807s	5.143s
6800.000	0.570s	1.143s	2.288s	3.279s	4.163s	4.786s	5.124s
6900.000	0.570s	1.142s	2.279s	3.260s	4.141s	4.764s	5.105s
7000.000	0.570s	1.142s	2.270s	3.241s	4.119s	4.742s	5.086s
7100.000	0.570s	1.142s	2.260s	3.223s	4.097s	4.720s	5.067s
7200.000	0.570s	1.142s	2.250s	3.205s	4.075s	4.698s	5.047s
7300.000	0.570s	1.142s	2.240s	3.188s	4.053s	4.676s	5.028s
7400.000	0.570s	1.143s	2.229s	3.171s	4.032s	4.653s	5.008s
7500.000	0.570s	1.144s	2.219s	3.154s	4.010s	4.630s	4.988s
7600.000	0.571s	1.144s	2.208s	3.138s	3.988s	4.607s	4.968s
7700.000	0.571s	1.145s	2.197s	3.122s	3.966s	4.584s	4.948s
7800.000	0.572s	1.146s	2.185s	3.106s	3.944s	4.560s	4.928s
7900.000	0.573s	1.147s	2.174s	3.091s	3.922s	4.537s	4.908s
8000.000	0.573s	1.147s	2.162s	3.075s	3.900s	4.513s	4.887s
8100.000	0.574s	1.147s	2.151s	3.061s	3.879s	4.489s	4.867s
8200.000	0.575s	1.147s	2.139s	3.046s	3.857s	4.465s	4.846s
8300.000	0.576s	1.145s	2.127s	3.031s	3.835s	4.441s	4.825s
8400.000	0.577s	1.143s	2.116s	3.017s	3.813s	4.417s	4.804s
8500.000	0.578s	1.140s	2.104s	3.003s	3.792s	4.392s	4.783s
8600.000	0.579s	1.136s	2.093s	2.989s	3.771s	4.368s	4.761s
8700.000	0.580s	1.130s	2.081s	2.975s	3.749s	4.344s	4.740s
8800.000	0.581s	1.124s	2.070s	2.961s	3.728s	4.319s	4.718s
8900.000	0.581s	1.116s	2.058s	2.947s	3.707s	4.295s	4.696s
9000.000	0.580s	1.107s	2.047s	2.933s	3.685s	4.270s	4.674s
9100.000	0.579s	1.097s	2.035s	2.918s	3.664s	4.246s	4.652s
9200.000	0.576s	1.086s	2.024s	2.904s	3.643s	4.221s	4.630s
9300.000	0.572s	1.074s	2.012s	2.889s	3.622s	4.197s	4.608s
9400.000	0.566s	1.062s	2.000s	2.874s	3.601s	4.173s	4.586s
9500.000	0.559s	1.048s	1.987s	2.859s	3.580s	4.149s	4.563s
9600.000	0.550s	1.034s	1.975s	2.844s	3.559s	4.125s	4.541s
9700.000	0.540s	1.021s	1.963s	2.829s	3.539s	4.103s	4.520s
9800.000	0.528s	1.008s	1.952s	2.815s	3.520s	4.081s	4.500s
9900.000	0.515s	0.995s	1.942s	2.801s	3.502s	4.061s	4.480s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim fwd 2.000/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.700s	2.985s	4.310s	4.944s	5.267s	5.417s	5.416s
1100.000	1.597s	2.872s	4.244s	4.911s	5.264s	5.439s	5.447s
1200.000	1.502s	2.762s	4.175s	4.875s	5.256s	5.459s	5.478s
1300.000	1.418s	2.654s	4.104s	4.837s	5.246s	5.475s	5.507s
1400.000	1.344s	2.550s	4.033s	4.798s	5.235s	5.487s	5.533s
1500.000	1.277s	2.450s	3.962s	4.758s	5.223s	5.496s	5.555s
1600.000	1.218s	2.356s	3.891s	4.717s	5.211s	5.505s	5.574s
1700.000	1.164s	2.268s	3.822s	4.677s	5.197s	5.511s	5.589s
1800.000	1.115s	2.185s	3.754s	4.637s	5.184s	5.514s	5.598s
1900.000	1.071s	2.107s	3.688s	4.598s	5.171s	5.516s	5.603s
2000.000	1.032s	2.036s	3.623s	4.559s	5.158s	5.515s	5.607s
2100.000	0.995s	1.970s	3.559s	4.522s	5.145s	5.511s	5.610s
2200.000	0.962s	1.909s	3.497s	4.484s	5.132s	5.507s	5.612s
2300.000	0.932s	1.853s	3.437s	4.448s	5.119s	5.501s	5.614s
2400.000	0.904s	1.800s	3.379s	4.412s	5.105s	5.494s	5.615s
2500.000	0.878s	1.752s	3.322s	4.377s	5.091s	5.485s	5.615s
2600.000	0.854s	1.707s	3.267s	4.343s	5.076s	5.478s	5.614s
2700.000	0.832s	1.665s	3.213s	4.309s	5.060s	5.469s	5.611s
2800.000	0.812s	1.626s	3.162s	4.277s	5.044s	5.457s	5.607s
2900.000	0.794s	1.590s	3.112s	4.245s	5.027s	5.443s	5.604s
3000.000	0.776s	1.557s	3.063s	4.214s	5.009s	5.428s	5.600s
3100.000	0.760s	1.525s	3.017s	4.184s	4.991s	5.413s	5.595s
3200.000	0.745s	1.496s	2.973s	4.155s	4.971s	5.399s	5.590s
3300.000	0.732s	1.469s	2.930s	4.127s	4.950s	5.384s	5.585s
3400.000	0.719s	1.443s	2.889s	4.099s	4.929s	5.369s	5.578s
3500.000	0.707s	1.420s	2.850s	4.072s	4.906s	5.356s	5.572s
3600.000	0.696s	1.398s	2.813s	4.046s	4.883s	5.342s	5.565s
3700.000	0.686s	1.377s	2.777s	4.020s	4.859s	5.328s	5.557s
3800.000	0.676s	1.358s	2.744s	3.995s	4.835s	5.313s	5.549s
3900.000	0.667s	1.340s	2.712s	3.970s	4.811s	5.297s	5.539s
4000.000	0.659s	1.323s	2.682s	3.945s	4.788s	5.282s	5.529s
4100.000	0.651s	1.308s	2.653s	3.920s	4.764s	5.266s	5.519s
4200.000	0.644s	1.293s	2.626s	3.895s	4.740s	5.251s	5.508s
4300.000	0.637s	1.279s	2.600s	3.869s	4.716s	5.235s	5.497s
4400.000	0.630s	1.267s	2.576s	3.844s	4.692s	5.218s	5.485s
4500.000	0.625s	1.255s	2.553s	3.819s	4.668s	5.202s	5.473s
4600.000	0.619s	1.244s	2.532s	3.794s	4.644s	5.185s	5.460s
4700.000	0.614s	1.234s	2.512s	3.769s	4.621s	5.168s	5.447s
4800.000	0.609s	1.224s	2.493s	3.743s	4.597s	5.151s	5.434s
4900.000	0.605s	1.216s	2.475s	3.717s	4.574s	5.134s	5.420s
5000.000	0.601s	1.207s	2.458s	3.691s	4.551s	5.116s	5.407s
5100.000	0.597s	1.200s	2.443s	3.665s	4.527s	5.099s	5.392s
5200.000	0.594s	1.193s	2.429s	3.639s	4.504s	5.081s	5.378s
5300.000	0.591s	1.186s	2.416s	3.613s	4.480s	5.062s	5.363s
5400.000	0.588s	1.181s	2.403s	3.587s	4.457s	5.044s	5.348s
5500.000	0.585s	1.175s	2.392s	3.562s	4.434s	5.026s	5.333s
5600.000	0.583s	1.170s	2.382s	3.537s	4.411s	5.007s	5.317s
5700.000	0.581s	1.166s	2.372s	3.511s	4.388s	4.988s	5.301s
5800.000	0.579s	1.162s	2.363s	3.487s	4.365s	4.969s	5.284s
5900.000	0.577s	1.158s	2.354s	3.462s	4.342s	4.950s	5.268s
6000.000	0.575s	1.155s	2.345s	3.439s	4.319s	4.930s	5.251s
6100.000	0.574s	1.152s	2.337s	3.415s	4.297s	4.910s	5.234s
6200.000	0.573s	1.150s	2.329s	3.392s	4.274s	4.890s	5.216s
6300.000	0.572s	1.148s	2.320s	3.370s	4.252s	4.869s	5.199s

6400.000	0.571s	1.146s	2.312s	3.348s	4.230s	4.849s	5.181s
6500.000	0.570s	1.144s	2.304s	3.327s	4.208s	4.828s	5.163s
6600.000	0.570s	1.143s	2.295s	3.306s	4.185s	4.808s	5.145s
6700.000	0.569s	1.142s	2.287s	3.286s	4.164s	4.787s	5.126s
6800.000	0.569s	1.142s	2.278s	3.266s	4.141s	4.765s	5.107s
6900.000	0.569s	1.141s	2.269s	3.246s	4.119s	4.744s	5.088s
7000.000	0.569s	1.141s	2.259s	3.227s	4.097s	4.722s	5.069s
7100.000	0.569s	1.141s	2.249s	3.209s	4.075s	4.700s	5.050s
7200.000	0.569s	1.141s	2.239s	3.190s	4.053s	4.677s	5.030s
7300.000	0.569s	1.141s	2.228s	3.173s	4.031s	4.655s	5.010s
7400.000	0.570s	1.142s	2.217s	3.155s	4.009s	4.632s	4.991s
7500.000	0.570s	1.143s	2.206s	3.138s	3.986s	4.609s	4.971s
7600.000	0.570s	1.143s	2.195s	3.121s	3.964s	4.586s	4.950s
7700.000	0.571s	1.144s	2.184s	3.104s	3.943s	4.563s	4.930s
7800.000	0.572s	1.144s	2.172s	3.088s	3.921s	4.539s	4.909s
7900.000	0.572s	1.144s	2.161s	3.072s	3.899s	4.515s	4.888s
8000.000	0.573s	1.143s	2.149s	3.056s	3.878s	4.491s	4.867s
8100.000	0.574s	1.142s	2.137s	3.041s	3.856s	4.467s	4.846s
8200.000	0.575s	1.140s	2.126s	3.026s	3.834s	4.443s	4.825s
8300.000	0.576s	1.137s	2.114s	3.011s	3.812s	4.419s	4.804s
8400.000	0.577s	1.134s	2.102s	2.996s	3.791s	4.394s	4.782s
8500.000	0.578s	1.130s	2.091s	2.982s	3.770s	4.370s	4.761s
8600.000	0.578s	1.125s	2.079s	2.968s	3.748s	4.345s	4.739s
8700.000	0.578s	1.118s	2.067s	2.953s	3.727s	4.321s	4.717s
8800.000	0.578s	1.111s	2.056s	2.939s	3.705s	4.296s	4.695s
8900.000	0.576s	1.103s	2.044s	2.924s	3.684s	4.271s	4.673s
9000.000	0.574s	1.093s	2.032s	2.909s	3.662s	4.247s	4.650s
9100.000	0.570s	1.083s	2.019s	2.895s	3.641s	4.222s	4.628s
9200.000	0.565s	1.071s	2.007s	2.880s	3.620s	4.197s	4.605s
9300.000	0.559s	1.059s	1.994s	2.865s	3.598s	4.173s	4.583s
9400.000	0.552s	1.047s	1.982s	2.850s	3.577s	4.149s	4.560s
9500.000	0.544s	1.034s	1.970s	2.836s	3.557s	4.126s	4.539s
9600.000	0.535s	1.021s	1.958s	2.822s	3.538s	4.104s	4.518s
9700.000	0.526s	1.009s	1.947s	2.809s	3.519s	4.083s	4.499s
9800.000	0.515s	0.997s	1.937s	2.796s	3.502s	4.063s	4.480s
9900.000	0.504s	0.985s	1.928s	2.784s	3.484s	4.044s	4.462s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim fwd 2.500/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.640s	2.861s	4.173s	4.822s	5.173s	5.365s	5.401s
1100.000	1.556s	2.771s	4.124s	4.802s	5.178s	5.389s	5.432s
1200.000	1.477s	2.681s	4.070s	4.780s	5.180s	5.409s	5.458s
1300.000	1.401s	2.590s	4.014s	4.753s	5.179s	5.427s	5.482s
1400.000	1.331s	2.500s	3.955s	4.724s	5.175s	5.441s	5.502s
1500.000	1.268s	2.413s	3.895s	4.693s	5.169s	5.452s	5.521s
1600.000	1.211s	2.328s	3.833s	4.660s	5.163s	5.460s	5.537s
1700.000	1.159s	2.246s	3.772s	4.626s	5.155s	5.465s	5.551s
1800.000	1.111s	2.169s	3.710s	4.592s	5.145s	5.470s	5.562s
1900.000	1.069s	2.097s	3.650s	4.557s	5.135s	5.472s	5.572s
2000.000	1.029s	2.028s	3.590s	4.523s	5.125s	5.473s	5.577s
2100.000	0.994s	1.964s	3.530s	4.488s	5.115s	5.472s	5.578s
2200.000	0.961s	1.904s	3.472s	4.455s	5.104s	5.470s	5.580s
2300.000	0.931s	1.849s	3.415s	4.421s	5.092s	5.466s	5.581s
2400.000	0.904s	1.798s	3.360s	4.388s	5.079s	5.461s	5.581s
2500.000	0.878s	1.750s	3.305s	4.355s	5.065s	5.455s	5.580s
2600.000	0.855s	1.706s	3.252s	4.323s	5.050s	5.446s	5.579s
2700.000	0.833s	1.665s	3.201s	4.292s	5.035s	5.435s	5.577s
2800.000	0.813s	1.626s	3.151s	4.261s	5.019s	5.425s	5.574s
2900.000	0.794s	1.591s	3.102s	4.230s	5.002s	5.415s	5.571s
3000.000	0.777s	1.557s	3.055s	4.201s	4.984s	5.404s	5.566s
3100.000	0.761s	1.526s	3.010s	4.172s	4.966s	5.391s	5.562s
3200.000	0.746s	1.497s	2.966s	4.143s	4.947s	5.377s	5.557s
3300.000	0.733s	1.470s	2.925s	4.116s	4.927s	5.362s	5.552s
3400.000	0.720s	1.445s	2.885s	4.089s	4.907s	5.348s	5.546s
3500.000	0.708s	1.421s	2.846s	4.063s	4.885s	5.332s	5.540s
3600.000	0.697s	1.399s	2.810s	4.037s	4.863s	5.316s	5.534s
3700.000	0.686s	1.378s	2.775s	4.011s	4.841s	5.302s	5.527s
3800.000	0.677s	1.359s	2.742s	3.986s	4.817s	5.287s	5.520s
3900.000	0.668s	1.341s	2.710s	3.960s	4.794s	5.273s	5.512s
4000.000	0.659s	1.324s	2.680s	3.935s	4.770s	5.258s	5.502s
4100.000	0.651s	1.308s	2.652s	3.910s	4.746s	5.242s	5.493s
4200.000	0.644s	1.294s	2.625s	3.884s	4.723s	5.227s	5.482s
4300.000	0.637s	1.280s	2.599s	3.858s	4.699s	5.211s	5.471s
4400.000	0.631s	1.267s	2.575s	3.833s	4.676s	5.195s	5.460s
4500.000	0.625s	1.255s	2.553s	3.807s	4.652s	5.178s	5.449s
4600.000	0.619s	1.244s	2.531s	3.781s	4.629s	5.162s	5.437s
4700.000	0.614s	1.234s	2.511s	3.756s	4.605s	5.146s	5.424s
4800.000	0.609s	1.224s	2.492s	3.730s	4.582s	5.129s	5.412s
4900.000	0.605s	1.215s	2.475s	3.704s	4.558s	5.112s	5.399s
5000.000	0.601s	1.207s	2.458s	3.678s	4.535s	5.095s	5.385s
5100.000	0.597s	1.200s	2.443s	3.652s	4.511s	5.077s	5.372s
5200.000	0.594s	1.193s	2.428s	3.626s	4.488s	5.060s	5.358s
5300.000	0.590s	1.186s	2.415s	3.601s	4.464s	5.042s	5.343s
5400.000	0.588s	1.180s	2.403s	3.575s	4.440s	5.024s	5.328s
5500.000	0.585s	1.175s	2.391s	3.549s	4.417s	5.005s	5.314s
5600.000	0.582s	1.170s	2.380s	3.524s	4.393s	4.987s	5.298s
5700.000	0.580s	1.165s	2.370s	3.499s	4.370s	4.968s	5.283s
5800.000	0.578s	1.161s	2.360s	3.475s	4.346s	4.948s	5.267s
5900.000	0.577s	1.158s	2.350s	3.451s	4.323s	4.928s	5.250s
6000.000	0.575s	1.154s	2.341s	3.427s	4.300s	4.908s	5.234s
6100.000	0.574s	1.152s	2.332s	3.404s	4.277s	4.889s	5.216s
6200.000	0.573s	1.149s	2.323s	3.381s	4.255s	4.869s	5.199s
6300.000	0.572s	1.147s	2.314s	3.359s	4.232s	4.849s	5.182s

6400.000	0.571s	1.145s	2.305s	3.337s	4.209s	4.828s	5.164s
6500.000	0.570s	1.144s	2.296s	3.315s	4.187s	4.808s	5.146s
6600.000	0.569s	1.143s	2.287s	3.294s	4.165s	4.786s	5.127s
6700.000	0.569s	1.142s	2.278s	3.274s	4.143s	4.765s	5.109s
6800.000	0.569s	1.141s	2.268s	3.254s	4.120s	4.744s	5.090s
6900.000	0.569s	1.141s	2.259s	3.234s	4.098s	4.723s	5.071s
7000.000	0.569s	1.140s	2.249s	3.215s	4.075s	4.701s	5.051s
7100.000	0.569s	1.140s	2.238s	3.196s	4.053s	4.678s	5.031s
7200.000	0.569s	1.141s	2.228s	3.176s	4.030s	4.656s	5.012s
7300.000	0.569s	1.141s	2.217s	3.158s	4.008s	4.633s	4.992s
7400.000	0.569s	1.141s	2.206s	3.140s	3.986s	4.610s	4.971s
7500.000	0.570s	1.142s	2.195s	3.122s	3.963s	4.587s	4.951s
7600.000	0.570s	1.142s	2.183s	3.104s	3.941s	4.563s	4.930s
7700.000	0.571s	1.141s	2.172s	3.087s	3.919s	4.540s	4.910s
7800.000	0.572s	1.140s	2.160s	3.070s	3.897s	4.516s	4.889s
7900.000	0.572s	1.139s	2.149s	3.053s	3.875s	4.492s	4.867s
8000.000	0.573s	1.137s	2.137s	3.037s	3.853s	4.468s	4.846s
8100.000	0.574s	1.135s	2.125s	3.021s	3.832s	4.443s	4.825s
8200.000	0.575s	1.132s	2.113s	3.006s	3.810s	4.419s	4.803s
8300.000	0.576s	1.128s	2.102s	2.990s	3.788s	4.394s	4.781s
8400.000	0.576s	1.124s	2.090s	2.975s	3.766s	4.370s	4.759s
8500.000	0.576s	1.118s	2.078s	2.960s	3.745s	4.345s	4.737s
8600.000	0.575s	1.112s	2.066s	2.945s	3.723s	4.320s	4.715s
8700.000	0.574s	1.105s	2.054s	2.930s	3.701s	4.295s	4.692s
8800.000	0.571s	1.097s	2.041s	2.915s	3.679s	4.270s	4.669s
8900.000	0.568s	1.088s	2.029s	2.900s	3.658s	4.245s	4.647s
9000.000	0.564s	1.078s	2.016s	2.885s	3.636s	4.220s	4.624s
9100.000	0.559s	1.068s	2.003s	2.870s	3.614s	4.195s	4.601s
9200.000	0.553s	1.057s	1.990s	2.855s	3.594s	4.171s	4.578s
9300.000	0.546s	1.045s	1.978s	2.841s	3.573s	4.148s	4.557s
9400.000	0.539s	1.034s	1.966s	2.827s	3.554s	4.126s	4.536s
9500.000	0.531s	1.022s	1.954s	2.814s	3.535s	4.104s	4.516s
9600.000	0.523s	1.010s	1.943s	2.801s	3.517s	4.083s	4.496s
9700.000	0.514s	0.999s	1.933s	2.789s	3.499s	4.063s	4.477s
9800.000	0.506s	0.987s	1.923s	2.777s	3.483s	4.044s	4.459s
9900.000	0.497s	0.976s	1.914s	2.765s	3.466s	4.025s	4.442s

Water Specific Gravity = 1.025.

Cross Curves of Stability

Righting Arms(heel) for VCG = 0.00
Trim fwd 3.000/96.590 at heel = 0 (RA Trim = 0)

Displ (MT)	5.000s	10.000s	20.000s	30.000s	40.000s	50.000s	60.000s
1000.000	1.566s	2.735s	4.040s	4.707s	5.083s	5.308s	5.386s
1100.000	1.499s	2.660s	4.000s	4.694s	5.094s	5.333s	5.411s
1200.000	1.435s	2.585s	3.958s	4.678s	5.102s	5.354s	5.433s
1300.000	1.372s	2.510s	3.912s	4.662s	5.107s	5.372s	5.454s
1400.000	1.311s	2.436s	3.865s	4.641s	5.110s	5.387s	5.472s
1500.000	1.254s	2.362s	3.815s	4.618s	5.111s	5.400s	5.489s
1600.000	1.200s	2.288s	3.763s	4.594s	5.110s	5.411s	5.503s
1700.000	1.151s	2.216s	3.711s	4.567s	5.107s	5.419s	5.516s
1800.000	1.106s	2.147s	3.657s	4.539s	5.103s	5.425s	5.528s
1900.000	1.064s	2.080s	3.603s	4.510s	5.097s	5.428s	5.537s
2000.000	1.026s	2.015s	3.548s	4.480s	5.089s	5.432s	5.545s
2100.000	0.992s	1.955s	3.494s	4.450s	5.080s	5.434s	5.551s
2200.000	0.960s	1.898s	3.441s	4.420s	5.070s	5.434s	5.551s
2300.000	0.930s	1.844s	3.388s	4.390s	5.059s	5.432s	5.550s
2400.000	0.903s	1.794s	3.336s	4.360s	5.048s	5.427s	5.549s
2500.000	0.878s	1.748s	3.285s	4.330s	5.035s	5.421s	5.548s
2600.000	0.855s	1.704s	3.235s	4.300s	5.021s	5.413s	5.546s
2700.000	0.834s	1.664s	3.185s	4.271s	5.006s	5.406s	5.544s
2800.000	0.814s	1.626s	3.138s	4.242s	4.991s	5.397s	5.541s
2900.000	0.795s	1.591s	3.091s	4.214s	4.974s	5.387s	5.538s
3000.000	0.778s	1.558s	3.046s	4.186s	4.957s	5.376s	5.535s
3100.000	0.762s	1.527s	3.002s	4.158s	4.939s	5.366s	5.530s
3200.000	0.747s	1.498s	2.960s	4.131s	4.921s	5.354s	5.526s
3300.000	0.734s	1.471s	2.919s	4.104s	4.902s	5.340s	5.521s
3400.000	0.721s	1.446s	2.881s	4.078s	4.883s	5.325s	5.516s
3500.000	0.709s	1.422s	2.843s	4.052s	4.863s	5.310s	5.510s
3600.000	0.698s	1.400s	2.807s	4.026s	4.842s	5.294s	5.504s
3700.000	0.687s	1.380s	2.773s	4.001s	4.821s	5.278s	5.497s
3800.000	0.678s	1.360s	2.740s	3.975s	4.799s	5.262s	5.490s
3900.000	0.668s	1.342s	2.709s	3.950s	4.777s	5.247s	5.483s
4000.000	0.660s	1.325s	2.679s	3.924s	4.754s	5.233s	5.475s
4100.000	0.652s	1.310s	2.651s	3.898s	4.730s	5.218s	5.466s
4200.000	0.645s	1.295s	2.625s	3.873s	4.707s	5.202s	5.456s
4300.000	0.638s	1.281s	2.599s	3.847s	4.683s	5.186s	5.446s
4400.000	0.631s	1.268s	2.575s	3.821s	4.660s	5.171s	5.436s
4500.000	0.625s	1.256s	2.553s	3.795s	4.637s	5.156s	5.424s
4600.000	0.620s	1.245s	2.532s	3.769s	4.614s	5.140s	5.413s
4700.000	0.615s	1.235s	2.512s	3.743s	4.590s	5.124s	5.401s
4800.000	0.610s	1.225s	2.493s	3.717s	4.567s	5.107s	5.389s
4900.000	0.605s	1.216s	2.476s	3.691s	4.543s	5.091s	5.376s
5000.000	0.601s	1.208s	2.459s	3.666s	4.519s	5.074s	5.363s
5100.000	0.597s	1.200s	2.444s	3.640s	4.496s	5.057s	5.350s
5200.000	0.594s	1.193s	2.430s	3.614s	4.472s	5.039s	5.336s
5300.000	0.591s	1.187s	2.416s	3.589s	4.448s	5.021s	5.323s
5400.000	0.588s	1.181s	2.403s	3.563s	4.424s	5.003s	5.308s
5500.000	0.585s	1.175s	2.391s	3.538s	4.400s	4.985s	5.294s
5600.000	0.583s	1.170s	2.380s	3.513s	4.376s	4.966s	5.279s
5700.000	0.580s	1.166s	2.368s	3.488s	4.352s	4.946s	5.263s
5800.000	0.579s	1.162s	2.358s	3.464s	4.329s	4.927s	5.248s
5900.000	0.577s	1.158s	2.347s	3.440s	4.306s	4.907s	5.231s
6000.000	0.575s	1.155s	2.337s	3.417s	4.282s	4.888s	5.215s
6100.000	0.574s	1.152s	2.327s	3.394s	4.259s	4.868s	5.198s
6200.000	0.573s	1.149s	2.318s	3.371s	4.236s	4.848s	5.181s
6300.000	0.572s	1.147s	2.308s	3.349s	4.213s	4.827s	5.163s

6400.000	0.571s	1.145s	2.298s	3.327s	4.191s	4.806s	5.145s
6500.000	0.570s	1.144s	2.289s	3.305s	4.168s	4.786s	5.127s
6600.000	0.569s	1.143s	2.279s	3.284s	4.145s	4.765s	5.108s
6700.000	0.569s	1.142s	2.269s	3.263s	4.122s	4.744s	5.090s
6800.000	0.569s	1.141s	2.259s	3.243s	4.099s	4.722s	5.071s
6900.000	0.569s	1.141s	2.249s	3.222s	4.076s	4.700s	5.052s
7000.000	0.569s	1.141s	2.239s	3.203s	4.053s	4.678s	5.032s
7100.000	0.569s	1.141s	2.228s	3.183s	4.030s	4.656s	5.012s
7200.000	0.569s	1.141s	2.218s	3.163s	4.008s	4.633s	4.992s
7300.000	0.569s	1.141s	2.207s	3.144s	3.985s	4.610s	4.972s
7400.000	0.570s	1.140s	2.195s	3.125s	3.963s	4.587s	4.951s
7500.000	0.570s	1.140s	2.184s	3.107s	3.940s	4.563s	4.930s
7600.000	0.571s	1.139s	2.173s	3.089s	3.917s	4.539s	4.909s
7700.000	0.571s	1.137s	2.161s	3.071s	3.895s	4.516s	4.888s
7800.000	0.572s	1.135s	2.149s	3.053s	3.873s	4.491s	4.867s
7900.000	0.573s	1.133s	2.138s	3.036s	3.851s	4.467s	4.845s
8000.000	0.573s	1.130s	2.126s	3.019s	3.829s	4.442s	4.823s
8100.000	0.574s	1.127s	2.114s	3.003s	3.806s	4.418s	4.801s
8200.000	0.574s	1.123s	2.102s	2.986s	3.784s	4.393s	4.779s
8300.000	0.574s	1.118s	2.090s	2.970s	3.762s	4.368s	4.757s
8400.000	0.573s	1.112s	2.078s	2.954s	3.740s	4.343s	4.734s
8500.000	0.571s	1.106s	2.066s	2.938s	3.718s	4.318s	4.711s
8600.000	0.569s	1.099s	2.053s	2.922s	3.695s	4.292s	4.688s
8700.000	0.566s	1.091s	2.040s	2.906s	3.673s	4.267s	4.665s
8800.000	0.562s	1.083s	2.026s	2.891s	3.651s	4.242s	4.642s
8900.000	0.558s	1.074s	2.013s	2.876s	3.630s	4.217s	4.619s
9000.000	0.552s	1.064s	2.000s	2.861s	3.609s	4.193s	4.596s
9100.000	0.547s	1.054s	1.987s	2.846s	3.588s	4.169s	4.574s
9200.000	0.541s	1.044s	1.975s	2.832s	3.569s	4.146s	4.553s
9300.000	0.534s	1.034s	1.962s	2.819s	3.549s	4.124s	4.532s
9400.000	0.527s	1.023s	1.951s	2.805s	3.531s	4.102s	4.512s
9500.000	0.520s	1.012s	1.939s	2.793s	3.513s	4.081s	4.492s
9600.000	0.513s	1.001s	1.929s	2.780s	3.495s	4.061s	4.473s
9700.000	0.506s	0.990s	1.918s	2.768s	3.479s	4.042s	4.455s
9800.000	0.499s	0.980s	1.908s	2.757s	3.462s	4.023s	4.437s
9900.000	0.491s	0.970s	1.899s	2.745s	3.446s	4.005s	4.420s

Water Specific Gravity = 1.025.

8.2 HEELING LEVER DUE TO WIND PRESSURE

PART	LPA	FILLING FACTOR	EFFECTIVE AREA	ARM FROM BL	MOMENT
	(m_2)		(m)	(m)	M3
OUTER HULL	411.20	0.85	349.52	5.20	1817.50
NAVIGATION DECK	17.50	1.00	17.50	19.46	340.57
FUNNEL	42.40	1.00	42.40	16.52	700.24
CAPTAIN DECK	17.50	1.00	17.50	14.36	251.37
LIFE SAVING DECK	24.50	1.00	24.50	11.80	288.98
POOP DECK	46.50	1.00	46.50	9.39	436.77
RAILINGS	24.80	0.20	4.96	8.65	42.90
AFT MAST	2.90	1.00	2.90	21.75	63.06
FORE MAST	4.40	1.00	4.40	12.21	53.72
HOSE CRAIN	11.50	1.00	11.50	9.33	107.31
5% AREA	30.16	1.00	30.16	12.33	371.90
10% MOMENT					1252.81
TOTAL			**551.84**	**10.38**	**5727.14**

TOTAL AREA: 554.92 m^2

CENTROD FROM BASE LINE : 10.551 m

8.3 BILGE KEEL AREA

Total area of bilge keels is 22 m^2

8.4 FLOODING ANGLE CURVE AND DECK EDGE IMMERSION ANGLE CURVE

(1) The value flooding angle curve is as follow (Z= 11.90 m, Y= 6.5 m)

(At the downside of window on poopdeck room.)

TETJ (o)	10	20	30	40	50	60
DIS (t)	11567.8	10827.3	9292.9	7334.0	5384.6	3804.2

(2) The value of Deck Edge Immersion Angle Curve is as follows (Z= 8.0 m, Y= 8.0 m)

TETJ (o)	10	20	30	40	50	60
DIS (t)	8137.9	6183.2	4189.8	2714.2	1758.7	111.4

Where:

TETJ : Flooding angle.

TETE: Deck edge immersion angle.

8.5 MINIMUM PERMISSIBLE KG CURVE

Trim = zero at zero heel (Trim righting arm held at zero)

Intact Displ (MT)	Intact Draft At MS (m)	Max.VCG (m)	Limit 1	Limit 2	Limit 3	Limit 4	Limit 5	Limit 6
1,000.0	0.93	3.955	2303.4%	1972.4%	1710.8%	1520.7%	0.0°	<large>
2,000.0	1.75	6.036	1009.7%	870.8%	778.0%	709.3%	0.0°	3788.5%
3,000.0	2.55	7.372	267.2%	215.4%	173.0%	183.8%	0.0°	906.0%
4,000.0	3.35	7.410	6.5%	6.4%	24.0%	37.7%	5.4°	0.0%
5,000.0	4.13	6.782	14.4%	35.0%	95.4%	81.6%	7.1°	0.0%
6,000.0	4.89	6.480	0.0%	11.4%	50.8%	32.4%	7.7°	15.8%
7,000.0	5.63	6.197	13.8%	7.8%	14.7%	0.0%	15.0°	146.2%
8,000.0	6.35	5.876	39.6%	22.9%	12.7%	0.0%	8.1°	379.0%

CRITERIA USED FOR CALCULATION

Limit	Min/Max
(1) Area from 0.00 deg to 30.00	>0.0550 m-R
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m
(5) Angle from 0.00 deg to MaxRA	>25.00 deg
(6) GM at Equilibrium	>0.150 m

8.6 CALCULATION OF ICING

No.	ITEMS	ICING AREA	ICING WEIGHT PER SQUARE METER	ICING WEIGHT	V.C.G	V.MT.	L.C.G.	L.M.T.
		m2	t/m2	t	m	t-m	m	t-m
	HORIZONTAL							
	MAIN DECK	900	0.03	27	8.1	218.7	7	189
2	FORECASTLE DECK	122.44	0.03	3.67	10.8	39.67	44.8	164.56
3	POOP DECK	190.86	0.03	5.73	10.8	61.84	-42.6	-243.92
4	LIFE SAVING DECK	56.98	0.03	1.71	13.3	22.74	-37	-63.25
5	CAPTAIN	86.1	0.03	2.58	15.8	40.81	-35.8	-92.47
6	NAVIGAT DECK	45.31	0.03	1.36	18.2	24.74	-28.8	-39.15
7	COMPASS DECK	71.24	0.03	2.14	20.61	44.05	-26.7	-57.06
8	BRIDGE	47.08	0.03	1.41	10.6	14.97	5.5	7.77
	LATERAL							
9	MAIN HULL	208	0.015	3.12	7	21.84	0.5	1.56
10	FORECASTLE	31.13	0.015	0.47	9.3	4.34	45.4	21.2
11	FORECASTLE BULWARK	8.16	0.015	0.12	11.3	1.38	47.2	5.78
12	RAILING	27.26	0.015	0.41	10	4.09	10.4	4.25
13	POOP	83.7	0.015	1.26	9.4	11.8	-33	-41.43
14	POOP DECK	46.25	0.015	0.69	11.7	8.12	-33.7	-23.38
15	LIFE-SAVING DECK	24.5	0.015	0.37	14.2	5.22	-28.8	-10.58
16	CAPTAIN DECK	17.5	0.015	0.26	16.7	4.38	-27.4	-7.19
17	NAVIGAT DECK	17.5	0.015	0.26	18.9	4.96	-27.4	-7.19
18	FUNNEL	42.51	0.015	0.64	16.9	10.78	-37	-23.59
19	FORE MAST	4.36	0.015	0.07	15.5	1.01	41.2	2.69
20	AFT MAST	2.88	0.015	0.04	21.9	0.95	-28.1	-1.21
21	HOSE CRAIN	11.55	0.015	0.17	13.35	2.31	0.4	0.07
	FRONT							
22	POOP & DECK HOUSE	160	0.015	2.4	14.4	34.56	-23.9	-57.36
	Σ			55.88		583.26		-270.92

	5% calculated Weight			2.79				
	10% calculated moment					58.33		-27.09
	TOTAL			**58.67**	**10.93**	**641.59**	**-5.08**	**-298.01**

9 TYPICAL LOADING CONDITIONS

9.1 LOADING SUMMARY

NO	1	2	3	4	4A
LOADING CONDITION	SG 1.025 T/M3		SG 0.95 T/M3		
	DEP	ARRI	DEP	ARRI	ARRI+ICING
LIGHTSHIP	2474.92 T	2474.92 T	2474.92 T	2474.92 T	2474.92 T
CREW&EFFECTS	3.00 T	3.00 T	3.00 T	3.00 T	3.00 T
PROVISION	3.00 T	3.00 T	3.00 T	3.00 T	3.00 T
STORE	5.00 T	5.00 T	5.00 T	5.00 T	5.00 T
CARGO_OIL	4347.25 T	4347.25 T	4253.00 T	4253.00 T	4253.00 T
WATER_BALLAST	0.00 T	0.00 T	91.74 T	91.74 T	91.74 T
FRESH_WATER	256.08 T	25.61 T	256.08 T	25.61 T	25.61 T
HFO	228.47 T	23.80 T	228.46 T	23.80 T	23.80 T
DIESEL_OIL	60.87 T	6.34 T	60.87 T	6.34 T	6.34 T
LUB_OIL	24.94 T	2.60 T	24.94 T	2.60 T	2.60 T
DEAD WEIGHT	4928.61 T	4416.60 T	4926.09 T	4414.09 T	4414.09 T
DISPLACEMENT	7403.53 T	6891.52 T	7401.01 T	6889.01 T	6889.01 T
DRAFT FP	5.582 m	5.864 m	5.280 m	5.540 m	5.568 m
DRAFT MS	5.910 m	5.556 m	5.895 m	5.547 m	5.590 m
DRAFT AP	6.238 m	5.248 m	6.511 m	5.555 m	5.612 m
TRIM BY AFT	0.656 m	-0.616 m	1.231 m	0.015 m	0.044 m
KG	4.952 m	4.976 m	5.078 m	5.112 m	5.156 m
LCG	48.728 m	50.444 m	48.028 m	49.690 m	49.633 m
GM	1.199 m	1.111 m	1.134 m	1.029 m	0.987 m
(1) Area from 0.00 deg to 30.00	0.175	0.168	0.181	0.173	0.166
(2) Area from 0.00 deg to 40.00 or Flood	0.301	0.295	0.31	0.304	0.291
(3) Area from 30.00 deg to 40.00 or Flood	0.126	0.128	0.129	0.132	0.125
(4) Righting Arm at 30.00 deg or MaxRA	0.807	0.839	0.81	0.847	0.805
(5) Angle from 0.00 deg to MaxRA	45	45	43.77	44.15	43.88
(6) GM at Equilibrium	1.199	1.111	1.134	1.029	0.987
JUDGMENT	OK	OK	OK	OK	OK

NO	5	6	7	8
LOADING CONDITION	HOMO 0.9405 T/M3		HOMO 0.9405 T/M3	
	DEP	BEF MIDWAY	AFT MIDWAY	ARRI
LIGHTSHIP	2474.92 T	2474.92 T	2474.92 T	2474.92 T
CREW&EFFECTS	3.00 T	3.00 T	3.00 T	3.00 T
PROVISION	3.00 T	3.00 T	3.00 T	3.00 T
STORE	5.00 T	5.00 T	5.00 T	5.00 T
CARGO_OIL	4343.44 T	4343.44 T	4343.44 T	4343.44 T
WATER_BALLAST	0.00 T	0.00 T	91.74 T	91.74 T
FRESH_WATER	256.08 T	128.04 T	128.04 T	25.61 T
HFO	233.22 T	118.99 T	118.99 T	23.80 T
DIESEL_OIL	62.14 T	31.71 T	31.71 T	6.34 T
LUB_OIL	25.46 T	12.99 T	12.99 T	2.60 T
DEAD WEIGHT	4931.34 T	4646.17 T	4737.91 T	4504.53 T
DISPLACEMENT	7406.26 T	7121.09 T	7212.83 T	6979.45 T
DRAFT FP	5.573 m	5.721 m	5.528 m	5.656 m
DRAFT MS	5.911 m	5.718 m	5.776 m	5.616 m
DRAFT AP	6.250 m	5.715 m	6.023 m	5.575 m
TRIM BY AFT	0.677 m	-0.006 m	0.495 m	-0.081 m
KG	5.104 m	5.092 m	5.117 m	5.165 m
LCG	48.700 m	49.626 m	48.988 m	49.771 m
GM	1.102 m	1.051 m	1.052 m	0.994 m
(1) Area from 0.00 deg to 30.00	0.186	0.184	0.183	0.178
(2) Area from 0.00 deg to 40.00 or Flood	0.315	0.316	0.313	0.308
(3) Area from 30.00 deg to 40.00 or Flood	0.129	0.132	0.13	0.13
(4) Righting Arm at 30.00 deg or MaxRA	0.815	0.841	0.821	0.831
(5) Angle from 0.00 deg to MaxRA	43.94	44.16	43.76	43.91
(6) GM at Equilibrium	1.101	1.051	1.051	0.994
JUDGMENT	OK	OK	OK	OK

NO	9	10	11	12	13	14
LOADING CONDITION	PARTIALLY 0.9405 T/M3		BALLAST			
	DEP	ARRI	DEP	ARRI	DOCKING	LIGHTSHIP
LIGHTSHIP	2474.92 T	2474.92 T	2474.92 T	2474.92 T	2474.92 T	2471.38 T
CREW&EFFECTS	3.00 T	3.00 T	3.00 T	3.00 T	3.00 T	0.00 T
PROVISION	3.00 T	3.00 T	3.00 T	3.00 T	3.00 T	0.00 T
STORE	5.00 T	5.00 T	5.00 T	5.00 T	5.00 T	0.00 T
CARGO_OIL	3929.37 T	3929.37 T				0.00 T
WATER_BALLAST	91.74 T	91.74 T	2342.07 T	2342.07 T	713.27 T	0.00 T
FRESH_WATER	256.08 T	25.61 T	225.91 T	25.61 T	48.85 T	0.00 T
HFO	233.22 T	23.80 T	233.22 T	23.80 T	40.28 T	0.00 T
DIESEL_OIL	62.14 T	6.34 T	62.14 T	6.34 T	5.97 T	0.00 T
LUB_OIL	25.46 T	2.60 T	25.46 T	2.60 T	14.71 T	0.00 T
DEAD WEIGHT	4609.01 T	4090.46 T	2899.80 T	2411.42 T	834.08 T	0.00 T
DISPLACEMENT	7083.93 T	6565.38 T	5374.72 T	4886.34 T	3309.00 T	2471.38 T
DRAFT FP	5.086 m	5.371 m	3.656 m	3.966 m	2.681 m	0.586 m
DRAFT MS	5.670 m	5.310 m	4.420 m	4.041 m	2.807 m	2.181 m
DRAFT AP	6.253 m	5.248 m	5.185 m	4.116 m	2.933 m	3.775 m
TRIM BY AFT	1.167 m	-0.123 m	1.529 m	0.150 m	0.252 m	3.189 m
KG	5.064 m	5.098 m	4.519 m	4.526 m	5.414 m	5.995 m
LCG	48.194 m	49.979 m	47.897 m	49.976 m	49.680 m	41.783 m
GM	1.147 m	1.041 m	2.311 m	2.424 m	2.872 m	4.248 m
(1) Area from 0.00 deg to 30.00	0.197	0.189	0.353	0.361	0.401	0.481
(2) Area from 0.00 deg to 40.00 or Flood	0.337	0.331	0.631	0.646	0.66	0.724
(3) Area from 30.00 deg to 40.00 or Flood	0.14	0.142	0.278	0.285	0.26	0.242
(4) Righting Arm at 30.00 deg or MaxRA	0.869	0.892	1.743	1.754	1.517	1.422
(5) Angle from 0.00 deg to MaxRA	42.45	42.95	45.85	46.18	38.22	29.19
(6) GM at Equilibrium	1.144	1.041	2.308	2.424	2.873	4.248
JUDGMENT	OK	OK	OK	OK	OK	OK

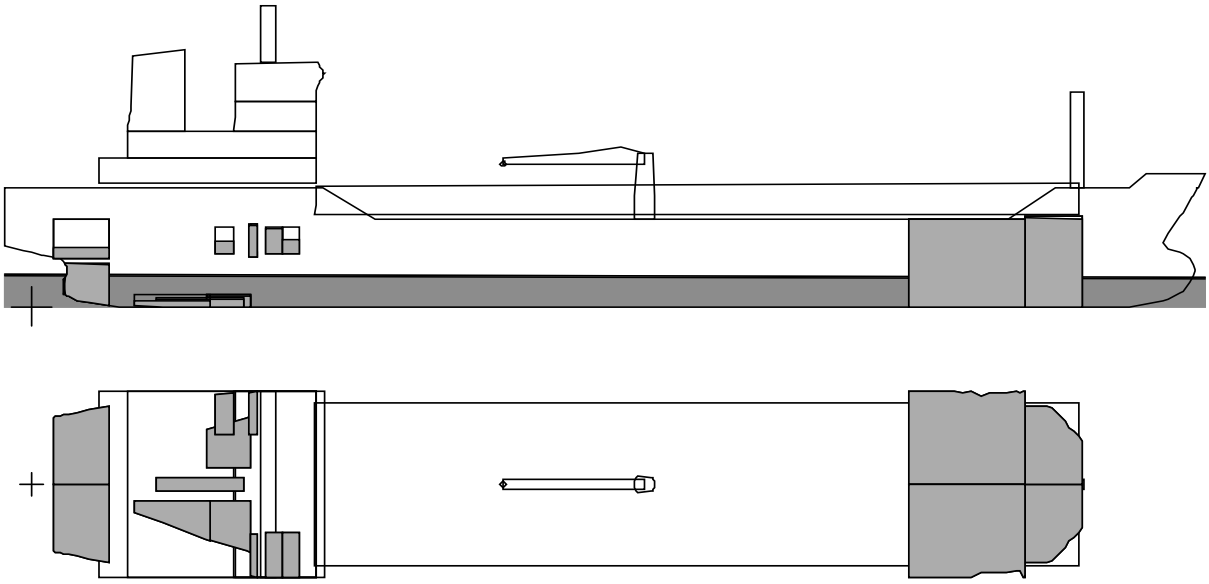
NOTE: *TANKS ARE CATEGORIZED ACCORDING TO THE SPECIFIC GRAVITY*

9.2 LOADING CONDITION

CONDITION: DOCKING

Floating Status

Draft FP	2.681 m	Heel	stbd 0.35 deg.	GM(Solid)	2.953 m
Draft MS	2.807 m	Equil	Yes	F/S Corr.	0.080 m
Draft AP	2.933 m	Wind	0.0 kn	GM(Fluid)	2.872 m
Trim	aft 0.251/96.590	Wave	No	KMT	8.367 m
LCG	49.680f m	VCG	5.414 m	TPcm	12.59



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
WATER_BALLAST		713.27	29.00%
FRESH_WATER		48.85	19.08%
HFO		40.28	18.39%
DIESEL_OIL		5.97	9.20%
LUB_OIL		14.71	53.67%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	834.08	73.047f	0.164s	3.700
Displacement	3,309.00	49.680f	0.018s	5.414

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BWT1.P	97.98%	200.00	86.540f	2.590p	4.330	89.22
BWT1.S	97.98%	200.00	86.539f	2.595s	4.330	68.32
BWT2.P	94.09%	155.06	79.178f	4.803p	2.566	2.77
BWT2.S	100.00%	158.21	79.281f	5.145s	3.030	0.00
Subtotals:	**29.00%**	**713.27**	**83.329f**	**0.098s**	**3.658**	**160.31**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**14.88%**	**11.23**	**4.662f**	**1.455p**	**4.919**	**19.91**
AFWT.S	**14.88%**	**11.23**	**4.670f**	**1.477s**	**4.919**	**20.51**
SHAFTCWT	**97.48%**	**26.40**	**5.162f**	**0.002s**	**2.168**	**6.94**
Subtotals:	**19.08%**	**48.85**	**4.934f**	**0.006s**	**3.432**	**47.36**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
FODAILYTK.S	**94.00%**	**11.72**	**20.572f**	**6.047s**	**5.987**	**6.00**
FODIRTK.S	**94.06%**	**10.92**	**16.792f**	**3.013s**	**0.581**	**16.25**
FOOVERTK.P	**94.26%**	**10.92**	**16.790f**	**2.996p**	**0.582**	**15.98**
FOSETTTK.S	**53.52%**	**6.72**	**21.987f**	**6.071s**	**5.475**	**5.95**
Subtotals:	**18.39%**	**40.28**	**18.758f**	**2.777s**	**2.971**	**44.17**

DIESEL_OIL (SpGr 0.870)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**15.24%**	**0.84**	**18.851f**	**5.955s**	**4.749**	**1.61**
NO2DODAYTK.P	**92.53%**	**5.13**	**18.751f**	**6.040p**	**5.943**	**2.07**
Subtotals:	**9.20%**	**5.97**	**18.765f**	**4.352p**	**5.775**	**3.68**

LUB_OIL (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	**44.61%**	**4.62**	**12.773f**	**2.271s**	**0.352**	**5.07**
LOSTORTK.P	**44.50%**	**5.10**	**16.409f**	**5.861p**	**5.396**	**4.18**
LOSUMPTK.C	**89.23%**	**4.99**	**14.284f**	**0.000**	**0.357**	**0.68**
Subtotals:	**53.67%**	**14.71**	**14.546f**	**1.319p**	**2.103**	**9.93**

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		**823.08**	**73.819f**	**0.166s**	**3.599**	**265.46**

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	**Intact**	**1.025**	**3,309.71**	**49.670f**	**0.043s**	**1.453**
SubTotals:			**3,309.71**	**49.670f**	**0.043s**	**1.453**

Righting Arms vs Heel Angle

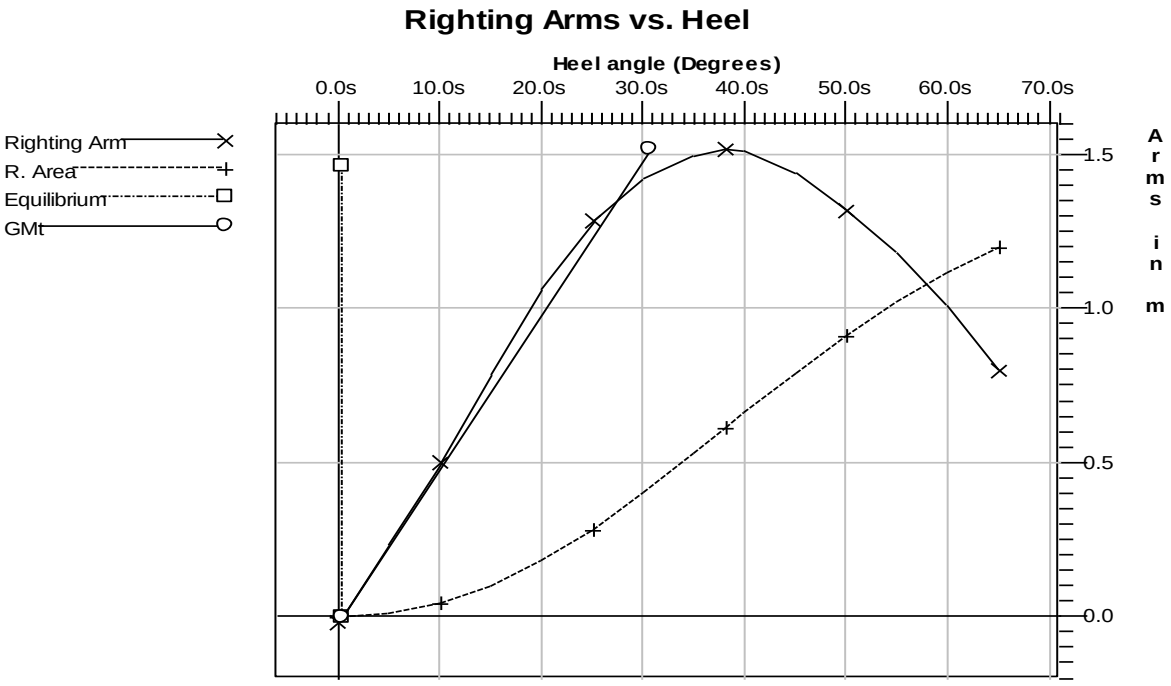
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.15a	2.932	-0.018	0.000	9.019 (1)	
0.35s	0.15a	2.932	0.000	0.000	8.980 (1)	Equil
5.00s	0.15a	2.916	0.236	0.010	8.423 (1)	
10.00s	0.14a	2.867	0.503	0.042	7.771 (1)	
15.00s	0.12a	2.783	0.786	0.098	7.070 (1)	
20.00s	0.09a	2.653	1.065	0.179	6.339 (1)	
25.00s	0.06a	2.456	1.288	0.282	5.603 (1)	
30.00s	0.02a	2.178	1.421	0.401	4.886 (1)	
35.00s	0.02f	1.826	1.497	0.528	4.187 (1)	
38.22s	0.05f	1.566	1.517	0.613	3.745 (1)	MaxRa
40.00s	0.07f	1.413	1.511	0.660	3.500 (1)	
45.00s	0.16f	0.946	1.440	0.789	2.818 (1)	
50.00s	0.28f	0.424	1.321	0.910	2.150 (1)	
55.00s	0.42f	-0.152	1.182	1.020	1.506 (1)	
60.00s	0.58f	-0.756	1.008	1.115	0.875 (1)	
65.00s	0.74f	-1.370	0.800	1.195	0.251 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	9.019

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.401	0.346	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.660	0.570	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.260	0.230	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	1.517	1.317	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	38.22	13.22	Yes
(6) GM at Equilibrium	>0.150 m	2.873	2.723	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.251/96.590, heel: stbd 0.35 deg., VCG = 5.414

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
2.802	3309.708	49.670f	1.453	50.346f	12.590	67.930	198.245	2.872

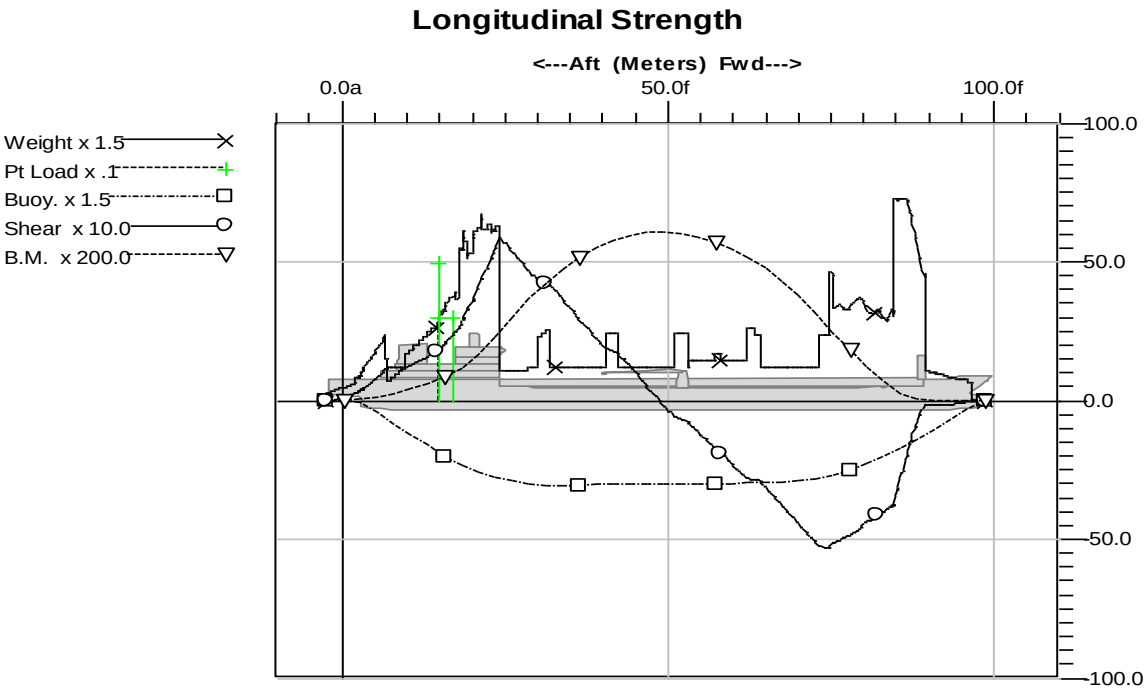
Water Specific Gravity = 1.025.

Trim is per 96.59m

LONGITUDNAL STRENGTH

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	13.92	16
FRAME 1	0.600f	18.36	26
FRAME 2	1.200f	23.59	39
FRAME 3	1.800f	29.25	55
FRAME 4	2.400f	36.60	75
FRAME 5	3.000f	44.94	99
FRAME 6	3.600f	54.69	129
FRAME 7	4.200f	65.49	166
FRAME 8	4.800f	77.51	209
FRAME 9	5.400f	90.75	259
FRAME 10	6.000f	105.20	318
FRAME 11	6.600f	120.22	386
FRAME 12	7.300f	120.65	471
FRAME 13	8.000f	121.29	556
FRAME 14	8.700f	122.29	641
FRAME 15	9.400f	123.80	728
FRAME 16	10.100f	130.08	817
FRAME 17	10.800f	137.02	911
FRAME 18	11.500f	144.79	1010
FRAME 19	12.200f	152.96	1114
FRAME 20	12.900f	161.54	1224
FRAME 29	19.200f	334.07	2661
FRAME 36	24.100f	589.59	4917
FRAME 42	28.300f	474.78	7157
FRAME 57	38.800f	227.53	10956
FRAME 60	40.900f	183.35	11379
FRAME 71	48.600f	1.35	12171
FRAME 76	52.100f	-66.99	12031
FRAME 84	57.700f	-183.35	11349
FRAME 92	63.300f	-285.01	9992
FRAME 108	74.500f	-529.10	5343
FRAME 118	81.500f	-418.14	2041
FRAME 122	84.300f	-373.81	932

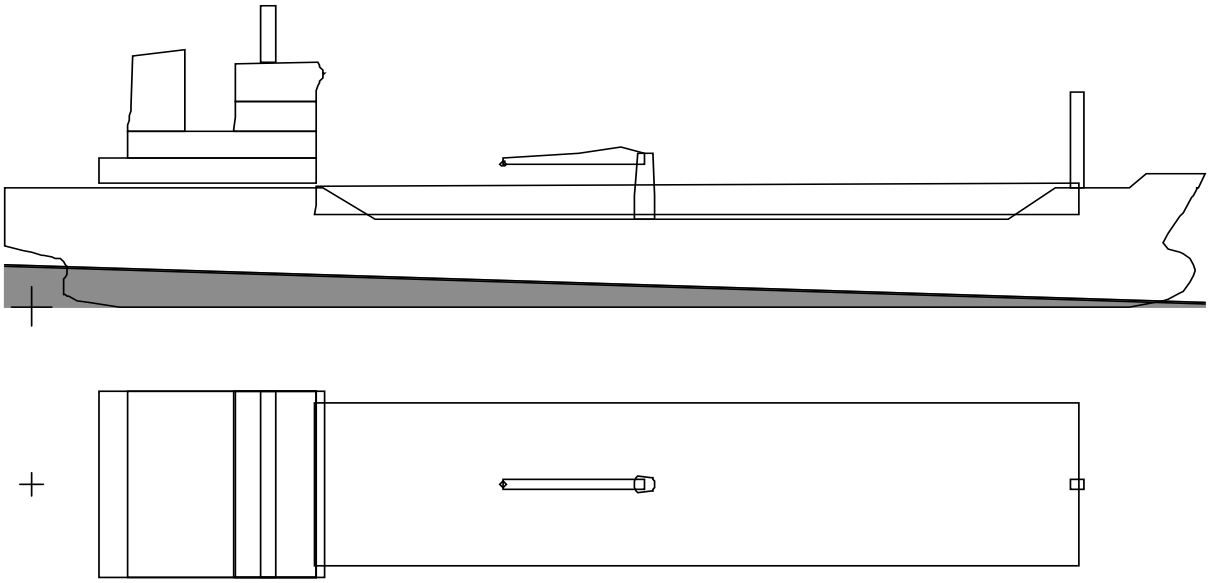
Max. Shear **589.59 MT** **at** **24.100f**
Max. Bending Moment **12171 MT-m** **at** **48.600f** **(Hogging)**


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 1.5
Pt Load x .1
Buoy. x 1.5
Shear x 10.0
B.M. x 200.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION : LIGHTSHIP CONDITION

Floating Status

Draft FP	0.586 m	Heel	port 0.39 deg.	GM(Solid)	4.248 m
Draft MS	2.181 m	Equil	Yes	F/S Corr.	0.000 m
Draft AP	3.775 m	Wind	0.0 kn	GM(Fluid)	4.248 m
Trim	aft 3.189/96.590	Wave	No	KMT	10.240 m
LCG	41.783f m	VCG	5.995 m	TPcm	12.28



Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,471.38	41.783f	0.028p	5.995
Displacement	2,471.38	41.783f	0.028p	5.995

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,471.38	41.783f	0.028p	5.995u
Total Weight:	**2,471.38**	**41.783f**	**0.028p**	**5.995u**

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	2,471.48	41.627f	0.061p	1.247
SubTotals:			**2,471.48**	**41.627f**	**0.061p**	**1.247**

Righting Arms vs Heel Angle

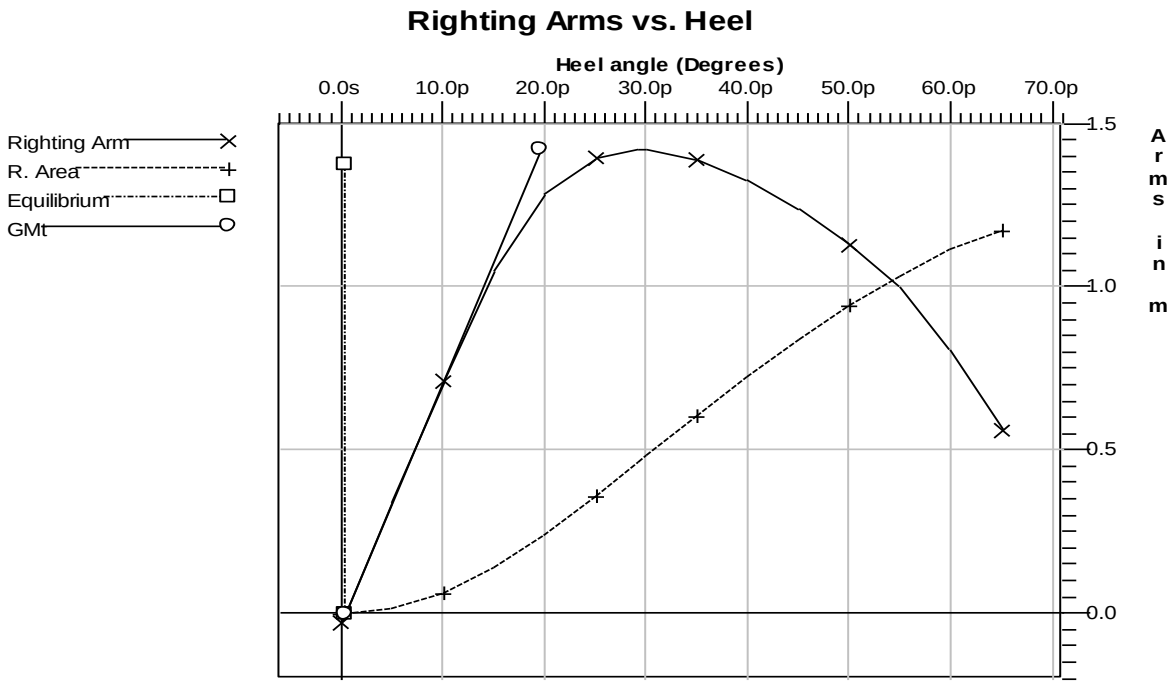
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	1.89a	3.773	-0.028	0.000	8.777 (1)	
0.38p	1.89a	3.773	0.000	0.000	8.819 (1)	Equil
5.00p	1.89a	3.757	0.344	0.014	9.313 (1)	
10.00p	1.88a	3.707	0.714	0.060	9.787 (1)	
15.00p	1.88a	3.625	1.051	0.137	10.198 (1)	
20.00p	1.91a	3.503	1.285	0.240	10.559 (1)	
25.00p	1.95a	3.308	1.398	0.358	10.893 (1)	
29.19p	1.98a	3.087	1.423	0.461	11.150 (1)	MaxRa
30.00p	1.98a	3.038	1.422	0.481	11.197 (1)	
35.00p	2.00a	2.695	1.391	0.605	11.466 (1)	
40.00p	1.99a	2.283	1.329	0.724	11.695 (1)	
45.00p	1.97a	1.811	1.240	0.836	11.876 (1)	
50.00p	1.92a	1.278	1.131	0.940	12.009 (1)	
55.00p	1.82a	0.688	0.998	1.033	12.088 (1)	
60.00p	1.71a	0.086	0.807	1.112	12.082 (1)	
65.00p	1.59a	-0.520	0.563	1.172	11.988 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.777

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.481	0.426	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.724	0.634	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.242	0.212	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	1.422	1.222	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	29.19	4.19	Yes
(6) GM at Equilibrium	>0.150 m	4.248	4.098	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 3.189/96.590, heel: port 0.39 deg., VCG = 5.995

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Solid) (m)
2.159	2471.481	41.627f	1.247	48.941f	12.276	63.201	247.001	4.248

Water Specific Gravity = 1.025.

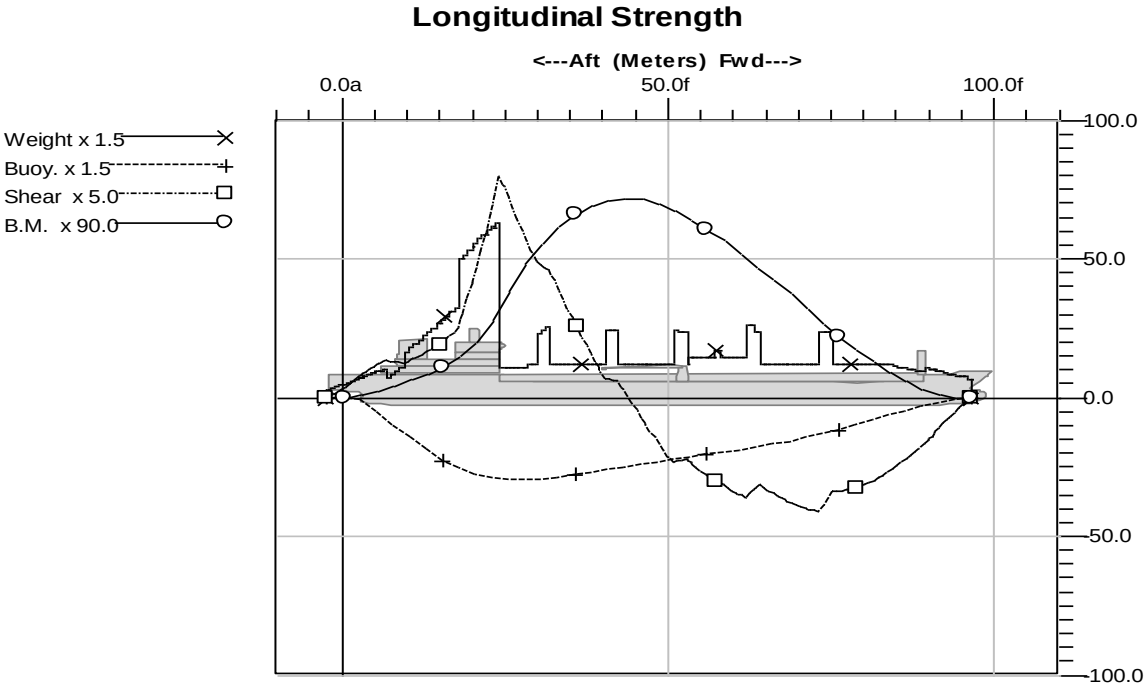
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.43 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	13.92	25
FRAME 1	0.600f	18.36	37
FRAME 2	1.200f	23.58	52
FRAME 3	1.800f	29.24	70
FRAME 4	2.400f	35.38	91
FRAME 5	3.000f	41.41	117
FRAME 6	3.600f	46.74	146
FRAME 7	4.200f	51.64	178
FRAME 8	4.800f	56.12	212
FRAME 9	5.400f	60.20	250
FRAME 10	6.000f	63.87	289
FRAME 11	6.600f	66.97	331
FRAME 12	7.300f	65.63	380
FRAME 13	8.000f	64.32	428
FRAME 14	8.700f	63.15	476
FRAME 15	9.400f	62.14	522
FRAME 16	10.100f	65.59	570
FRAME 17	10.800f	69.24	620
FRAME 18	11.500f	73.11	673
FRAME 19	12.200f	77.24	728
FRAME 20	12.900f	81.65	786
FRAME 29	19.200f	176.80	1515
FRAME 36	24.100f	399.91	2924
FRAME 42	28.300f	281.93	4373
FRAME 57	38.800f	64.95	6295
FRAME 60	40.900f	33.40	6397
FRAME 71	48.600f	-83.50	6294
FRAME 76	52.100f	-112.50	5936
FRAME 84	57.700f	-153.22	5223
FRAME 92	63.300f	-163.64	4303
FRAME 108	74.500f	-181.38	2273
FRAME 118	81.500f	-150.16	1153
FRAME 122	84.300f	-129.20	770

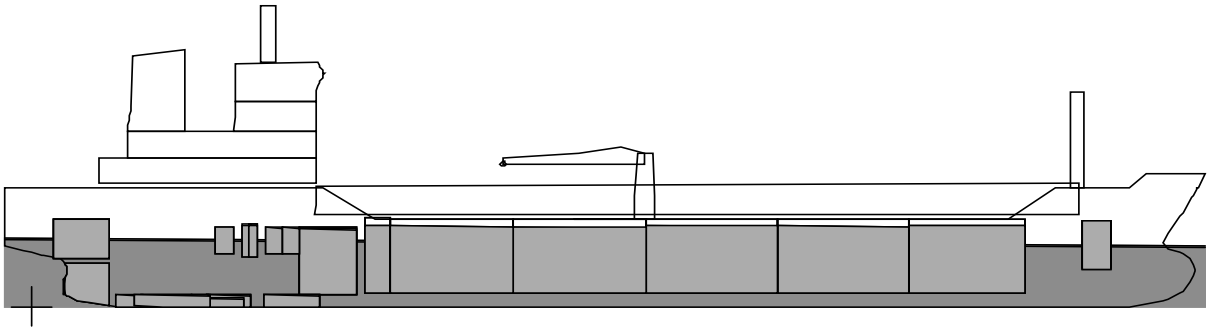
Max. Shear 399.91 MT at 24.100f
Max. Bending Moment 6476 MT-m at 44.400f (Hogging)

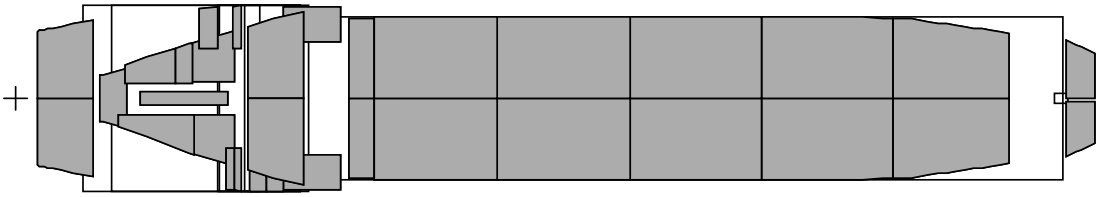

Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 1.5
Buoy. x 1.5
Shear x 5.0
B.M. x 90.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 1: FULY LOADED DEPARTURE 1.025 t /m3

Floating Status

Draft FP	5.582 m	Heel	stbd 0.24 deg.	GM(Solid)	1.642 m
Draft MS	5.910 m	Equil	Yes	F/S Corr.	0.443 m
Draft AP	6.238 m	Wind	0.0 kn	GM(Fluid)	1.199 m
Trim	aft 0.656/96.590	Wave	No	KMT	6.594 m
LCG	48.728f m	VCG	4.952 m	TPcm	13.89





Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,347.25	90.00%
FRESH_WATER		256.08	100.00%
HFO		228.47	96.00%
DIESEL_OIL		60.87	96.00%
LUB_OIL		24.94	96.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,928.62	52.204f	0.026s	4.430
Displacement	7,403.54	48.728f	0.007s	4.952

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	90.00%	342.80	79.123f	2.907p	4.477	204.41
COT1.S	90.00%	342.80	79.122f	2.912s	4.477	204.69
COT2.P	90.00%	445.77	68.862f	3.329p	4.455	314.89
COT2.S	90.00%	445.77	68.862f	3.335s	4.455	315.10
COT3.P	90.00%	453.35	57.662f	3.364p	4.400	315.34
COT3.S	90.00%	453.35	57.662f	3.370s	4.400	315.50
COT4.P	90.00%	423.07	46.455f	3.399p	4.392	305.75
COT4.S	90.00%	423.07	46.455f	3.405s	4.392	305.72
COT5.P	90.00%	422.08	35.638f	3.383p	4.365	293.97
COT5.S	90.00%	422.08	35.638f	3.389s	4.365	294.11
SLOPTANK.P	90.00%	86.55	29.353f	3.348p	4.362	52.75
SLOPTANK.S	90.00%	86.55	29.353f	3.353s	4.362	52.72
Subtotals:	**90.00%**	**4,347.25**	**55.758f**	**0.003s**	**4.414**	**2,974.95**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**100.00%**	**75.43**	**4.423f**	**2.462p**	**6.505**	**0.00**
AFWT.S	**100.00%**	**75.43**	**4.423f**	**2.462s**	**6.505**	**0.00**
FFWT.P	**100.00%**	**40.47**	**90.340f**	**1.895p**	**5.738**	**0.00**
FFWT.S	**100.00%**	**37.67**	**90.335f**	**2.047s**	**5.690**	**0.00**
SHAFTCWT	**100.00%**	**27.08**	**5.166f**	**0.000**	**2.213**	**0.00**
Subtotals:	**100.00%**	**256.08**	**30.718f**	**0.002s**	**5.810**	**0.00**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**96.00%**	**8.20**	**8.352f**	**0.009s**	**0.598**	**17.18**
FODAILYTK.S	**96.00%**	**11.97**	**20.572f**	**6.047s**	**6.011**	**6.00**
FODIRTK.S	**96.00%**	**11.15**	**16.787f**	**3.017s**	**0.591**	**16.37**
FOOVERTK.P	**96.00%**	**11.12**	**16.785f**	**3.004p**	**0.591**	**16.17**
FOSETTTK.S	**96.00%**	**12.06**	**21.986f**	**6.078s**	**6.006**	**6.06**
FOT.P	**96.00%**	**82.01**	**25.169f**	**6.363p**	**4.131**	**10.50**
FOT.S	**96.00%**	**82.01**	**25.169f**	**6.364s**	**4.131**	**10.50**
SLUGETK.P	**96.00%**	**3.43**	**14.346f**	**2.683p**	**0.597**	**3.45**
THERMALODTK.P	**96.00%**	**6.52**	**11.663f**	**2.299p**	**0.637**	**3.88**
Subtotals:	**96.00%**	**228.47**	**22.792f**	**0.533s**	**3.704**	**90.12**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**95.99%**	**5.17**	**18.851f**	**6.049s**	**5.995**	**2.02**
DOT.P	**96.00%**	**22.69**	**22.151f**	**3.042p**	**0.564**	**95.83**
DOT.S	**96.00%**	**22.69**	**22.153f**	**3.078s**	**0.564**	**96.84**
NO1DODAYTK.S	**95.99%**	**5.13**	**18.151f**	**6.027s**	**6.001**	**2.00**
NO2DODAYTK.P	**95.99%**	**5.20**	**18.750f**	**6.043p**	**5.995**	**2.03**
Subtotals:	**96.00%**	**60.87**	**21.244f**	**0.518s**	**1.947**	**198.71**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	**96.00%**	**9.42**	**12.659f**	**2.418s**	**0.616**	**7.36**
LOSTORTK.P	**95.99%**	**10.43**	**16.406f**	**5.940p**	**6.038**	**4.73**
LOSUMPTK.C	**96.00%**	**5.09**	**14.260f**	**0.000**	**0.384**	**0.64**
Subtotals:	**96.00%**	**24.94**	**14.552f**	**1.570p**	**2.836**	**12.73**

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,917.62	52.287f	0.026s	4.415	3,276.51

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	7,402.99	48.715f	0.015s	3.079
SubTotals:			7,402.99	48.715f	0.015s	3.079

Righting Arms vs Heel Angle

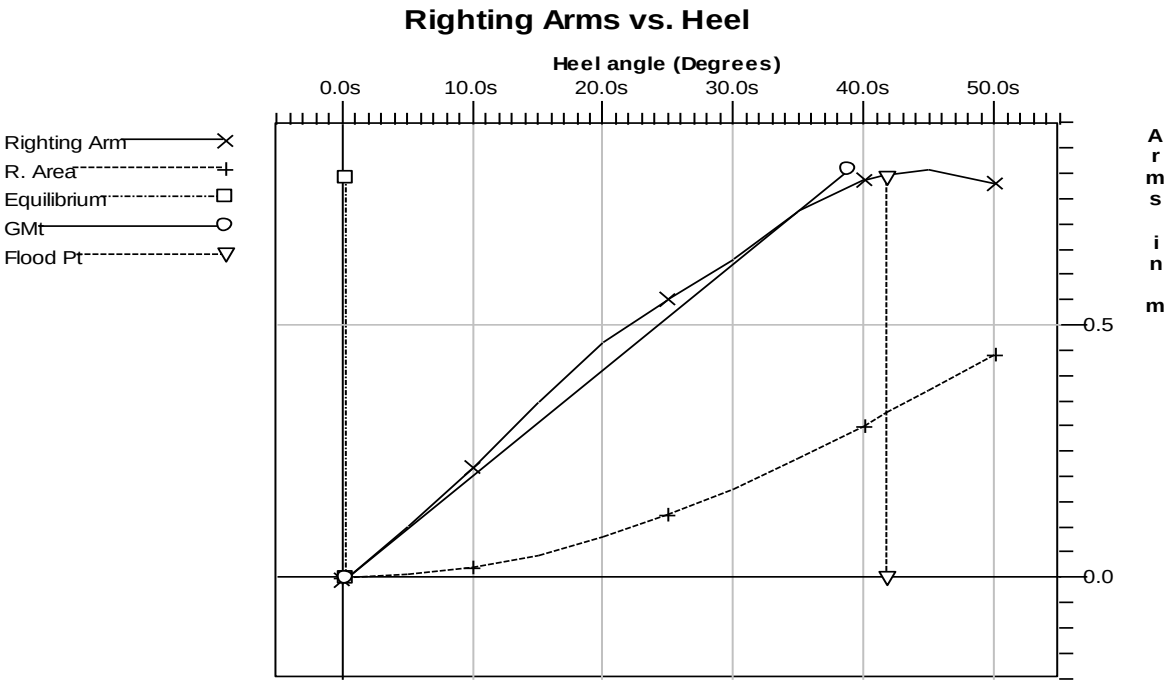
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.39a	6.237	-0.005	0.000	5.797 (1)	
0.23s	0.39a	6.238	0.000	0.000	5.771 (1)	Equil
5.00s	0.38a	6.205	0.103	0.004	5.215 (1)	
10.00s	0.35a	6.108	0.217	0.018	4.606 (1)	
15.00s	0.31a	5.946	0.351	0.043	3.974 (1)	
20.00s	0.24a	5.740	0.469	0.079	3.301 (1)	
25.00s	0.09a	5.481	0.552	0.123	2.590 (1)	
30.00s	0.09f	5.172	0.634	0.175	1.854 (1)	
35.00s	0.27f	4.833	0.727	0.235	1.093 (1)	
40.00s	0.44f	4.495	0.787	0.301	0.289 (1)	
41.74s	0.50f	4.378	0.799	0.325	0.000 (1)	FldPt
45.00s	0.59f	4.160	0.807	0.371	-0.545 (1)	
50.00s	0.71f	3.811	0.782	0.440	-1.389 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	5.797

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.175	0.120	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.301	0.211	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.126	0.096	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.807	0.607	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	45.00	20.00	Yes
(6) GM at Equilibrium	>0.150 m	1.199	1.049	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.656/96.590, heel: stbd 0.24 deg., VCG = 4.952

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.924	7402.987	48.715f	3.079	46.213f	13.891	88.513	115.487	1.199

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	338.3	1.986	4.899	0.051	84.527
NAVIGATION DECK	17.5	14.549	17.462	0.051	15.552
FUNNEL	42.4	13.600	16.513	0.051	35.746
CAPTAIN DECK	17.5	11.449	14.362	0.051	12.815
LIFE SAVING DECK	24.5	8.880	11.794	0.051	14.743
POOP DECK	46.5	6.479	9.392	0.051	22.271
RAILINGS	24.8	3.858	6.772	0.051	8.565
AFT MAST	2.9	18.832	21.745	0.051	3.203
FORE MAST	4.4	9.294	12.207	0.051	2.714
HOSE CRAIN	11.5	6.416	9.330	0.051	5.473

Total wind heeling moment 205.609 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.09a	5.481	-0.602	0.000	8.084 (1)	Roll
20.00p	0.24a	5.741	-0.519	-0.049	7.747 (1)	
15.00p	0.31a	5.947	-0.402	-0.089	7.338 (1)	
10.00p	0.35a	6.108	-0.269	-0.119	6.862 (1)	
5.00p	0.38a	6.205	-0.154	-0.137	6.347 (1)	
0.00	0.39a	6.238	-0.047	-0.146	5.797 (1)	
2.16s	0.39a	6.232	-0.001	-0.147	5.549 (1)	Equil
5.00s	0.38a	6.205	0.061	-0.145	5.215 (1)	
10.00s	0.35a	6.108	0.175	-0.135	4.606 (1)	
15.00s	0.31a	5.946	0.309	-0.114	3.974 (1)	
20.00s	0.24a	5.740	0.427	-0.082	3.301 (1)	
25.00s	0.09a	5.481	0.510	-0.041	2.590 (1)	
30.00s	0.09f	5.172	0.593	0.008	1.854 (1)	
35.00s	0.27f	4.833	0.685	0.063	1.093 (1)	
40.00s	0.44f	4.495	0.746	0.126	0.289 (1)	
41.74s	0.50f	4.378	0.758	0.149	0.000 (1)	FldPt
45.00s	0.59f	4.160	0.766	0.192	-0.545 (1)	
50.00s	0.71f	3.811	0.740	0.258	-1.389 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 308.41

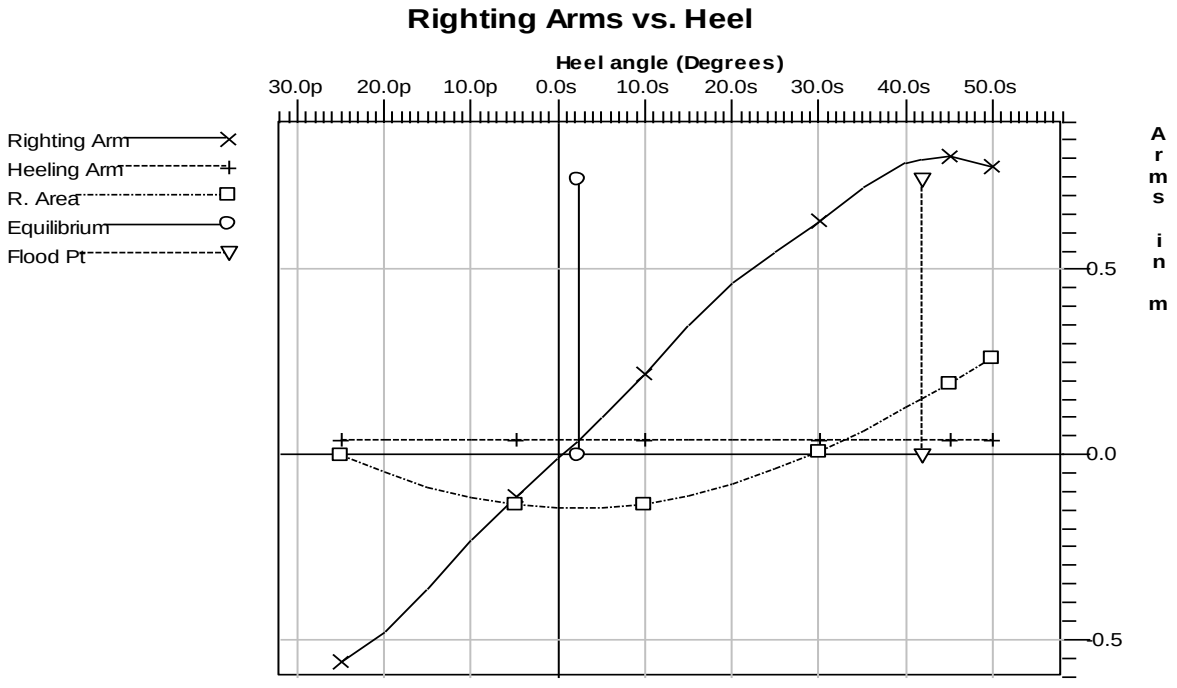
Roll angle is 20.94
Equilibrium for load condition without gust is 1.56s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.084

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.015	1.015	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.16	9.54	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.654/96.590, heel: stbd 1.57 deg., VCG = 4.952

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.925	7404.554	48.715f	3.081	46.213f	13.897	88.564	115.529	1.226

Water Specific Gravity = 1.025.

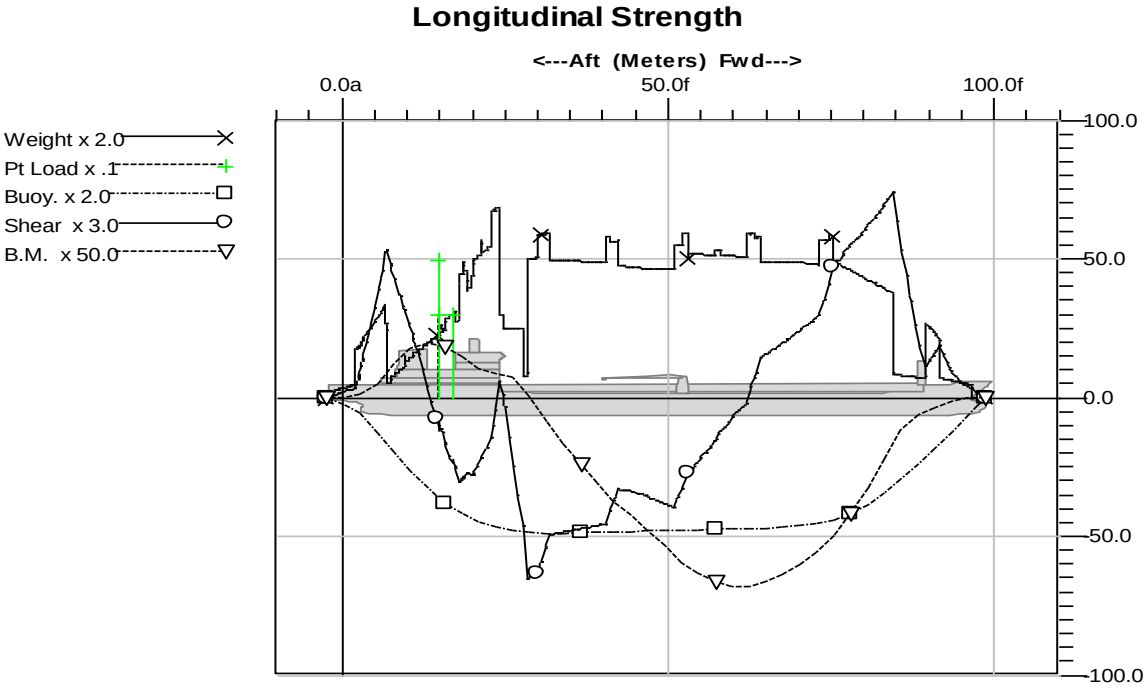
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (stbd 0.24 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	6.89	11
FRAME 1	0.600f	8.29	16
FRAME 2	1.200f	9.84	22
FRAME 3	1.800f	11.19	29
FRAME 4	2.400f	25.04	40
FRAME 5	3.000f	42.12	60
FRAME 6	3.600f	60.10	91
FRAME 7	4.200f	78.85	134
FRAME 8	4.800f	98.23	187
FRAME 9	5.400f	118.22	253
FRAME 10	6.000f	138.84	330
FRAME 11	6.600f	159.47	421
FRAME 12	7.300f	143.79	528
FRAME 13	8.000f	128.56	624
FRAME 14	8.700f	112.43	709
FRAME 15	9.400f	95.90	783
FRAME 16	10.100f	80.49	845
FRAME 17	10.800f	64.48	897
FRAME 18	11.500f	48.11	937
FRAME 19	12.200f	31.19	965
FRAME 20	12.900f	13.76	982
FRAME 29	19.200f	-80.36	670
FRAME 36	24.100f	17.59	422
FRAME 42	28.300f	-194.53	106
FRAME 57	38.800f	-137.45	-1504
FRAME 60	40.900f	-121.82	-1783
FRAME 71	48.600f	-111.84	-2584
FRAME 76	52.100f	-97.42	-2973
FRAME 84	57.700f	-38.61	-3331
FRAME 92	63.300f	28.35	-3395
FRAME 108	74.500f	122.90	-2610
FRAME 118	81.500f	194.88	-1445
FRAME 122	84.300f	222.78	-860

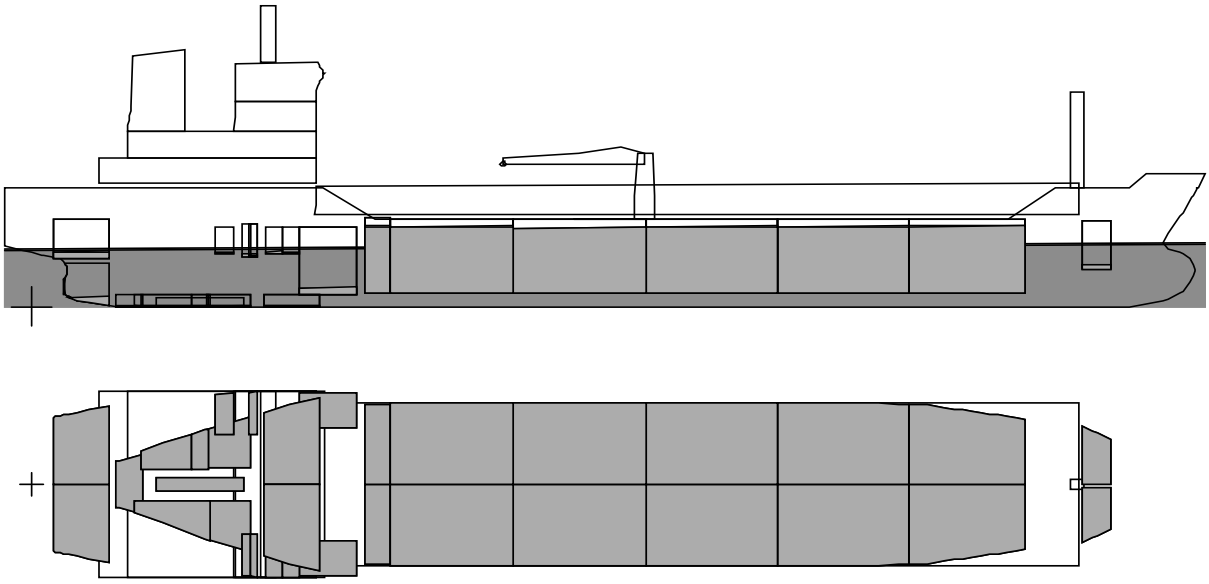
Max. Shear 222.93 MT at 84.297f
Max. Bending Moment -3414 MT-m at 61.900f (Sagging)


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 2.0
Pt Load x .1
Buoy. x 2.0
Shear x 3.0
B.M. x 50.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 2 : FULY LOADED ARRIVAL 1.025 t /m3

Floating Status

Draft FP	5.864 m	Heel	port 0.48 deg.	GM(Solid)	1.570 m
Draft MS	5.556 m	Equil	Yes	F/S Corr.	0.459 m
Draft AP	5.248 m	Wind	0.0 kn	GM(Fluid)	1.111 m
Trim	fwd 0.616/96.590	Wave	No	KMT	6.546 m
LCG	50.444f m	VCG	4.976 m	TPcm	13.45



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,347.25	90.00%
FRESH_WATER		25.61	10.00%
HFO		23.80	10.00%
DIESEL_OIL		6.34	10.00%
LUB_OIL		2.60	10.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,416.60	55.284f	0.003p	4.407
Displacement	6,891.52	50.444f	0.013p	4.976

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	90.00%	342.80	79.140f	2.914p	4.477	204.90
COT1.S	90.00%	342.80	79.142f	2.904s	4.477	204.35
COT2.P	90.00%	445.77	68.887f	3.338p	4.455	315.20
COT2.S	90.00%	445.77	68.887f	3.326s	4.455	314.80
COT3.P	90.00%	453.35	57.685f	3.373p	4.400	315.66
COT3.S	90.00%	453.35	57.685f	3.361s	4.400	315.34
COT4.P	90.00%	423.07	46.479f	3.408p	4.392	305.89
COT4.S	90.00%	423.07	46.479f	3.396s	4.392	305.96
COT5.P	90.00%	422.08	35.659f	3.392p	4.365	294.20
COT5.S	90.00%	422.08	35.659f	3.380s	4.365	293.93
SLOPTANK.P	90.00%	86.55	29.353f	3.356p	4.362	52.71
SLOPTANK.S	90.00%	86.55	29.353f	3.346s	4.362	52.77
Subtotals:	**90.00%**	**4,347.25**	**55.780f**	**0.006p**	**4.414**	**2,975.70**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**10.00%**	**7.54**	**4.759f**	**1.370p**	**4.778**	**15.22**
AFWT.S	**10.00%**	**7.54**	**4.744f**	**1.337s**	**4.778**	**14.52**
FFWT.P	**10.00%**	**4.05**	**90.359f**	**1.919p**	**3.718**	**11.26**
FFWT.S	**10.00%**	**3.77**	**90.359f**	**2.027s**	**3.623**	**8.75**
SHAFTCWT	**10.00%**	**2.71**	**5.483f**	**0.009p**	**0.679**	**3.11**
Subtotals:	**10.00%**	**25.61**	**30.952f**	**0.016p**	**4.007**	**52.85**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**10.01%**	**0.85**	**8.398f**	**0.036p**	**0.099**	**3.73**
FODAILYTK.S	**10.00%**	**1.25**	**20.579f**	**5.956s**	**4.929**	**5.24**
FODIRTK.S	**10.00%**	**1.16**	**16.850f**	**2.427s**	**0.092**	**3.98**
FOOVERTK.P	**10.00%**	**1.16**	**16.868f**	**2.484p**	**0.091**	**4.33**
FOSETTTK.S	**10.00%**	**1.26**	**21.992f**	**6.009s**	**4.927**	**5.67**
FOT.P	**10.00%**	**8.54**	**25.252f**	**6.243p**	**1.446**	**8.49**
FOT.S	**10.00%**	**8.54**	**25.250f**	**6.227s**	**1.446**	**8.45**
SLUGETK.P	**10.00%**	**0.36**	**14.359f**	**2.209p**	**0.107**	**0.97**
THERMALODTK.P	**10.01%**	**0.68**	**11.901f**	**1.886p**	**0.137**	**0.93**
Subtotals:	**10.00%**	**23.80**	**22.866f**	**0.532s**	**1.574**	**41.79**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**10.00%**	**0.54**	**18.852f**	**5.910s**	**4.664**	**1.52**
DOT.P	**10.00%**	**2.36**	**22.298f**	**2.540p**	**0.075**	**44.22**
DOT.S	**10.00%**	**2.36**	**22.261f**	**2.249s**	**0.074**	**39.29**
NO1DODAYTK.S	**10.00%**	**0.53**	**18.153f**	**5.867s**	**4.667**	**1.42**
NO2DODAYTK.P	**10.00%**	**0.54**	**18.752f**	**5.951p**	**4.664**	**1.52**
Subtotals:	**10.00%**	**6.34**	**21.340f**	**0.379s**	**1.243**	**87.96**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	**10.00%**	**0.98**	**13.078f**	**2.029s**	**0.116**	**1.72**
LOSTORTK.P	**10.00%**	**1.09**	**16.417f**	**5.812p**	**4.939**	**3.09**
LOSUMPTK.C	**10.00%**	**0.53**	**14.671f**	**0.010p**	**0.041**	**0.64**
Subtotals:	**10.00%**	**2.60**	**14.799f**	**1.666p**	**2.117**	**5.45**

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,405.60	55.384f	0.003p	4.390	3,163.75

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	6,892.27	50.456f	0.030p	2.881
SubTotals:			6,892.27	50.456f	0.030p	2.881

Righting Arms vs Heel Angle

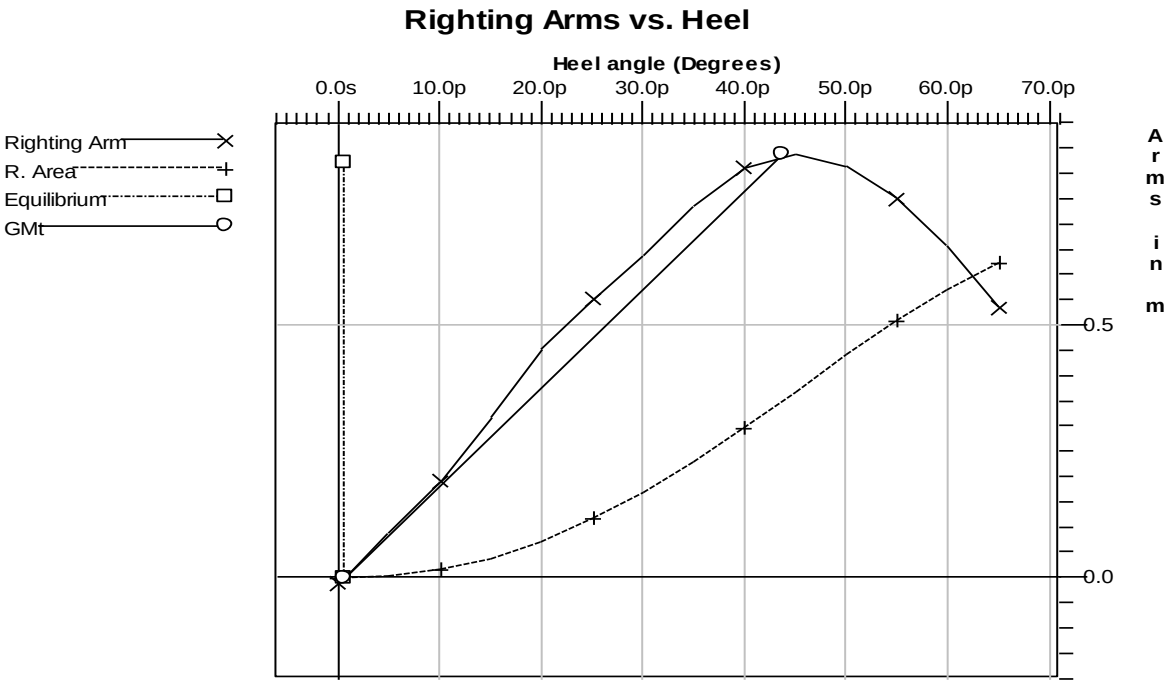
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.37f	5.248	-0.009	0.000	6.525 (1)	
0.48p	0.37f	5.247	0.000	0.000	6.580 (1)	Equil
5.00p	0.37f	5.218	0.089	0.003	7.074 (1)	
10.00p	0.39f	5.132	0.193	0.016	7.581 (1)	
15.00p	0.42f	4.989	0.319	0.038	8.043 (1)	
20.00p	0.47f	4.786	0.456	0.072	8.454 (1)	
25.00p	0.59f	4.543	0.552	0.116	8.784 (1)	
30.00p	0.73f	4.264	0.639	0.168	9.036 (1)	
35.00p	0.90f	3.938	0.737	0.228	9.225 (1)	
40.00p	1.09f	3.561	0.812	0.296	9.352 (1)	
45.00p	1.27f	3.162	0.839	0.368	9.403 (1)	
50.00p	1.44f	2.751	0.814	0.440	9.374 (1)	
55.00p	1.58f	2.331	0.750	0.509	9.265 (1)	
60.00p	1.71f	1.900	0.655	0.571	9.079 (1)	
65.00p	1.82f	1.460	0.535	0.623	8.821 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	6.525

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.168	0.113	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.296	0.206	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.128	0.098	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.839	0.639	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	45.00	20.00	Yes
(6) GM at Equilibrium	>0.150 m	1.111	0.961	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 0.616/96.590, heel: port 0.48 deg., VCG = 4.976

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.551	6892.273	50.456f	2.881	47.517f	13.454	80.013	112.133	1.111

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	376.1	2.142	4.875	0.051	93.505
NAVIGATION DECK	17.5	14.923	17.657	0.051	15.725
FUNNEL	42.4	13.974	16.708	0.051	36.167
CAPTAIN DECK	17.5	11.823	14.557	0.051	12.989
LIFE SAVING DECK	24.5	9.254	11.988	0.051	14.986
POOP DECK	46.5	6.853	9.586	0.051	22.732
RAILINGS	24.8	4.232	6.966	0.051	8.810
AFT MAST	2.9	19.206	21.939	0.051	3.232
FORE MAST	4.4	9.668	12.401	0.051	2.757
HOSE CRAIN	11.5	6.790	9.524	0.051	5.587

Total wind heeling moment 216.489 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.59f	4.544	-0.599	0.000	8.783 (1)	Roll
20.00p	0.47f	4.786	-0.503	-0.048	8.454 (1)	
15.00p	0.42f	4.988	-0.366	-0.086	8.044 (1)	
10.00p	0.39f	5.131	-0.240	-0.113	7.581 (1)	
5.00p	0.37f	5.218	-0.136	-0.129	7.074 (1)	
0.00	0.37f	5.247	-0.038	-0.136	6.525 (1)	
1.93s	0.37f	5.243	0.000	-0.137	6.304 (1)	Equil
5.00s	0.37f	5.218	0.060	-0.135	5.941 (1)	
10.00s	0.39f	5.132	0.164	-0.126	5.324 (1)	
15.00s	0.42f	4.989	0.290	-0.106	4.679 (1)	
20.00s	0.48f	4.786	0.426	-0.075	4.008 (1)	
25.00s	0.59f	4.543	0.521	-0.033	3.290 (1)	
30.00s	0.73f	4.263	0.608	0.016	2.537 (1)	
35.00s	0.90f	3.938	0.705	0.073	1.769 (1)	
40.00s	1.09f	3.560	0.779	0.138	0.998 (1)	
45.00s	1.27f	3.162	0.806	0.208	0.213 (1)	
46.35s	1.32f	3.052	0.803	0.227	0.000 (1)	FldPt
50.00s	1.44f	2.751	0.779	0.277	-0.582 (1)	
55.00s	1.58f	2.330	0.714	0.343	-1.380 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 324.73

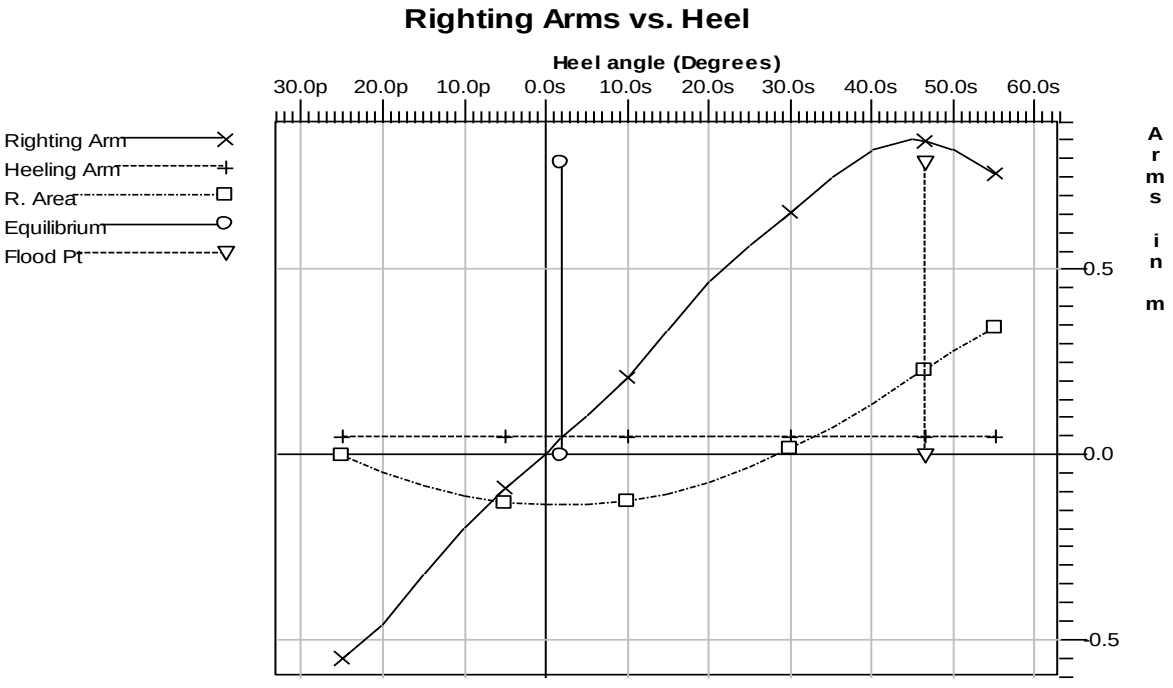
Roll angle is 20.25
Equilibrium for load condition without gust is 1.14s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.783

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.654	1.654	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	1.93	9.77	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 0.616/96.590, heel: stbd 1.13 deg., VCG = 4.976

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.551	6891.521	50.456f	2.881	47.519f	13.455	80.020	112.154	1.112

Water Specific Gravity = 1.025.

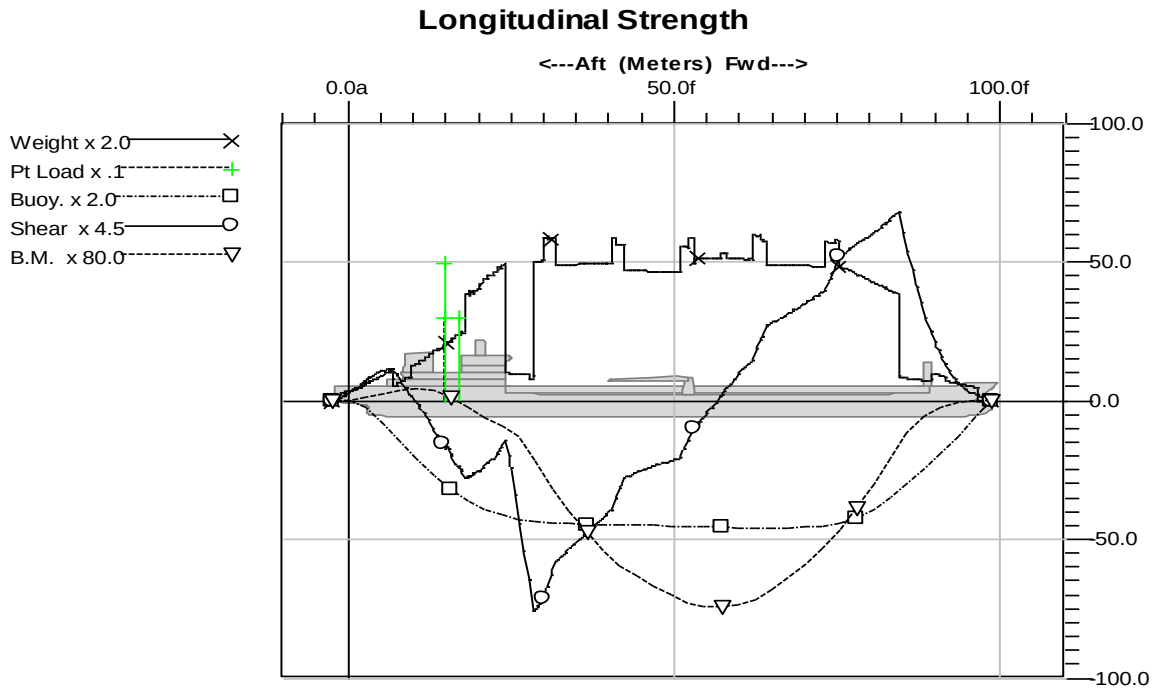
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.48 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	13.82	13
FRAME 1	0.600f	17.97	22
FRAME 2	1.200f	22.61	34
FRAME 3	1.800f	27.36	48
FRAME 4	2.400f	32.87	66
FRAME 5	3.000f	38.12	87
FRAME 6	3.600f	42.29	110
FRAME 7	4.200f	45.95	136
FRAME 8	4.800f	48.85	164
FRAME 9	5.400f	51.01	194
FRAME 10	6.000f	52.50	224
FRAME 11	6.600f	53.15	256
FRAME 12	7.300f	43.57	289
FRAME 13	8.000f	33.13	315
FRAME 14	8.700f	21.81	334
FRAME 15	9.400f	9.60	345
FRAME 16	10.100f	0.52	348
FRAME 17	10.800f	-9.39	344
FRAME 18	11.500f	-20.07	333
FRAME 19	12.200f	-31.36	315
FRAME 20	12.900f	-43.22	288
FRAME 29	19.200f	-116.95	-295
FRAME 36	24.100f	-63.22	-763
FRAME 42	28.300f	-339.72	-1603
FRAME 57	38.800f	-189.78	-4255
FRAME 60	40.900f	-156.51	-4630
FRAME 71	48.600f	-98.27	-5525
FRAME 76	52.100f	-62.67	-5835
FRAME 84	57.700f	17.85	-5947
FRAME 92	63.300f	105.48	-5647
FRAME 108	74.500f	215.30	-3929
FRAME 118	81.500f	281.87	-2148
FRAME 122	84.300f	307.50	-1328

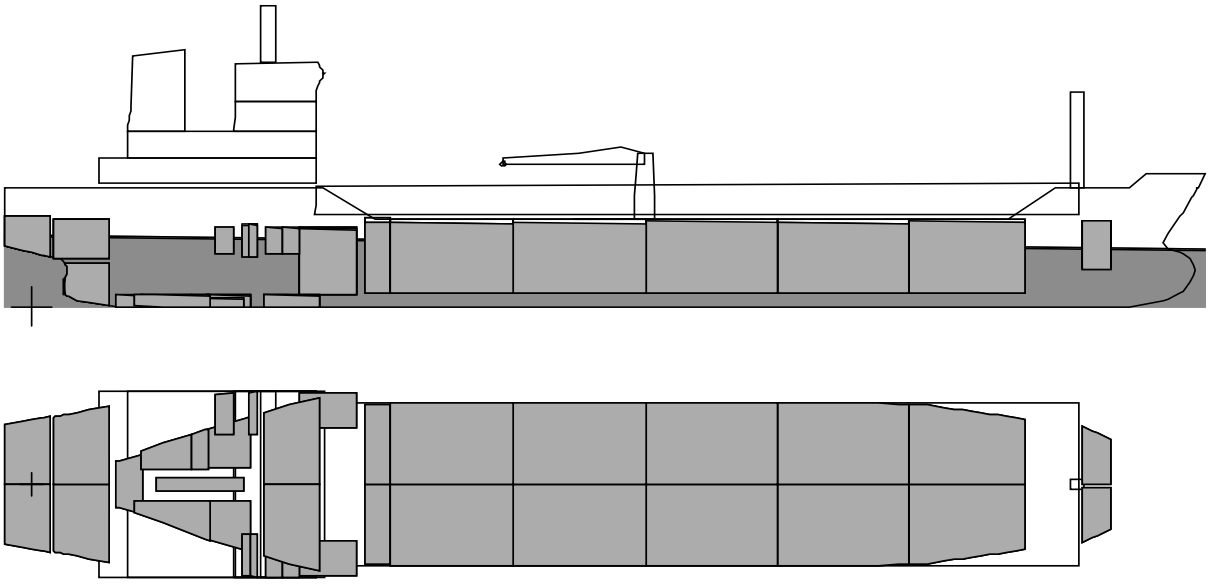
Max. Shear **-339.94 MT** **at** **28.303f**
Max. Bending Moment **-5957 MT-m** **at** **56.408f** **(Sagging)**


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 2.0
Pt Load x .1
Buoy. x 2.0
Shear x 4.5
B.M. x 80.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 3 : FULY LOADED DEPARTURE 0.95 t /m3

Floating Status

Draft FP	5.280 m	Heel	stbd 0.27 deg.	GM(Solid)	1.547 m
Draft MS	5.895 m	Equil	Yes	F/S Corr.	0.413 m
Draft AP	6.511 m	Wind	0.0 kn	GM(Fluid)	1.134 m
Trim	aft 1.232/96.590	Wave	No	KMT	6.625 m
LCG	48.028f m	VCG	5.078 m	TPcm	14.00



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,253.00	95.00%
WATER_BALLAST		91.74	3.73%
FRESH_WATER		256.08	100.00%
HFO		228.46	96.00%
DIESEL_OIL		60.87	96.00%
LUB_OIL		24.94	96.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,926.11	51.154f	0.026s	4.619
Displacement	7,401.03	48.028f	0.007s	5.078

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.950)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	95.00%	335.37	79.120f	2.920p	4.638	192.56
COT1.S	95.00%	335.37	79.119f	2.925s	4.638	192.86
COT2.P	95.00%	436.11	68.854f	3.337p	4.616	293.93
COT2.S	95.00%	436.11	68.854f	3.343s	4.616	294.14
COT3.P	95.00%	443.52	57.653f	3.370p	4.564	293.91
COT3.S	95.00%	443.52	57.653f	3.377s	4.564	294.08
COT4.P	95.00%	413.89	46.446f	3.404p	4.550	285.52
COT4.S	95.00%	413.89	46.446f	3.411s	4.550	285.48
COT5.P	95.00%	412.93	35.630f	3.388p	4.529	273.87
COT5.S	95.00%	412.93	35.630f	3.395s	4.529	274.01
SLOPTANK.P	95.00%	84.68	29.352f	3.347p	4.530	48.55
SLOPTANK.S	95.00%	84.68	29.352f	3.352s	4.530	48.52
Subtotals:	**95.00%**	**4,253.00**	**55.751f**	**0.003s**	**4.575**	**2,777.43**

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	**100.00%**	**45.87**	**0.172a**	**2.032p**	**7.055**	**0.00**
AWBTK.S	**100.00%**	**45.87**	**0.172a**	**2.032s**	**7.055**	**0.00**
Subtotals:	**3.73%**	**91.74**	**0.172a**	**0.000**	**7.055**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**100.00%**	**75.43**	**4.423f**	**2.462p**	**6.505**	**0.00**
AFWT.S	**100.00%**	**75.43**	**4.423f**	**2.462s**	**6.505**	**0.00**
FFWT.P	**100.00%**	**40.47**	**90.340f**	**1.895p**	**5.738**	**0.00**
FFWT.S	**100.00%**	**37.67**	**90.335f**	**2.047s**	**5.690**	**0.00**
SHAFTCWT	**100.00%**	**27.08**	**5.166f**	**0.000**	**2.213**	**0.00**
Subtotals:	**100.00%**	**256.08**	**30.718f**	**0.002s**	**5.810**	**0.00**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**96.00%**	**8.20**	**8.349f**	**0.010s**	**0.598**	**17.17**
FODAILYTK.S	**96.00%**	**11.97**	**20.571f**	**6.047s**	**6.011**	**6.00**
FODIRTK.S	**96.00%**	**11.14**	**16.779f**	**3.017s**	**0.592**	**16.35**
FOOVERTK.P	**96.00%**	**11.12**	**16.777f**	**3.004p**	**0.592**	**16.13**
FOSETTTK.S	**96.00%**	**12.06**	**21.986f**	**6.078s**	**6.006**	**6.06**
FOT.P	**96.00%**	**82.01**	**25.167f**	**6.363p**	**4.131**	**10.50**
FOT.S	**96.00%**	**82.01**	**25.167f**	**6.364s**	**4.131**	**10.50**
SLUGETK.P	**96.00%**	**3.43**	**14.345f**	**2.682p**	**0.597**	**3.45**
THERMALODTK.P	**96.00%**	**6.52**	**11.653f**	**2.298p**	**0.637**	**3.40**
Subtotals:	**96.00%**	**228.46**	**22.789f**	**0.533s**	**3.704**	**89.58**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**95.99%**	**5.17**	**18.850f**	**6.049s**	**5.995**	**2.02**
DOT.P	**96.00%**	**22.69**	**22.140f**	**3.041p**	**0.565**	**82.39**
DOT.S	**96.00%**	**22.69**	**22.142f**	**3.079s**	**0.564**	**89.27**
NO1DODAYTK.S	**95.99%**	**5.13**	**18.151f**	**6.027s**	**6.001**	**2.00**
NO2DODAYTK.P	**95.99%**	**5.20**	**18.750f**	**6.043p**	**5.995**	**2.03**
Subtotals:	**96.00%**	**60.87**	**21.236f**	**0.519s**	**1.947**	**177.70**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	96.00%	9.42	12.639f	2.421s	0.616	6.77
LOSTORTK.P	95.99%	10.43	16.406f	5.940p	6.038	4.73
LOSUMPTK.C	96.00%	5.09	14.231f	0.000	0.384	0.42
Subtotals:	96.00%	24.94	14.539f	1.569p	2.836	11.92

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,915.10	51.234f	0.026s	4.604	3,056.62

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	7,401.12	48.002f	0.016s	3.085
SubTotals:			7,401.12	48.002f	0.016s	3.085

Righting Arms vs Heel Angle

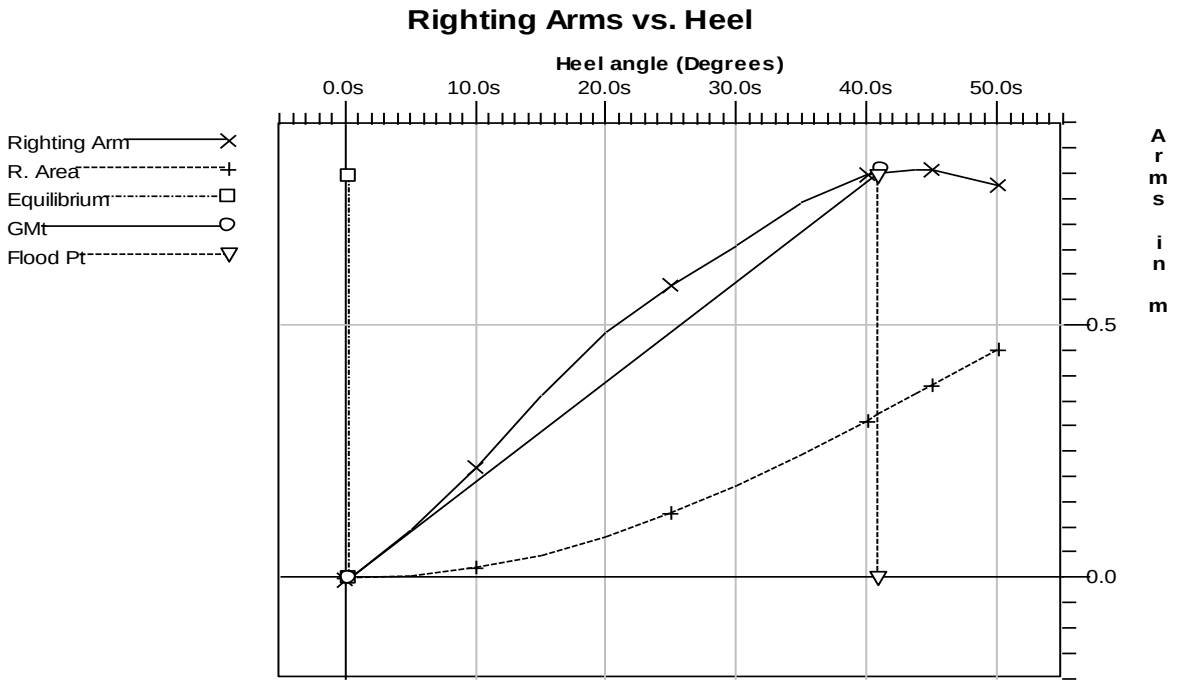
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.73a	6.511	-0.005	0.000	5.642 (1)	
0.24s	0.73a	6.511	0.000	0.000	5.615 (1)	Equil
5.00s	0.72a	6.477	0.097	0.004	5.061 (1)	
10.00s	0.69a	6.375	0.218	0.018	4.453 (1)	
15.00s	0.64a	6.209	0.362	0.043	3.824 (1)	
20.00s	0.57a	6.002	0.489	0.080	3.153 (1)	
25.00s	0.43a	5.740	0.579	0.127	2.446 (1)	
30.00s	0.24a	5.424	0.661	0.181	1.715 (1)	
35.00s	0.05a	5.086	0.746	0.242	0.951 (1)	
40.00s	0.11f	4.763	0.798	0.310	0.138 (1)	
40.83s	0.13f	4.710	0.803	0.322	0.000 (1)	FldPt
43.77s	0.21f	4.522	0.810	0.363	-0.497 (1)	MaxRa
45.00s	0.24f	4.442	0.808	0.380	-0.705 (1)	
50.00s	0.34f	4.107	0.777	0.450	-1.556 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	5.642

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.181	0.126	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.310	0.220	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.129	0.099	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.810	0.610	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	43.77	18.77	Yes
(6) GM at Equilibrium	>0.150 m	1.134	0.984	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.232/96.590, heel: stbd 0.27 deg., VCG = 5.078

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.925	7401.124	48.002f	3.085	46.008f	13.998	90.654	118.310	1.134

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	338.5	1.987	4.899	0.051	84.571
NAVIGATION DECK	17.5	14.551	17.463	0.051	15.553
FUNNEL	42.4	13.602	16.514	0.051	35.749
CAPTAIN DECK	17.5	11.451	14.363	0.051	12.816
LIFE SAVING DECK	24.5	8.882	11.795	0.051	14.744
POOP DECK	46.5	6.480	9.393	0.051	22.273
RAILINGS	24.8	3.860	6.773	0.051	8.566
AFT MAST	2.9	18.834	21.746	0.051	3.203
FORE MAST	4.4	9.296	12.208	0.051	2.714
HOSE CRAIN	11.5	6.418	9.331	0.051	5.473

Total wind heeling moment 205.662 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.43a	5.740	-0.629	0.000	7.940 (1)	Roll
20.00p	0.57a	6.002	-0.540	-0.051	7.600 (1)	
15.00p	0.64a	6.210	-0.413	-0.093	7.188 (1)	
10.00p	0.69a	6.375	-0.270	-0.123	6.710 (1)	
5.00p	0.72a	6.477	-0.149	-0.141	6.193 (1)	
0.00	0.73a	6.511	-0.047	-0.149	5.642 (1)	
2.28s	0.73a	6.504	-0.001	-0.150	5.381 (1)	Equil
5.00s	0.72a	6.477	0.056	-0.149	5.061 (1)	
10.00s	0.69a	6.375	0.176	-0.139	4.453 (1)	
15.00s	0.64a	6.209	0.320	-0.117	3.824 (1)	
20.00s	0.57a	6.002	0.448	-0.084	3.153 (1)	
25.00s	0.43a	5.740	0.537	-0.041	2.446 (1)	
30.00s	0.24a	5.424	0.620	0.010	1.715 (1)	
35.00s	0.05a	5.086	0.704	0.068	0.951 (1)	
40.00s	0.11f	4.763	0.757	0.132	0.138 (1)	
40.83s	0.13f	4.710	0.761	0.143	0.000 (1)	FldPt
43.77s	0.21f	4.522	0.768	0.182	-0.496 (1)	MaxRa
45.00s	0.24f	4.442	0.766	0.198	-0.705 (1)	
50.00s	0.34f	4.107	0.735	0.264	-1.556 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 308.49

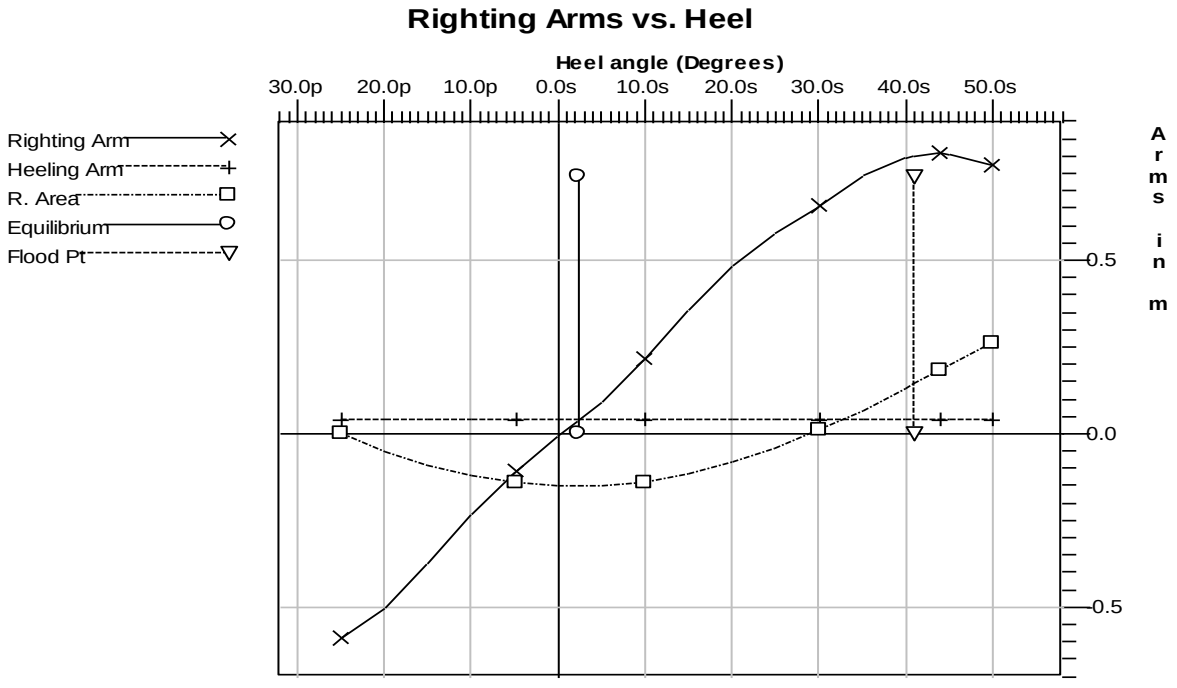
Roll angle is 20.78
Equilibrium for load condition without gust is 1.66s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	7.940

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	1.949	0.949	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.28	9.42	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.230/96.590, heel: stbd 1.64 deg., VCG = 5.078

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.925	7402.094	48.002f	3.087	46.008f	14.004	90.702	118.358	1.159

Water Specific Gravity = 1.025.

Trim is per 96.59m

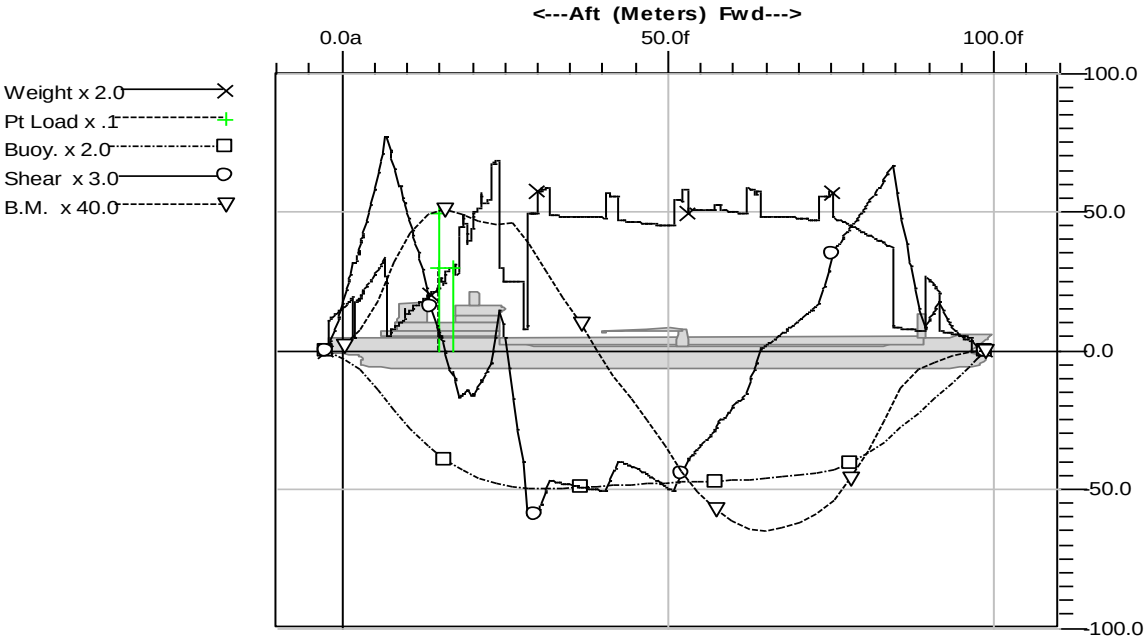
LONGITUDNAL STRENGTH

Longitudinal Strength (stbd 0.27 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	51.28	62
FRAME 1	0.600f	66.62	98
FRAME 2	1.200f	83.22	144
FRAME 3	1.800f	95.66	200
FRAME 4	2.400f	108.20	261
FRAME 5	3.000f	123.92	332
FRAME 6	3.600f	140.48	413
FRAME 7	4.200f	157.77	503
FRAME 8	4.800f	175.64	604
FRAME 9	5.400f	194.08	716
FRAME 10	6.000f	213.12	840
FRAME 11	6.600f	232.14	975
FRAME 12	7.300f	214.55	1132
FRAME 13	8.000f	197.40	1278
FRAME 14	8.700f	179.31	1411
FRAME 15	9.400f	160.80	1532
FRAME 16	10.100f	143.41	1640
FRAME 17	10.800f	125.42	1735
FRAME 18	11.500f	107.03	1818
FRAME 19	12.200f	88.11	1888
FRAME 20	12.900f	68.66	1944
FRAME 29	19.200f	-42.91	1928
FRAME 36	24.100f	43.69	1840
FRAME 42	28.300f	-176.60	1620
FRAME 57	38.800f	-149.88	41
FRAME 60	40.900f	-139.74	-268
FRAME 71	48.600f	-142.40	-1250
FRAME 76	52.100f	-132.91	-1752
FRAME 84	57.700f	-78.03	-2314
FRAME 92	63.300f	-13.74	-2602
FRAME 108	74.500f	86.77	-2249
FRAME 118	81.500f	168.81	-1297
FRAME 122	84.300f	201.12	-776

Max. Shear 232.28 MT at 6.610f
Max. Bending Moment -2605 MT-m at 64.000f (Sagging)

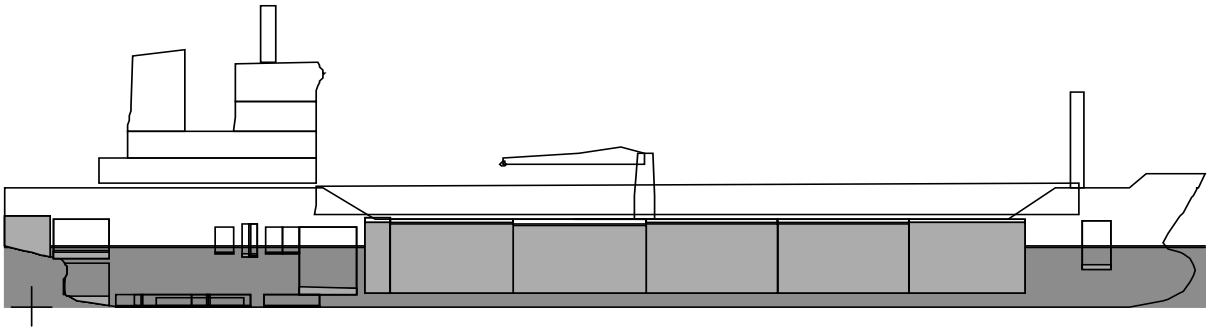
Longitudinal Strength

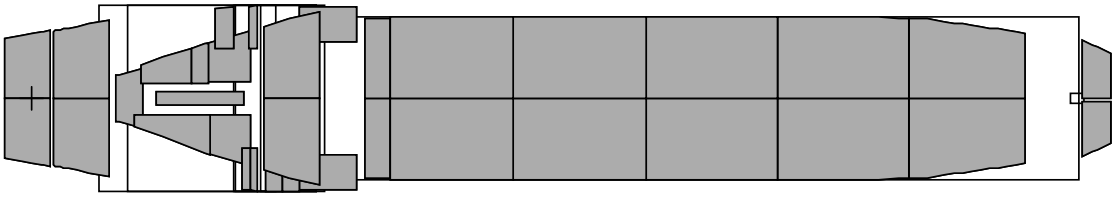


CONDITION 4 : FULY LOADED ARRIVAL 0.95t /m3

Floating Status

Draft FP	5.540 m	Heel	port 0.52 deg.	GM(Solid)	1.459 m
Draft MS	5.547 m	Equil	Yes	F/S Corr.	0.430 m
Draft AP	5.555 m	Wind	0.0 kn	GM(Fluid)	1.029 m
Trim	0.015/96.590	Wave	No	KMT	6.570 m
LCG	49.690f m	VCG	5.112 m	TPcm	13.61





Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,253.00	95.00%
WATER_BALLAST		91.74	3.73%
FRESH_WATER		25.61	10.00%
HFO		23.80	10.00%
DIESEL_OIL		6.34	10.00%
LUB_OIL		2.60	10.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,414.09	54.112f	0.003p	4.618
Displacement	6,889.01	49.690f	0.013p	5.112

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.950)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	95.00%	335.37	79.135f	2.927p	4.638	193.05
COT1.S	95.00%	335.37	79.137f	2.916s	4.638	192.47
COT2.P	95.00%	436.11	68.875f	3.346p	4.616	294.23
COT2.S	95.00%	436.11	68.876f	3.334s	4.616	293.81
COT3.P	95.00%	443.52	57.675f	3.380p	4.564	294.21
COT3.S	95.00%	443.52	57.675f	3.367s	4.564	293.88
COT4.P	95.00%	413.89	46.469f	3.414p	4.549	285.62
COT4.S	95.00%	413.89	46.468f	3.401s	4.549	285.70
COT5.P	95.00%	412.93	35.649f	3.398p	4.529	274.09
COT5.S	95.00%	412.93	35.649f	3.385s	4.529	273.81
SLOPTANK.P	95.00%	84.68	29.353f	3.355p	4.530	48.50
SLOPTANK.S	95.00%	84.68	29.353f	3.344s	4.530	48.57
Subtotals:	**95.00%**	**4,253.00**	**55.771f**	**0.006p**	**4.575**	**2,777.94**

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	**100.00%**	**45.87**	**0.172a**	**2.032p**	**7.055**	**0.00**
AWBTK.S	**100.00%**	**45.87**	**0.172a**	**2.032s**	**7.055**	**0.00**
Subtotals:	**3.73%**	**91.74**	**0.172a**	**0.000**	**7.055**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**10.00%**	**7.54**	**4.739f**	**1.366p**	**4.778**	**15.17**
AFWT.S	**10.00%**	**7.54**	**4.722f**	**1.330s**	**4.778**	**14.39**
FFWT.P	**10.00%**	**4.05**	**90.352f**	**1.923p**	**3.718**	**11.26**
FFWT.S	**10.00%**	**3.77**	**90.352f**	**2.027s**	**3.623**	**8.75**
SHAFTCWT	**10.00%**	**2.71**	**5.469f**	**0.010p**	**0.679**	**3.10**
Subtotals:	**10.00%**	**25.61**	**30.936f**	**0.017p**	**4.007**	**52.66**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**10.01%**	**0.85**	**8.380f**	**0.040p**	**0.099**	**3.72**
FODAILYTK.S	**10.00%**	**1.25**	**20.574f**	**5.952s**	**4.929**	**5.24**
FODIRTK.S	**10.00%**	**1.16**	**16.802f**	**2.424s**	**0.093**	**3.95**
FOOVERTK.P	**10.00%**	**1.16**	**16.821f**	**2.488p**	**0.092**	**4.34**
FOSETTTK.S	**10.00%**	**1.26**	**21.987f**	**6.005s**	**4.927**	**5.67**
FOT.P	**10.00%**	**8.54**	**25.233f**	**6.244p**	**1.446**	**8.50**
FOT.S	**10.00%**	**8.54**	**25.230f**	**6.226s**	**1.446**	**8.45**
SLUGETK.P	**10.00%**	**0.36**	**14.351f**	**2.210p**	**0.107**	**0.97**
THERMALODTK.P	**10.01%**	**0.68**	**11.841f**	**1.883p**	**0.138**	**0.92**
Subtotals:	**10.00%**	**23.80**	**22.845f**	**0.531s**	**1.575**	**41.75**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**10.00%**	**0.54**	**18.851f**	**5.908s**	**4.664**	**1.52**
DOT.P	**10.00%**	**2.36**	**22.203f**	**2.546p**	**0.075**	**44.26**
DOT.S	**10.00%**	**2.36**	**22.167f**	**2.225s**	**0.075**	**38.89**
NO1DODAYTK.S	**10.00%**	**0.53**	**18.152f**	**5.865s**	**4.667**	**1.42**
NO2DODAYTK.P	**10.00%**	**0.54**	**18.751f**	**5.954p**	**4.664**	**1.52**
Subtotals:	**10.00%**	**6.34**	**21.269f**	**0.368s**	**1.243**	**87.60**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	10.00%	0.98	12.981f	2.019s	0.119	1.68
LOSTORTK.P	10.00%	1.09	16.412f	5.815p	4.939	3.09
LOSUMPTK.C	10.00%	0.53	14.294f	0.011p	0.040	0.64
Subtotals:	10.00%	2.60	14.684f	1.671p	2.118	5.42

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,403.09	54.209f	0.003p	4.601	2,965.38

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	6,889.32	49.690f	0.034p	2.878
SubTotals:			6,889.32	49.690f	0.034p	2.878

Righting Arms vs Heel Angle

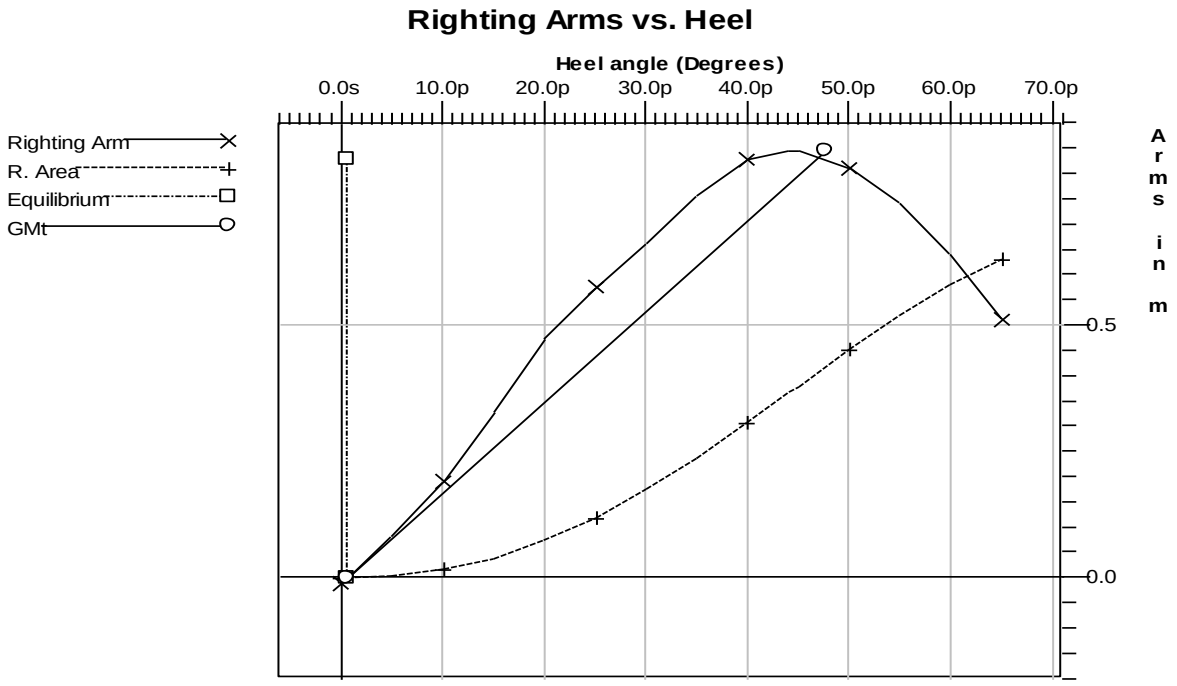
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.01a	5.555	-0.009	0.000	6.348 (1)	
0.52p	0.01a	5.554	0.000	0.000	6.407 (1)	Equil
5.00p	0.00a	5.525	0.082	0.003	6.897 (1)	
10.00p	0.02f	5.434	0.192	0.015	7.407 (1)	
15.00p	0.06f	5.283	0.329	0.038	7.874 (1)	
20.00p	0.12f	5.077	0.475	0.073	8.287 (1)	
25.00p	0.23f	4.828	0.576	0.119	8.623 (1)	
30.00p	0.39f	4.534	0.663	0.173	8.885 (1)	
35.00p	0.57f	4.196	0.759	0.235	9.081 (1)	
40.00p	0.76f	3.820	0.829	0.304	9.208 (1)	
44.15p	0.91f	3.499	0.847	0.365	9.251 (1)	MaxRa
45.00p	0.93f	3.433	0.847	0.378	9.252 (1)	
50.00p	1.08f	3.036	0.813	0.451	9.215 (1)	
55.00p	1.21f	2.627	0.741	0.519	9.100 (1)	
60.00p	1.32f	2.207	0.639	0.579	8.909 (1)	
65.00p	1.43f	1.777	0.513	0.630	8.645 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	6.348

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.173	0.118	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.304	0.214	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.132	0.102	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.847	0.647	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	44.15	19.15	Yes
(6) GM at Equilibrium	>0.150 m	1.029	0.879	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.015/96.590, heel: port 0.52 deg., VCG = 5.112

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.548	6889.315	49.690f	2.878	47.075f	13.610	83.169	116.605	1.029

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	376.3	2.142	4.875	0.051	93.550
NAVIGATION DECK	17.5	14.925	17.658	0.051	15.726
FUNNEL	42.4	13.976	16.709	0.051	36.169
CAPTAIN DECK	17.5	11.825	14.558	0.051	12.990
LIFE SAVING DECK	24.5	9.256	11.989	0.051	14.987
POOP DECK	46.5	6.854	9.587	0.051	22.734
RAILINGS	24.8	4.234	6.967	0.051	8.812
AFT MAST	2.9	19.208	21.940	0.051	3.232
FORE MAST	4.4	9.670	12.402	0.051	2.757
HOSE CRAIN	11.5	6.792	9.525	0.051	5.587

Total wind heeling moment 216.543 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.23f	4.828	-0.623	0.000	8.623 (1)	Roll
20.00p	0.12f	5.076	-0.522	-0.050	8.288 (1)	
15.00p	0.06f	5.283	-0.376	-0.090	7.873 (1)	
10.00p	0.02f	5.434	-0.239	-0.116	7.407 (1)	
5.00p	0.00a	5.525	-0.129	-0.132	6.897 (1)	
0.00	0.01a	5.555	-0.038	-0.139	6.348 (1)	
2.07s	0.01a	5.550	-0.001	-0.140	6.111 (1)	Equil
5.00s	0.00a	5.524	0.054	-0.139	5.764 (1)	
10.00s	0.02f	5.434	0.164	-0.129	5.149 (1)	
15.00s	0.06f	5.283	0.300	-0.109	4.509 (1)	
20.00s	0.12f	5.077	0.446	-0.077	3.841 (1)	
25.00s	0.23f	4.828	0.546	-0.033	3.129 (1)	
30.00s	0.39f	4.534	0.633	0.018	2.385 (1)	
35.00s	0.57f	4.196	0.728	0.078	1.625 (1)	
40.00s	0.76f	3.820	0.796	0.144	0.853 (1)	
44.04s	0.90f	3.506	0.814	0.201	0.214 (1)	MaxRa
45.00s	0.93f	3.432	0.813	0.215	0.062 (1)	
45.39s	0.95f	3.402	0.812	0.220	0.000 (1)	FldPt
50.00s	1.08f	3.036	0.778	0.285	-0.741 (1)	
55.00s	1.21f	2.627	0.704	0.350	-1.547 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 324.81

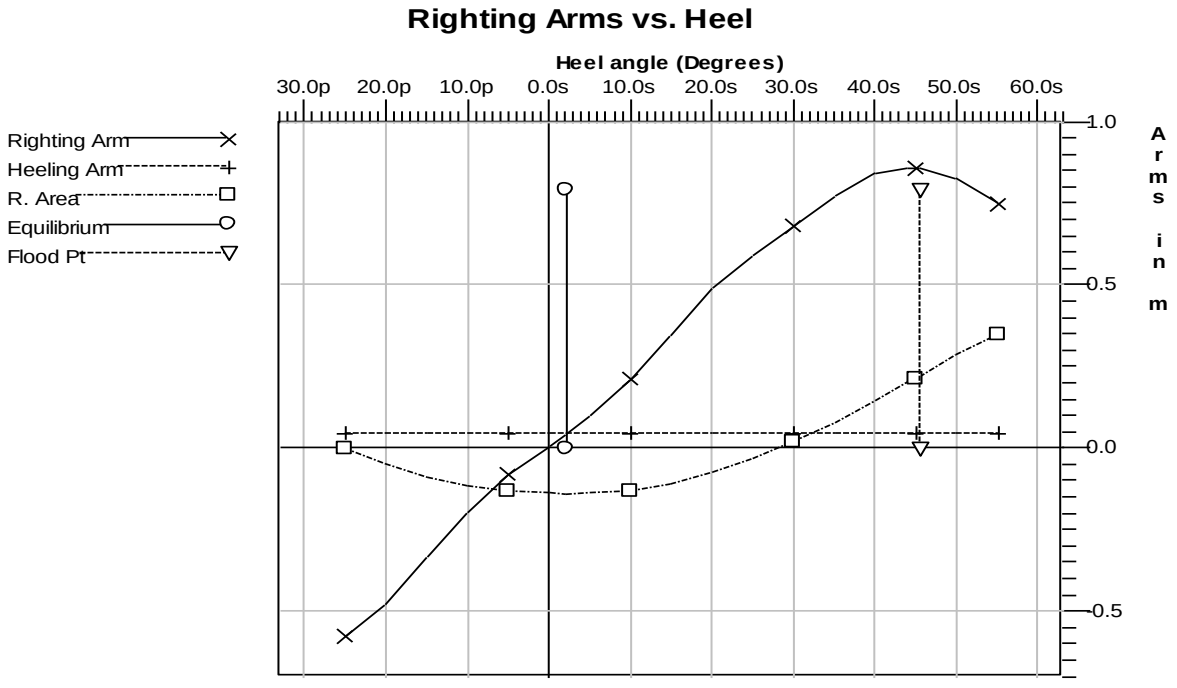
Roll angle is 19.99
Equilibrium for load condition without gust is 1.23s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.623

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.574	1.574	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.07	9.63	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.014/96.590, heel: stbd 1.23 deg., VCG = 5.112

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.548	6889.555	49.690f	2.878	47.076f	13.613	83.185	116.623	1.030

Water Specific Gravity = 1.025.

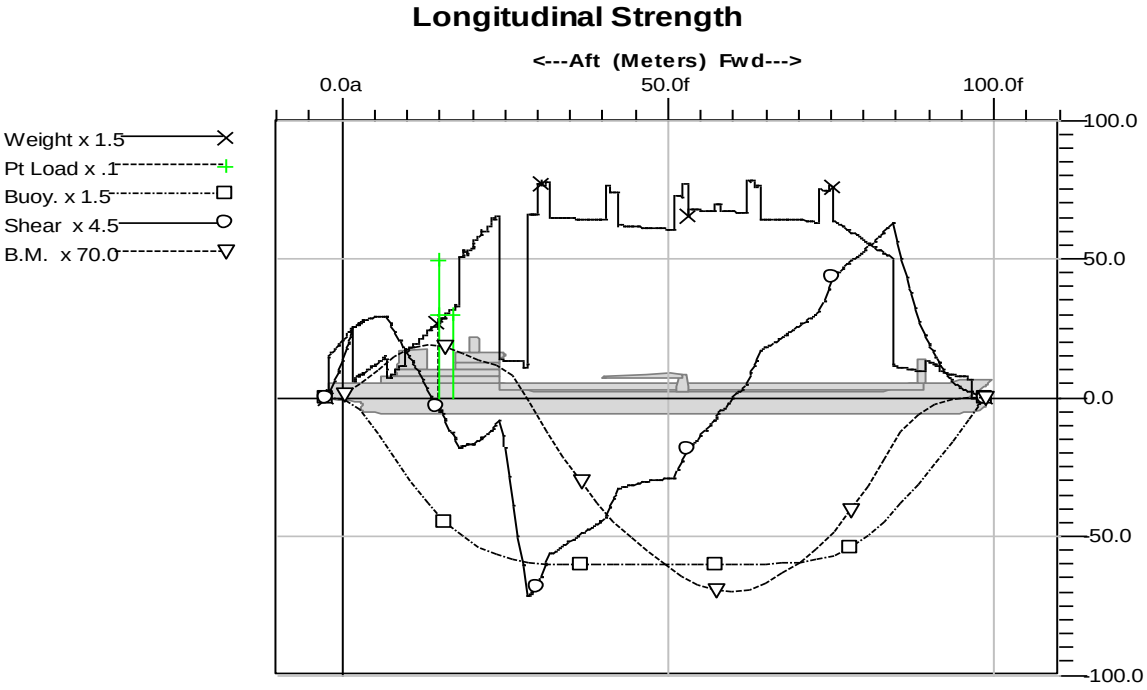
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.52 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	60.91	67
FRAME 1	0.600f	79.53	109
FRAME 2	1.200f	99.70	163
FRAME 3	1.800f	115.99	229
FRAME 4	2.400f	120.62	300
FRAME 5	3.000f	124.88	374
FRAME 6	3.600f	127.97	450
FRAME 7	4.200f	130.45	527
FRAME 8	4.800f	132.07	606
FRAME 9	5.400f	132.85	686
FRAME 10	6.000f	132.86	765
FRAME 11	6.600f	131.95	845
FRAME 12	7.300f	120.54	934
FRAME 13	8.000f	108.21	1014
FRAME 14	8.700f	94.94	1085
FRAME 15	9.400f	80.73	1147
FRAME 16	10.100f	69.61	1200
FRAME 17	10.800f	57.61	1244
FRAME 18	11.500f	44.82	1280
FRAME 19	12.200f	31.40	1307
FRAME 20	12.900f	17.38	1324
FRAME 29	19.200f	-75.61	1068
FRAME 36	24.100f	-34.89	774
FRAME 42	28.300f	-320.88	37
FRAME 57	38.800f	-203.68	-2587
FRAME 60	40.900f	-176.47	-2995
FRAME 71	48.600f	-131.67	-4090
FRAME 76	52.100f	-101.56	-4524
FRAME 84	57.700f	-24.90	-4860
FRAME 92	63.300f	59.79	-4802
FRAME 108	74.500f	176.56	-3550
FRAME 118	81.500f	254.52	-1996
FRAME 122	84.300f	284.94	-1242

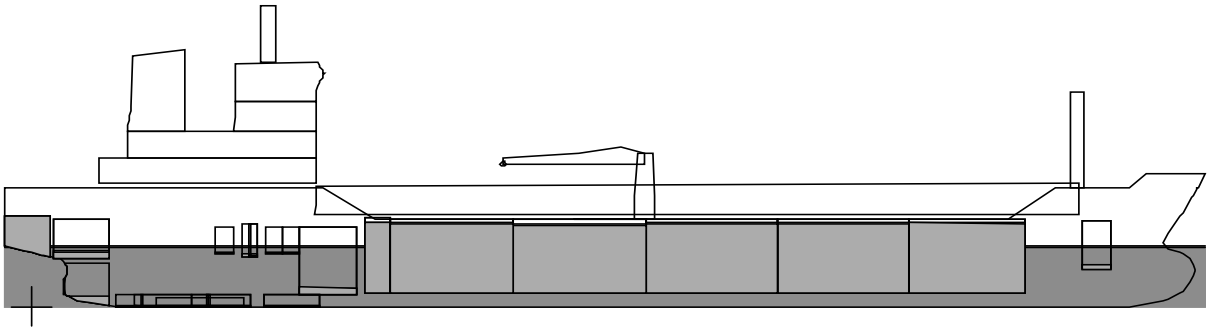
Max. Shear **-321.10 MT** **at** **28.303f**
Max. Bending Moment **-4884 MT-m** **at** **59.800f** **(Sagging)**

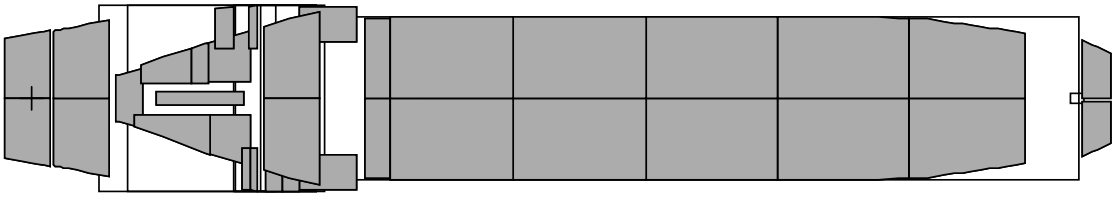

Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 1.5
Pt Load x .1
Buoy. x 1.5
Shear x 4.5
B.M. x 70.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 4A : FULY LOADED ARRIVAL 0.95t /m3 with icing

Floating Status

Draft FP	5.568 m	Heel	port 0.54 deg.	GM(Solid)	1.414 m
Draft MS	5.590 m	Equil	Yes	F/S Corr.	0.427 m
Draft AP	5.612 m	Wind	0.0 kn	GM(Fluid)	0.987 m
Trim	0.044/96.590	Wave	No	KMT	6.570 m
LCG	49.633f m	VCG	5.156 m	TPcm	13.64





Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,253.00	95.00%
WATER_BALLAST		91.74	3.73%
FRESH_WATER		25.61	10.00%
HFO		23.80	10.00%
DIESEL_OIL		6.34	10.00%
LUB_OIL		2.60	10.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,472.76	53.964f	0.004p	4.694
Displacement	6,947.68	49.633f	0.013p	5.156

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
ICING	58.67	42.920f	0.000	10.390u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,544.59**	**41.716f**	**0.030p**	**6.116u**

Tank Status

CARGO_OIL (SpGr 0.950)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	95.00%	335.37	79.135f	2.927p	4.638	193.06
COT1.S	95.00%	335.37	79.137f	2.916s	4.638	192.46
COT2.P	95.00%	436.11	68.875f	3.346p	4.616	294.24
COT2.S	95.00%	436.11	68.875f	3.333s	4.616	293.81
COT3.P	95.00%	443.52	57.674f	3.380p	4.564	294.22
COT3.S	95.00%	443.52	57.674f	3.367s	4.564	293.88
COT4.P	95.00%	413.89	46.468f	3.414p	4.549	285.61
COT4.S	95.00%	413.89	46.468f	3.401s	4.549	285.70
COT5.P	95.00%	412.93	35.648f	3.398p	4.529	274.09
COT5.S	95.00%	412.93	35.648f	3.385s	4.529	273.81
SLOPTANK.P	95.00%	84.68	29.353f	3.355p	4.530	48.50
SLOPTANK.S	95.00%	84.68	29.353f	3.344s	4.530	48.57
Subtotals:	**95.00%**	**4,253.00**	**55.770f**	**0.006p**	**4.575**	**2,777.95**

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	**100.00%**	**45.87**	**0.172a**	**2.032p**	**7.055**	**0.00**
AWBTK.S	**100.00%**	**45.87**	**0.172a**	**2.032s**	**7.055**	**0.00**
Subtotals:	**3.73%**	**91.74**	**0.172a**	**0.000**	**7.055**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**10.00%**	**7.54**	**4.738f**	**1.366p**	**4.778**	**15.18**
AFWT.S	**10.00%**	**7.54**	**4.721f**	**1.329s**	**4.778**	**14.37**
FFWT.P	**10.00%**	**4.05**	**90.352f**	**1.924p**	**3.718**	**11.26**
FFWT.S	**10.00%**	**3.77**	**90.351f**	**2.026s**	**3.623**	**8.75**
SHAFTCWT	**10.00%**	**2.71**	**5.468f**	**0.011p**	**0.679**	**3.10**
Subtotals:	**10.00%**	**25.61**	**30.935f**	**0.018p**	**4.007**	**52.66**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**10.01%**	**0.85**	**8.379f**	**0.041p**	**0.099**	**3.72**
FODAILYTK.S	**10.00%**	**1.25**	**20.574f**	**5.951s**	**4.929**	**5.24**
FODIRTK.S	**10.00%**	**1.16**	**16.799f**	**2.423s**	**0.093**	**3.94**
FOOVERTK.P	**10.00%**	**1.16**	**16.819f**	**2.489p**	**0.092**	**4.35**
FOSETTTK.S	**10.00%**	**1.26**	**21.987f**	**6.003s**	**4.927**	**5.67**
FOT.P	**10.00%**	**8.54**	**25.232f**	**6.244p**	**1.446**	**8.50**
FOT.S	**10.00%**	**8.54**	**25.229f**	**6.225s**	**1.446**	**8.45**
SLUGETK.P	**10.00%**	**0.36**	**14.351f**	**2.211p**	**0.107**	**0.97**
THERMALODTK.P	**10.01%**	**0.68**	**11.839f**	**1.883p**	**0.138**	**0.92**
Subtotals:	**10.00%**	**23.80**	**22.844f**	**0.530s**	**1.575**	**41.76**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**10.00%**	**0.54**	**18.851f**	**5.907s**	**4.664**	**1.52**
DOT.P	**10.00%**	**2.36**	**22.199f**	**2.551p**	**0.075**	**44.35**
DOT.S	**10.00%**	**2.36**	**22.162f**	**2.220s**	**0.075**	**38.80**
NO1DODAYTK.S	**10.00%**	**0.53**	**18.152f**	**5.864s**	**4.667**	**1.42**
NO2DODAYTK.P	**10.00%**	**0.54**	**18.751f**	**5.955p**	**4.664**	**1.52**
Subtotals:	**10.00%**	**6.34**	**21.266f**	**0.363s**	**1.243**	**87.61**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	10.00%	0.98	12.975f	2.018s	0.119	1.68
LOSTORTK.P	10.00%	1.09	16.412f	5.816p	4.939	3.09
LOSUMPTK.C	10.00%	0.53	14.276f	0.012p	0.040	0.64
Subtotals:	10.00%	2.60	14.678f	1.672p	2.118	5.41

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,403.09	54.208f	0.004p	4.601	2,965.39

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	6,948.07	49.631f	0.035p	2.900
SubTotals:			6,948.07	49.631f	0.035p	2.900

Righting Arms vs Heel Angle

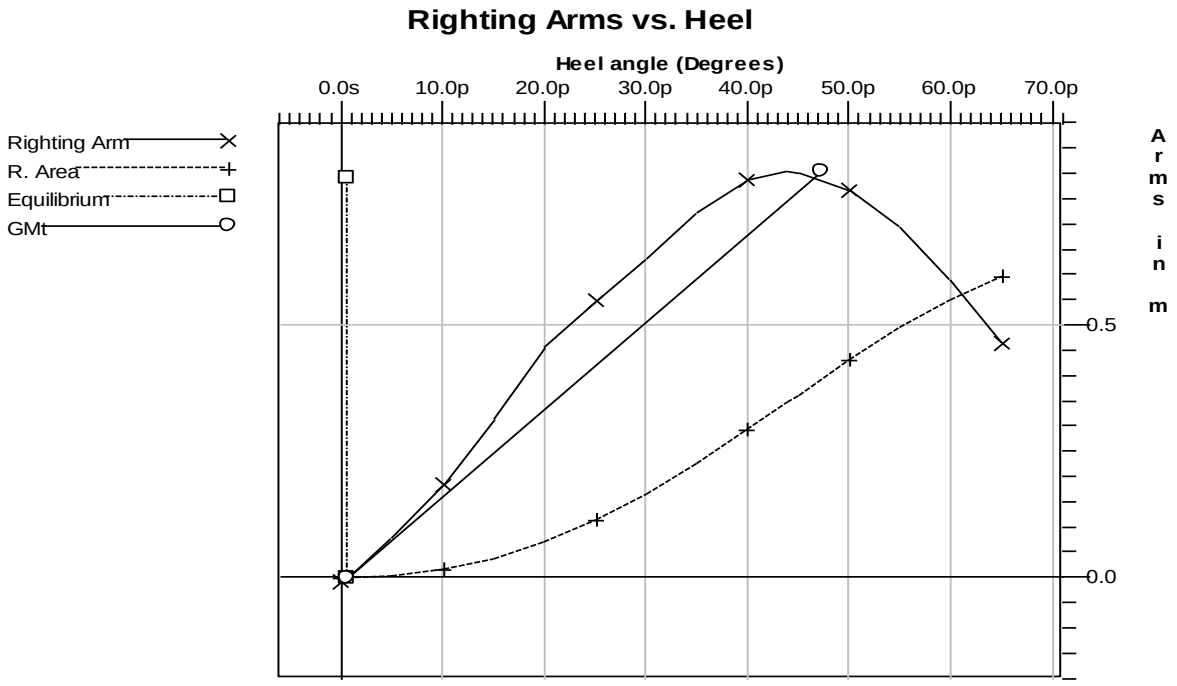
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.03a	5.612	-0.009	0.000	6.297 (1)	
0.53p	0.03a	5.612	0.000	0.000	6.357 (1)	Equil
5.00p	0.02a	5.582	0.078	0.003	6.846 (1)	
10.00p	0.00f	5.490	0.185	0.014	7.356 (1)	
15.00p	0.04f	5.339	0.318	0.036	7.824 (1)	
20.00p	0.10f	5.132	0.457	0.070	8.238 (1)	
25.00p	0.22f	4.882	0.550	0.114	8.573 (1)	
30.00p	0.38f	4.587	0.632	0.166	8.835 (1)	
35.00p	0.56f	4.248	0.724	0.225	9.032 (1)	
40.00p	0.75f	3.875	0.789	0.291	9.156 (1)	
43.88p	0.89f	3.578	0.805	0.345	9.195 (1)	MaxRa
45.00p	0.92f	3.492	0.804	0.361	9.197 (1)	
50.00p	1.07f	3.100	0.768	0.430	9.156 (1)	
55.00p	1.20f	2.695	0.694	0.494	9.037 (1)	
60.00p	1.31f	2.278	0.591	0.550	8.843 (1)	
65.00p	1.41f	1.849	0.465	0.597	8.577 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	6.297

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.166	0.111	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.291	0.201	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.125	0.095	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.805	0.605	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	43.88	18.88	Yes
(6) GM at Equilibrium	>0.150 m	0.987	0.837	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.044/96.590, heel: port 0.54 deg., VCG = 5.156

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.591	6948.073	49.631f	2.900	46.985f	13.637	83.624	116.251	0.987

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	371.9	2.124	4.878	0.051	92.513
NAVIGATION DECK	17.5	14.882	17.635	0.051	15.706
FUNNEL	42.4	13.933	16.686	0.051	36.121
CAPTAIN DECK	17.5	11.782	14.535	0.051	12.970
LIFE SAVING DECK	24.5	9.213	11.967	0.051	14.959
POOP DECK	46.5	6.811	9.565	0.051	22.681
RAILINGS	24.8	4.191	6.945	0.051	8.783
AFT MAST	2.9	19.164	21.918	0.051	3.228
FORE MAST	4.4	9.627	12.380	0.051	2.752
HOSE CRAIN	11.5	6.749	9.503	0.051	5.574

Total wind heeling moment 215.286 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.22f	4.882	-0.597	0.000	8.573 (1)	Roll
20.00p	0.10f	5.132	-0.503	-0.048	8.238 (1)	
15.00p	0.04f	5.338	-0.364	-0.086	7.824 (1)	
10.00p	0.00f	5.490	-0.231	-0.112	7.356 (1)	
5.00p	0.02a	5.581	-0.125	-0.128	6.846 (1)	
0.00	0.03a	5.612	-0.037	-0.134	6.297 (1)	
2.12s	0.02a	5.606	-0.001	-0.135	6.054 (1)	Equil
5.00s	0.02a	5.582	0.051	-0.134	5.713 (1)	
10.00s	0.00f	5.490	0.157	-0.125	5.099 (1)	
15.00s	0.04f	5.339	0.289	-0.106	4.459 (1)	
20.00s	0.10f	5.132	0.428	-0.074	3.791 (1)	
25.00s	0.22f	4.882	0.521	-0.033	3.079 (1)	
30.00s	0.38f	4.587	0.602	0.016	2.336 (1)	
35.00s	0.56f	4.248	0.693	0.073	1.576 (1)	
40.00s	0.75f	3.875	0.757	0.136	0.801 (1)	
43.75s	0.88f	3.588	0.772	0.186	0.206 (1)	MaxRa
45.00s	0.92f	3.492	0.771	0.203	0.006 (1)	
45.04s	0.92f	3.489	0.770	0.204	0.000 (1)	FldPt
50.00s	1.07f	3.099	0.733	0.269	-0.801 (1)	
55.00s	1.20f	2.694	0.658	0.330	-1.610 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 322.93

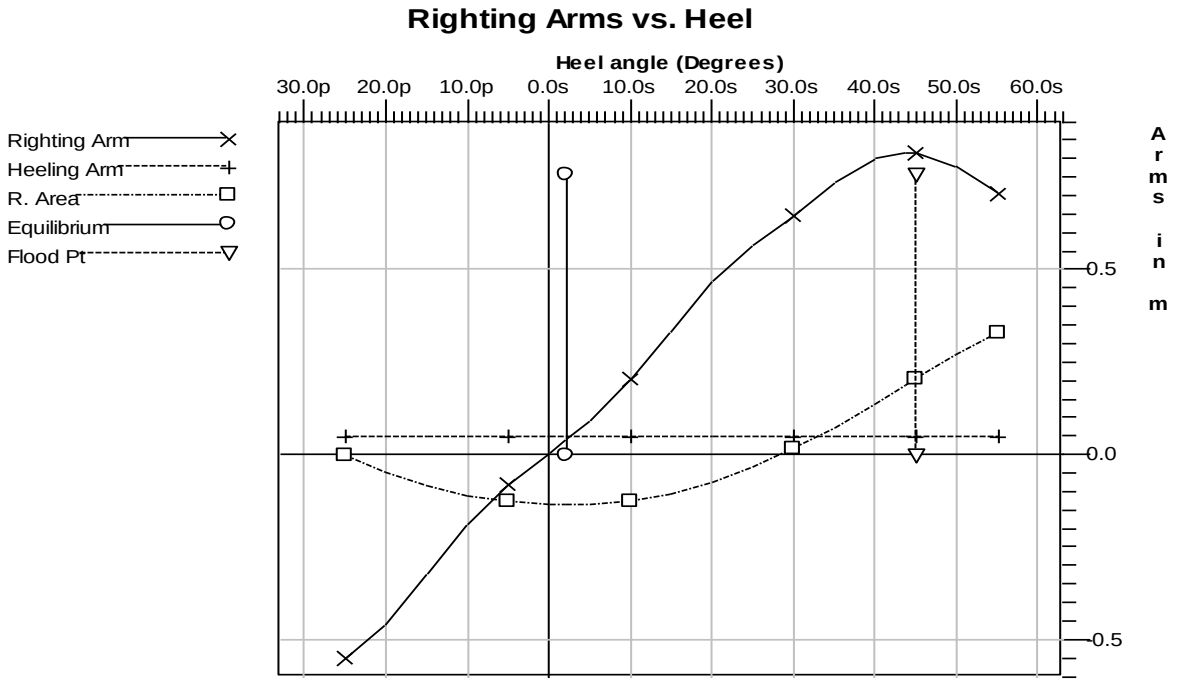
Roll angle is 19.83
Equilibrium for load condition without gust is 1.26s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.573

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.508	1.508	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.12	9.58	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.043/96.590, heel: stbd 1.26 deg., VCG = 5.156

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.591	6948.284	49.632f	2.901	46.988f	13.639	83.636	116.265	0.989

Water Specific Gravity = 1.025.

Trim is per 96.59m

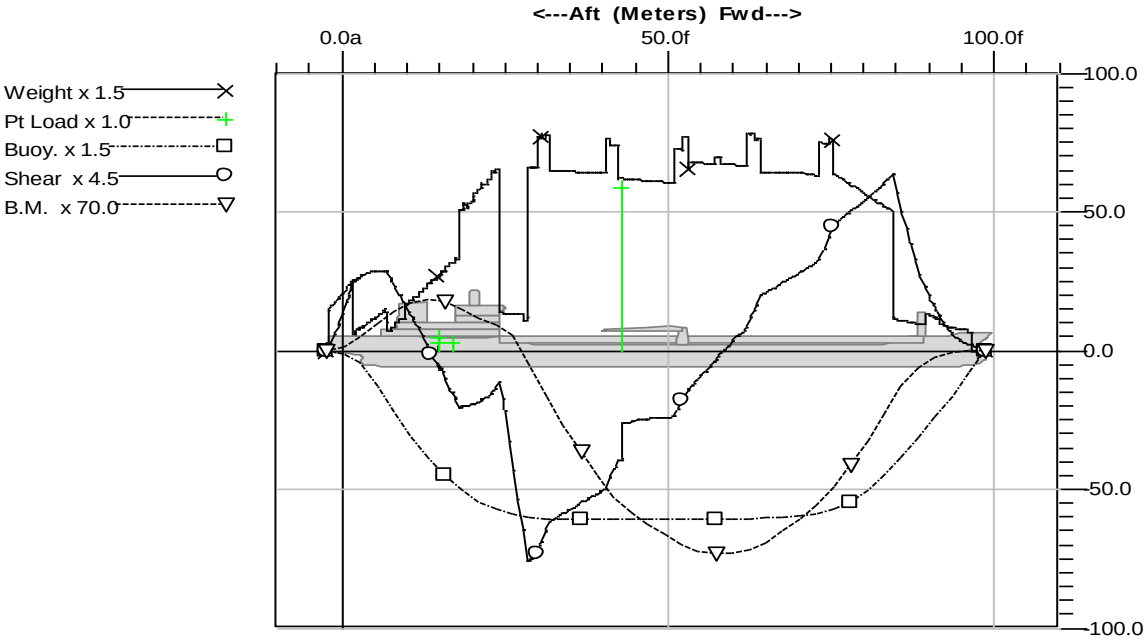
LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.54 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	60.60	67
FRAME 1	0.600f	79.09	109
FRAME 2	1.200f	99.09	163
FRAME 3	1.800f	115.20	228
FRAME 4	2.400f	119.63	298
FRAME 5	3.000f	123.67	372
FRAME 6	3.600f	126.52	447
FRAME 7	4.200f	128.74	523
FRAME 8	4.800f	130.09	601
FRAME 9	5.400f	130.58	680
FRAME 10	6.000f	130.27	758
FRAME 11	6.600f	129.03	836
FRAME 12	7.300f	117.22	922
FRAME 13	8.000f	104.48	1000
FRAME 14	8.700f	90.77	1069
FRAME 15	9.400f	76.11	1127
FRAME 16	10.100f	64.52	1177
FRAME 17	10.800f	52.04	1218
FRAME 18	11.500f	38.75	1250
FRAME 19	12.200f	24.83	1272
FRAME 20	12.900f	10.28	1285
FRAME 29	19.200f	-87.72	968
FRAME 36	24.100f	-51.03	606
FRAME 42	28.300f	-340.42	-207
FRAME 57	38.800f	-231.29	-3078
FRAME 60	40.900f	-205.67	-3546
FRAME 71	48.600f	-107.68	-4553
FRAME 76	52.100f	-80.04	-4907
FRAME 84	57.700f	-7.05	-5132
FRAME 92	63.300f	73.99	-4985
FRAME 108	74.500f	184.07	-3610
FRAME 118	81.500f	258.36	-2016
FRAME 122	84.300f	287.52	-1254

Max. Shear **-340.64 MT** **at** **28.303f**
Max. Bending Moment **-5134 MT-m** **at** **58.131f** **(Sagging)**

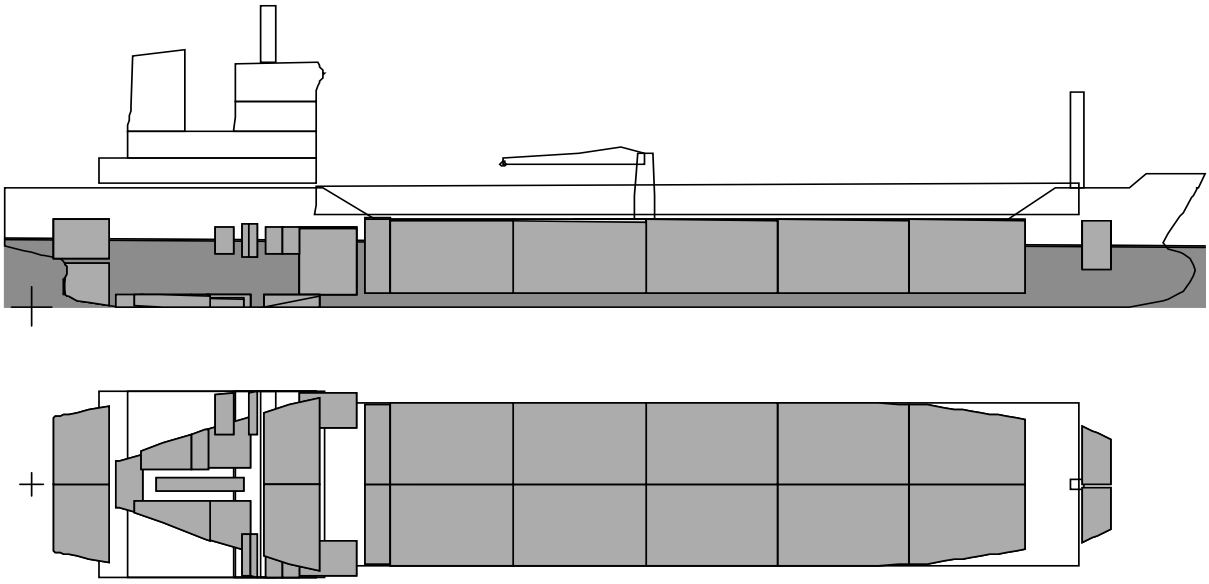
Longitudinal Strength



CONDITION 5 : FULY LOADED DEPARTURE homo 0.9405 t /m3

Floating Status

Draft FP	5.573 m	Heel	stbd 0.28 deg.	GM(Solid)	1.491 m
Draft MS	5.911 m	Equil	Yes	F/S Corr.	0.389 m
Draft AP	6.250 m	Wind	0.0 kn	GM(Fluid)	1.102 m
Trim	aft 0.677/96.590	Wave	No	KMT	6.595 m
LCG	48.702f m	VCG	5.104 m	TPcm	13.90



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,343.44	98.00%
FRESH_WATER		256.08	100.00%
HFO		233.22	98.00%
DIESEL_OIL		62.14	98.00%
LUB_OIL		25.46	98.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,931.35	52.164f	0.026s	4.659
Displacement	7,406.27	48.702f	0.007s	5.104

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.941)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	98.00%	342.50	79.130f	2.927p	4.734	192.51
COT1.S	98.00%	342.50	79.129f	2.932s	4.734	192.83
COT2.P	98.00%	445.38	68.864f	3.341p	4.712	292.19
COT2.S	98.00%	445.38	68.864f	3.347s	4.712	292.40
COT3.P	98.00%	452.95	57.664f	3.374p	4.662	291.96
COT3.S	98.00%	452.95	57.664f	3.380s	4.662	292.14
COT4.P	98.00%	422.70	46.458f	3.407p	4.644	242.99
COT4.S	98.00%	422.70	46.459f	3.412s	4.644	185.28
COT5.P	98.00%	421.71	35.639f	3.391p	4.627	271.95
COT5.S	98.00%	421.71	35.639f	3.398s	4.627	272.10
SLOPTANK.P	98.00%	86.48	29.353f	3.346p	4.630	47.86
SLOPTANK.S	98.00%	86.48	29.353f	3.352s	4.630	47.82
Subtotals:	**98.00%**	**4,343.44**	**55.761f**	**0.003s**	**4.672**	**2,622.02**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**100.00%**	**75.43**	**4.423f**	**2.462p**	**6.505**	**0.00**
AFWT.S	**100.00%**	**75.43**	**4.423f**	**2.462s**	**6.505**	**0.00**
FFWT.P	**100.00%**	**40.47**	**90.340f**	**1.895p**	**5.738**	**0.00**
FFWT.S	**100.00%**	**37.67**	**90.335f**	**2.047s**	**5.690**	**0.00**
SHAFTCWT	**100.00%**	**27.08**	**5.166f**	**0.000**	**2.213**	**0.00**
Subtotals:	**100.00%**	**256.08**	**30.718f**	**0.002s**	**5.810**	**0.00**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**98.00%**	**8.37**	**8.352f**	**0.010s**	**0.608**	**17.28**
FODAILYTK.S	**98.00%**	**12.22**	**20.572f**	**6.048s**	**6.036**	**6.01**
FODIRTK.S	**98.00%**	**11.38**	**16.787f**	**3.024s**	**0.601**	**13.64**
FOOVERTK.P	**98.00%**	**11.35**	**16.785f**	**3.011p**	**0.601**	**10.73**
FOSETTTK.S	**98.00%**	**12.31**	**21.986f**	**6.079s**	**6.031**	**6.06**
FOT.P	**98.00%**	**83.72**	**25.169f**	**6.364p**	**4.192**	**10.50**
FOT.S	**98.00%**	**83.72**	**25.169f**	**6.365s**	**4.192**	**10.50**
SLUGETK.P	**98.01%**	**3.50**	**14.346f**	**2.688p**	**0.607**	**3.49**
THERMALODTK.P	**98.00%**	**6.66**	**11.663f**	**2.303p**	**0.646**	**3.25**
Subtotals:	**98.00%**	**233.22**	**22.791f**	**0.533s**	**3.752**	**81.45**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**97.99%**	**5.28**	**18.851f**	**6.050s**	**6.025**	**2.02**
DOT.P	**98.00%**	**23.16**	**22.152f**	**3.049p**	**0.575**	**75.55**
DOT.S	**98.00%**	**23.16**	**22.154f**	**3.087s**	**0.575**	**83.31**
NO1DODAYTK.S	**97.99%**	**5.24**	**18.151f**	**6.029s**	**6.031**	**2.00**
NO2DODAYTK.P	**97.99%**	**5.31**	**18.750f**	**6.044p**	**6.025**	**2.03**
Subtotals:	**98.00%**	**62.14**	**21.245f**	**0.519s**	**1.963**	**164.91**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	98.00%	9.62	12.658f	2.428s	0.624	6.99
LOSTORTK.P	98.00%	10.65	16.406f	5.942p	6.062	4.75
LOSUMPTK.C	98.00%	5.19	14.265f	0.000	0.392	0.41
Subtotals:	98.00%	25.46	14.553f	1.568p	2.851	12.16

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,920.35	52.246f	0.026s	4.644	2,880.54

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	7,405.93	48.688f	0.017s	3.080
SubTotals:			7,405.93	48.688f	0.017s	3.080

Righting Arms vs Heel Angle

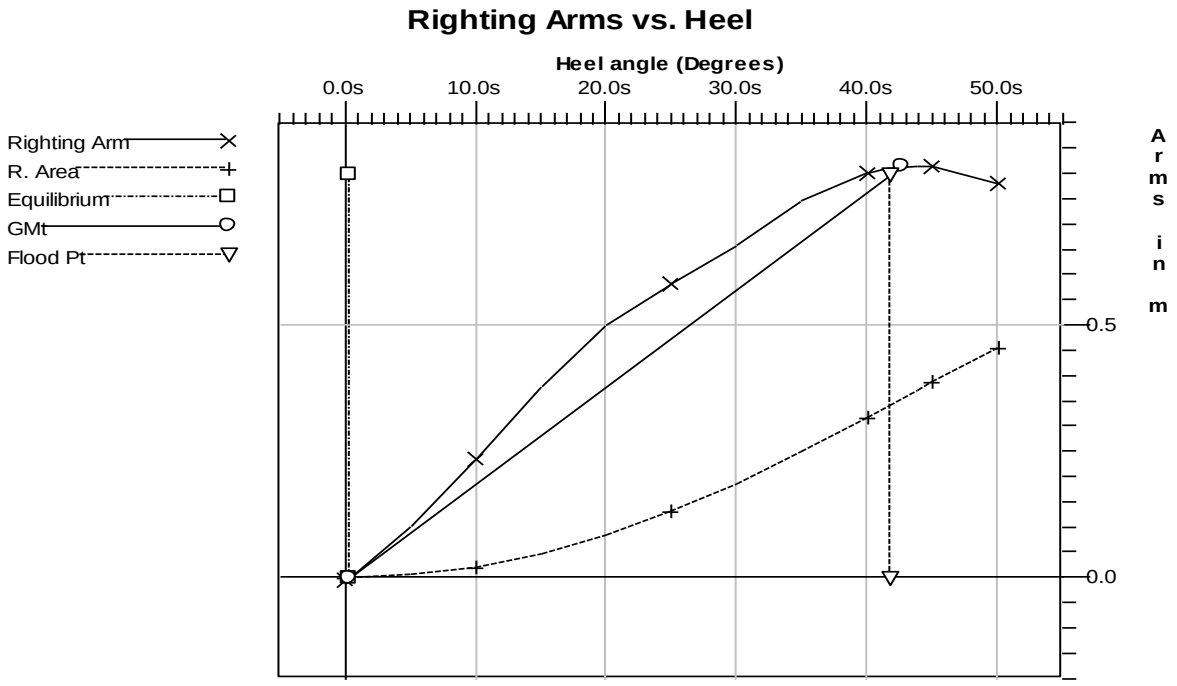
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.40a	6.250	-0.005	0.000	5.789 (1)	
0.25s	0.40a	6.250	0.000	0.000	5.761 (1)	Equil
5.00s	0.39a	6.217	0.102	0.004	5.207 (1)	
10.00s	0.37a	6.119	0.234	0.019	4.599 (1)	
15.00s	0.32a	5.958	0.381	0.045	3.966 (1)	
20.00s	0.25a	5.752	0.502	0.084	3.294 (1)	
25.00s	0.11a	5.493	0.584	0.132	2.582 (1)	
30.00s	0.07f	5.184	0.662	0.186	1.846 (1)	
35.00s	0.26f	4.845	0.749	0.248	1.085 (1)	
40.00s	0.43f	4.508	0.802	0.315	0.280 (1)	
41.69s	0.48f	4.395	0.811	0.339	0.000 (1)	FldPt
43.94s	0.54f	4.246	0.815	0.371	-0.377 (1)	MaxRa
45.00s	0.57f	4.175	0.814	0.386	-0.555 (1)	
50.00s	0.70f	3.826	0.782	0.456	-1.399 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	5.789

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.186	0.131	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.315	0.225	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.129	0.099	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.815	0.615	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	43.94	18.94	Yes
(6) GM at Equilibrium	>0.150 m	1.101	0.951	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.677/96.590, heel: stbd 0.28 deg., VCG = 5.104

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.926	7405.926	48.688f	3.080	46.202f	13.896	88.571	115.516	1.102

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	338.1	1.985	4.899	0.051	84.480
NAVIGATION DECK	17.5	14.547	17.461	0.051	15.551
FUNNEL	42.4	13.598	16.512	0.051	35.744
CAPTAIN DECK	17.5	11.447	14.361	0.051	12.814
LIFE SAVING DECK	24.5	8.878	11.793	0.051	14.742
POOP DECK	46.5	6.477	9.391	0.051	22.268
RAILINGS	24.8	3.856	6.771	0.051	8.563
AFT MAST	2.9	18.830	21.744	0.051	3.203
FORE MAST	4.4	9.292	12.206	0.051	2.714
HOSE CRAIN	11.5	6.414	9.329	0.051	5.472

Total wind heeling moment 205.552 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.11a	5.493	-0.635	0.000	8.076 (1)	Roll
20.00p	0.25a	5.752	-0.553	-0.052	7.739 (1)	
15.00p	0.32a	5.958	-0.432	-0.095	7.331 (1)	
10.00p	0.37a	6.119	-0.286	-0.127	6.855 (1)	
5.00p	0.39a	6.217	-0.154	-0.146	6.340 (1)	
0.00	0.40a	6.250	-0.047	-0.154	5.789 (1)	
2.18s	0.40a	6.244	-0.004	-0.155	5.539 (1)	Equil
5.00s	0.39a	6.217	0.061	-0.154	5.207 (1)	
10.00s	0.37a	6.119	0.192	-0.143	4.598 (1)	
15.00s	0.32a	5.958	0.339	-0.120	3.966 (1)	
20.00s	0.25a	5.752	0.460	-0.085	3.294 (1)	
25.00s	0.11a	5.493	0.542	-0.041	2.582 (1)	
30.00s	0.07f	5.184	0.620	0.010	1.846 (1)	
35.00s	0.26f	4.845	0.707	0.068	1.085 (1)	
40.00s	0.43f	4.508	0.760	0.132	0.280 (1)	
41.69s	0.48f	4.395	0.769	0.155	0.000 (1)	FldPt
43.94s	0.54f	4.246	0.773	0.185	-0.377 (1)	MaxRa
45.00s	0.57f	4.175	0.772	0.199	-0.555 (1)	
50.00s	0.70f	3.826	0.740	0.265	-1.399 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 308.33

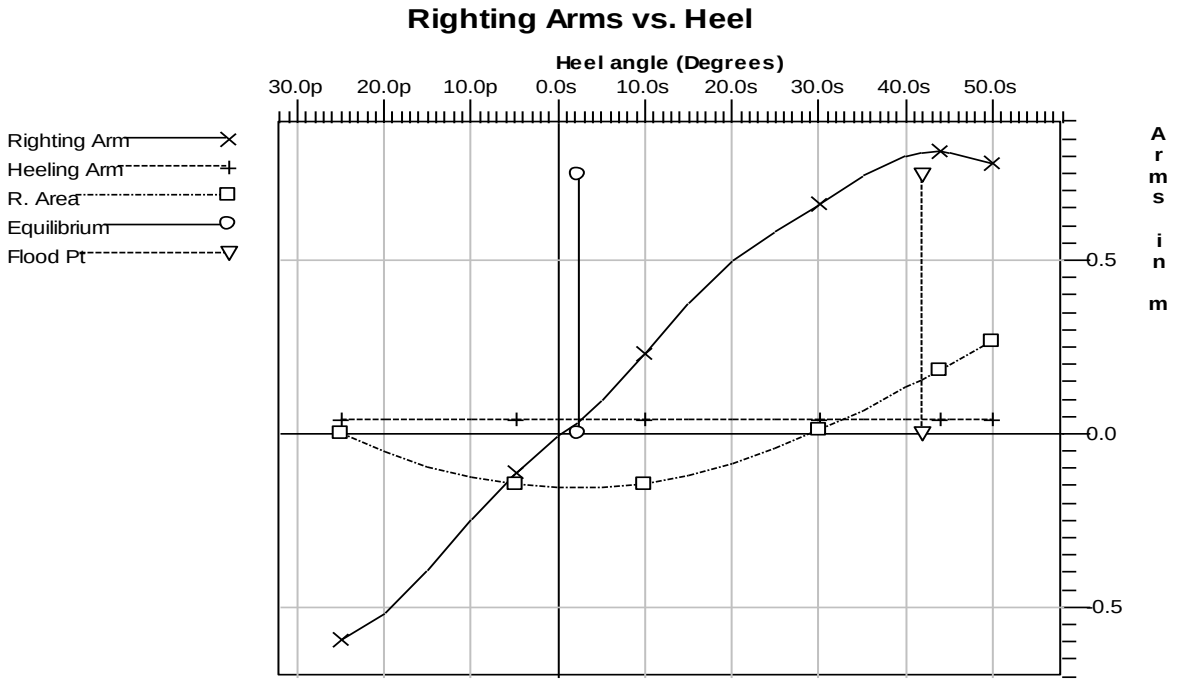
Roll angle is 20.64
Equilibrium for load condition without gust is 1.70s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.076

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	1.995	0.995	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.18	9.52	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.675/96.590, heel: stbd 1.68 deg., VCG = 5.105

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.927	7407.285	48.688f	3.082	46.202f	13.902	88.640	115.586	1.152

Water Specific Gravity = 1.025.

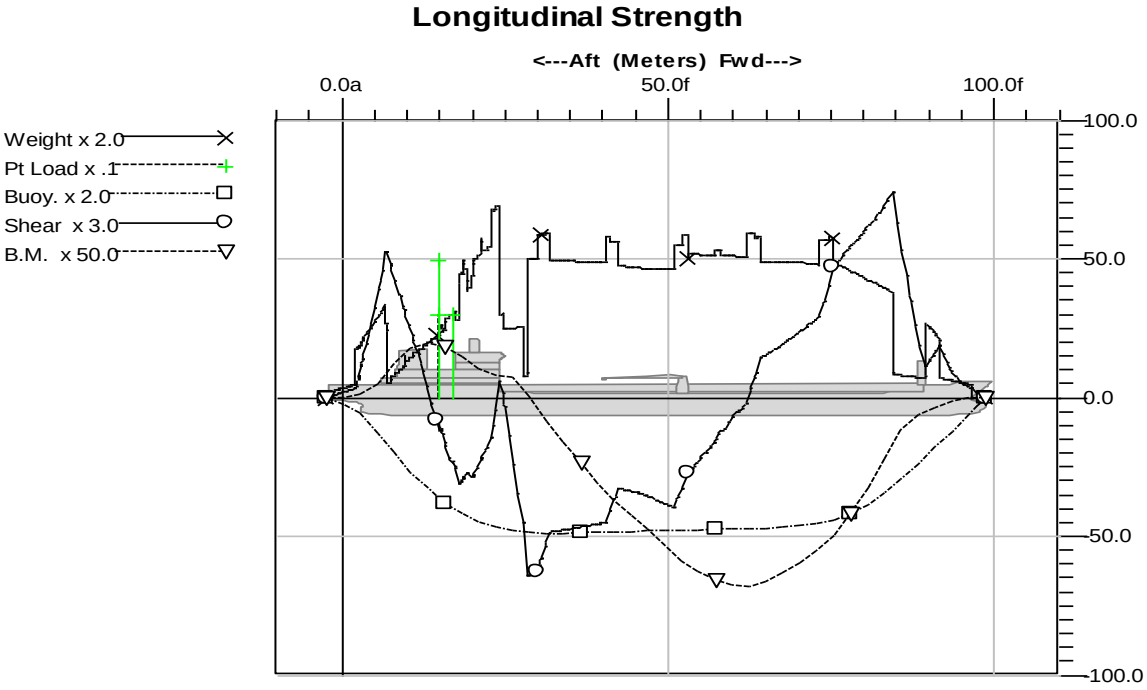
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (stbd 0.28 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	6.74	11
FRAME 1	0.600f	8.10	16
FRAME 2	1.200f	9.60	22
FRAME 3	1.800f	10.89	28
FRAME 4	2.400f	24.69	39
FRAME 5	3.000f	41.70	60
FRAME 6	3.600f	59.62	91
FRAME 7	4.200f	78.30	133
FRAME 8	4.800f	97.62	186
FRAME 9	5.400f	117.54	251
FRAME 10	6.000f	138.09	328
FRAME 11	6.600f	158.64	418
FRAME 12	7.300f	142.89	525
FRAME 13	8.000f	127.62	620
FRAME 14	8.700f	111.46	705
FRAME 15	9.400f	94.90	778
FRAME 16	10.100f	79.43	840
FRAME 17	10.800f	63.36	890
FRAME 18	11.500f	46.94	930
FRAME 19	12.200f	29.99	958
FRAME 20	12.900f	12.52	973
FRAME 29	19.200f	-81.17	655
FRAME 36	24.100f	18.53	406
FRAME 42	28.300f	-191.51	100
FRAME 57	38.800f	-136.05	-1486
FRAME 60	40.900f	-120.63	-1762
FRAME 71	48.600f	-111.79	-2560
FRAME 76	52.100f	-97.32	-2948
FRAME 84	57.700f	-39.20	-3307
FRAME 92	63.300f	27.77	-3374
FRAME 108	74.500f	122.09	-2598
FRAME 118	81.500f	193.55	-1442
FRAME 122	84.300f	222.16	-859

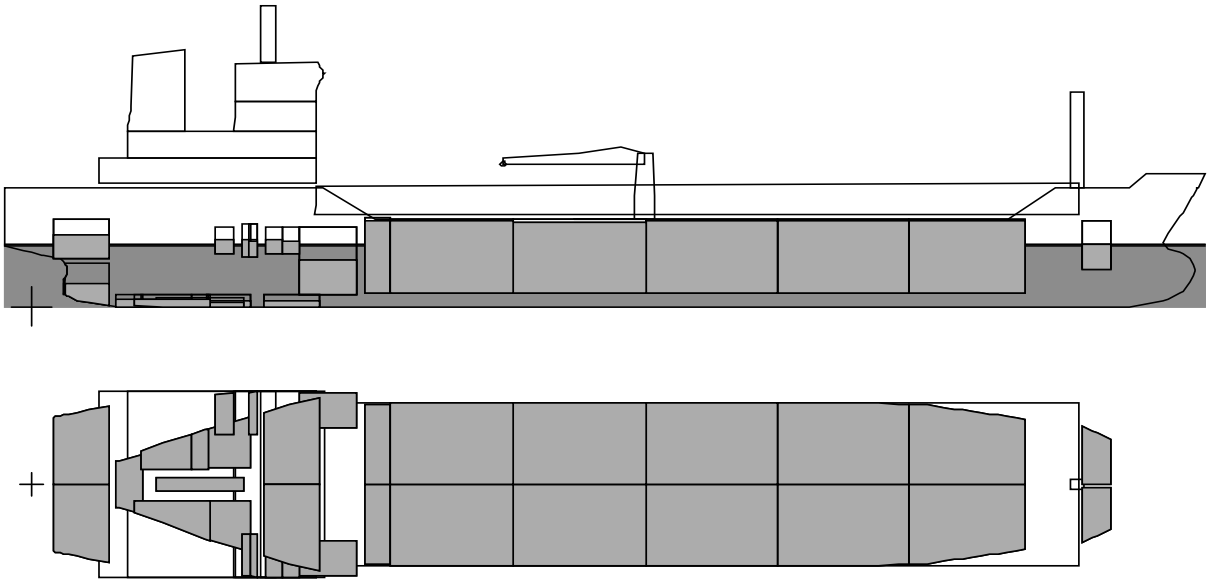
Max. Shear 222.31 MT at 84.297f
Max. Bending Moment -3392 MT-m at 61.900f (Sagging)


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 2.0
Pt Load x .1
Buoy. x 2.0
Shear x 3.0
B.M. x 50.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 6: FULY LOADED HOMO MIDWAY BEFORE BALLAST 0.9405 t /m3

Floating Status

Draft FP	5.721 m	Heel	port 0.13 deg.	GM(Solid)	1.472 m
Draft MS	5.718 m	Equil	Yes	F/S Corr.	0.420 m
Draft AP	5.715 m	Wind	0.0 kn	GM(Fluid)	1.051 m
Trim	0.000/96.590	Wave	No	KMT	6.564 m
LCG	49.626f m	VCG	5.092 m	TPcm	13.68



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,343.44	98.00%
FRESH_WATER		128.04	50.00%
HFO		118.99	50.00%
DIESEL_OIL		31.71	50.00%
LUB_OIL		12.99	50.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,646.17	53.792f	0.011s	4.613
Displacement	7,121.09	49.626f	0.003p	5.092

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.941)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	98.00%	342.50	79.139f	2.930p	4.734	192.76
COT1.S	98.00%	342.50	79.139f	2.927s	4.734	192.61
COT2.P	98.00%	445.38	68.876f	3.346p	4.712	292.30
COT2.S	98.00%	445.38	68.876f	3.343s	4.712	292.22
COT3.P	98.00%	452.95	57.676f	3.379p	4.662	292.10
COT3.S	98.00%	452.95	57.676f	3.376s	4.662	292.02
COT4.P	98.00%	422.70	46.470f	3.411p	4.644	196.16
COT4.S	98.00%	422.70	46.470f	3.409s	4.644	231.03
COT5.P	98.00%	421.71	35.649f	3.396p	4.627	272.04
COT5.S	98.00%	421.71	35.649f	3.393s	4.627	271.97
SLOPTANK.P	98.00%	86.48	29.353f	3.350p	4.630	47.83
SLOPTANK.S	98.00%	86.48	29.353f	3.348s	4.630	47.85
Subtotals:	**98.00%**	**4,343.44**	**55.772f**	**0.001p**	**4.672**	**2,620.91**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**50.00%**	**37.71**	**4.504f**	**2.026p**	**5.684**	**56.32**
AFWT.S	**50.00%**	**37.71**	**4.503f**	**2.019s**	**5.684**	**55.93**
FFWT.P	**50.00%**	**20.23**	**90.345f**	**1.848p**	**4.606**	**9.20**
FFWT.S	**50.00%**	**18.84**	**90.342f**	**2.001s**	**4.529**	**7.03**
SHAFTCWT	**50.00%**	**13.54**	**5.114f**	**0.001p**	**1.392**	**5.70**
Subtotals:	**50.00%**	**128.04**	**30.762f**	**0.000**	**4.890**	**134.19**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**50.00%**	**4.27**	**8.361f**	**0.006p**	**0.359**	**11.94**
FODAILYTK.S	**49.99%**	**6.23**	**20.573f**	**6.021s**	**5.437**	**5.70**
FODIRTK.S	**50.00%**	**5.80**	**16.796f**	**2.817s**	**0.349**	**11.14**
FOOVERTK.P	**50.00%**	**5.79**	**16.798f**	**2.826p**	**0.349**	**11.22**
FOSETTTK.S	**50.00%**	**6.28**	**21.987f**	**6.062s**	**5.431**	**5.93**
FOT.P	**50.00%**	**42.71**	**25.191f**	**6.335p**	**2.721**	**10.42**
FOT.S	**50.00%**	**42.71**	**25.191f**	**6.334s**	**2.721**	**10.42**
SLUGETK.P	**50.00%**	**1.78**	**14.350f**	**2.524p**	**0.359**	**2.42**
THERMALODTK.P	**50.00%**	**3.40**	**11.705f**	**2.176p**	**0.399**	**2.61**
Subtotals:	**50.00%**	**118.99**	**22.810f**	**0.534s**	**2.588**	**71.79**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**50.00%**	**2.69**	**18.851f**	**5.999s**	**5.296**	**1.85**
DOT.P	**50.00%**	**11.82**	**22.179f**	**2.843p**	**0.317**	**76.36**
DOT.S	**50.00%**	**11.82**	**22.176f**	**2.814s**	**0.317**	**75.50**
NO1DODAYTK.S	**50.00%**	**2.67**	**18.152f**	**5.969s**	**5.303**	**1.82**
NO2DODAYTK.P	**50.00%**	**2.71**	**18.751f**	**5.999p**	**5.297**	**1.87**
Subtotals:	**50.00%**	**31.71**	**21.263f**	**0.489s**	**1.585**	**157.40**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	**50.00%**	**4.91**	**12.765f**	**2.286s**	**0.382**	**5.07**
LOSTORTK.P	**50.00%**	**5.43**	**16.409f**	**5.878p**	**5.466**	**4.10**
LOSUMPTK.C	**50.00%**	**2.65**	**14.301f**	**0.000**	**0.200**	**0.64**
Subtotals:	**50.00%**	**12.99**	**14.602f**	**1.595p**	**2.471**	**9.81**

All Tanks

	Load	Weight	LCG	TCG	VCG	FSM

	(%)	(MT)	(m)	(m)	(m)	(MT-m)
Totals:		4,635.17	53.883f	0.011s	4.597	2,994.10

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	7,121.11	49.626f	0.008p	2.967
SubTotals:			7,121.11	49.626f	0.008p	2.967

Righting Arms vs Heel Angle

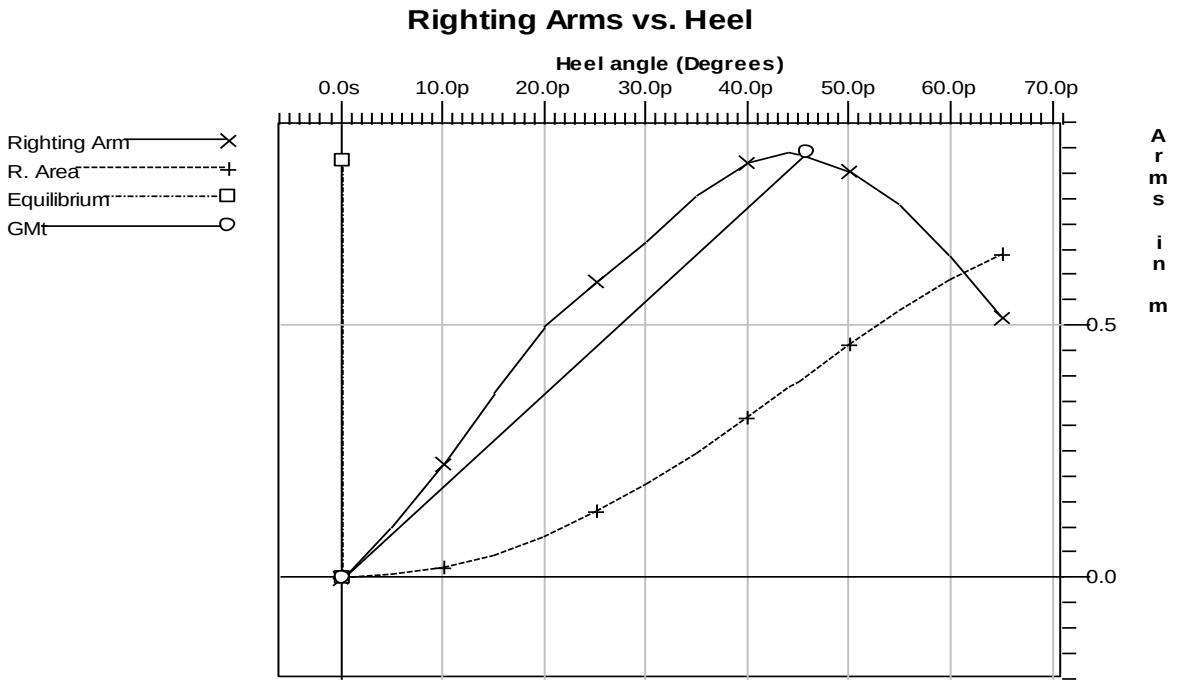
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.00f	5.715	-0.002	0.000	6.184 (1)	
0.12p	0.00f	5.715	0.000	0.000	6.198 (1)	Equil
5.00p	0.01f	5.684	0.099	0.004	6.733 (1)	
10.00p	0.03f	5.593	0.224	0.018	7.244 (1)	
15.00p	0.07f	5.440	0.367	0.044	7.713 (1)	
20.00p	0.13f	5.234	0.500	0.082	8.125 (1)	
25.00p	0.26f	4.983	0.587	0.129	8.459 (1)	
30.00p	0.42f	4.687	0.668	0.184	8.721 (1)	
35.00p	0.60f	4.349	0.760	0.246	8.916 (1)	
40.00p	0.79f	3.984	0.824	0.316	9.033 (1)	
44.16p	0.93f	3.676	0.841	0.376	9.064 (1)	MaxRa
45.00p	0.96f	3.613	0.840	0.389	9.063 (1)	
50.00p	1.11f	3.229	0.807	0.461	9.013 (1)	
55.00p	1.24f	2.833	0.737	0.529	8.886 (1)	
60.00p	1.35f	2.422	0.637	0.589	8.685 (1)	
65.00p	1.45f	1.999	0.515	0.639	8.413 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	6.184

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.184	0.129	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.316	0.226	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.132	0.102	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.841	0.641	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	44.16	19.16	Yes
(6) GM at Equilibrium	>0.150 m	1.052	0.902	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.000/96.590, heel: port 0.13 deg., VCG = 5.092

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.718	7121.114	49.626f	2.967	46.819f	13.681	84.437	114.530	1.051

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	359.1	2.071	4.885	0.051	89.461
NAVIGATION DECK	17.5	14.755	17.569	0.051	15.647
FUNNEL	42.4	13.806	16.620	0.051	35.978
CAPTAIN DECK	17.5	11.655	14.469	0.051	12.911
LIFE SAVING DECK	24.5	9.086	11.901	0.051	14.876
POOP DECK	46.5	6.684	9.499	0.051	22.524
RAILINGS	24.8	4.064	6.878	0.051	8.700
AFT MAST	2.9	19.037	21.852	0.051	3.219
FORE MAST	4.4	9.500	12.314	0.051	2.738
HOSE CRAIN	11.5	6.622	9.436	0.051	5.535

Total wind heeling moment 211.588 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.26f	4.983	-0.632	0.000	8.459 (1)	Roll
20.00p	0.13f	5.234	-0.545	-0.051	8.125 (1)	
15.00p	0.07f	5.440	-0.411	-0.093	7.713 (1)	
10.00p	0.03f	5.593	-0.269	-0.123	7.244 (1)	
5.00p	0.01f	5.684	-0.143	-0.141	6.733 (1)	
0.00	0.00f	5.715	-0.042	-0.149	6.184 (1)	
2.08s	0.00f	5.709	-0.003	-0.150	5.945 (1)	Equil
5.00s	0.01f	5.684	0.059	-0.148	5.600 (1)	
10.00s	0.03f	5.593	0.184	-0.138	4.987 (1)	
15.00s	0.07f	5.440	0.327	-0.116	4.349 (1)	
20.00s	0.13f	5.234	0.460	-0.081	3.679 (1)	
25.00s	0.26f	4.982	0.547	-0.037	2.965 (1)	
30.00s	0.42f	4.687	0.627	0.014	2.221 (1)	
35.00s	0.60f	4.349	0.719	0.073	1.460 (1)	
40.00s	0.79f	3.984	0.783	0.139	0.678 (1)	
44.13s	0.93f	3.678	0.800	0.196	0.013 (1)	MaxRa
44.21s	0.93f	3.672	0.800	0.197	0.000 (1)	MaxRa FldPt
45.00s	0.96f	3.613	0.799	0.208	-0.128 (1)	
50.00s	1.11f	3.229	0.766	0.277	-0.944 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 317.38

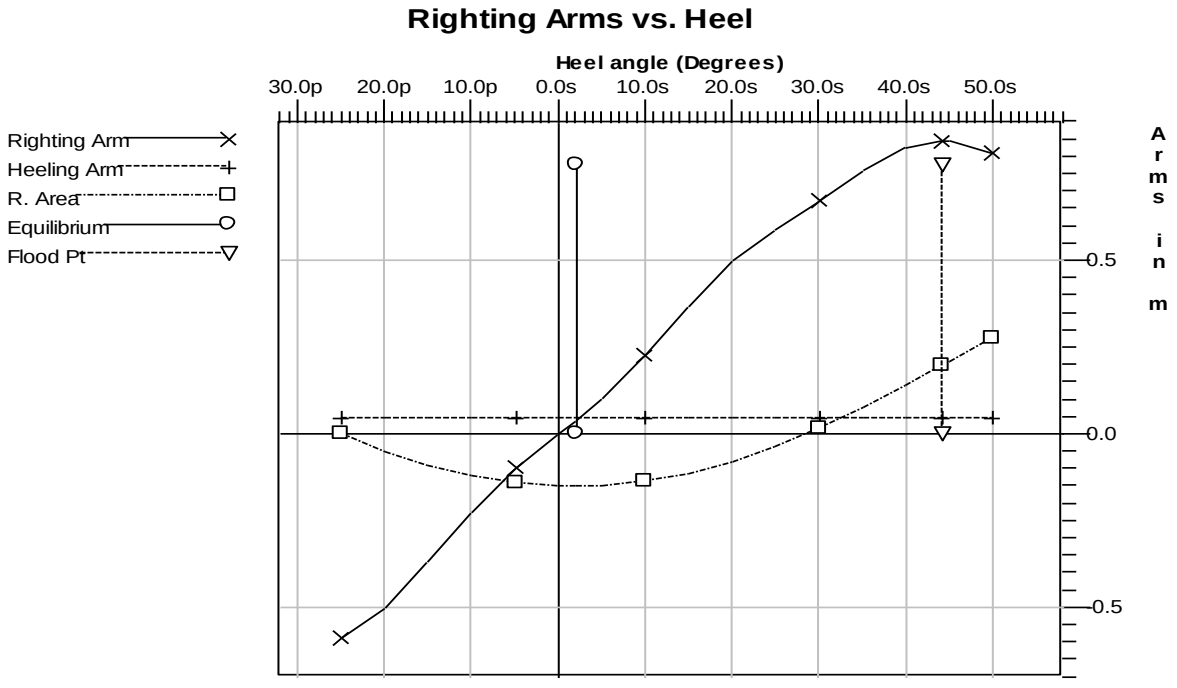
Roll angle is 20.24
Equilibrium for load condition without gust is 1.49s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.459

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.318	1.318	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.08	9.62	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.000/96.590, heel: stbd 1.48 deg., VCG = 5.093

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.718	7121.804	49.626f	2.969	46.821f	13.685	84.490	114.591	1.072

Water Specific Gravity = 1.025.

Trim is per 96.59m

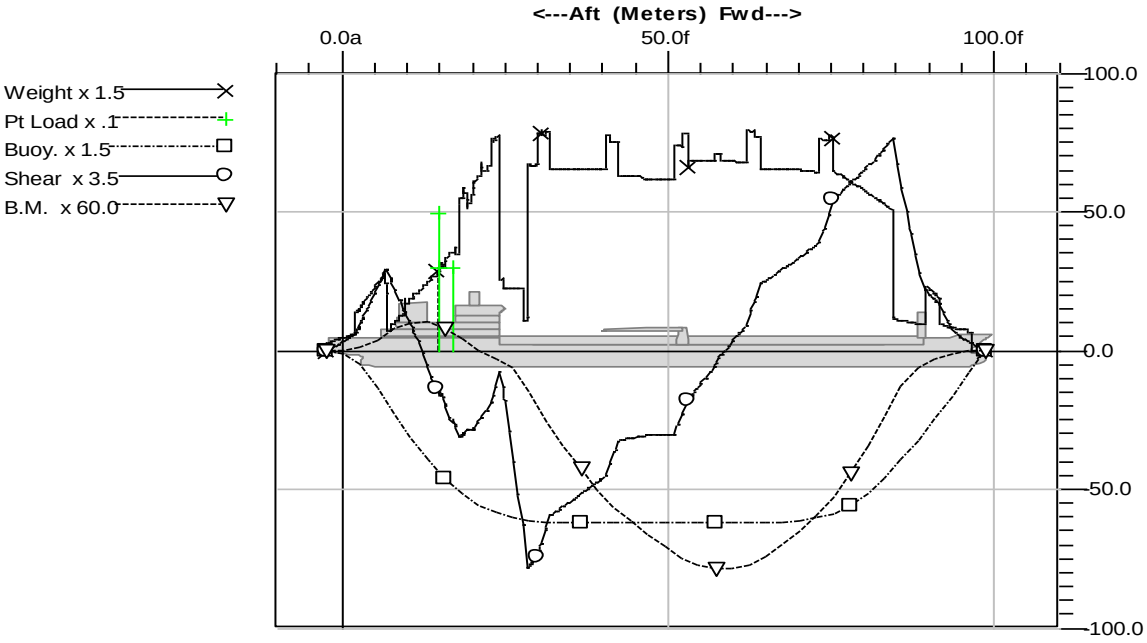
LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.13 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	11.89	14
FRAME 1	0.600f	15.04	22
FRAME 2	1.200f	18.49	32
FRAME 3	1.800f	21.89	44
FRAME 4	2.400f	30.85	60
FRAME 5	3.000f	41.22	81
FRAME 6	3.600f	51.53	109
FRAME 7	4.200f	62.07	143
FRAME 8	4.800f	72.49	184
FRAME 9	5.400f	82.77	230
FRAME 10	6.000f	92.94	283
FRAME 11	6.600f	102.65	342
FRAME 12	7.300f	90.34	409
FRAME 13	8.000f	77.77	468
FRAME 14	8.700f	64.30	518
FRAME 15	9.400f	50.12	558
FRAME 16	10.100f	38.12	589
FRAME 17	10.800f	25.40	612
FRAME 18	11.500f	12.11	625
FRAME 19	12.200f	-1.75	629
FRAME 20	12.900f	-16.17	623
FRAME 29	19.200f	-99.33	170
FRAME 36	24.100f	-25.54	-194
FRAME 42	28.300f	-271.82	-789
FRAME 57	38.800f	-165.78	-2956
FRAME 60	40.900f	-140.84	-3287
FRAME 71	48.600f	-105.41	-4144
FRAME 76	52.100f	-79.55	-4494
FRAME 84	57.700f	-9.31	-4724
FRAME 92	63.300f	68.97	-4598
FRAME 108	74.500f	172.19	-3319
FRAME 118	81.500f	241.21	-1828
FRAME 122	84.300f	268.69	-1116

Max. Shear **-272.05 MT** **at** **28.303f**
Max. Bending Moment **-4728 MT-m** **at** **58.400f** **(Sagging)**

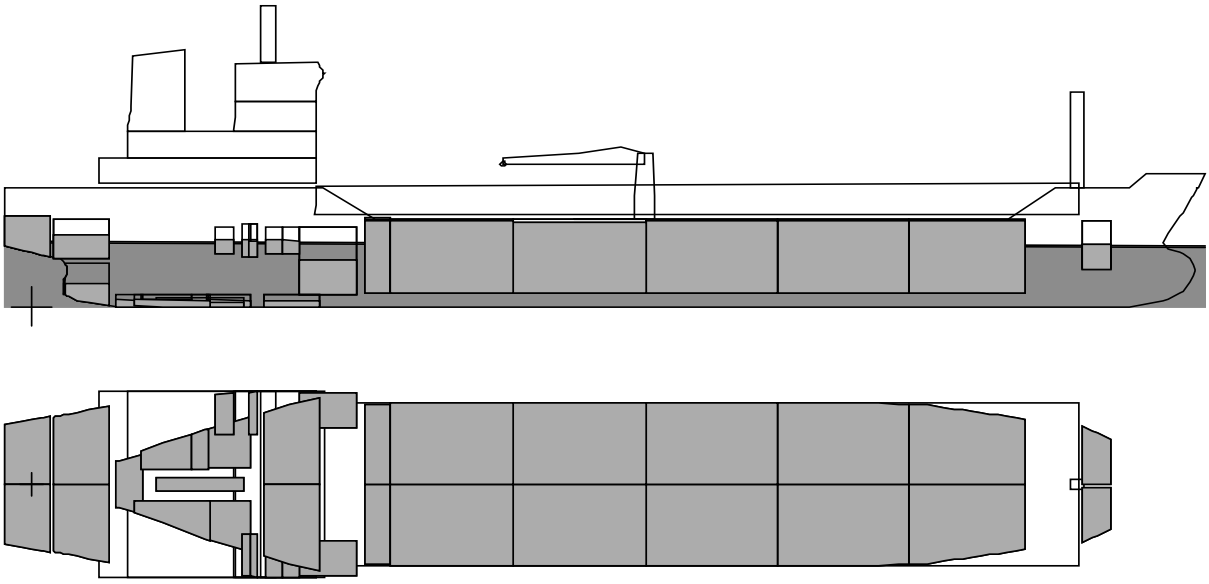
Longitudinal Strength



CONDITION 7 : FULY LOADED HOMO MIDWAY AFTER BALLAST 0.9405 t /m3

Floating Status

Draft FP	5.528 m	Heel	port 0.13 deg.	GM(Solid)	1.468 m
Draft MS	5.776 m	Equil	Yes	F/S Corr.	0.416 m
Draft AP	6.023 m	Wind	0.0 kn	GM(Fluid)	1.052 m
Trim	aft 0.496/96.590	Wave	No	KMT	6.585 m
LCG	48.988f m	VCG	5.117 m	TPcm	13.81



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,343.44	98.00%
WATER_BALLAST		91.74	3.73%
FRESH_WATER		128.04	50.00%
HFO		118.99	50.00%
DIESEL_OIL		31.71	50.00%
LUB_OIL		12.99	50.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,737.91	52.740f	0.011s	4.661
Displacement	7,212.83	48.988f	0.003p	5.117

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.941)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	98.00%	342.50	79.132f	2.931p	4.734	192.74
COT1.S	98.00%	342.50	79.133f	2.928s	4.734	192.59
COT2.P	98.00%	445.38	68.868f	3.346p	4.712	292.33
COT2.S	98.00%	445.38	68.868f	3.343s	4.712	292.23
COT3.P	98.00%	452.95	57.667f	3.379p	4.662	292.09
COT3.S	98.00%	452.95	57.667f	3.376s	4.662	292.00
COT4.P	98.00%	422.70	46.462f	3.411p	4.644	199.17
COT4.S	98.00%	422.70	46.461f	3.408s	4.644	232.46
COT5.P	98.00%	421.71	35.642f	3.396p	4.627	272.05
COT5.S	98.00%	421.71	35.642f	3.393s	4.627	271.98
SLOPTANK.P	98.00%	86.48	29.353f	3.350p	4.630	47.83
SLOPTANK.S	98.00%	86.48	29.353f	3.348s	4.630	47.85
Subtotals:	**98.00%**	**4,343.44**	**55.764f**	**0.001p**	**4.672**	**2,625.32**

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	**100.00%**	**45.87**	**0.172a**	**2.032p**	**7.055**	**0.00**
AWBTK.S	**100.00%**	**45.87**	**0.172a**	**2.032s**	**7.055**	**0.00**
Subtotals:	**3.73%**	**91.74**	**0.172a**	**0.000**	**7.055**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**50.00%**	**37.71**	**4.498f**	**2.025p**	**5.684**	**56.30**
AFWT.S	**50.00%**	**37.71**	**4.497f**	**2.018s**	**5.684**	**55.92**
FFWT.P	**50.00%**	**20.23**	**90.344f**	**1.848p**	**4.606**	**9.21**
FFWT.S	**50.00%**	**18.84**	**90.341f**	**2.001s**	**4.529**	**7.03**
SHAFTCWT	**50.00%**	**13.54**	**5.110f**	**0.001p**	**1.392**	**5.70**
Subtotals:	**50.00%**	**128.04**	**30.758f**	**0.000**	**4.890**	**134.15**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**50.00%**	**4.27**	**8.356f**	**0.007p**	**0.359**	**11.95**
FODAILYTK.S	**49.99%**	**6.23**	**20.572f**	**6.021s**	**5.437**	**5.70**
FODIRTK.S	**50.00%**	**5.80**	**16.785f**	**2.817s**	**0.350**	**11.12**
FOOVERTK.P	**50.00%**	**5.79**	**16.787f**	**2.826p**	**0.350**	**11.21**
FOSETTTK.S	**50.00%**	**6.28**	**21.986f**	**6.062s**	**5.431**	**5.93**
FOT.P	**50.00%**	**42.71**	**25.188f**	**6.335p**	**2.721**	**10.42**
FOT.S	**50.00%**	**42.71**	**25.188f**	**6.334s**	**2.721**	**10.42**
SLUGETK.P	**50.00%**	**1.78**	**14.348f**	**2.524p**	**0.360**	**2.42**
THERMALODTK.P	**50.00%**	**3.40**	**11.690f**	**2.175p**	**0.400**	**2.60**
Subtotals:	**50.00%**	**118.99**	**22.806f**	**0.535s**	**2.589**	**71.77**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**50.00%**	**2.69**	**18.851f**	**5.999s**	**5.296**	**1.85**
DOT.P	**50.00%**	**11.82**	**22.160f**	**2.842p**	**0.317**	**76.40**
DOT.S	**50.00%**	**11.82**	**22.158f**	**2.812s**	**0.317**	**75.53**
NO1DODAYTK.S	**50.00%**	**2.67**	**18.151f**	**5.969s**	**5.303**	**1.82**
NO2DODAYTK.P	**50.00%**	**2.71**	**18.751f**	**5.999p**	**5.297**	**1.87**
Subtotals:	**50.00%**	**31.71**	**21.249f**	**0.489s**	**1.585**	**157.47**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	50.00%	4.91	12.733f	2.283s	0.384	5.03
LOSTORTK.P	50.00%	5.43	16.408f	5.878p	5.466	4.10
LOSUMPTK.C	50.00%	2.65	14.241f	0.000	0.200	0.64
Subtotals:	50.00%	12.99	14.578f	1.596p	2.472	9.78

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,726.91	52.827f	0.011s	4.645	2,998.49

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	7,212.52	48.977f	0.008p	3.004
SubTotals:			7,212.52	48.977f	0.008p	3.004

Righting Arms vs Heel Angle

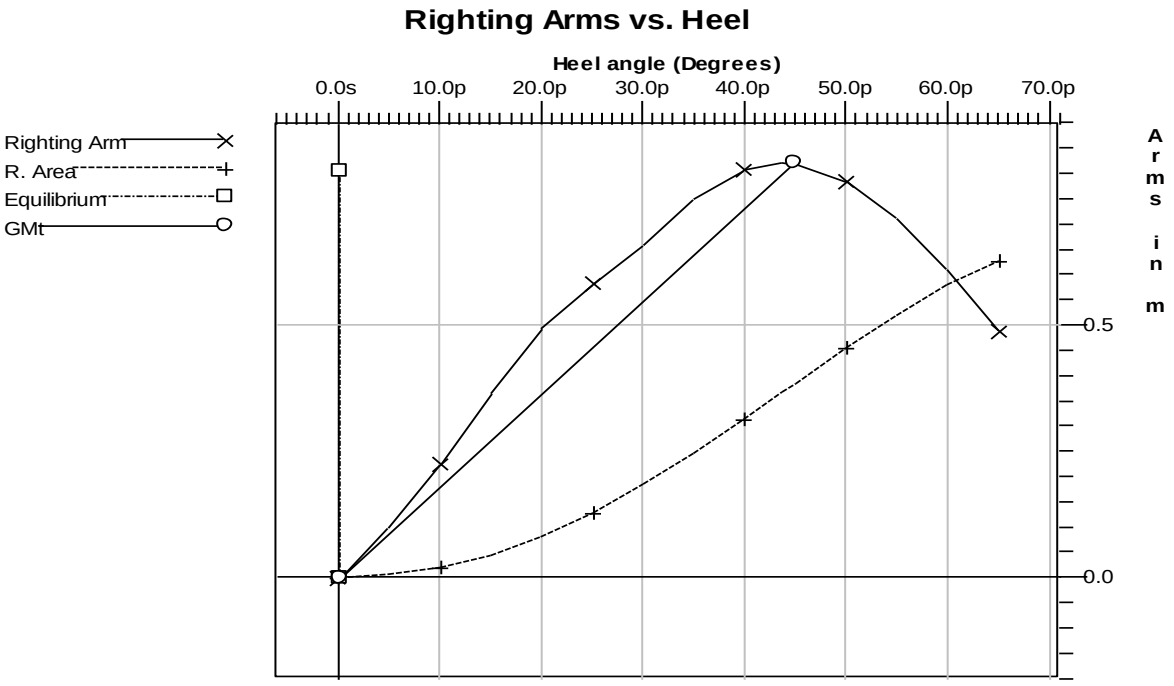
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.29a	6.023	-0.002	0.000	5.979 (1)	
0.12p	0.29a	6.024	0.000	0.000	5.992 (1)	Equil
5.00p	0.29a	5.991	0.099	0.004	6.529 (1)	
10.00p	0.26a	5.895	0.224	0.018	7.042 (1)	
15.00p	0.22a	5.737	0.366	0.044	7.515 (1)	
20.00p	0.15a	5.529	0.497	0.081	7.928 (1)	
25.00p	0.02a	5.273	0.583	0.129	8.264 (1)	
30.00p	0.16f	4.969	0.661	0.183	8.532 (1)	
35.00p	0.34f	4.627	0.750	0.245	8.730 (1)	
40.00p	0.52f	4.273	0.808	0.313	8.839 (1)	
43.75p	0.64f	4.009	0.821	0.366	8.859 (1)	MaxRa
45.00p	0.68f	3.920	0.820	0.384	8.855 (1)	
50.00p	0.81f	3.555	0.784	0.455	8.792 (1)	
55.00p	0.93f	3.173	0.711	0.520	8.654 (1)	
60.00p	1.03f	2.775	0.611	0.578	8.444 (1)	
65.00p	1.12f	2.362	0.489	0.626	8.166 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	5.979

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.183	0.128	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.313	0.223	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.130	0.100	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.821	0.621	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	43.75	18.75	Yes
(6) GM at Equilibrium	>0.150 m	1.052	0.902	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.496/96.590, heel: port 0.13 deg., VCG = 5.117

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.785	7212.516	48.977f	3.004	46.469f	13.810	86.971	116.471	1.052

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	352.2	2.043	4.890	0.051	87.833
NAVIGATION DECK	17.5	14.687	17.534	0.051	15.615
FUNNEL	42.4	13.738	16.585	0.051	35.901
CAPTAIN DECK	17.5	11.587	14.434	0.051	12.879
LIFE SAVING DECK	24.5	9.018	11.865	0.051	14.832
POOP DECK	46.5	6.616	9.463	0.051	22.441
RAILINGS	24.8	3.996	6.843	0.051	8.655
AFT MAST	2.9	18.970	21.817	0.051	3.214
FORE MAST	4.4	9.432	12.279	0.051	2.730
HOSE CRAIN	11.5	6.554	9.401	0.051	5.515

Total wind heeling moment 209.615 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.02a	5.273	-0.626	0.000	8.265 (1)	Roll
20.00p	0.15a	5.529	-0.540	-0.051	7.928 (1)	
15.00p	0.22a	5.738	-0.410	-0.093	7.515 (1)	
10.00p	0.26a	5.896	-0.268	-0.122	7.042 (1)	
5.00p	0.29a	5.992	-0.142	-0.140	6.528 (1)	
0.00	0.29a	6.024	-0.041	-0.148	5.978 (1)	
2.03s	0.29a	6.018	-0.003	-0.149	5.745 (1)	Equil
5.00s	0.29a	5.991	0.060	-0.147	5.396 (1)	
10.00s	0.26a	5.895	0.185	-0.137	4.785 (1)	
15.00s	0.22a	5.737	0.327	-0.114	4.150 (1)	
20.00s	0.15a	5.529	0.458	-0.080	3.481 (1)	
25.00s	0.02a	5.273	0.543	-0.036	2.771 (1)	
30.00s	0.16f	4.969	0.622	0.015	2.032 (1)	
35.00s	0.34f	4.626	0.711	0.073	1.273 (1)	
40.00s	0.52f	4.273	0.768	0.138	0.483 (1)	
42.96s	0.62f	4.064	0.781	0.178	0.000 (1)	FldPt
43.75s	0.64f	4.009	0.781	0.189	-0.130 (1)	MaxRa
45.00s	0.68f	3.920	0.779	0.206	-0.336 (1)	
50.00s	0.81f	3.555	0.743	0.272	-1.166 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 314.42

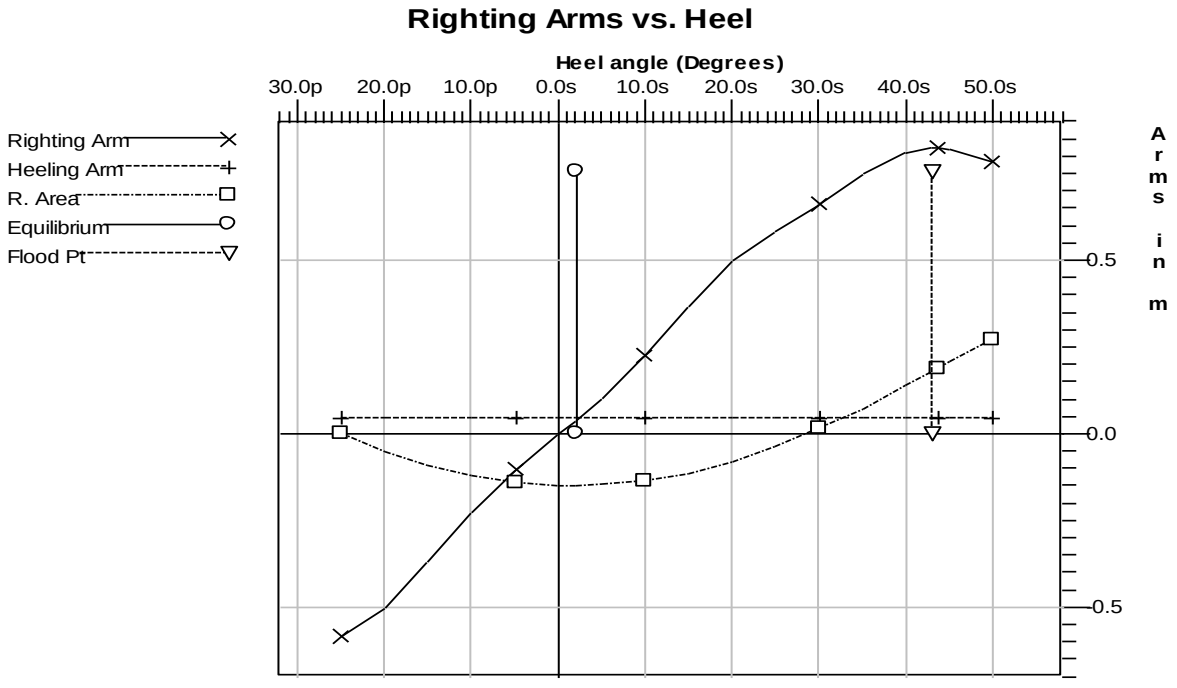
Roll angle is 20.33
Equilibrium for load condition without gust is 1.45s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.265

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.195	1.195	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.03	9.67	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.495/96.590, heel: stbd 1.45 deg., VCG = 5.118

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.785	7213.636	48.977f	3.006	46.468f	13.815	87.025	116.526	1.069

Water Specific Gravity = 1.025.

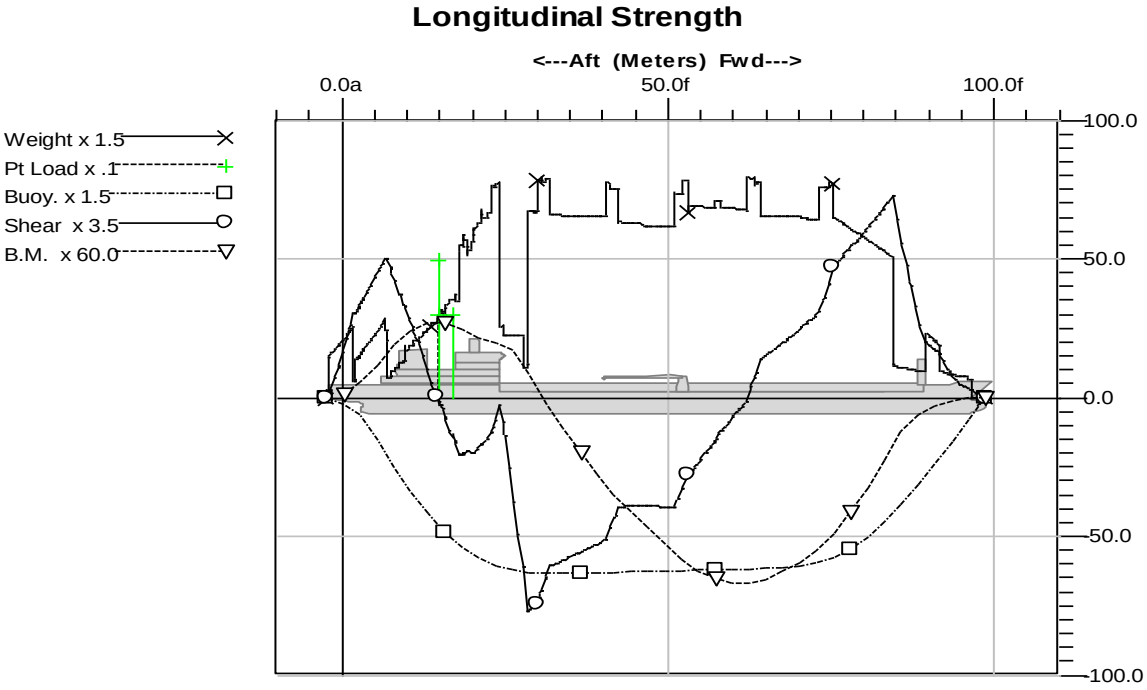
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.13 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	57.34	66
FRAME 1	0.600f	74.59	106
FRAME 2	1.200f	93.23	156
FRAME 3	1.800f	107.85	218
FRAME 4	2.400f	115.63	285
FRAME 5	3.000f	124.73	358
FRAME 6	3.600f	133.70	436
FRAME 7	4.200f	142.79	519
FRAME 8	4.800f	151.67	608
FRAME 9	5.400f	160.31	702
FRAME 10	6.000f	168.75	802
FRAME 11	6.600f	176.65	906
FRAME 12	7.300f	162.25	1025
FRAME 13	8.000f	147.54	1134
FRAME 14	8.700f	131.86	1233
FRAME 15	9.400f	115.45	1320
FRAME 16	10.100f	101.17	1396
FRAME 17	10.800f	86.13	1463
FRAME 18	11.500f	70.48	1518
FRAME 19	12.200f	54.23	1562
FRAME 20	12.900f	37.40	1595
FRAME 29	19.200f	-67.63	1415
FRAME 36	24.100f	-9.35	1173
FRAME 42	28.300f	-267.65	623
FRAME 57	38.800f	-184.23	-1617
FRAME 60	40.900f	-163.38	-1989
FRAME 71	48.600f	-136.82	-3049
FRAME 76	52.100f	-114.48	-3512
FRAME 84	57.700f	-45.39	-3938
FRAME 92	63.300f	32.34	-4011
FRAME 108	74.500f	144.52	-3086
FRAME 118	81.500f	224.58	-1743
FRAME 122	84.300f	256.12	-1070

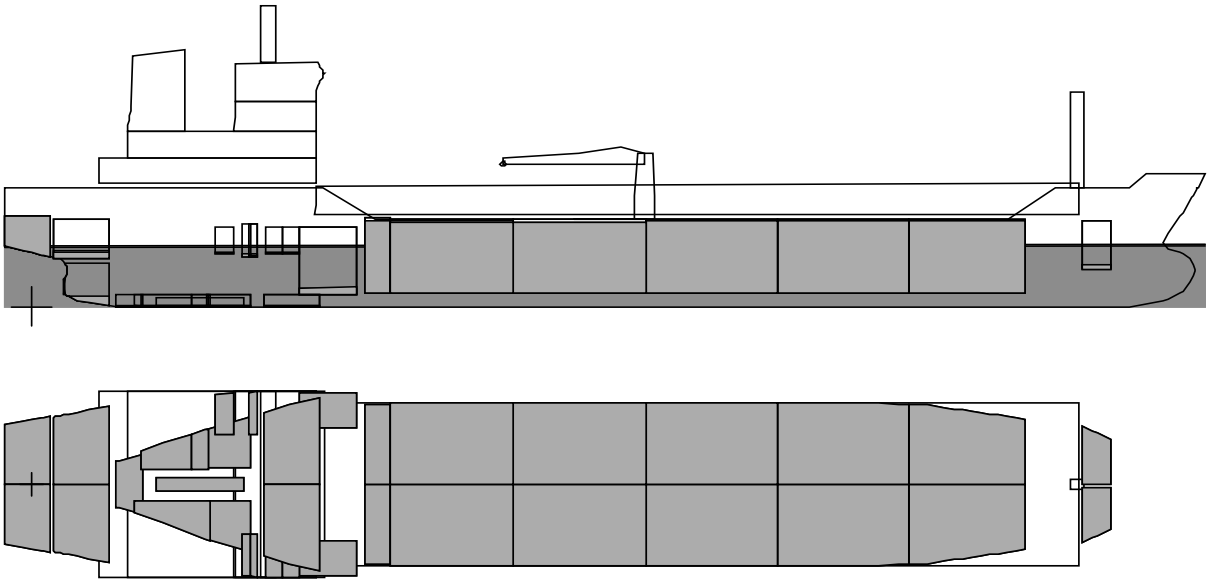
Max. Shear **-267.89 MT** **at** **28.303f**
Max. Bending Moment **-4033 MT-m** **at** **61.900f** **(Sagging)**


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 1.5
Pt Load x .1
Buoy. x 1.5
Shear x 3.5
B.M. x 60.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 8 : FULY LOADED ARRIVAL homo 0.9405t /m3

Floating Status

Draft FP	5.656 m	Heel	port 0.53 deg.	GM(Solid)	1.399 m
Draft MS	5.616 m	Equil	Yes	F/S Corr.	0.405 m
Draft AP	5.575 m	Wind	0.0 kn	GM(Fluid)	0.994 m
Trim	0.081/96.590	Wave	No	KMT	6.564 m
LCG	49.771f m	VCG	5.165 m	TPcm	13.62



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		4,343.44	98.00%
WATER_BALLAST		91.74	3.73%
FRESH_WATER		25.61	10.00%
HFO		23.80	10.00%
DIESEL_OIL		6.34	10.00%
LUB_OIL		2.60	10.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,504.53	54.147f	0.003p	4.710
Displacement	6,979.45	49.771f	0.013p	5.165

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.941)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	98.00%	342.50	79.139f	2.934p	4.734	193.01
COT1.S	98.00%	342.50	79.141f	2.923s	4.734	192.42
COT2.P	98.00%	445.38	68.878f	3.350p	4.712	292.47
COT2.S	98.00%	445.38	68.878f	3.338s	4.712	292.10
COT3.P	98.00%	452.95	57.677f	3.383p	4.662	292.27
COT3.S	98.00%	452.95	57.677f	3.371s	4.662	291.93
COT4.P	98.00%	422.70	46.471f	3.414p	4.644	158.18
COT4.S	98.00%	422.70	46.471f	3.404s	4.644	284.16
COT5.P	98.00%	421.71	35.650f	3.401p	4.627	272.18
COT5.S	98.00%	421.71	35.650f	3.389s	4.627	271.90
SLOPTANK.P	98.00%	86.48	29.353f	3.354p	4.630	47.81
SLOPTANK.S	98.00%	86.48	29.353f	3.344s	4.630	47.88
Subtotals:	**98.00%**	**4,343.44**	**55.773f**	**0.006p**	**4.672**	**2,636.31**

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	**100.00%**	**45.87**	**0.172a**	**2.032p**	**7.055**	**0.00**
AWBTK.S	**100.00%**	**45.87**	**0.172a**	**2.032s**	**7.055**	**0.00**
Subtotals:	**3.73%**	**91.74**	**0.172a**	**0.000**	**7.055**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**10.00%**	**7.54**	**4.742f**	**1.367p**	**4.778**	**15.19**
AFWT.S	**10.00%**	**7.54**	**4.725f**	**1.331s**	**4.778**	**14.40**
FFWT.P	**10.00%**	**4.05**	**90.353f**	**1.923p**	**3.718**	**11.26**
FFWT.S	**10.00%**	**3.77**	**90.353f**	**2.026s**	**3.623**	**8.75**
SHAFTCWT	**10.00%**	**2.71**	**5.471f**	**0.010p**	**0.679**	**3.10**
Subtotals:	**10.00%**	**25.61**	**30.938f**	**0.018p**	**4.007**	**52.69**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**10.01%**	**0.85**	**8.383f**	**0.040p**	**0.099**	**3.72**
FODAILYTK.S	**10.00%**	**1.25**	**20.575f**	**5.951s**	**4.929**	**5.24**
FODIRTK.S	**10.00%**	**1.16**	**16.809f**	**2.424s**	**0.093**	**3.95**
FOOVERTK.P	**10.00%**	**1.16**	**16.829f**	**2.488p**	**0.092**	**4.34**
FOSETTTK.S	**10.00%**	**1.26**	**21.988f**	**6.004s**	**4.927**	**5.67**
FOT.P	**10.00%**	**8.54**	**25.236f**	**6.244p**	**1.446**	**8.50**
FOT.S	**10.00%**	**8.54**	**25.233f**	**6.226s**	**1.446**	**8.45**
SLUGETK.P	**10.00%**	**0.36**	**14.353f**	**2.211p**	**0.107**	**0.97**
THERMALODTK.P	**10.01%**	**0.68**	**11.851f**	**1.884p**	**0.137**	**0.92**
Subtotals:	**10.00%**	**23.80**	**22.848f**	**0.531s**	**1.575**	**41.76**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**10.00%**	**0.54**	**18.851f**	**5.907s**	**4.664**	**1.52**
DOT.P	**10.00%**	**2.36**	**22.218f**	**2.550p**	**0.075**	**44.34**
DOT.S	**10.00%**	**2.36**	**22.181f**	**2.224s**	**0.075**	**38.88**
NO1DODAYTK.S	**10.00%**	**0.53**	**18.152f**	**5.865s**	**4.667**	**1.42**
NO2DODAYTK.P	**10.00%**	**0.54**	**18.751f**	**5.954p**	**4.664**	**1.52**
Subtotals:	**10.00%**	**6.34**	**21.280f**	**0.366s**	**1.243**	**87.67**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	10.00%	0.98	12.995f	2.020s	0.118	1.69
LOSTORTK.P	10.00%	1.09	16.413f	5.815p	4.939	3.09
LOSUMPTK.C	10.00%	0.53	14.351f	0.011p	0.040	0.64
Subtotals:	10.00%	2.60	14.701f	1.671p	2.118	5.42

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,493.53	54.242f	0.003p	4.694	2,823.86

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	6,980.37	49.772f	0.034p	2.913
SubTotals:			6,980.37	49.772f	0.034p	2.913

Righting Arms vs Heel Angle

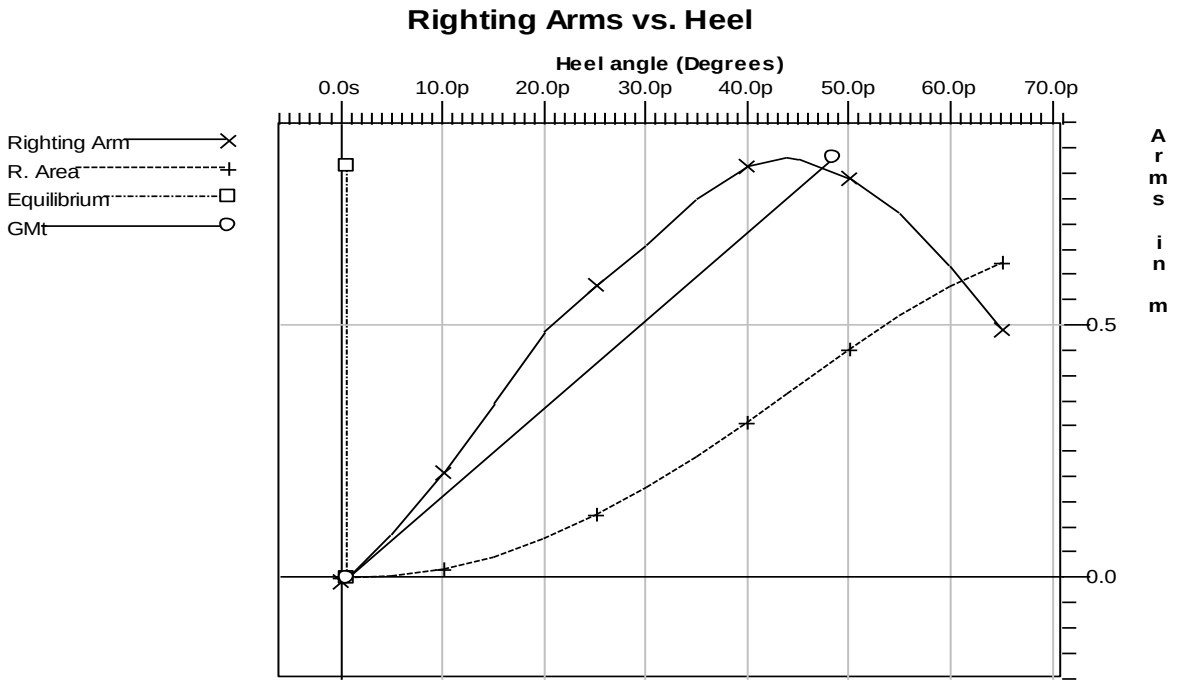
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.05f	5.575	-0.009	0.000	6.308 (1)	
0.48p	0.05f	5.574	-0.001	0.000	6.363 (1)	Equil
5.00p	0.05f	5.545	0.087	0.003	6.857 (1)	
10.00p	0.08f	5.455	0.209	0.016	7.367 (1)	
15.00p	0.11f	5.304	0.348	0.040	7.834 (1)	
20.00p	0.17f	5.098	0.487	0.077	8.247 (1)	
25.00p	0.29f	4.849	0.579	0.124	8.581 (1)	
30.00p	0.45f	4.556	0.660	0.178	8.842 (1)	
35.00p	0.63f	4.220	0.751	0.239	9.037 (1)	
40.00p	0.82f	3.847	0.815	0.308	9.161 (1)	
43.91p	0.96f	3.548	0.831	0.364	9.199 (1)	MaxRa
45.00p	0.99f	3.464	0.830	0.380	9.201 (1)	
50.00p	1.14f	3.071	0.794	0.451	9.159 (1)	
55.00p	1.27f	2.665	0.719	0.517	9.040 (1)	
60.00p	1.39f	2.248	0.616	0.576	8.846 (1)	
65.00p	1.49f	1.819	0.490	0.624	8.580 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	6.308

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.178	0.123	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.308	0.218	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.130	0.100	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.831	0.631	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	43.91	18.91	Yes
(6) GM at Equilibrium	>0.150 m	0.994	0.844	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.081/96.590, heel: port 0.53 deg., VCG = 5.165

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.615	6980.368	49.772f	2.913	47.020f	13.618	83.239	115.181	0.994

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	369.5	2.114	4.879	0.051	91.952
NAVIGATION DECK	17.5	14.859	17.623	0.051	15.695
FUNNEL	42.4	13.910	16.674	0.051	36.094
CAPTAIN DECK	17.5	11.758	14.523	0.051	12.959
LIFE SAVING DECK	24.5	9.190	11.954	0.051	14.944
POOP DECK	46.5	6.788	9.553	0.051	22.652
RAILINGS	24.8	4.168	6.932	0.051	8.768
AFT MAST	2.9	19.141	21.906	0.051	3.227
FORE MAST	4.4	9.603	12.368	0.051	2.750
HOSE CRAIN	11.5	6.726	9.490	0.051	5.567

Total wind heeling moment 214.607 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.29f	4.849	-0.625	0.000	8.581 (1)	Roll
20.00p	0.17f	5.098	-0.533	-0.051	8.247 (1)	
15.00p	0.11f	5.304	-0.394	-0.091	7.834 (1)	
10.00p	0.08f	5.454	-0.255	-0.120	7.367 (1)	
5.00p	0.05f	5.545	-0.133	-0.137	6.858 (1)	
0.00	0.05f	5.575	-0.037	-0.144	6.309 (1)	
1.91s	0.05f	5.570	-0.003	-0.144	6.090 (1)	Equil
5.00s	0.05f	5.545	0.060	-0.143	5.724 (1)	
10.00s	0.08f	5.454	0.181	-0.133	5.110 (1)	
15.00s	0.11f	5.304	0.320	-0.111	4.470 (1)	
20.00s	0.17f	5.098	0.458	-0.077	3.801 (1)	
25.00s	0.29f	4.849	0.550	-0.032	3.087 (1)	
30.00s	0.45f	4.556	0.630	0.019	2.342 (1)	
35.00s	0.63f	4.219	0.720	0.078	1.581 (1)	
40.00s	0.82f	3.847	0.783	0.144	0.805 (1)	
43.75s	0.95f	3.560	0.798	0.196	0.210 (1)	MaxRa
45.00s	0.99f	3.464	0.797	0.213	0.010 (1)	
45.06s	0.99f	3.459	0.797	0.214	0.000 (1)	FldPt
50.00s	1.14f	3.071	0.759	0.281	-0.797 (1)	
55.00s	1.27f	2.665	0.684	0.344	-1.606 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 321.91

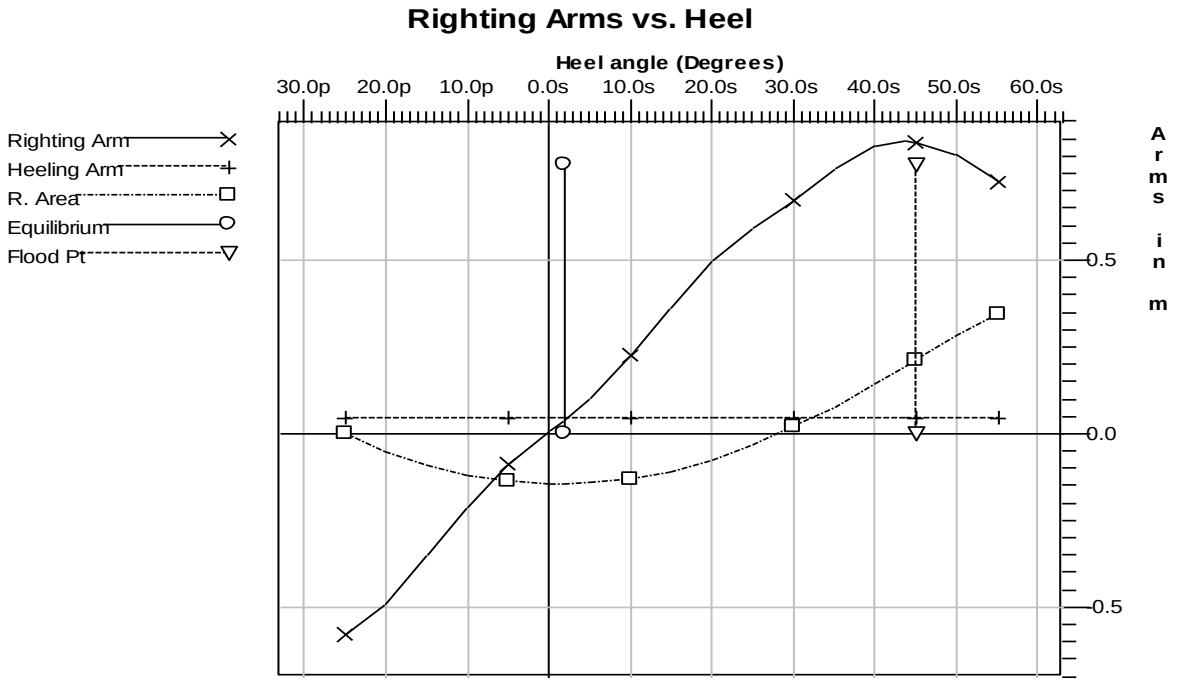
Roll angle is 19.92
Equilibrium for load condition without gust is 1.23s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.581

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.480	1.480	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	1.91	9.79	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: 0.081/96.590, heel: stbd 1.23 deg., VCG = 5.165

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.614	6979.447	49.772f	2.913	47.023f	13.620	83.263	115.230	1.009

Water Specific Gravity = 1.025.

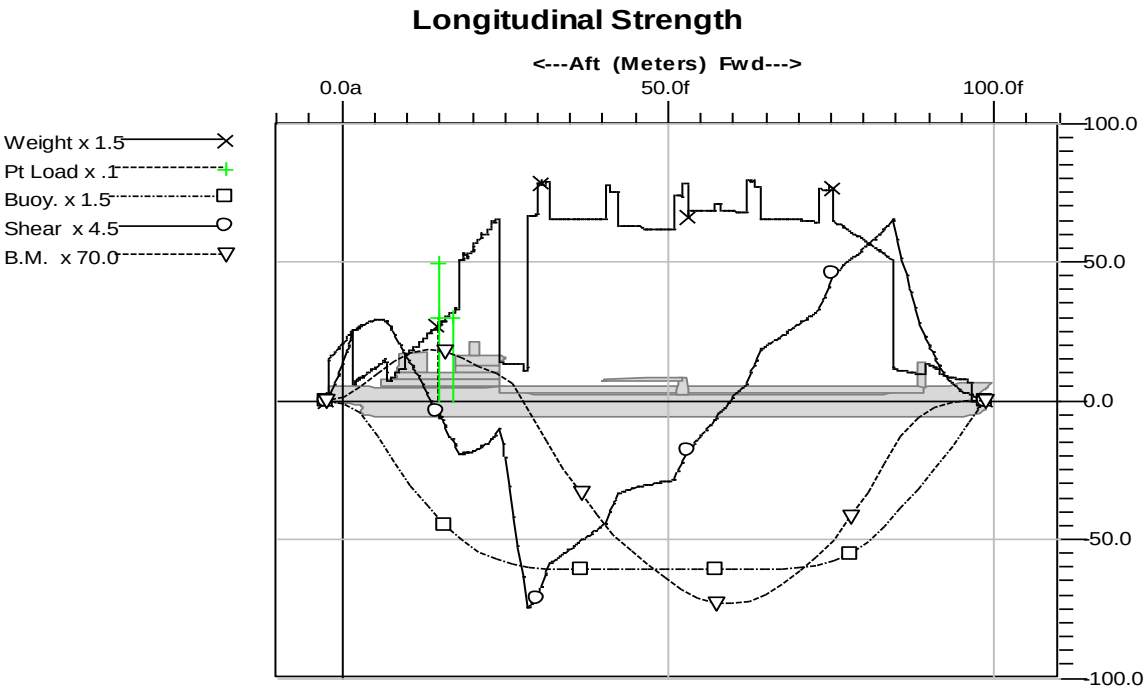
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.53 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	60.81	67
FRAME 1	0.600f	79.39	109
FRAME 2	1.200f	99.49	162
FRAME 3	1.800f	115.71	228
FRAME 4	2.400f	120.26	299
FRAME 5	3.000f	124.43	372
FRAME 6	3.600f	127.41	448
FRAME 7	4.200f	129.78	525
FRAME 8	4.800f	131.27	603
FRAME 9	5.400f	131.93	682
FRAME 10	6.000f	131.80	761
FRAME 11	6.600f	130.74	840
FRAME 12	7.300f	119.14	927
FRAME 13	8.000f	106.60	1007
FRAME 14	8.700f	93.10	1076
FRAME 15	9.400f	78.65	1137
FRAME 16	10.100f	67.27	1188
FRAME 17	10.800f	55.01	1231
FRAME 18	11.500f	41.92	1265
FRAME 19	12.200f	28.20	1289
FRAME 20	12.900f	13.86	1304
FRAME 29	19.200f	-82.56	1014
FRAME 36	24.100f	-45.14	678
FRAME 42	28.300f	-334.26	-110
FRAME 57	38.800f	-208.65	-2831
FRAME 60	40.900f	-179.86	-3248
FRAME 71	48.600f	-131.22	-4355
FRAME 76	52.100f	-99.44	-4785
FRAME 84	57.700f	-20.38	-5103
FRAME 92	63.300f	66.64	-5015
FRAME 108	74.500f	185.80	-3674
FRAME 118	81.500f	263.48	-2057
FRAME 122	84.300f	293.95	-1279

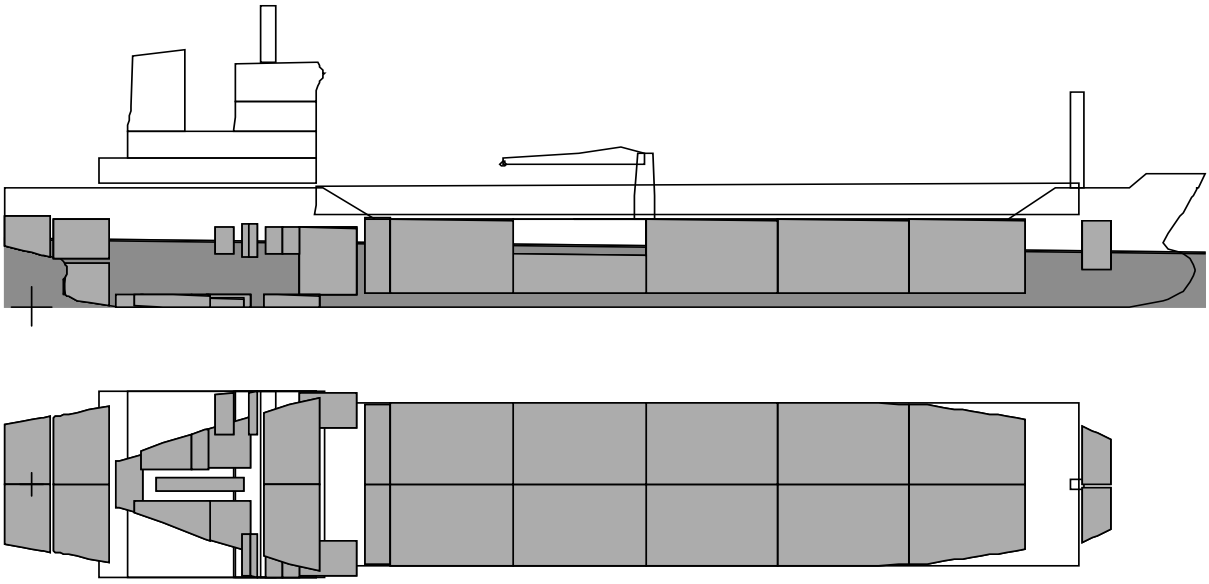
Max. Shear **-334.48 MT** **at** **28.303f**
Max. Bending Moment **-5119 MT-m** **at** **59.100f** **(Sagging)**


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 1.5
Pt Load x .1
Buoy. x 1.5
Shear x 4.5
B.M. x 70.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 9 : PARTIALLY LOADED DEPARTURE homo 0.9405 t /m3

Floating Status

Draft FP	5.086 m	Heel	stbd 0.29 deg.	GM(Solid)	1.561 m
Draft MS	5.670 m	Equil	Yes	F/S Corr.	0.414 m
Draft AP	6.253 m	Wind	0.0 kn	GM(Fluid)	1.147 m
Trim	aft 1.167/96.590	Wave	No	KMT	6.624 m
LCG	48.194f m	VCG	5.064 m	TPcm	13.92



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		3,929.37	88.66%
WATER_BALLAST		91.74	3.73%
FRESH_WATER		256.08	100.00%
HFO		233.22	98.00%
DIESEL_OIL		62.14	98.00%
LUB_OIL		25.46	98.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,609.02	51.625f	0.028s	4.566
Displacement	7,083.94	48.194f	0.008s	5.064

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.941)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	98.00%	342.50	79.124f	2.927p	4.734	192.49
COT1.S	98.00%	342.50	79.123f	2.933s	4.734	192.82
COT2.P	98.00%	445.38	68.856f	3.341p	4.712	292.21
COT2.S	98.00%	445.38	68.856f	3.348s	4.712	292.43
COT3.P	98.00%	452.95	57.656f	3.374p	4.663	291.95
COT3.S	98.00%	452.95	57.656f	3.381s	4.663	292.13
COT4.P	50.00%	215.66	46.424f	3.306p	3.122	263.57
COT4.S	50.00%	215.66	46.424f	3.318s	3.122	263.60
COT5.P	98.00%	421.71	35.632f	3.391p	4.627	271.96
COT5.S	98.00%	421.71	35.632f	3.398s	4.627	272.11
SLOPTANK.P	98.00%	86.48	29.352f	3.346p	4.630	47.86
SLOPTANK.S	98.00%	86.48	29.352f	3.352s	4.630	47.83
Subtotals:	**88.66%**	**3,929.37**	**56.731f**	**0.004s**	**4.508**	**2,720.97**

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	**100.00%**	**45.87**	**0.172a**	**2.032p**	**7.055**	**0.00**
AWBTK.S	**100.00%**	**45.87**	**0.172a**	**2.032s**	**7.055**	**0.00**
Subtotals:	**3.73%**	**91.74**	**0.172a**	**0.000**	**7.055**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**100.00%**	**75.43**	**4.423f**	**2.462p**	**6.505**	**0.00**
AFWT.S	**100.00%**	**75.43**	**4.423f**	**2.462s**	**6.505**	**0.00**
FFWT.P	**100.00%**	**40.47**	**90.340f**	**1.895p**	**5.738**	**0.00**
FFWT.S	**100.00%**	**37.67**	**90.335f**	**2.047s**	**5.690**	**0.00**
SHAFTCWT	**100.00%**	**27.08**	**5.166f**	**0.000**	**2.213**	**0.00**
Subtotals:	**100.00%**	**256.08**	**30.718f**	**0.002s**	**5.810**	**0.00**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**98.00%**	**8.37**	**8.349f**	**0.010s**	**0.608**	**12.82**
FODAILYTK.S	**98.00%**	**12.22**	**20.571f**	**6.048s**	**6.036**	**6.01**
FODIRTK.S	**97.99%**	**11.38**	**16.783f**	**3.022s**	**0.601**	**9.68**
FOOVERTK.P	**97.99%**	**11.35**	**16.782f**	**3.014p**	**0.601**	**7.61**
FOSETTTK.S	**98.00%**	**12.31**	**21.986f**	**6.079s**	**6.031**	**6.06**
FOT.P	**98.00%**	**83.72**	**25.167f**	**6.364p**	**4.192**	**10.50**
FOT.S	**98.00%**	**83.72**	**25.167f**	**6.365s**	**4.192**	**10.50**
SLUGETK.P	**98.02%**	**3.50**	**14.345f**	**2.687p**	**0.607**	**3.47**
THERMALODTK.P	**98.00%**	**6.66**	**11.657f**	**2.306p**	**0.646**	**3.27**
Subtotals:	**98.00%**	**233.22**	**22.789f**	**0.533s**	**3.752**	**69.93**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**97.99%**	**5.28**	**18.850f**	**6.051s**	**6.025**	**2.02**
DOT.P	**98.00%**	**23.16**	**22.147f**	**3.051p**	**0.575**	**59.44**
DOT.S	**98.00%**	**23.16**	**22.147f**	**3.085s**	**0.575**	**66.59**
NO1DODAYTK.S	**97.99%**	**5.24**	**18.151f**	**6.029s**	**6.031**	**2.00**
NO2DODAYTK.P	**97.99%**	**5.31**	**18.750f**	**6.044p**	**6.025**	**2.03**
Subtotals:	**98.00%**	**62.14**	**21.240f**	**0.518s**	**1.963**	**132.08**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	97.99%	9.62	12.652f	2.425s	0.625	4.21
LOSTORTK.P	98.00%	10.65	16.406f	5.942p	6.063	4.75
LOSUMPTK.C	98.00%	5.19	14.255f	0.000	0.392	0.36
Subtotals:	98.00%	25.46	14.549f	1.569p	2.851	9.33

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,598.02	51.712f	0.028s	4.550	2,932.31

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	7,084.06	48.169f	0.019s	2.962
SubTotals:			7,084.06	48.169f	0.019s	2.962

Righting Arms vs Heel Angle

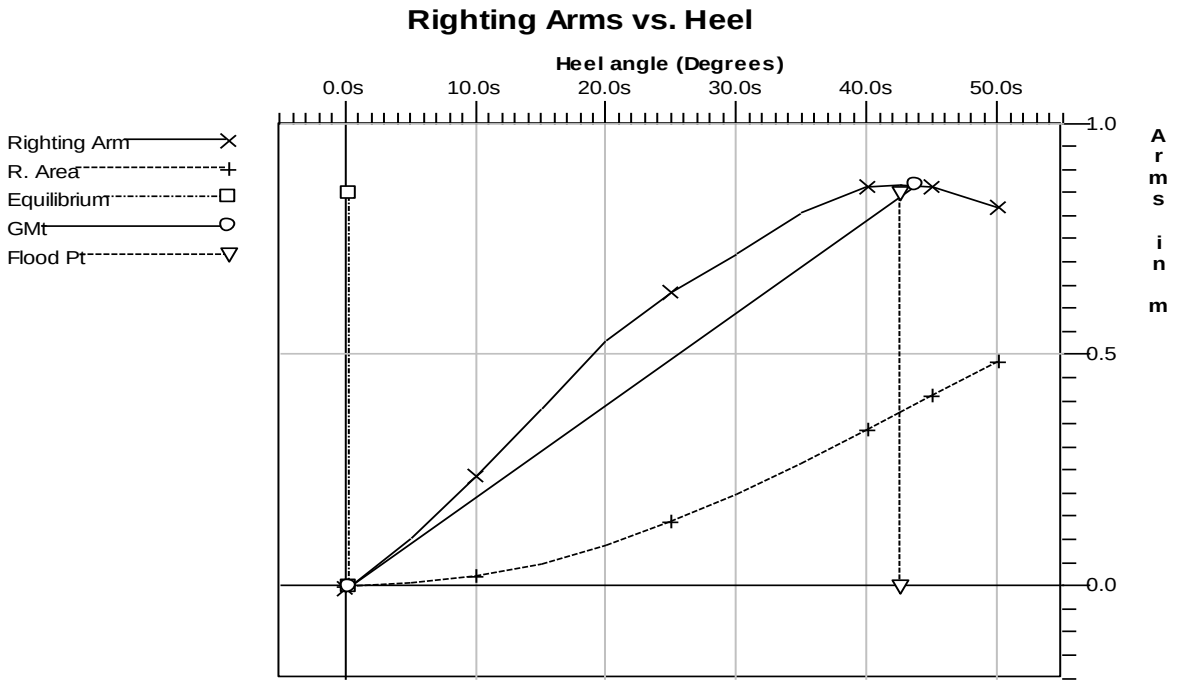
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.69a	6.252	-0.006	0.000	5.887 (1)	
0.25s	0.69a	6.252	0.000	0.000	5.859 (1)	Equil
5.00s	0.68a	6.218	0.105	0.004	5.305 (1)	
10.00s	0.65a	6.119	0.237	0.019	4.696 (1)	
15.00s	0.60a	5.956	0.384	0.046	4.063 (1)	
20.00s	0.53a	5.743	0.531	0.086	3.399 (1)	
25.00s	0.40a	5.485	0.635	0.137	2.694 (1)	
30.00s	0.23a	5.172	0.722	0.197	1.962 (1)	
35.00s	0.03a	4.822	0.809	0.263	1.208 (1)	
40.00s	0.14f	4.476	0.863	0.337	0.414 (1)	
42.45s	0.21f	4.305	0.869	0.374	0.015 (1)	MaxRa
42.54s	0.21f	4.299	0.869	0.375	0.000 (1)	FldPt
45.00s	0.28f	4.127	0.862	0.412	-0.406 (1)	
50.00s	0.40f	3.769	0.818	0.486	-1.237 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	5.887

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.197	0.142	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.337	0.247	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.140	0.110	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.869	0.669	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	42.45	17.45	Yes
(6) GM at Equilibrium	>0.150 m	1.144	0.994	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.167/96.590, heel: stbd 0.29 deg., VCG = 5.064

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.693	7084.063	48.169f	2.962	46.346f	13.922	89.435	121.943	1.147

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	361.8	2.082	4.883	0.051	90.113
NAVIGATION DECK	17.5	14.782	17.583	0.051	15.659
FUNNEL	42.4	13.833	16.634	0.051	36.008
CAPTAIN DECK	17.5	11.682	14.483	0.051	12.923
LIFE SAVING DECK	24.5	9.113	11.915	0.051	14.894
POOP DECK	46.5	6.711	9.513	0.051	22.557
RAILINGS	24.8	4.091	6.893	0.051	8.718
AFT MAST	2.9	19.065	21.866	0.051	3.221
FORE MAST	4.4	9.527	12.328	0.051	2.741
HOSE CRAIN	11.5	6.649	9.451	0.051	5.544

Total wind heeling moment 212.378 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.40a	5.485	-0.690	0.000	8.188 (1)	Roll
20.00p	0.53a	5.744	-0.586	-0.056	7.845 (1)	
15.00p	0.60a	5.955	-0.440	-0.101	7.428 (1)	
10.00p	0.65a	6.120	-0.293	-0.133	6.953 (1)	
5.00p	0.68a	6.218	-0.161	-0.152	6.439 (1)	
0.00	0.69a	6.252	-0.050	-0.161	5.887 (1)	
2.28s	0.69a	6.245	-0.004	-0.163	5.625 (1)	Equil
5.00s	0.68a	6.218	0.060	-0.161	5.305 (1)	
10.00s	0.65a	6.119	0.192	-0.150	4.696 (1)	
15.00s	0.60a	5.956	0.339	-0.127	4.063 (1)	
20.00s	0.53a	5.743	0.486	-0.091	3.399 (1)	
25.00s	0.40a	5.485	0.590	-0.044	2.694 (1)	
30.00s	0.23a	5.172	0.677	0.011	1.962 (1)	
35.00s	0.03a	4.822	0.764	0.074	1.208 (1)	
40.00s	0.14f	4.476	0.818	0.144	0.414 (1)	
42.45s	0.21f	4.305	0.824	0.179	0.015 (1)	MaxRa
42.54s	0.21f	4.299	0.824	0.180	0.000 (1)	FldPt
45.00s	0.28f	4.127	0.817	0.215	-0.406 (1)	
50.00s	0.40f	3.769	0.773	0.285	-1.237 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 318.57

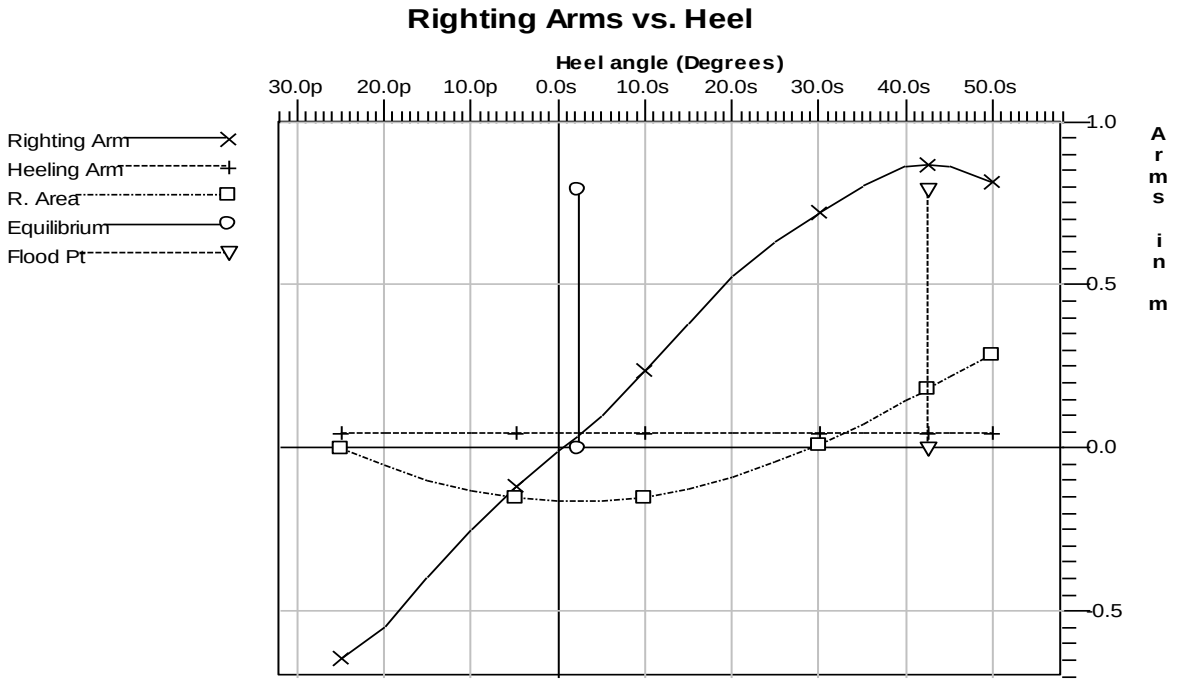
Roll angle is 20.65
Equilibrium for load condition without gust is 1.79s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.188

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.107	1.107	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.28	9.42	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.164/96.590, heel: stbd 1.75 deg., VCG = 5.064

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.693	7083.951	48.169f	2.964	46.348f	13.928	89.511	122.049	1.198

Water Specific Gravity = 1.025.

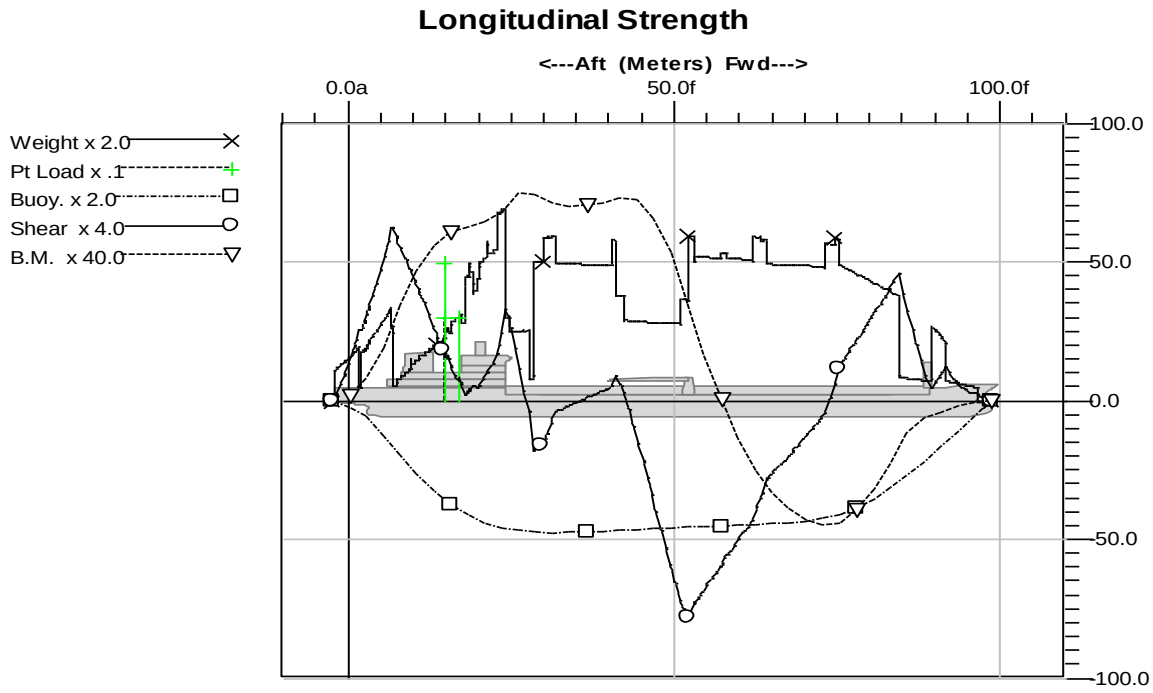
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (stbd 0.29 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	54.72	65
FRAME 1	0.600f	71.14	104
FRAME 2	1.200f	88.88	153
FRAME 3	1.800f	102.55	213
FRAME 4	2.400f	116.38	279
FRAME 5	3.000f	133.45	355
FRAME 6	3.600f	151.44	441
FRAME 7	4.200f	170.22	539
FRAME 8	4.800f	189.65	648
FRAME 9	5.400f	209.72	769
FRAME 10	6.000f	230.44	902
FRAME 11	6.600f	251.18	1048
FRAME 12	7.300f	235.69	1219
FRAME 13	8.000f	220.74	1380
FRAME 14	8.700f	204.92	1531
FRAME 15	9.400f	188.75	1670
FRAME 16	10.100f	173.72	1798
FRAME 17	10.800f	158.14	1916
FRAME 18	11.500f	142.25	2022
FRAME 19	12.200f	125.88	2117
FRAME 20	12.900f	109.03	2201
FRAME 29	19.200f	23.04	2518
FRAME 36	24.100f	131.39	2803
FRAME 42	28.300f	-69.79	2993
FRAME 57	38.800f	15.07	2841
FRAME 60	40.900f	36.77	2891
FRAME 71	48.600f	-210.84	2319
FRAME 76	52.100f	-311.15	1386
FRAME 84	57.700f	-226.71	-93
FRAME 92	63.300f	-132.84	-1131
FRAME 108	74.500f	25.08	-1791
FRAME 118	81.500f	139.92	-1154
FRAME 122	84.300f	183.79	-697

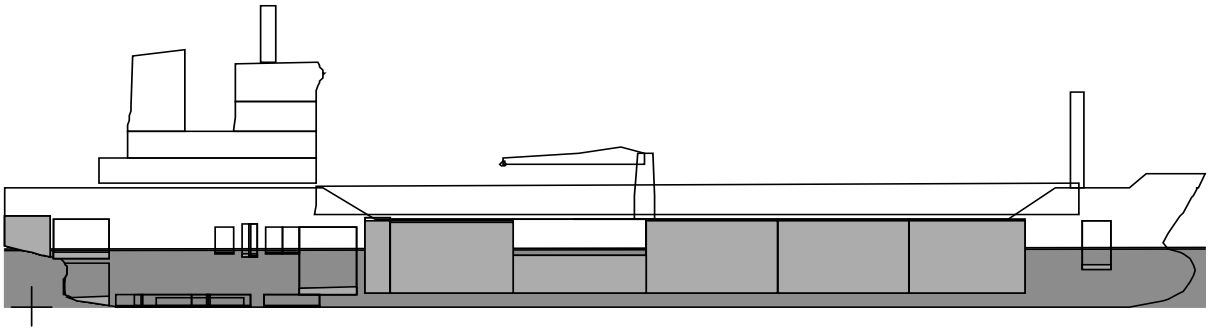
Max. Shear **-311.15 MT** **at** **52.100f**
Max. Bending Moment **3021 MT-m** **at** **27.600f** **(Hogging)**

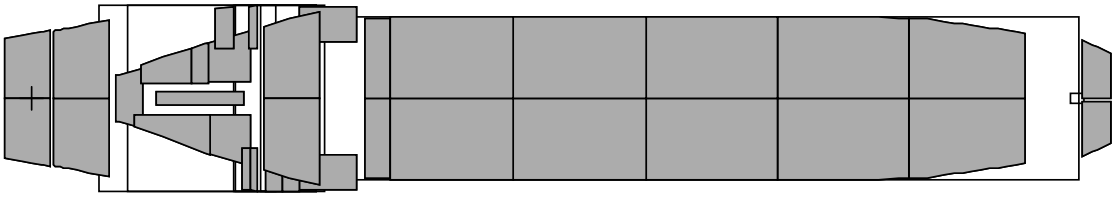

Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 2.0
Pt Load x .1
Buoy. x 2.0
Shear x 4.0
B.M. x 40.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 10 : PARTIALLY LOADED ARRIVAL homo 0.9405t /m3

Floating Status

Draft FP	5.371 m	Heel	port 0.54 deg.	GM(Solid)	1.484 m
Draft MS	5.310 m	Equil	Yes	F/S Corr.	0.443 m
Draft AP	5.248 m	Wind	0.0 kn	GM(Fluid)	1.041 m
Trim	fwd 0.123/96.590	Wave	No	KMT	6.582 m
LCG	49.979f m	VCG	5.098 m	TPcm	13.45





Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
CARGO_OIL		3,929.37	88.66%
WATER_BALLAST		91.74	3.73%
FRESH_WATER		25.61	10.00%
HFO		23.80	10.00%
DIESEL_OIL		6.34	10.00%
LUB_OIL		2.60	10.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	4,090.46	54.925f	0.004p	4.557
Displacement	6,565.38	49.979f	0.014p	5.098

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

CARGO_OIL (SpGr 0.941)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
COT1.P	98.00%	342.50	79.140f	2.934p	4.734	193.02
COT1.S	98.00%	342.50	79.142f	2.923s	4.734	192.42
COT2.P	98.00%	445.38	68.878f	3.350p	4.712	292.47
COT2.S	98.00%	445.38	68.878f	3.338s	4.712	292.10
COT3.P	98.00%	452.95	57.678f	3.383p	4.662	292.27
COT3.S	98.00%	452.95	57.678f	3.371s	4.662	291.94
COT4.P	50.00%	215.66	46.468f	3.324p	3.122	263.67
COT4.S	50.00%	215.66	46.467f	3.301s	3.122	263.72
COT5.P	98.00%	421.71	35.651f	3.401p	4.627	272.19
COT5.S	98.00%	421.71	35.651f	3.389s	4.627	271.90
SLOPTANK.P	98.00%	86.48	29.353f	3.354p	4.630	47.81
SLOPTANK.S	98.00%	86.48	29.353f	3.344s	4.630	47.88
Subtotals:	**88.66%**	**3,929.37**	**56.753f**	**0.007p**	**4.508**	**2,721.37**

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	**100.00%**	**45.87**	**0.172a**	**2.032p**	**7.055**	**0.00**
AWBTK.S	**100.00%**	**45.87**	**0.172a**	**2.032s**	**7.055**	**0.00**
Subtotals:	**3.73%**	**91.74**	**0.172a**	**0.000**	**7.055**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**10.00%**	**7.54**	**4.744f**	**1.368p**	**4.778**	**15.20**
AFWT.S	**10.00%**	**7.54**	**4.727f**	**1.331s**	**4.778**	**14.40**
FFWT.P	**10.00%**	**4.05**	**90.353f**	**1.923p**	**3.718**	**11.26**
FFWT.S	**10.00%**	**3.77**	**90.353f**	**2.026s**	**3.623**	**8.75**
SHAFTCWT	**10.00%**	**2.71**	**5.472f**	**0.011p**	**0.679**	**3.10**
Subtotals:	**10.00%**	**25.61**	**30.939f**	**0.018p**	**4.007**	**52.70**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**10.01%**	**0.85**	**8.384f**	**0.041p**	**0.099**	**3.72**
FODAILYTK.S	**10.00%**	**1.25**	**20.575f**	**5.951s**	**4.929**	**5.24**
FODIRTK.S	**10.00%**	**1.16**	**16.812f**	**2.423s**	**0.092**	**3.95**
FOOVERTK.P	**10.00%**	**1.16**	**16.832f**	**2.489p**	**0.092**	**4.35**
FOSETTTK.S	**10.00%**	**1.26**	**21.988f**	**6.003s**	**4.927**	**5.67**
FOT.P	**10.00%**	**8.54**	**25.237f**	**6.244p**	**1.446**	**8.50**
FOT.S	**10.00%**	**8.54**	**25.234f**	**6.225s**	**1.446**	**8.45**
SLUGETK.P	**10.00%**	**0.36**	**14.353f**	**2.211p**	**0.107**	**0.98**
THERMALODTK.P	**10.01%**	**0.68**	**11.855f**	**1.884p**	**0.137**	**0.92**
Subtotals:	**10.00%**	**23.80**	**22.849f**	**0.531s**	**1.575**	**41.77**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**10.00%**	**0.54**	**18.852f**	**5.907s**	**4.664**	**1.52**
DOT.P	**10.00%**	**2.36**	**22.225f**	**2.553p**	**0.075**	**44.40**
DOT.S	**10.00%**	**2.36**	**22.187f**	**2.223s**	**0.075**	**38.85**
NO1DODAYTK.S	**10.00%**	**0.53**	**18.152f**	**5.864s**	**4.667**	**1.42**
NO2DODAYTK.P	**10.00%**	**0.54**	**18.752f**	**5.954p**	**4.664**	**1.52**
Subtotals:	**10.00%**	**6.34**	**21.284f**	**0.364s**	**1.243**	**87.71**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	10.00%	0.98	13.001f	2.020s	0.118	1.69
LOSTORTK.P	10.00%	1.09	16.414f	5.816p	4.939	3.09
LOSUMPTK.C	10.00%	0.53	14.376f	0.011p	0.040	0.64
Subtotals:	10.00%	2.60	14.709f	1.671p	2.118	5.42

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		4,079.46	55.031f	0.004p	4.539	2,908.97

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	6,565.38	49.982f	0.036p	2.752
SubTotals:			6,565.38	49.982f	0.036p	2.752

Righting Arms vs Heel Angle

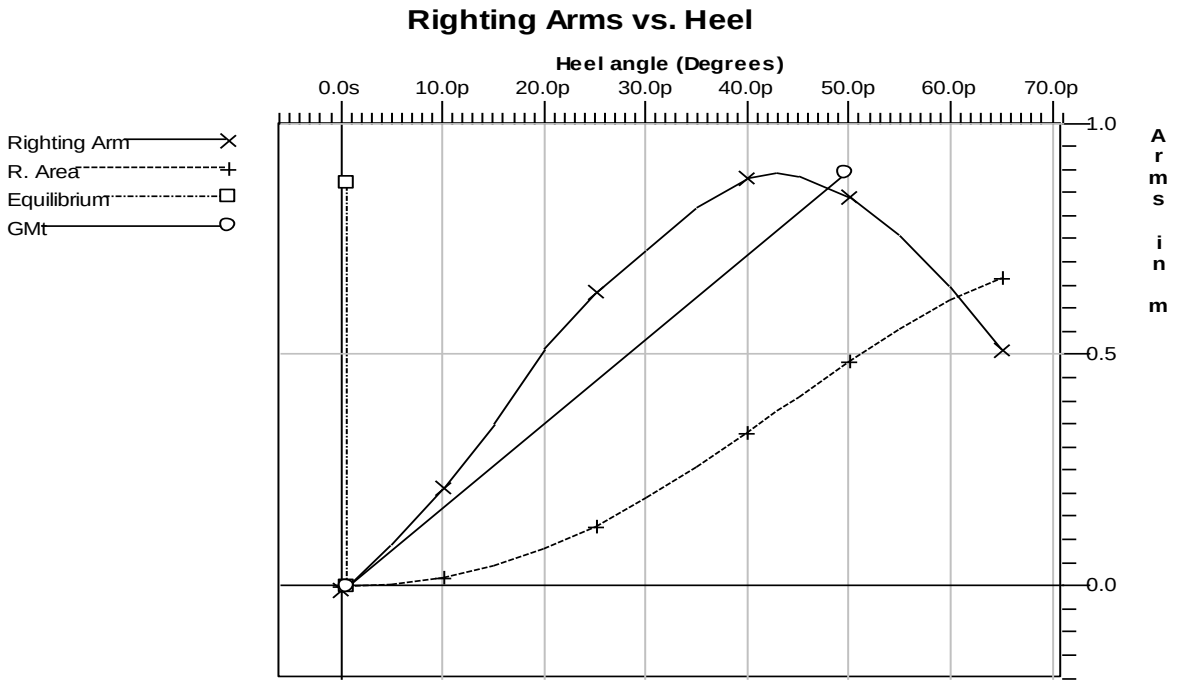
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.07f	5.248	-0.010	0.000	6.627 (1)	
0.49p	0.07f	5.248	-0.001	0.000	6.682 (1)	Equil
5.00p	0.08f	5.219	0.090	0.003	7.174 (1)	
10.00p	0.10f	5.131	0.214	0.017	7.681 (1)	
15.00p	0.14f	4.985	0.354	0.041	8.143 (1)	
20.00p	0.19f	4.784	0.513	0.079	8.555 (1)	
25.00p	0.29f	4.539	0.635	0.129	8.892 (1)	
30.00p	0.44f	4.253	0.729	0.189	9.151 (1)	
35.00p	0.61f	3.919	0.818	0.257	9.346 (1)	
40.00p	0.79f	3.533	0.882	0.331	9.484 (1)	
42.95p	0.91f	3.290	0.892	0.377	9.533 (1)	MaxRa
45.00p	0.98f	3.120	0.887	0.409	9.550 (1)	
50.00p	1.13f	2.702	0.843	0.484	9.532 (1)	
55.00p	1.26f	2.275	0.758	0.555	9.434 (1)	
60.00p	1.38f	1.840	0.645	0.616	9.258 (1)	
65.00p	1.48f	1.397	0.509	0.667	9.006 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	6.627

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.189	0.134	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.331	0.241	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.142	0.112	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	0.892	0.692	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	42.95	17.95	Yes
(6) GM at Equilibrium	>0.150 m	1.041	0.891	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 0.123/96.590, heel: port 0.54 deg., VCG = 5.098

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.309	6565.383	49.982f	2.752	47.622f	13.455	80.274	118.100	1.041

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	400.2	2.246	4.864	0.051	99.271
NAVIGATION DECK	17.5	15.164	17.782	0.051	15.836
FUNNEL	42.4	14.215	16.833	0.051	36.437
CAPTAIN DECK	17.5	12.064	14.681	0.051	13.100
LIFE SAVING DECK	24.5	9.495	12.113	0.051	15.142
POOP DECK	46.5	7.093	9.711	0.051	23.027
RAILINGS	24.8	4.473	7.091	0.051	8.968
AFT MAST	2.9	19.446	22.064	0.051	3.250
FORE MAST	4.4	9.909	12.526	0.051	2.785
HOSE CRAIN	11.5	7.031	9.649	0.051	5.660

Total wind heeling moment 223.476 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.29f	4.540	-0.686	0.000	8.891 (1)	Roll
20.00p	0.19f	4.784	-0.564	-0.055	8.555 (1)	
15.00p	0.14f	4.985	-0.405	-0.097	8.143 (1)	
10.00p	0.10f	5.131	-0.265	-0.126	7.681 (1)	
5.00p	0.08f	5.219	-0.141	-0.144	7.174 (1)	
0.00	0.07f	5.248	-0.041	-0.152	6.627 (1)	
2.06s	0.07f	5.243	-0.003	-0.152	6.390 (1)	Equil
5.00s	0.08f	5.219	0.059	-0.151	6.041 (1)	
10.00s	0.10f	5.131	0.182	-0.141	5.424 (1)	
15.00s	0.14f	4.985	0.322	-0.119	4.779 (1)	
20.00s	0.19f	4.784	0.481	-0.084	4.109 (1)	
25.00s	0.29f	4.539	0.602	-0.036	3.398 (1)	
30.00s	0.44f	4.253	0.695	0.020	2.651 (1)	
35.00s	0.61f	3.919	0.783	0.085	1.890 (1)	
40.00s	0.79f	3.532	0.847	0.156	1.129 (1)	
42.84s	0.90f	3.299	0.855	0.199	0.693 (1)	MaxRa
45.00s	0.98f	3.120	0.850	0.231	0.359 (1)	
47.30s	1.05f	2.928	0.835	0.265	0.000 (1)	FldPt
50.00s	1.13f	2.702	0.805	0.303	-0.424 (1)	
55.00s	1.26f	2.275	0.719	0.370	-1.212 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 335.21

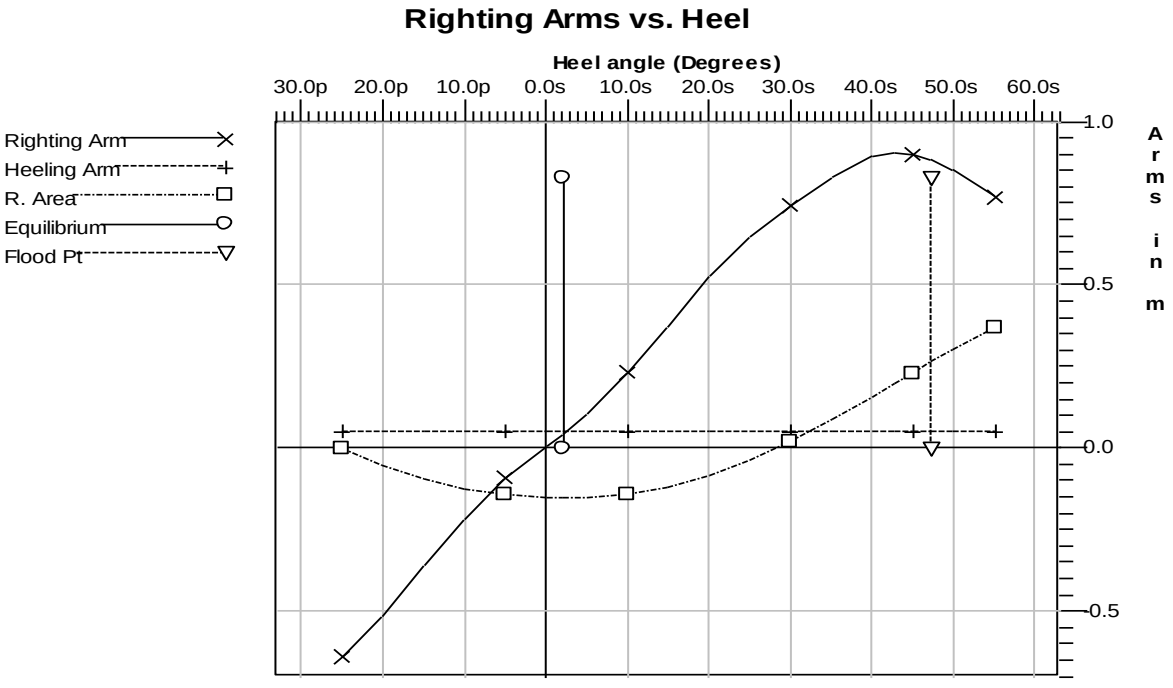
Roll angle is 19.83
Equilibrium for load condition without gust is 1.33s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	8.891

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	2.736	1.736	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	2.06	9.64	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: fwd 0.123/96.590, heel: stbd 1.33 deg., VCG = 5.098

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
5.308	6565.382	49.981f	2.752	47.623f	13.457	80.305	118.145	1.054

Water Specific Gravity = 1.025.

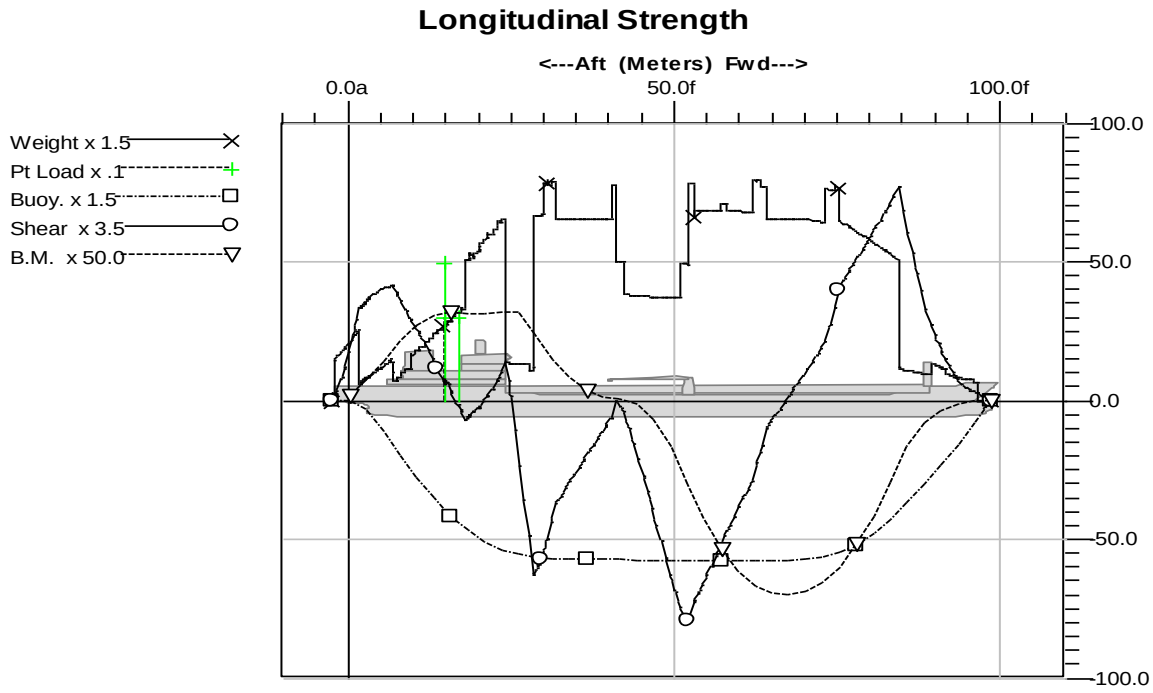
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.54 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	61.90	68
FRAME 1	0.600f	81.11	110
FRAME 2	1.200f	102.00	165
FRAME 3	1.800f	119.13	232
FRAME 4	2.400f	124.70	305
FRAME 5	3.000f	130.01	382
FRAME 6	3.600f	134.27	461
FRAME 7	4.200f	138.02	542
FRAME 8	4.800f	141.02	626
FRAME 9	5.400f	143.30	711
FRAME 10	6.000f	144.90	798
FRAME 11	6.600f	145.68	885
FRAME 12	7.300f	136.33	984
FRAME 13	8.000f	126.18	1075
FRAME 14	8.700f	115.18	1160
FRAME 15	9.400f	103.34	1236
FRAME 16	10.100f	94.68	1306
FRAME 17	10.800f	85.24	1369
FRAME 18	11.500f	75.08	1425
FRAME 19	12.200f	64.37	1474
FRAME 20	12.900f	53.11	1515
FRAME 29	19.200f	-12.90	1565
FRAME 36	24.100f	49.65	1631
FRAME 42	28.300f	-217.78	1287
FRAME 57	38.800f	-38.53	70
FRAME 60	40.900f	0.95	21
FRAME 71	48.600f	-197.42	-650
FRAME 76	52.100f	-276.47	-1506
FRAME 84	57.700f	-169.73	-2738
FRAME 92	63.300f	-55.07	-3409
FRAME 108	74.500f	118.48	-3127
FRAME 118	81.500f	228.07	-1868
FRAME 122	84.300f	269.62	-1173

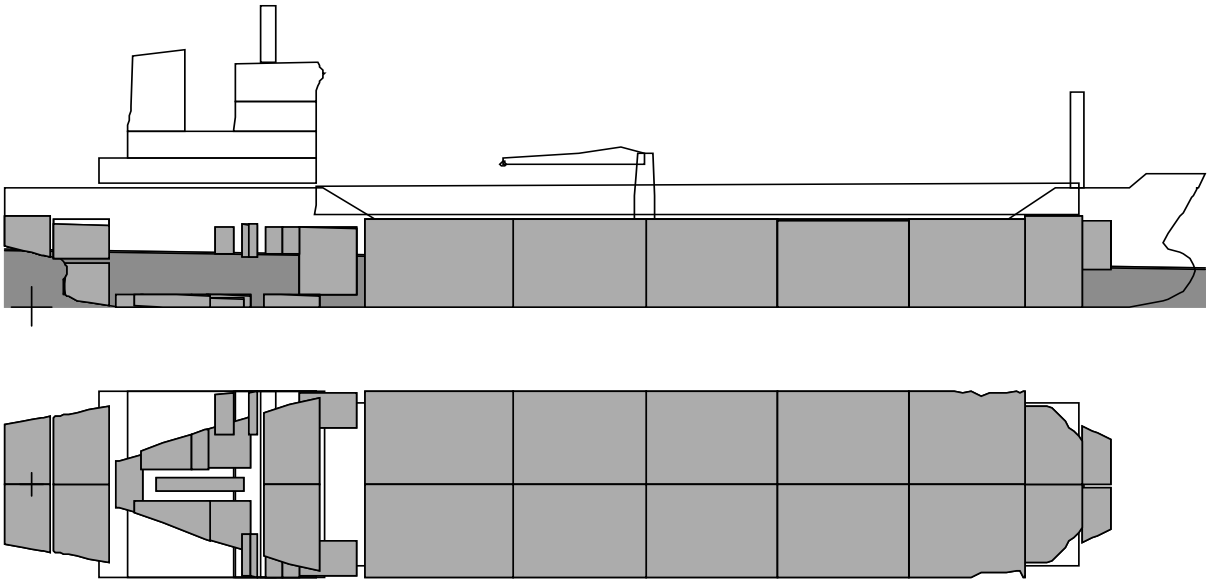
Max. Shear **-276.48 MT** **at** **52.100f**
Max. Bending Moment **-3492 MT-m** **at** **66.800f** **(Sagging)**


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 1.5
Pt Load x .1
Buoy. x 1.5
Shear x 3.5
B.M. x 50.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 11 : BALLAST DEPARTURE

Floating Status

Draft FP	3.656 m	Heel	stbd 0.09 deg.	GM(Solid)	2.384 m
Draft MS	4.420 m	Equil	Yes	F/S Corr.	0.073 m
Draft AP	5.185 m	Wind	0.0 kn	GM(Fluid)	2.311 m
Trim	aft 1.529/96.590	Wave	No	KMT	6.902 m
LCG	47.897f m	VCG	4.519 m	TPcm	13.45



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
WATER_BALLAST		2,342.07	95.21%
FRESH_WATER		225.91	88.22%
HFO		233.22	98.00%
DIESEL_OIL		62.14	98.00%
LUB_OIL		25.46	98.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	2,899.82	53.096f	0.033s	3.261
Displacement	5,374.74	47.897f	0.003s	4.519

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	100.00%	45.87	0.172a	2.032p	7.055	0.00
AWBTK.S	100.00%	45.87	0.172a	2.032s	7.055	0.00
BWT1.P	100.00%	204.11	86.536f	2.582p	4.407	0.00
BWT1.S	100.00%	204.11	86.536f	2.582s	4.407	0.00
BWT2.P	100.00%	164.80	79.217f	4.941p	2.867	0.00
BWT2.S	100.00%	158.21	79.281f	5.145s	3.030	0.00
BWT3.P	100.00%	189.57	68.884f	5.444p	2.369	0.00
BWT3.S	100.00%	181.48	68.833f	5.667s	2.442	0.00
BWT4.P	100.00%	187.59	57.712f	5.403p	2.332	0.00
BWT4.S	100.00%	180.07	57.711f	5.590s	2.405	0.00
BWT5.P	100.00%	187.59	46.546f	5.438p	2.347	0.00
BWT5.S	100.00%	180.11	46.524f	5.651s	2.388	0.00
BWT6.P	100.00%	210.59	34.570f	5.406p	2.364	0.00
BWT6.S	100.00%	202.10	34.599f	5.593s	2.372	0.00
Subtotals:	**95.21%**	**2,342.07**	**59.375f**	**0.009p**	**2.992**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**80.00%**	**60.34**	**4.434f**	**2.310p**	**6.197**	**82.54**
AFWT.S	**80.00%**	**60.34**	**4.434f**	**2.314s**	**6.197**	**82.80**
FFWT.P	**100.00%**	**40.47**	**90.340f**	**1.895p**	**5.738**	**0.00**
FFWT.S	**100.00%**	**37.67**	**90.335f**	**2.047s**	**5.690**	**0.00**
SHAFTCWT	**100.00%**	**27.08**	**5.166f**	**0.000**	**2.213**	**0.00**
Subtotals:	**88.22%**	**225.91**	**34.236f**	**0.003s**	**5.552**	**165.34**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**98.01%**	**8.37**	**8.347f**	**0.003s**	**0.608**	**15.21**
FODAILYTK.S	**98.00%**	**12.22**	**20.571f**	**6.046s**	**6.036**	**6.01**
FODIRTK.S	**97.99%**	**11.38**	**16.778f**	**3.023s**	**0.601**	**8.93**
FOOVERTK.P	**97.99%**	**11.35**	**16.778f**	**3.021p**	**0.601**	**7.48**
FOSETTTK.S	**98.00%**	**12.31**	**21.985f**	**6.077s**	**6.031**	**6.06**
FOT.P	**98.00%**	**83.72**	**25.166f**	**6.364p**	**4.192**	**10.50**
FOT.S	**98.00%**	**83.72**	**25.166f**	**6.364s**	**4.192**	**10.50**
SLUGETK.P	**98.02%**	**3.50**	**14.345f**	**2.691p**	**0.607**	**3.50**
THERMALODTK.P	**98.00%**	**6.66**	**11.654f**	**2.306p**	**0.646**	**3.08**
Subtotals:	**98.00%**	**233.22**	**22.788f**	**0.532s**	**3.752**	**71.27**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**97.99%**	**5.28**	**18.850f**	**6.049s**	**6.025**	**2.02**
DOT.P	**98.00%**	**23.16**	**22.141f**	**3.064p**	**0.575**	**70.26**
DOT.S	**98.00%**	**23.16**	**22.141f**	**3.073s**	**0.575**	**71.69**
NO1DODAYTK.S	**97.99%**	**5.24**	**18.151f**	**6.028s**	**6.031**	**2.00**
NO2DODAYTK.P	**97.99%**	**5.31**	**18.750f**	**6.046p**	**6.025**	**2.03**
Subtotals:	**98.00%**	**62.14**	**21.236f**	**0.508s**	**1.963**	**148.01**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	**98.00%**	**9.62**	**12.647f**	**2.429s**	**0.625**	**3.87**
LOSTORTK.P	**98.00%**	**10.65**	**16.406f**	**5.944p**	**6.063**	**4.76**
LOSUMPTK.C	**97.99%**	**5.19**	**14.251f**	**0.000**	**0.392**	**0.33**
Subtotals:	**98.00%**	**25.46**	**14.546f**	**1.568p**	**2.851**	**8.96**

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		2,888.82	53.239f	0.033s	3.230	393.58

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	5,374.74	47.862f	0.007s	2.302
SubTotals:			5,374.74	47.862f	0.007s	2.302

Righting Arms vs Heel Angle

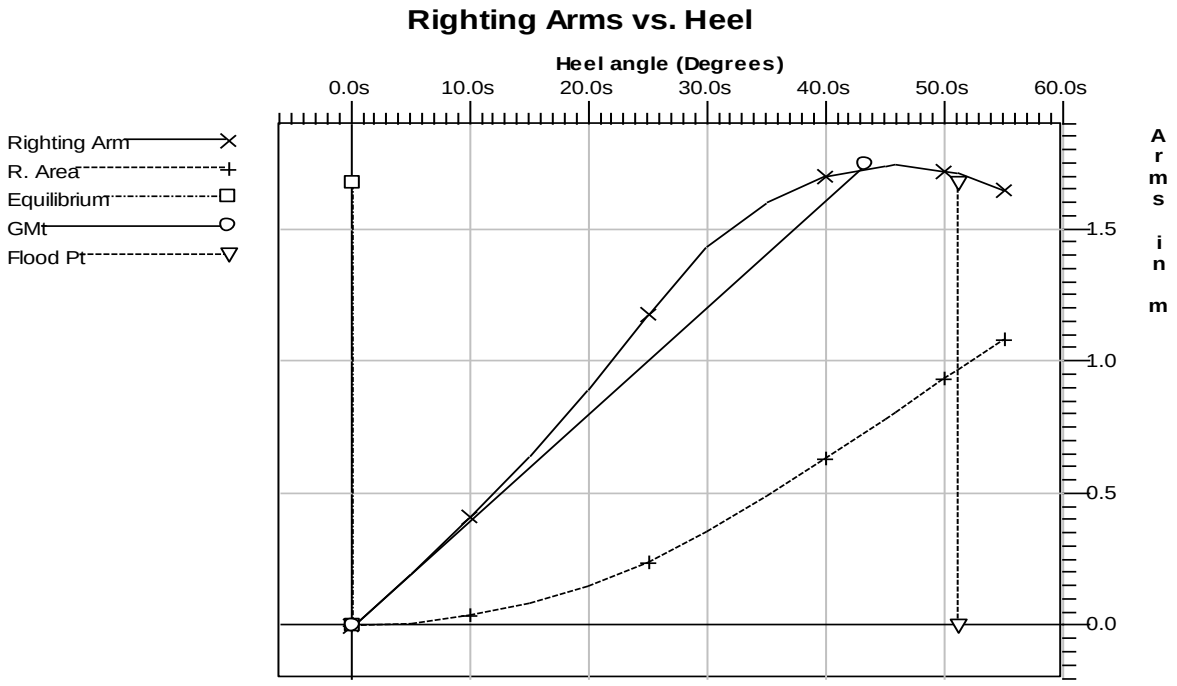
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.91a	5.184	-0.003	0.000	7.029 (1)	
0.08s	0.91a	5.185	0.000	0.000	7.020 (1)	Equil
5.00s	0.90a	5.154	0.202	0.009	6.443 (1)	
10.00s	0.86a	5.067	0.415	0.036	5.822 (1)	
15.00s	0.81a	4.922	0.644	0.082	5.170 (1)	
20.00s	0.74a	4.723	0.897	0.149	4.491 (1)	
25.00s	0.65a	4.472	1.180	0.239	3.791 (1)	
30.00s	0.55a	4.181	1.435	0.353	3.065 (1)	
35.00s	0.40a	3.826	1.604	0.487	2.333 (1)	
40.00s	0.22a	3.395	1.701	0.631	1.618 (1)	
45.00s	0.05a	2.933	1.742	0.782	0.902 (1)	
45.85s	0.02a	2.853	1.743	0.808	0.779 (1)	MaxRa
50.00s	0.10f	2.466	1.722	0.934	0.170 (1)	
51.15s	0.13f	2.359	1.710	0.968	0.000 (1)	FldPt
55.00s	0.22f	1.999	1.652	1.081	-0.573 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	7.029

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.353	0.298	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.631	0.541	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.278	0.248	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	1.743	1.543	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	45.85	20.85	Yes
(6) GM at Equilibrium	>0.150 m	2.308	2.158	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.529/96.590, heel: stbd 0.09 deg., VCG = 4.519

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
4.422	5374.740	47.862f	2.302	48.198f	13.448	82.290	147.883	2.311

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	488.3	2.656	4.836	0.051	120.432
NAVIGATION DECK	17.5	16.059	18.239	0.051	16.244
FUNNEL	42.4	15.110	17.290	0.051	37.428
CAPTAIN DECK	17.5	12.959	15.139	0.051	13.509
LIFE SAVING DECK	24.5	10.391	12.571	0.051	15.714
POOP DECK	46.5	7.989	10.169	0.051	24.113
RAILINGS	24.8	5.369	7.549	0.051	9.547
AFT MAST	2.9	20.342	22.522	0.051	3.317
FORE MAST	4.4	10.804	12.984	0.051	2.887
HOSE CRAIN	11.5	7.927	10.107	0.051	5.928

Total wind heeling moment 249.120 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.65a	4.472	-1.255	0.000	9.285 (1)	Roll
20.00p	0.74a	4.723	-0.973	-0.097	8.937 (1)	
15.00p	0.81a	4.922	-0.720	-0.171	8.534 (1)	
10.00p	0.86a	5.067	-0.491	-0.223	8.079 (1)	
5.00p	0.90a	5.154	-0.278	-0.257	7.576 (1)	
0.00	0.91a	5.184	-0.073	-0.272	7.029 (1)	
1.78s	0.91a	5.181	-0.001	-0.273	6.825 (1)	Equil
5.00s	0.90a	5.155	0.132	-0.270	6.443 (1)	
10.00s	0.86a	5.067	0.345	-0.249	5.822 (1)	
15.00s	0.81a	4.922	0.574	-0.209	5.170 (1)	
20.00s	0.74a	4.723	0.828	-0.148	4.491 (1)	
25.00s	0.65a	4.472	1.110	-0.064	3.791 (1)	
30.00s	0.55a	4.181	1.365	0.045	3.065 (1)	
35.00s	0.40a	3.826	1.535	0.172	2.333 (1)	
40.00s	0.22a	3.395	1.632	0.311	1.618 (1)	
45.00s	0.05a	2.933	1.672	0.455	0.902 (1)	
45.85s	0.02a	2.853	1.674	0.480	0.779 (1)	MaxRa
50.00s	0.10f	2.466	1.653	0.601	0.170 (1)	
51.15s	0.13f	2.359	1.641	0.634	0.000 (1)	FldPt
55.00s	0.22f	1.999	1.582	0.742	-0.573 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 373.68

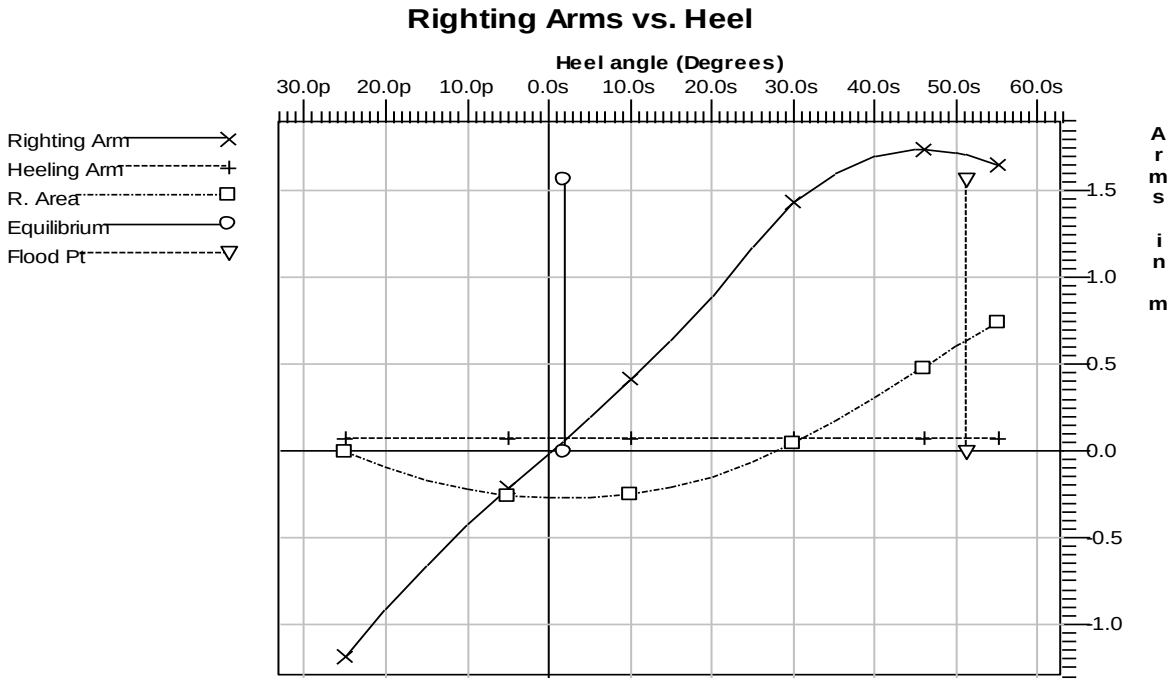
Roll angle is 21.53
Equilibrium for load condition without gust is 1.23s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	9.285

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	3.198	2.198	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	1.78	9.92	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 1.528/96.590, heel: stbd 1.23 deg., VCG = 4.519

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
4.422	5375.208	47.862f	2.303	48.197f	13.450	82.311	147.910	2.340

Water Specific Gravity = 1.025.

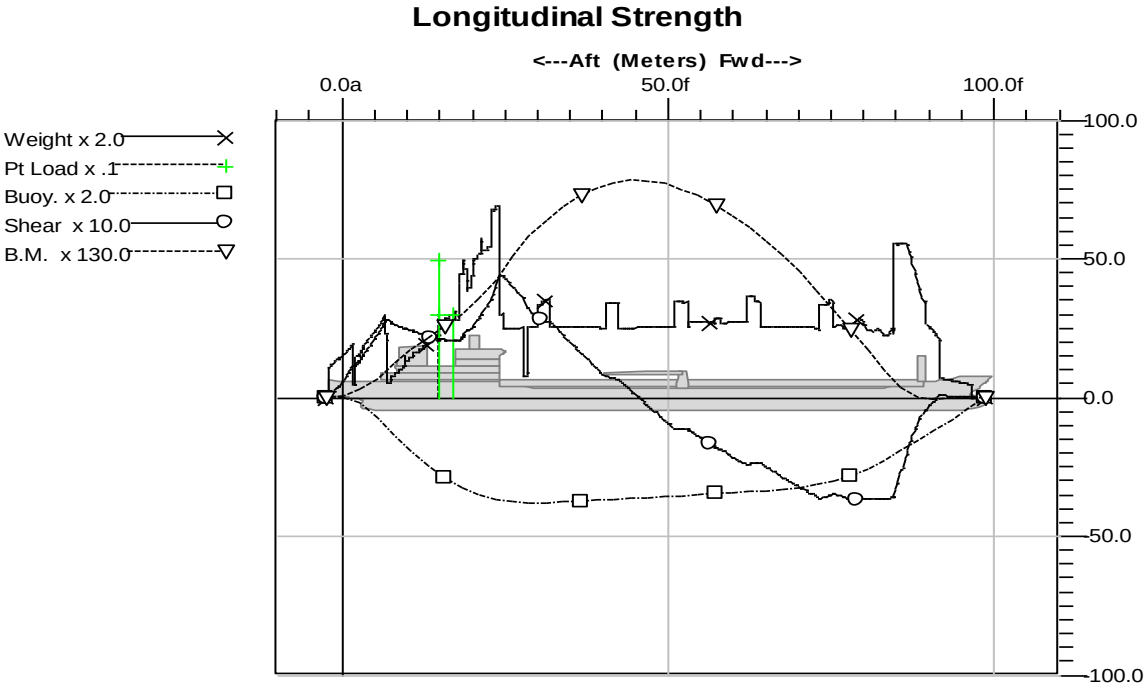
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (stbd 0.09 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	61.95	72
FRAME 1	0.600f	81.25	116
FRAME 2	1.200f	102.28	172
FRAME 3	1.800f	119.61	241
FRAME 4	2.400f	134.74	318
FRAME 5	3.000f	152.72	405
FRAME 6	3.600f	171.84	504
FRAME 7	4.200f	191.96	614
FRAME 8	4.800f	212.94	736
FRAME 9	5.400f	234.76	872
FRAME 10	6.000f	257.43	1020
FRAME 11	6.600f	280.30	1183
FRAME 12	7.300f	272.71	1378
FRAME 13	8.000f	266.15	1568
FRAME 14	8.700f	259.09	1753
FRAME 15	9.400f	252.05	1933
FRAME 16	10.100f	246.52	2109
FRAME 17	10.800f	240.83	2281
FRAME 18	11.500f	235.19	2449
FRAME 19	12.200f	229.35	2613
FRAME 20	12.900f	223.32	2773
FRAME 29	19.200f	244.94	4141
FRAME 36	24.100f	444.49	5736
FRAME 42	28.300f	323.53	7408
FRAME 57	38.800f	109.28	9790
FRAME 60	40.900f	73.94	9977
FRAME 71	48.600f	-66.32	10086
FRAME 76	52.100f	-109.44	9757
FRAME 84	57.700f	-182.84	8964
FRAME 92	63.300f	-233.43	7756
FRAME 108	74.500f	-351.94	4392
FRAME 118	81.500f	-363.43	1892
FRAME 122	84.300f	-357.39	885

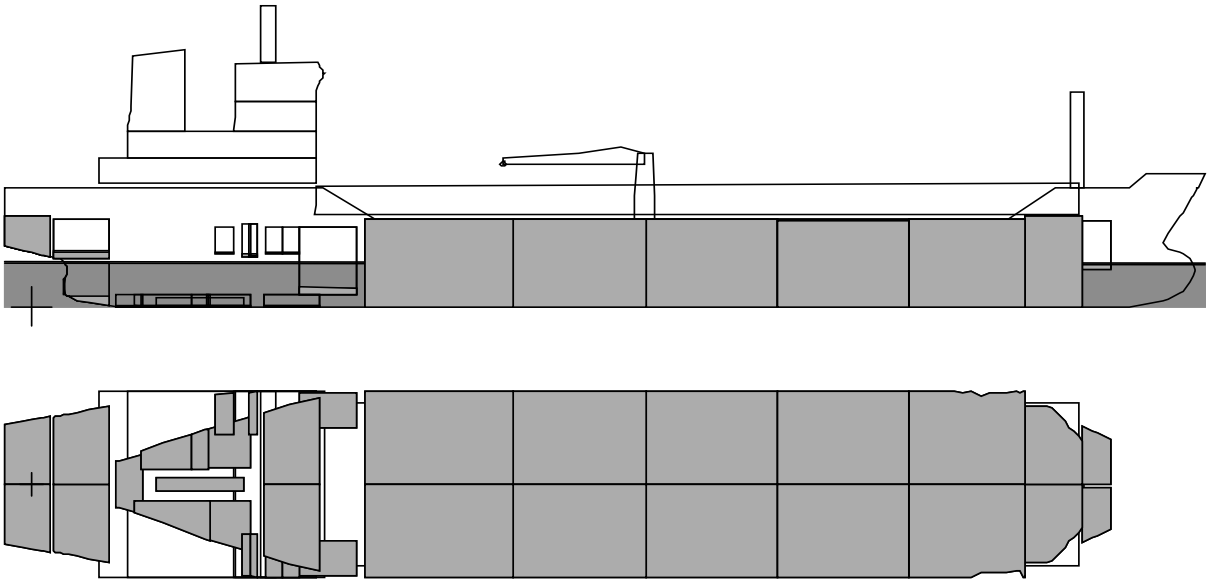
Max. Shear 444.49 MT at 24.100f
Max. Bending Moment 10187 MT-m at 45.208f (Hogging)


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 2.0
Pt Load x .1
Buoy. x 2.0
Shear x 10.0
B.M. x 130.0
100.0
50.0
0.0
-50.0
-100.0

CONDITION 12 : BALLAST ARRIVAL

Floating Status

Draft FP	3.966 m	Heel	port 0.42 deg.	GM(Solid)	2.462 m
Draft MS	4.041 m	Equil	Yes	F/S Corr.	0.038 m
Draft AP	4.116 m	Wind	0.0 kn	GM(Fluid)	2.424 m
Trim	aft 0.149/96.590	Wave	No	KMT	6.988 m
LCG	49.976f m	VCG	4.526 m	TPcm	12.97



Fluid Legend

Fluid Name	Legend	Weight (MT)	Load%
WATER_BALLAST		2,342.07	95.21%
FRESH_WATER		25.61	10.00%
HFO		23.80	10.00%
DIESEL_OIL		6.34	10.00%
LUB_OIL		2.60	10.00%

Loading Summary

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
Light Ship	2,474.92	41.805f	0.031p	5.992
Deadweight	2,411.42	58.363f	0.004p	3.021
Displacement	4,886.34	49.976f	0.018p	4.526

Fixed Weight Status

Item	Weight (MT)	LCG (m)	TCG (m)	VCG (m)
LIGHT SHIP	2,474.92	41.805f	0.031p	5.992u
CREW & EFFECTS	3.00	14.750f	0.000	13.000u
PROVISIONS	3.00	16.750f	0.000	10.000u
STORE	5.00	14.750f	0.000	11.000u
Total Fixed:	**2,485.92**	**41.688f**	**0.031p**	**6.015u**

Tank Status

WATER_BALLAST (SpGr 1.025)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AWBTK.P	100.00%	45.87	0.172a	2.032p	7.055	0.00
AWBTK.S	100.00%	45.87	0.172a	2.032s	7.055	0.00
BWT1.P	100.00%	204.11	86.536f	2.582p	4.407	0.00
BWT1.S	100.00%	204.11	86.536f	2.582s	4.407	0.00
BWT2.P	100.00%	164.80	79.217f	4.941p	2.867	0.00
BWT2.S	100.00%	158.21	79.281f	5.145s	3.030	0.00
BWT3.P	100.00%	189.57	68.884f	5.444p	2.369	0.00
BWT3.S	100.00%	181.48	68.833f	5.667s	2.442	0.00
BWT4.P	100.00%	187.59	57.712f	5.403p	2.332	0.00
BWT4.S	100.00%	180.07	57.711f	5.590s	2.405	0.00
BWT5.P	100.00%	187.59	46.546f	5.438p	2.347	0.00
BWT5.S	100.00%	180.11	46.524f	5.651s	2.388	0.00
BWT6.P	100.00%	210.59	34.570f	5.406p	2.364	0.00
BWT6.S	100.00%	202.10	34.599f	5.593s	2.372	0.00
Subtotals:	**95.21%**	**2,342.07**	**59.375f**	**0.009p**	**2.992**	**0.00**

FRESH_WATER (SpGr 1.000)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
AFWT.P	**10.00%**	**7.54**	**4.732f**	**1.361p**	**4.778**	**15.07**
AFWT.S	**10.00%**	**7.54**	**4.719f**	**1.333s**	**4.778**	**14.45**
FFWT.P	**10.00%**	**4.05**	**90.351f**	**1.918p**	**3.718**	**11.26**
FFWT.S	**10.00%**	**3.77**	**90.350f**	**2.031s**	**3.623**	**8.75**
SHAFTCWT	**10.00%**	**2.71**	**5.466f**	**0.008p**	**0.679**	**3.10**
Subtotals:	**10.00%**	**25.61**	**30.932f**	**0.013p**	**4.007**	**52.62**

HFO (SpGr 0.960)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
BILGETK.C	**10.01%**	**0.85**	**8.376f**	**0.032p**	**0.099**	**3.72**
FODAILYTK.S	**10.00%**	**1.25**	**20.573f**	**5.960s**	**4.929**	**5.25**
FODIRTK.S	**10.00%**	**1.16**	**16.794f**	**2.430s**	**0.093**	**3.98**
FOOVERTK.P	**10.00%**	**1.16**	**16.809f**	**2.481p**	**0.093**	**4.29**
FOSETTTK.S	**10.00%**	**1.26**	**21.986f**	**6.013s**	**4.927**	**5.67**
FOT.P	**10.00%**	**8.54**	**25.228f**	**6.242p**	**1.446**	**8.49**
FOT.S	**10.00%**	**8.54**	**25.226f**	**6.227s**	**1.446**	**8.46**
SLUGETK.P	**10.00%**	**0.36**	**14.349f**	**2.205p**	**0.107**	**0.96**
THERMALODTK.P	**10.01%**	**0.68**	**11.826f**	**1.880p**	**0.138**	**0.90**
Subtotals:	**10.00%**	**23.80**	**22.840f**	**0.534s**	**1.575**	**41.72**

DIESEL_OIL (SpGr 0.850)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
DOSETTTK.S	**10.00%**	**0.54**	**18.851f**	**5.913s**	**4.664**	**1.52**
DOT.P	**10.00%**	**2.36**	**22.179f**	**2.509p**	**0.075**	**43.61**
DOT.S	**10.00%**	**2.36**	**22.150f**	**2.254s**	**0.075**	**39.35**
NO1DODAYTK.S	**10.00%**	**0.53**	**18.152f**	**5.870s**	**4.667**	**1.42**
NO2DODAYTK.P	**10.00%**	**0.54**	**18.751f**	**5.948p**	**4.664**	**1.52**
Subtotals:	**10.00%**	**6.34**	**21.254f**	**0.393s**	**1.243**	**87.42**

LUB_OIL (SpGr 0.910)

Tank Name	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
LODIRTK.S	**10.00%**	**0.98**	**12.964f**	**2.020s**	**0.119**	**1.69**
LOSTORTK.P	**10.00%**	**1.09**	**16.411f**	**5.809p**	**4.939**	**3.09**
LOSUMPTK.C	**10.00%**	**0.53**	**14.214f**	**0.009p**	**0.040**	**0.64**
Subtotals:	**10.00%**	**2.60**	**14.660f**	**1.668p**	**2.119**	**5.42**

All Tanks

	Load (%)	Weight (MT)	LCG (m)	TCG (m)	VCG (m)	FSM (MT-m)
Totals:		2,400.42	58.560f	0.004p	2.984	187.18

Displacer Status

Item	Status	Spgr	Displ (MT)	LCB (m)	TCB (m)	VCB (m)
HULL	Intact	1.025	4,887.11	49.972f	0.036p	2.089
SubTotals:			4,887.11	49.972f	0.036p	2.089

Righting Arms vs Heel Angle

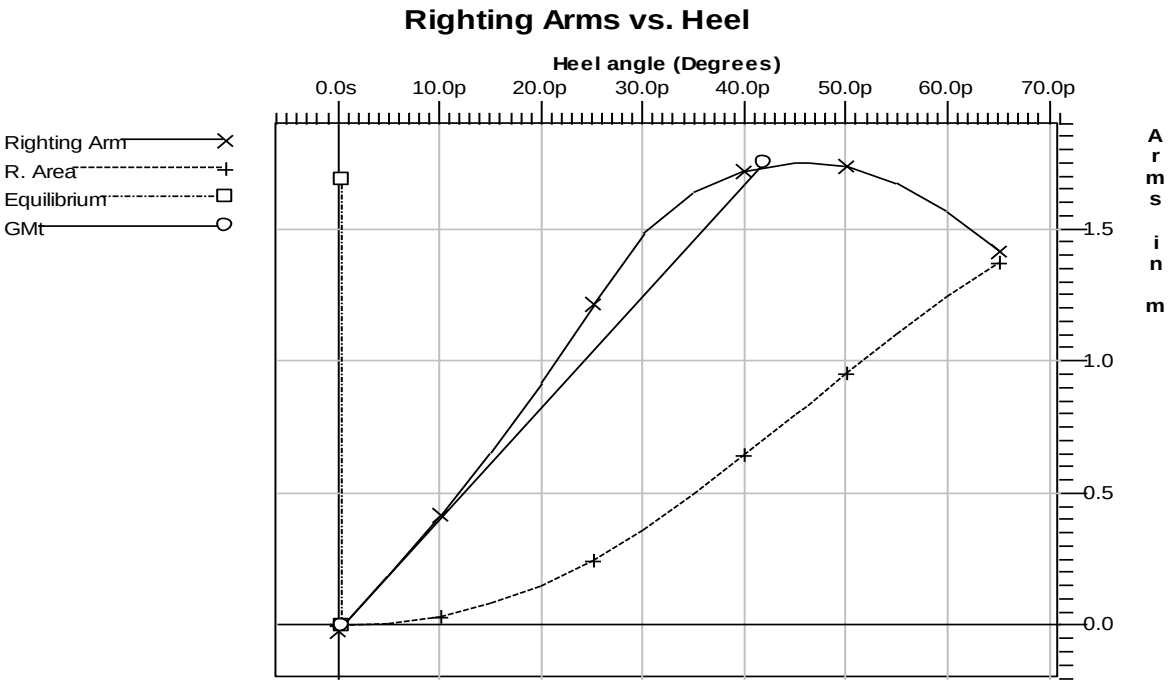
Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Righting Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
0.00	0.09a	4.116	-0.018	0.000	7.815 (1)	
0.41p	0.09a	4.115	0.000	0.000	7.863 (1)	Equil
5.00p	0.08a	4.090	0.195	0.008	8.359 (1)	
10.00p	0.06a	4.018	0.418	0.034	8.851 (1)	
15.00p	0.03a	3.899	0.657	0.081	9.287 (1)	
20.00p	0.02f	3.733	0.923	0.150	9.666 (1)	
25.00p	0.07f	3.518	1.214	0.243	9.988 (1)	
30.00p	0.15f	3.244	1.488	0.361	10.261 (1)	
35.00p	0.26f	2.906	1.645	0.499	10.481 (1)	
40.00p	0.40f	2.502	1.719	0.646	10.653 (1)	
45.00p	0.55f	2.040	1.752	0.798	10.779 (1)	
46.18p	0.59f	1.925	1.754	0.834	10.800 (1)	MaxRa
50.00p	0.71f	1.539	1.737	0.950	10.843 (1)	
55.00p	0.85f	1.023	1.672	1.100	10.829 (1)	
60.00p	0.98f	0.507	1.562	1.241	10.729 (1)	
65.00p	1.10f	-0.011	1.416	1.371	10.548 (1)	

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	7.815

IMO RES A.749

Limit	Min/Max	Actual	Margin	Pass
(1) Area from 0.00 deg to 30.00	>0.0550 m-R	0.361	0.306	Yes
(2) Area from 0.00 deg to 40.00 or Flood	>0.0900 m-R	0.646	0.556	Yes
(3) Area from 30.00 deg to 40.00 or Flood	>0.0300 m-R	0.285	0.255	Yes
(4) Righting Arm at 30.00 deg or MaxRA	>0.200 m	1.754	1.554	Yes
(5) Angle from 0.00 deg to MaxRA	>25.00 deg	46.18	21.18	Yes
(6) GM at Equilibrium	>0.150 m	2.424	2.274	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.149/96.590, heel: port 0.42 deg., VCG = 4.526

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
4.039	4887.111	49.972f	2.089	49.697f	12.969	73.516	145.299	2.424

Water Specific Gravity = 1.025.

Trim is per 96.59m

WEATHER CRITERIA

Heeling Moment Derivation

Part	LPA (m^2)	HCP (m)	Arm (m)	Pressure (MT/m^2)	Moment (m-MT)
OUTER HULL	524.4	2.836	4.830	0.051	129.167
NAVIGATION DECK	17.5	16.434	18.429	0.051	16.412
FUNNEL	42.4	15.485	17.480	0.051	37.838
CAPTAIN DECK	17.5	13.334	15.329	0.051	13.678
LIFE SAVING DECK	24.5	10.766	12.760	0.051	15.951
POOP DECK	46.5	8.364	10.358	0.051	24.563
RAILINGS	24.8	5.744	7.738	0.051	9.787
AFT MAST	2.9	20.717	22.712	0.051	3.345
FORE MAST	4.4	11.179	13.174	0.051	2.929
HOSE CRAIN	11.5	8.302	10.296	0.051	6.040

Total wind heeling moment 259.710 to starboard

Residual Righting Arms vs Heel Angle

Heel Angle (deg)	Trim Angle (deg)	Origin Depth (m)	Residual Arm (m)	Area (m-Rad)	Flood Pt Height (m)	Notes
25.00p	0.07f	3.518	-1.294	0.000	9.988 (1)	Roll
20.00p	0.02f	3.733	-1.003	-0.100	9.666 (1)	
15.00p	0.03a	3.898	-0.737	-0.176	9.288 (1)	
10.00p	0.06a	4.018	-0.497	-0.230	8.851 (1)	
5.00p	0.08a	4.090	-0.275	-0.263	8.360 (1)	
0.00	0.09a	4.115	-0.062	-0.278	7.816 (1)	
1.46s	0.09a	4.113	0.000	-0.279	7.648 (1)	Equil
5.00s	0.08a	4.090	0.151	-0.274	7.226 (1)	
10.00s	0.06a	4.017	0.373	-0.251	6.594 (1)	
15.00s	0.03a	3.899	0.611	-0.208	5.923 (1)	
20.00s	0.02f	3.733	0.876	-0.144	5.220 (1)	
25.00s	0.07f	3.518	1.167	-0.055	4.494 (1)	
30.00s	0.15f	3.244	1.439	0.059	3.761 (1)	
35.00s	0.26f	2.906	1.594	0.192	3.024 (1)	
40.00s	0.40f	2.502	1.666	0.335	2.297 (1)	
45.00s	0.55f	2.040	1.697	0.482	1.587 (1)	
45.96s	0.58f	1.946	1.698	0.511	1.452 (1)	MaxRa
50.00s	0.71f	1.539	1.680	0.630	0.885 (1)	
55.00s	0.85f	1.023	1.612	0.774	0.181 (1)	
56.28s	0.89f	0.890	1.587	0.810	0.000 (1)	FldPt
60.00s	0.98f	0.506	1.500	0.910	-0.527 (1)	

Note:
Residual Righting Arms shown above are in excess of the wind heeling arms derived from this moment (in m-MT):
Stbd heeling moment = 389.56

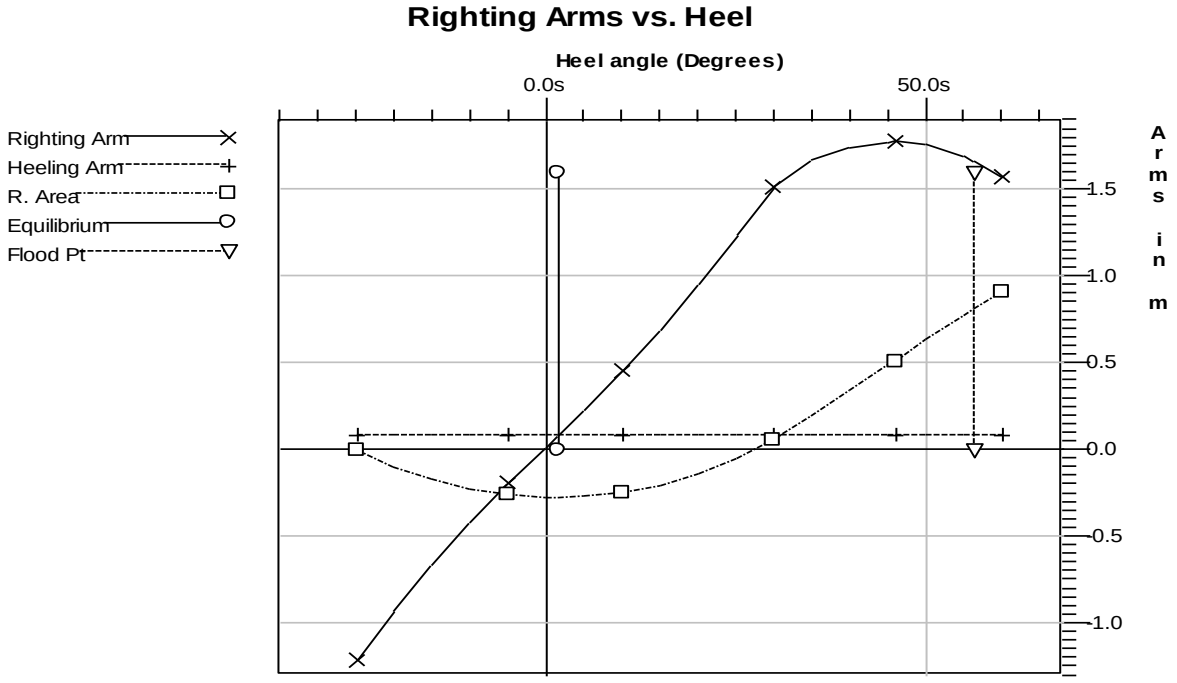
Roll angle is 22.42
Equilibrium for load condition without gust is 0.84s

Unprotected Flood Point

Name	L,T,V (m)	Height (m)
(1) POOP DECK WINDOW	19.900f, 6.500s, 11.900	9.988

IMO RES. MSC.267 (85) PART A 2.3

Limit	Min/Max	Actual	Margin	Pass
(1) Res. Ratio from Roll to Abs 50.00 deg or Flood	>1.000	3.261	2.261	Yes
(2) Absolute Angle at Equilibrium	<11.70 deg	1.46	10.24	Yes



Hydrostatic Properties

Draft is from Baseline.
Trim: aft 0.149/96.590, heel: stbd 0.84 deg., VCG = 4.526

LCF Draft (m)	Displ (MT)	LCB (m)	VCB (m)	LCF (m)	TPcm (MT/cm)	MTcm (MT-m /cm)	GML (m)	GM(Fluid) (m)
4.038	4886.782	49.972f	2.089	49.697f	12.970	73.523	145.322	2.425

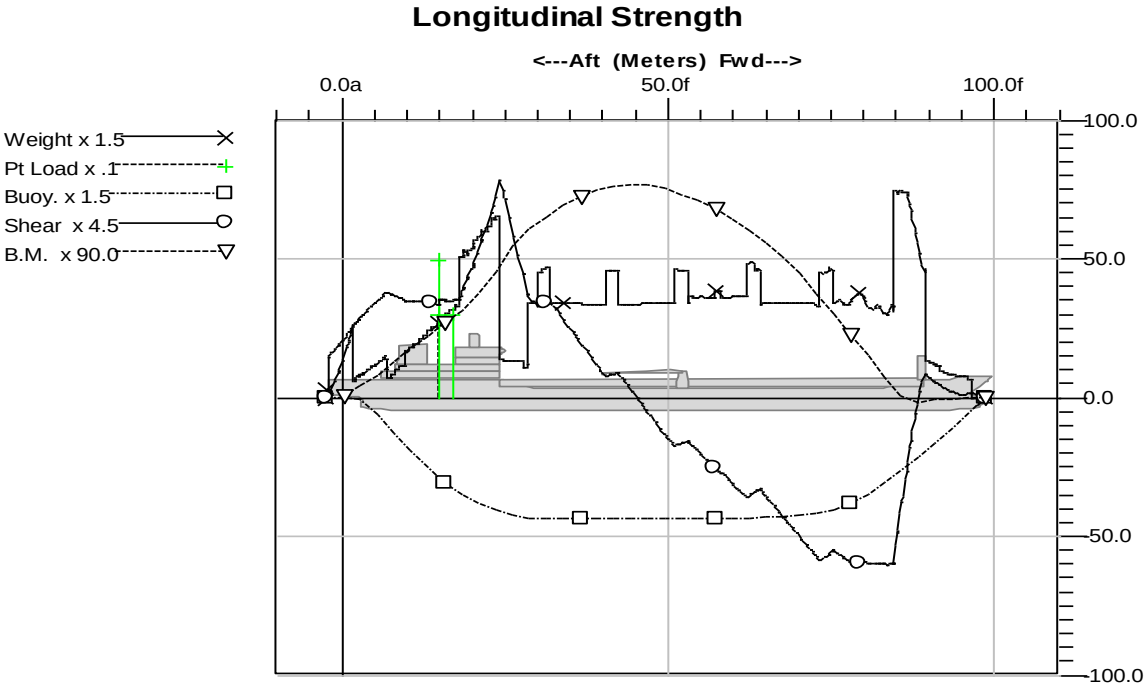
Water Specific Gravity = 1.025.
Trim is per 96.59m

LONGITUDNAL STRENGTH

Longitudinal Strength (port 0.42 deg.)

Frame No.	Location (m)	Shear (MT)	Bending (MT-m)
FRAME 0	0.000	62.01	68
FRAME 1	0.600f	81.51	112
FRAME 2	1.200f	102.98	167
FRAME 3	1.800f	121.00	235
FRAME 4	2.400f	127.84	310
FRAME 5	3.000f	134.98	389
FRAME 6	3.600f	141.64	472
FRAME 7	4.200f	148.20	559
FRAME 8	4.800f	154.55	650
FRAME 9	5.400f	160.69	745
FRAME 10	6.000f	166.65	843
FRAME 11	6.600f	172.22	945
FRAME 12	7.300f	169.07	1065
FRAME 13	8.000f	165.73	1182
FRAME 14	8.700f	162.08	1297
FRAME 15	9.400f	158.16	1410
FRAME 16	10.100f	157.97	1521
FRAME 17	10.800f	157.56	1631
FRAME 18	11.500f	156.96	1742
FRAME 19	12.200f	156.20	1851
FRAME 20	12.900f	155.28	1961
FRAME 29	19.200f	196.45	2984
FRAME 36	24.100f	352.78	4305
FRAME 42	28.300f	168.27	5409
FRAME 57	38.800f	55.69	6700
FRAME 60	40.900f	37.58	6790
FRAME 71	48.600f	-48.31	6824
FRAME 76	52.100f	-71.31	6589
FRAME 84	57.700f	-118.48	6077
FRAME 92	63.300f	-150.17	5277
FRAME 108	74.500f	-252.94	2943
FRAME 118	81.500f	-268.94	1114
FRAME 122	84.300f	-267.01	361

Max. Shear **352.78 MT** **at** **24.100f**
Max. Bending Moment **6906 MT-m** **at** **45.208f** **(Hogging)**


Longitudinal Strength
<---Aft (Meters) Fwd--->
0.0a
50.0f
100.0f
Weight x 1.5
Pt Load x .1
Buoy. x 1.5
Shear x 4.5
B.M. x 90.0
100.0
50.0
0.0
-50.0
-100.0

10 APPENDIX

10.1 FRAME DISTANCE TABLE

TABLE OF DISTANCE OF EVERY FRAME FROM AFT PERPENDICULAR

FR NO	DIST FROM AP	FR NO	DIST FROM AP	FR NO	DIST FROM AP	FR NO	DIST FROM AP
-4	-2.4	38	25.5	80	54.9	122	84.3
-3	-1.8	39	26.2	81	55.6	123	85
-2	-1.2	40	26.9	82	56.3	124	85.7
-1	-0.6	41	27.6	83	57	125	86.4
0	0	42	28.3	84	57.7	126	87.1
1	0.6	43	29	85	58.4	127	87.8
2	1.2	44	29.7	86	59.1	128	88.5
3	1.8	45	30.4	87	59.8	129	89.2
4	2.4	46	31.1	88	60.5	130	89.8
5	3	47	31.8	89	61.2	131	90.4
6	3.6	48	32.5	90	61.9	132	91
7	4.2	49	33.2	91	62.6	133	91.6
8	4.8	50	33.9	92	63.3	134	92.2
9	5.4	51	34.6	93	64	135	92.8
10	6	52	35.3	94	64.7	136	93.4
11	6.6	53	36	95	65.4	137	94
12	7.3	54	36.7	96	66.1	138	94.6
13	8	55	37.4	97	66.8	139	95.2
14	8.7	56	38.1	98	67.5	140	95.8
15	9.4	57	38.8	99	68.2		
16	10.1	58	39.5	100	68.9		
17	10.8	59	40.2	101	69.6		
18	11.5	60	40.9	102	70.3		
19	12.2	61	41.6	103	71		
20	12.9	62	42.3	104	71.7		
21	13.6	63	43	105	72.4		
22	14.3	64	43.7	106	73.1		
23	15	65	44.4	107	73.8		
24	15.7	66	45.1	108	74.5		
25	16.4	67	45.8	109	75.2		
26	17.1	68	46.5	110	75.9		
27	17.8	69	47.2	111	76.6		
28	18.5	70	47.9	112	77.3		
29	19.2	71	48.6	113	78		
30	19.9	72	49.3	114	78.7		
31	20.6	73	50	115	79.4		
32	21.3	74	50.7	116	80.1		
33	22	75	51.4	117	80.8		
34	22.7	76	52.1	118	81.5		
35	23.4	77	52.8	119	82.2		
36	24.1	78	53.5	120	82.9		
37	24.8	79	54.2	121	83.6		

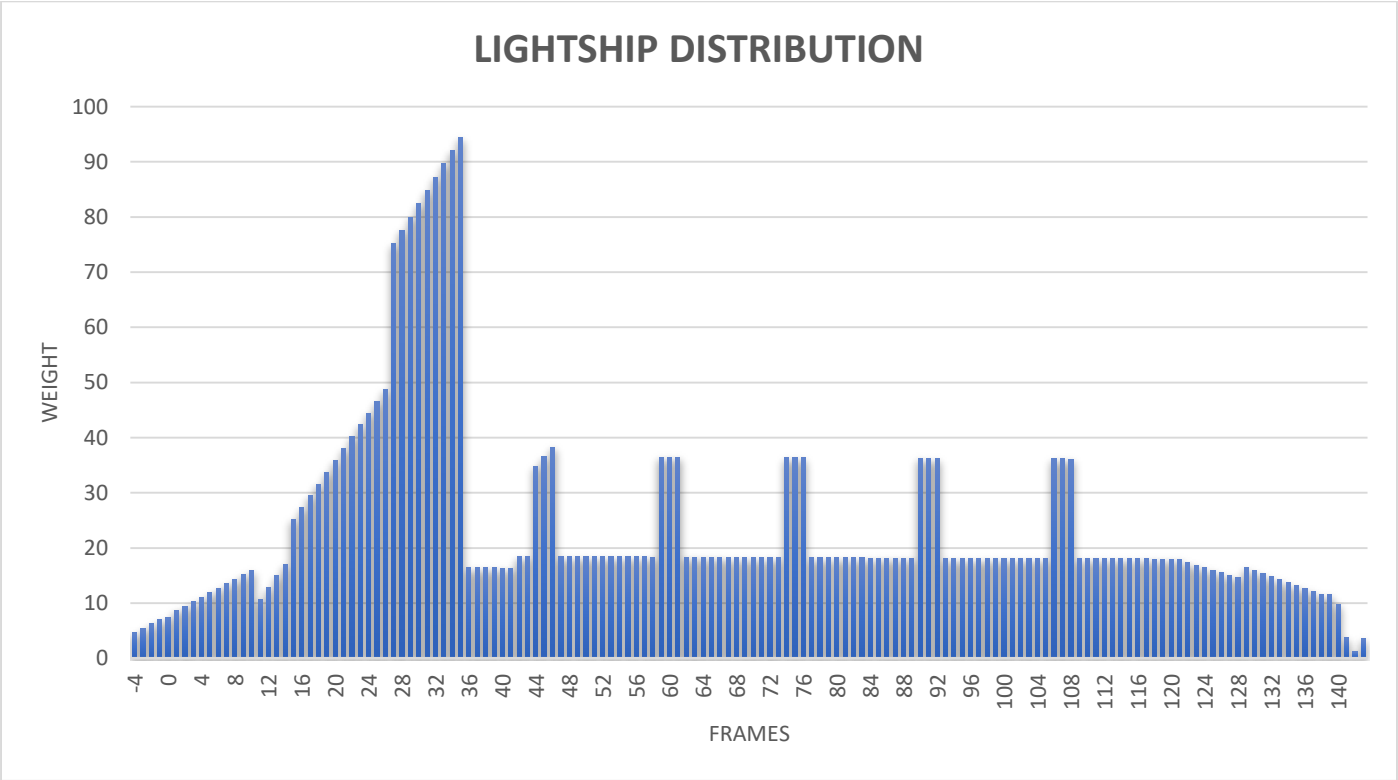
10.2 LIGHTSHIP DISTRIBUTION

AFT END FR	FORE END FR	AFTWEIGHT t/m	FOREWEIGHT t/m
-4	-3	4.59	4.59
-3	-2	5.398	5.398
-2	-1	6.205	6.205
-1	0	7.013	7.013
0	1	7.403	7.403
1	2	8.712	8.712
2	3	9.435	9.435
3	4	10.243	10.243
4	5	11.05	11.05
5	6	11.858	11.858
6	7	12.665	12.665
7	8	13.473	13.473
8	9	14.28	14.28
9	10	15.088	15.088
10	11	15.895	15.895
11	12	10.761	10.761
12	13	12.834	12.834
13	14	14.907	14.907
14	15	16.98	16.98
15	16	25.194	25.194
16	17	27.333	27.333
17	18	29.471	29.471
18	19	31.61	31.61
19	20	33.749	33.749
20	21	35.887	35.887
21	22	38.026	38.026
22	23	40.164	40.164
23	24	42.303	42.303
24	25	44.441	44.441
25	26	46.58	46.58
26	27	48.72	48.72
27	28	75.18	75.18
28	29	77.587	77.587
29	30	79.994	79.994
30	31	82.401	82.401
31	32	84.81	84.81
32	33	87.217	87.217
33	34	89.624	89.624
34	35	92.031	92.031
35	36	94.44	94.44
36	37	16.409	16.409
37	38	16.393	16.393
38	39	16.377	16.377
39	40	16.361	16.361
40	41	16.346	16.346
41	42	16.33	16.33
42	43	18.494	18.494

43	44	18.487	18.487
44	45	34.853	34.853
45	46	36.569	36.569
46	47	38.286	38.286
47	48	18.46	18.46
48	49	18.453	18.453
49	50	18.446	18.446
50	51	18.44	18.44
51	52	18.433	18.433
52	53	18.426	18.426
53	54	18.419	18.419
54	55	18.411	18.411
55	56	18.406	18.406
56	57	18.399	18.399
57	58	18.391	18.391
58	59	18.384	18.384
59	60	36.473	36.473
60	61	36.466	36.466
61	62	36.46	36.46
62	63	18.357	18.357
63	64	18.35	18.35
64	65	18.344	18.344
65	66	18.337	18.337
66	67	18.33	18.33
67	68	18.323	18.323
68	69	18.317	18.317
69	70	18.31	18.31
70	71	18.303	18.303
71	72	18.296	18.296
72	73	18.29	18.29
73	74	18.283	18.283
74	75	36.371	36.371
75	76	36.364	36.364
76	77	36.357	36.357
77	78	18.256	18.256
78	79	18.249	18.249
79	80	18.241	18.241
80	81	18.234	18.234
81	82	18.229	18.229
82	83	18.221	18.221
83	84	18.214	18.214
84	85	18.207	18.207
85	86	18.201	18.201
86	87	18.194	18.194
87	88	18.187	18.187
88	89	18.18	18.18
89	90	18.173	18.173
90	91	36.261	36.261
91	92	36.256	36.256

92	93	36.249	36.249
93	94	18.146	18.146
94	95	18.14	18.14
95	96	18.133	18.133
96	97	18.126	18.126
97	98	18.119	18.119
98	99	18.113	18.113
99	100	18.106	18.106
100	101	18.099	18.099
101	102	18.091	18.091
102	103	18.084	18.084
103	104	18.079	18.079
104	105	18.071	18.071
105	106	18.064	18.064
106	107	36.153	36.153
107	108	36.146	36.146
108	109	36.139	36.139
109	110	18.037	18.037
110	111	18.03	18.03
111	112	18.024	18.024
112	113	18.017	18.017
113	114	18.01	18.01
114	115	18.003	18.003
115	116	17.996	17.996
116	117	17.99	17.99
117	118	17.983	17.983
118	119	17.976	17.976
119	120	17.969	17.969
120	121	17.963	17.963
121	122	17.956	17.956
122	123	17.344	17.344
123	124	16.88	16.88
124	125	16.417	16.417
125	126	15.954	15.954
126	127	15.491	15.491
127	128	15.029	15.029
128	129	14.566	14.566
129	130	16.453	16.453
130	131	15.913	15.913
131	132	15.372	15.372
132	133	14.832	14.832
133	134	14.292	14.292
134	135	13.752	13.752
135	136	13.212	13.212
136	137	12.672	12.672
137	138	12.132	12.132
138	139	11.59	11.59
139	140	11.538	11.538
140	141	9.798	9.798

77+200 mm	91+400 mm	3.754	3.754
30+100 mm	34+300 mm	1.281	1.281
83+30 mm	84+330mm	3.536	3.536



10.3 METRIC CONVERSION TABLE

10.3.1 Length

Meter (m)	Foot (ft)	Inch (in)
1	3.2808	39.37
0.3048	1	12
0.0254	0.0833	1

10.3.2 AREA

Sq. Meter	Sq. Foot	Sq. Inch
(m^2)	(ft^2)	(in^2)
1	10.764	1550
0.0929	1	144
0.000645	0.006944	1

10.3.3 VOLUME

Cab. Meter	Cub. Foot	Imperial Gallen	US Gallen	Barrel
(m)	(N)			(bbl)
1	35.315	219.98	264.18	6.208
0.028317	1	6.229	7.4806	0.17811
0.004546	0.16054	1	1.2009	0.028593
0.0037853	0.13368	0.83269	1	0.02381
0.15898	5.6146	34.973	42	1

10.3.4 Weight

Metric ton (mt)	Kİlİgram (kg)	Long ton (L.T.)	Shofl ton (S.T.)	Pound (lb)
1	1000	0.98421	1.1023	2204.6
0.001	1	0.00098421	0.0011023	2.2046
1.016064	1016.064	1	1.12	22400
0.90719	907.19	0.89286	1	2000
0.0004536	0.4536	0.00044643	0.0005	1

10.3.5 Force

Kilogram	Metric ton	Newton	Kilonewton
kg	t	N	(KN)
1	0.001	9.80665	980665
1000	1	9806.65	9.80665
0.1019716	0.00010972	1	0.001
101.9716	0.1019716	1000	1

10.3.6 Power

kilogwatt (kw)	kg.m/second (kg.m/s)	(PS)	horsepower (hp)
1	101.9716	1.3596	1.341
0.0098	1	0.0133	0.0132
0.7355	75	1	0.9863
0.7457	76.0402	1.0139	1

10.3.7 speed

meter/sccond (m/s)	kilometer/hour (km/h)	nmile/hour (knot)	feet/second (hp)
1	3.6	1.943	3.281
0.2778	1	0.5396	0.9113
0.5144	1.852	1	1.689
0.3048	1.097	0.5921	1

Relation between units of weight and volume

10 mm = 1 cubic centimetre

1 cubic centimetre of fresh water (S.G. 1.0) = 1 gramme

1000 cubic centimetre of fresh water (S.G. 1.0) = 1 kilogramme(1000 grammes)

1 cubic metre of fresh water (S.G. 1.0) = 1 Tonne

1 cubic metre of salt water (S.G. 1.025) = 1.025 Tonne

1 Tonne of salt water (S.G. 1.025) = 0.975 Cubic Meters

1 cubic metre = 35.315 cubic feet

1 cubic foot = 0.0283 cubic metres

EXPLANATION OF ABBREVIATION USED

(+) : sign shows forward from midship.

(-) : sign shows aftward from midship.

T : Draught above baseline. (m)

do : Corresponding draught above baseline. (m)

dF : Draught above baseline at "FP" (m)

dA : Draught above baseline at "AP" (m)

dm : Draught mean above baseline (m)

t : Trim (m) 1>0, shows trim by stern, tO, shows trim by stem.

v : Volume displacement moulded (m')

D : Displacement including shell-plating (t)

S.G. (y) : Specific gravity (U/m')

T.P.C. : Tones per cm immersion (t)

M.T.C. : Moment to change trim per cm (t-m)

D.T.C. : Displacement to change trim per cm by stern (t)

Cь : Block coefficient

L.C.B. : Center of buoyancy from midship (m),

"-" shows aft from midship, "+" shows forward from midship.

L.C.F. : Center of floatation from midship (m)

KB : Center of buoyancy above baseline (m)

KM : Transverse metacentric weight above baseline (m)

Aw : Water plane area (m?)

As : Wetted surface area (m?)

V.C.G. : Center of gravity above baseline (m)

L.C.G. : Center of gravity from midship (m)

KG : Center of gravity of the whole ship above baseline (m)

KGo : Center of gravity of whole ship above baseline with free surface correction (m)

GM : Initial transverse metacentric height without free surface correction

GoG : Free surface correction due to liquid in tank (m)

GoM : Initial transverse metacentric height with free surface correction (m)

GZ : Righting lever (m)

Θ	:	Heeling angle (degree)
Θ	:	Flooding angle (degree)
Ix	:	Transverse moment of inertia of free surface (m')
TETe	:	The less angle of 40 degree or flooding angle.
TETm	:	The angle corresponding to max, value of GZ curve.
LWI	:	The heeling moment lever caused by steady wind.
TETo	:	The heeling angle heel caused by steady wind.
TETI	:	The rolling angle due to wave action.
TET2	:	The heeling angle to be taken of whichever the least, down flooding Angle, 0° or TETc.
TETc	:	Heeling angle at second intersection point between 1.5Lw lever and stability curve

11 LIGHTSHIP REPORT

LIGHT SHIP UPDATION REPORT

BITUMEN PRINCESS 2

IMO NO: 9440289

1	Corrected class comments	04-10-2023	MRP	NBL
0	Submitted for Review	04-09-2023	MRP	NBL
Rev.	**Description**	**Date**	**Prepared**	**Review**
Issued for Review				

	Document Title: LIGHT SHIP UPDATION REPORT
	Vessel Name: BITUMEN PRINCESS 2
Project Number: N1188	**Date:** 04/10/2023

1.1 GENERAL PARTICULARS

Name of ship	:	BITUMEN PRINCESS 2
IMO NO.	:	9440289
Port of registry	:	MALAAHAL HARBOR
Year of manufacture	:	2008
Official No.	:	P046077
Type	:	OIL TANKER
Classification Society	:	POLISH REGISTER OF SHIPPING (PRS)
Call Sign	:	TBA3465

1.2 PRINCIPAL DIMENSIONS

Length O.A	:	101.90 m
Length B.P	:	96.59 m
Breadth (MLD)	:	16.00 m
Depth (MLD)	:	8.00 m
Design Draft (MLD)	:	5.912 m
Draft, Freeboard	:	2.088 m
Net Tonnage	:	1419 t
Gross Tonnage	:	3757 t

1.3 SPEED

Service speed at design draft at C.S.R of main engine	:	11.50 Knots
With 10% sea margin		
Cruising range	:	3500 n.miles

1.4 COMPLEMENT

Complement	**:**	**18**

1.5 MAIN ENGINE

Type	**:**	**DIESEL**
M. C.R	**:**	**2060KWxWx525 rpm**

Light Ship Updation							
Item	**Weight (t)**	**LCG (m)**	**VCG (m)**	**TCG (m)**	**Moment (LCG)**	**Moment (VCG)**	**Moment (TCG)**
Light Ship	2430.000	41.600	6.020	0.000	101088.000	14628.600	0.000
Added Weight	44.920	52.911	4.497	-1.690	2376.780	201.990	-75.933
Removed Weight	0.000	0.000	0.000	0.000	0.000	0.000	0.000
∑	2474.920				103464.780	14830.590	-75.933

	Weight (t)	**LCG (m)**	**VCG (m)**	**TCG (m)**
New Lightship	2474.920	41.805	5.992	-0.031

Reference

LCG *:- Measured from AP(Fr.0)*

VCG *:- Measured from base line*

TCG *:- Measured from Ship centre line (port -ve & stbd +ve)*

Where,

New added weights to go onboard							
Item	**Weight (t)**	**LCG (m)**	**VCG (m)**	**TCG (m)**	**Moment (LCG)**	**Moment (VCG)**	**Moment (TCG)**
BWTS							
Electrical Cabinet	0.246	20.600	5.000	-4.050	5.068	1.230	-0.996
UV Reactor	0.112	21.300	5.100	-5.300	2.386	0.571	-0.594
FIlter	0.227	22.700	5.200	-5.250	5.153	1.180	-1.192
Back Flush Pump	0.137	20.800	4.950	-5.470	2.850	0.678	-0.749
Pipe & Fittings Including Pipe Support	2.718	21.500	5.300	-5.190	58.437	14.405	-14.106
Electrical Cabinet Foundation	0.083	20.400	4.910	-4.020	1.693	0.408	-0.334
UV Reactor Foundation	0.061	21.600	4.900	-5.280	1.318	0.299	-0.322
Filter Foundation	0.009	22.300	4.930	-5.270	0.201	0.044	-0.047
Back Flush Pump Foundation	0.019	20.650	4.920	-5.410	0.392	0.093	-0.103
Platform	0.232	21.480	4.910	-5.250	4.983	1.139	-1.218

PLATE RENEWAL							
Doubler Plate added on longi. bulkhead	27.521	55.620	4.371	-1.521	1530.718	120.294	-41.859
Additional Stiffeners added on longi bulkheads	10.419	56.576	4.594	-0.902	589.465	47.865	-9.398
Additional vertical flat bars added on longi bulkheads	3.136	55.522	4.395	-1.599	174.117	13.783	-5.014

TOTAL	44.920				2376.780	201.990	-75.933

	Weight (t)	LCG (m)	VCG (m)	TCG (m)
Total added weight	44.920	52.911	4.497	-1.690

Conclusion:

Net Addition of Light Ship Wt.	44.920	t
% Change in Light Ship	1.849	%
% Change in LCG	0.196	%
% Change in VCG	-0.459	%