7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER

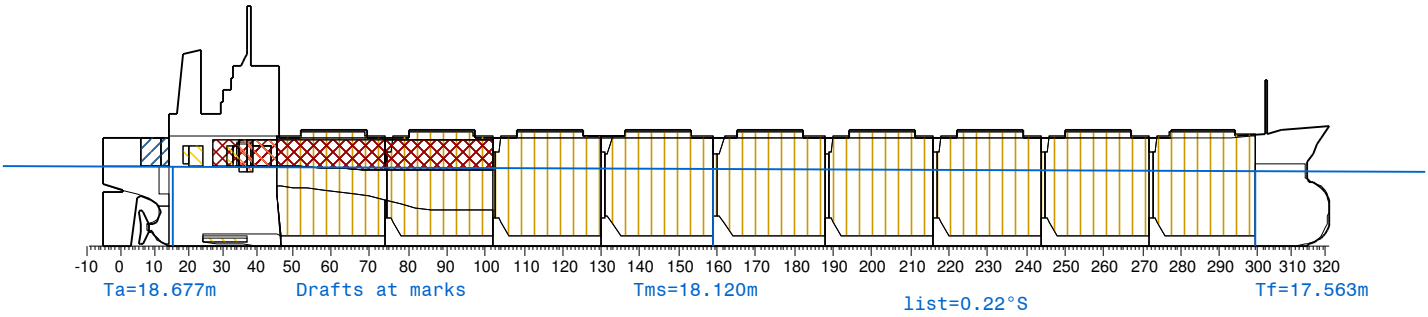
C O N D I T I O N A S S E S S M E N T S U M M A R Y

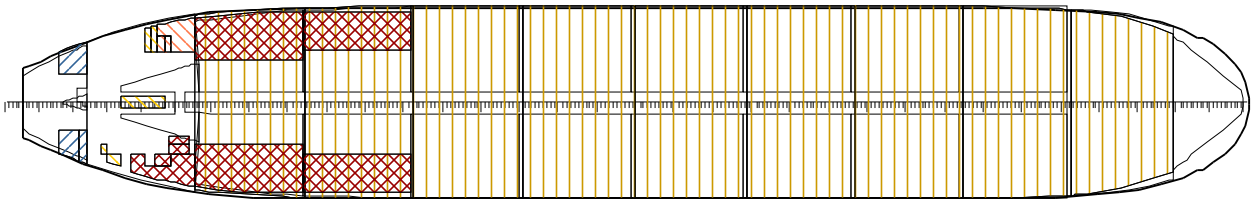
No.	Description	Actual	Value	Reg.	Limit	Comment	Judge
	Ship Limitation Criteria						
1	Deadweight	174124.0	MT	max	174124.0		PASS
2	Mean Draft (extreme)	18.100	m	max	18.120		PASS
3	Propeller Immersion	223.6	%	min	100.0		PASS
4	Ahead Visibility	222.9	m	max	500.0		PASS
5	min Draft fwd	17.490	m	min	7.100		PASS
6	max Draft - Seabed Restr.	18.710	m	max	30.000		PASS
	Long. Strength Criteria						
7	Shear Force Percentage	50.8	%	max	100.0		PASS
8	Bending Moment Percentage	51.9	%	max	100.0		PASS
	General Stability Criteria						
9	Flooding Angle	56.33	deg	min	30.00		PASS
10	GZ AREA (0.22-30.00)	0.630	m rad	min	0.055		PASS
11	GZ AREA (0.22-40.00)	0.997	m rad	min	0.090		PASS
12	GZ AREA (30.00-40.00)	0.366	m rad	min	0.030		PASS
13	GZ at 30 deg	2.069	m	min	0.200		PASS
14	GZmax	2.108	m	min	0.200		PASS
15	Angle of GZmax	35.900	deg	min	25.000		PASS
16	GMcor	4.685	m	min	0.150		PASS
	Severe Wind Criteria						
17	Heel Under Steady Wind	0.43	m	max	12.18		PASS
18	Wind Restoring Energy	1.325	m rad	min	0.306		PASS
	Hold Limitation Criteria						
19	No.1 HOLD Cargo Mass	15722.7	MT	max	29300.0		PASS
20	No.2 HOLD Cargo Mass	19155.8	MT	max	19900.0		PASS
21	No.3 HOLD Cargo Mass	19262.5	MT	max	37250.0		PASS
22	No.4 HOLD Cargo Mass	19262.5	MT	max	19750.0		PASS
23	No.5 HOLD Cargo Mass	19769.3	MT	max	38200.0		PASS
24	No.6 HOLD Cargo Mass	19780.4	MT	max	23258.0		PASS
25	No.7 HOLD Cargo Mass	19273.6	MT	max	37300.0		PASS
26	No.8 HOLD Cargo Mass	19151.2	MT	max	21500.0		PASS
27	No.9 HOLD Cargo Mass	16937.3	MT	max	30100.0		PASS
	Single Hold Local Strength						
28	No.1 HOLD max Mass	15722.7	MT	max	29300.0		PASS
29	No.1 HOLD min Mass	15722.7	MT	min	1800.6		PASS
30	No.2 HOLD max Mass	19155.8	MT	max	19900.0		PASS
31	No.2 HOLD min Mass	19155.8	MT	min	0.0		PASS
32	No.3 HOLD max Mass	19262.5	MT	max	37250.0		PASS
33	No.3 HOLD min Mass	19262.5	MT	min	768.6		PASS
34	No.4 HOLD max Mass	19262.5	MT	max	19750.0		PASS
35	No.4 HOLD min Mass	19262.5	MT	min	0.0		PASS
36	No.5 HOLD max Mass	19769.3	MT	max	38200.0		PASS
37	No.5 HOLD min Mass	19769.3	MT	min	0.0		PASS
38	No.6 HOLD max Mass	19780.4	MT	max	23258.0		PASS
39	No.6 HOLD min Mass	19780.4	MT	min	0.0		PASS
40	No.7 HOLD max Mass	19273.6	MT	max	37300.0		PASS
41	No.7 HOLD min Mass	19273.6	MT	min	0.0		PASS
42	No.8 HOLD max Mass	19151.2	MT	max	21500.0		PASS
43	No.8 HOLD min Mass	19151.2	MT	min	0.0		PASS
44	No.9 HOLD max Mass	16937.3	MT	max	30100.0		PASS
45	No.9 HOLD min Mass	16937.3	MT	min	4709.0		PASS
	Adjacent Holds Local Strength						
46	No.1&2 HOLDS max Mass	34878.5	MT	max	39353.0		PASS
47	No.1&2 HOLDS min Mass	34878.5	MT	min	1833.6		PASS
48	No.2&3 HOLDS max Mass	38418.3	MT	max	43485.0		PASS
49	No.2&3 HOLDS min Mass	38418.3	MT	min	724.7		PASS
50	No.3&4 HOLDS max Mass	38525.0	MT	max	43616.0		PASS
51	No.3&4 HOLDS min Mass	38525.0	MT	min	812.4		PASS
52	No.4&5 HOLDS max Mass	39031.8	MT	max	44191.0		PASS
53	No.4&5 HOLDS min Mass	39031.8	MT	min	0.0		PASS
54	No.5&6 HOLDS max Mass	39549.7	MT	max	44782.0		PASS
55	No.5&6 HOLDS min Mass	39549.7	MT	min	0.0		PASS
56	No.6&7 HOLDS max Mass	39054.1	MT	max	44237.0		PASS
57	No.6&7 HOLDS min Mass	39054.1	MT	min	0.0		PASS
58	No.7&8 HOLDS max Mass	38424.9	MT	max	43451.0		PASS
59	No.7&8 HOLDS min Mass	38424.9	MT	min	0.0		PASS
60	No.8&9 HOLDS max Mass	36088.6	MT	max	40840.0		PASS
61	No.8&9 HOLDS min Mass	36088.6	MT	min	4709.0		PASS
	Long. Strength for Flooded Holds						
62	No.1 HOLD Flooded S.F.	36.6	%	max	100.0		PASS
63	No.1 HOLD Flooded B.M.	32.9	%	max	100.0		PASS
64	No.2 HOLD Flooded S.F.	37.5	%	max	100.0		PASS
65	No.2 HOLD Flooded B.M.	44.6	%	max	100.0		PASS
66	No.3 HOLD Flooded S.F.	40.3	%	max	100.0		PASS
67	No.3 HOLD Flooded B.M.	45.1	%	max	100.0		PASS
68	No.4 HOLD Flooded S.F.	43.0	%	max	100.0		PASS
69	No.4 HOLD Flooded B.M.	48.3	%	max	100.0		PASS
70	No.5 HOLD Flooded S.F.	45.9	%	max	100.0		PASS
71	No.5 HOLD Flooded B.M.	52.2	%	max	100.0		PASS
72	No.6 HOLD Flooded S.F.	48.9	%	max	100.0		PASS
73	No.6 HOLD Flooded B.M.	55.0	%	max	100.0		PASS
74	No.7 HOLD Flooded S.F.	51.7	%	max	100.0		PASS
75	No.7 HOLD Flooded B.M.	57.6	%	max	100.0		PASS
76	No.8 HOLD Flooded S.F.	51.7	%	max	100.0		PASS
77	No.8 HOLD Flooded B.M.	57.6	%	max	100.0		PASS
78	No.9 HOLD Flooded S.F.	51.7	%	max	100.0		PASS
79	No.9 HOLD Flooded B.M.	57.6	%	max	100.0		PASS

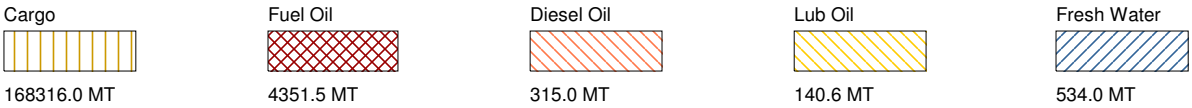
Longitudinal Strength and Local Strength Assessment is based on the SEAGOING LIMITS

GENERAL STATEMENT: Condition FULFILLS all the above assessed criteria

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER







S U M M A R Y T A B L E

DESCRIPTION	WEIGHT MT	LCG m+fwdMS	L.MOMENT MT m	TCG m+stbCL	T.MOMENT MT m	VCG m abvBL	V.MOMENT MT m	F.SURFACE MT m
Cargo	168315.00	12.661	2.13107E+06	0.000	0.0	13.692	2.30452E+06	0.00
Fuel	4351.45	-81.734	-355660.0	2.087	9079.7	22.350	97253.4	7402.27
Diesel	315.02	-106.927	-33684.4	-15.445	-4865.4	21.742	6849.1	289.09
Lub. Oil	140.57	-116.401	-16363.0	-3.834	-539.0	18.014	2532.3	74.43
Fr. Water	534.05	-131.293	-70117.0	0.000	0.2	21.994	11746.0	0.00
Constants	467.02	-58.161	-27162.3	0.000	0.0	8.996	4201.3	84.00
Light Ship	23728.10	-8.188	-194275.0	0.000	0.0	13.746	326167.0	0.00
Displacement	197852.00	7.247	1.43388E+06	0.019	3685.3	13.916	2.75327E+06	7849.79
DeadWeight	174124.00	9.350	1.62809E+06	0.021	3675.5	13.939	2.42711E+06	7849.79

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.640	m
DRAFT CORRESPONDING	Tcf	18.121	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	17.510	m	METACENTRIC HEIGHT	GM	4.724	m
DRAFT A.P.	Tap	18.730	m	FREE SURFACE MOMENT	FSM	7849.79	MT m
DRAFT MEAN	Tms	18.120	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	1.219	m by STERN	METACENTRIC HEIGHT CORR.	GMc	4.685	m
LONG. CENTER BUOYANCY	LCB	7.228	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.956	m
LONG. CENTER FLOTATION	LCF	-0.143	m +fwdMS	PROPELLER IMMERSION	P.I	223.6	%
MOMENT TO CHANGE TRIM	MCT	2441.65	MT m / cm	AHEAD VISIBILITY	A.V	222.9	m
TONS PER CENTIMETRE	TPC	119.23	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER

No	Cargo	FILL %	DESCRIPTION	WEIGHT MT	LCG m +fwdMS	TCG m +stbCL	VCG m abvBL	MOMENT MT m
1	NO.1 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	15722.70	114.951	0.000	14.192	0.00
2	NO.2 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	19155.80	90.765	0.000	13.558	0.00
3	NO.3 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	19262.50	65.332	0.000	13.533	0.00
4	NO.4 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	19262.50	39.852	0.000	13.533	0.00
5	NO.5 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	19769.30	14.022	0.000	13.552	0.00
6	NO.6 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	19780.40	-12.359	0.000	13.555	0.00
7	NO.7 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	19273.60	-38.399	0.000	13.536	0.00
8	NO.8 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	19151.20	-63.834	0.000	13.569	0.00
9	NO.9 CARGO HOLD	100.0	41.1963 ft3/LT Cargo	16937.30	-89.223	0.000	14.378	0.00
	Cargo Total			168315.00	12.661	0.000	13.692	0.00

SINGLE HOLD LOCAL STRENGTH CRITERIA - SEAGOING LIMITS

Hold No.	Position m+fwdMS	Draft m abv BL	DB corr. m	Draft used m	Minimum Req. MT	Cargo Mass MT	Maximum Per. MT	STATUS
1	115.135	17.597	0.000	17.597	1800.6	15722.70	29300.0	PASS
2	90.110	17.706	0.000	17.706	0.0	19155.80	19900.0	PASS
3	64.630	17.818	0.000	17.818	768.6	19262.50	37250.0	PASS
4	39.150	17.929	0.000	17.929	0.0	19262.50	19750.0	PASS
5	13.215	18.042	0.000	18.042	0.0	19769.30	38200.0	PASS
6	-13.175	18.158	0.000	18.158	0.0	19780.40	23258.0	PASS
7	-39.110	18.271	0.000	18.271	0.0	19273.60	37300.0	PASS
8	-64.590	18.382	0.000	18.382	0.0	19151.20	21500.0	PASS
9	-90.015	18.494	0.000	18.494	4709.0	16937.30	30100.0	PASS

ADJACENT HOLD LOCAL STRENGTH CRITERIA - SEAGOING LIMITS

Holds Nos.	Position m+fwdMS	Draft m abv BL	DB corr. m	Draft used m	Minimum Req. MT	Cargo Mass MT	Maximum Per. MT	STATUS
1&2	102.395	17.653	0.000	17.653	1833.6	34878.50	39353.0	PASS
2&3	77.370	17.762	0.000	17.762	724.7	38418.30	43485.0	PASS
3&4	51.890	17.873	0.000	17.873	812.4	38525.00	43616.0	PASS
4&5	25.955	17.987	0.000	17.987	0.0	39031.80	44191.0	PASS
5&6	0.020	18.100	0.000	18.100	0.0	39549.70	44782.0	PASS
6&7	-25.915	18.213	0.000	18.213	0.0	39054.10	44237.0	PASS
7&8	-51.850	18.327	0.000	18.327	0.0	38424.90	43451.0	PASS
8&9	-77.275	18.438	0.000	18.438	4709.0	36088.60	40840.0	PASS

No	Ballast	FILL %	DESCRIPTION	WEIGHT MT	LCG m +fwdMS	TCG m +stbCL	VCG m abvBL	F.SURF. MT m
10	F.P.TK.							
11	No.1 W.B.TK.							
12	No.2 W.B.TK.(P)							
13	No.2 W.B.TK.(S)							
14	No.3 W.B.TK.(P)							
15	No.3 W.B.TK.(S)							
16	No.4 W.B.TK.(P)							
17	No.4 W.B.TK.(S)							
18	No.5 W.B.TK.(P)							
19	No.5 W.B.TK.(S)							
20	No.6 W.B.TK.(P)							
21	No.6 W.B.TK.(S)							
22	No.7 W.B.TK.(P)							
23	No.7 W.B.TK.(S)							
24	No.8 W.B.TK.(P)							
25	No.8 W.B.TK.(S)							
26	No.9 W.B.TK.(P)							
27	No.9 W.B.TK.(S)							
28	No.10 D.B.W.B.TK.							
29	A.P.TK.							
	Ballast Total			0.00				

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER

No	Fuel	FILL %	DESCRIPTION	WEIGHT MT	LCG m +fwdMS	TCG m +stb CL	VCG m abv BL	F.SURF MT m	TEMP. °C	VCF
30	No.1 H.F.O.TK.(P)	98.0	0.990 MT/m3 Fuel Oil	924.78	-64.620	-17.795	22.297	345.50	15.0	1.0000
31	No.1 H.F.O.TK.(S)	98.0	0.990 MT/m3 Fuel Oil	924.78	-64.622	17.792	22.297	278.64	15.0	1.0000
32	No.2 H.F.O.TK.(P)	98.0	0.990 MT/m3 Fuel Oil	938.66	-89.502	-16.910	22.617	3195.82	15.0	1.0000
33	No.2 H.F.O.TK.(S)	98.0	0.990 MT/m3 Fuel Oil	938.66	-89.505	16.907	22.617	3195.82	15.0	1.0000
34	No.3 H.F.O.TK.	98.0	0.990 MT/m3 Fuel Oil	481.12	-109.310	15.488	21.816	373.33	15.0	1.0000
35	No.1 H.F.O.SERV.TK.	98.0	0.990 MT/m3 Fuel Oil	59.33	-110.301	13.340	21.434	7.72	15.0	1.0000
36	No.1 H.F.O.SETT.TK.	98.0	0.990 MT/m3 Fuel Oil	41.84	-106.714	9.050	21.236	2.67	15.0	1.0000
37	No.2 H.F.O.SETT.TK.	98.0	0.990 MT/m3 Fuel Oil	42.28	-106.714	10.960	21.236	2.77	15.0	1.0000
	Fuel Total			4351.45	-81.734	2.087	22.350	7402.27		

No	Diesel	FILL %	DESCRIPTION	WEIGHT MT	LCG m +fwdMS	TCG m +stb CL	VCG m abv BL	F.SURF MT m	TEMP. °C	VCF
38	M.D.O.TK.(P)	98.0	0.850 MT/m3 Diesel Oil	253.05	-106.198	-15.842	21.719	276.50	15.0	1.0000
39	M.D.O.SERV.TK.(P)	98.0	0.850 MT/m3 Diesel Oil	30.99	-110.700	-13.820	21.833	6.29	15.0	1.0000
40	M.D.O.SETT.TK.(P)	98.0	0.850 MT/m3 Diesel Oil	30.99	-109.100	-13.820	21.833	6.29	15.0	1.0000
	Diesel Total			315.02	-106.927	-15.445	21.742	289.09		

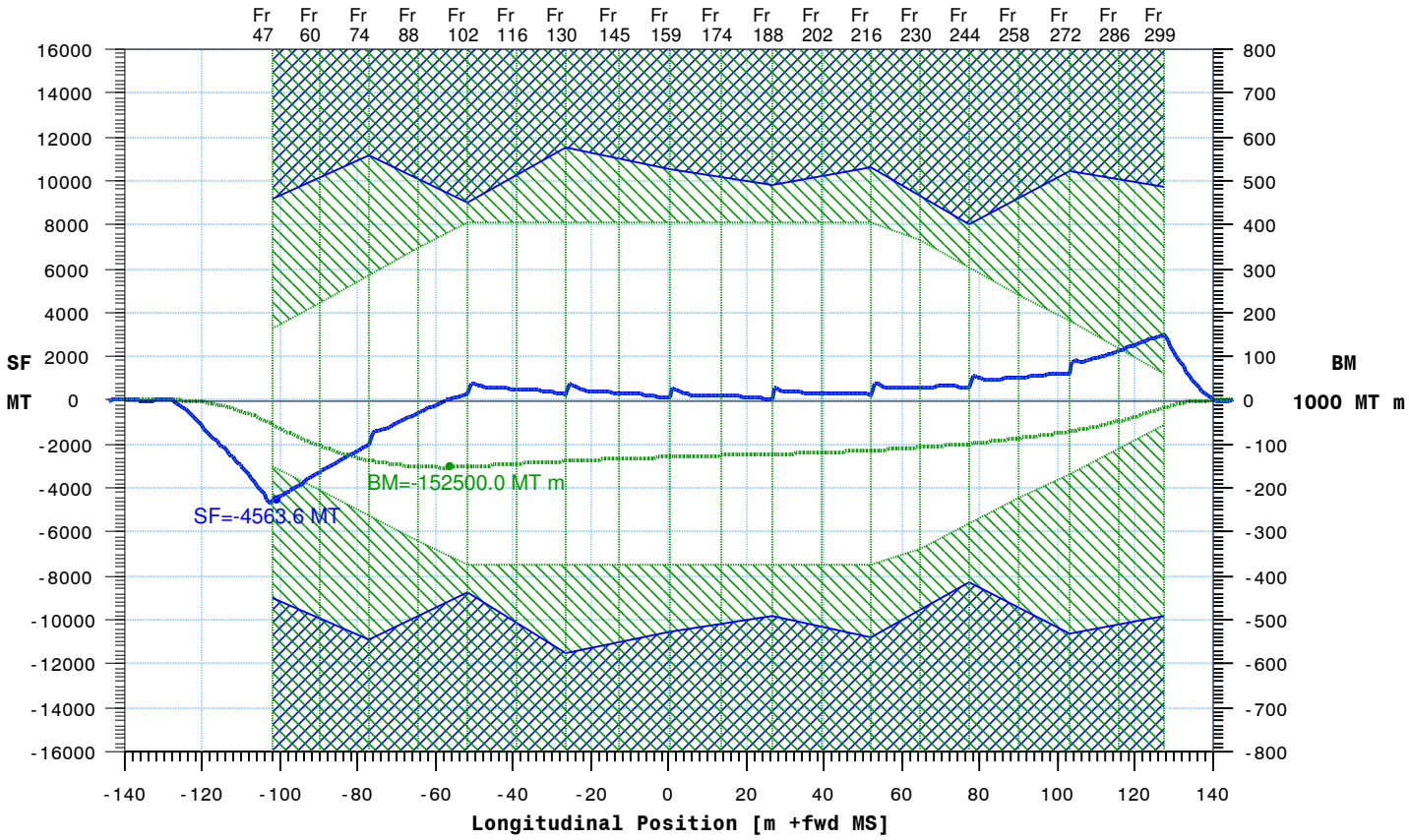
No	Lub. Oil	FILL %	DESCRIPTION	WEIGHT MT	LCG m +fwdMS	TCG m +stb CL	VCG m abv BL	F.SURF MT m	TEMP. °C	VCF
41	M/E L.O.SUMP TK.	60.0	0.900 MT/m3 Lub Oil	21.61	-115.361	-0.004	1.268	20.61	15.0	1.0000
42	No.1 CYL.STORE TK.(P)	98.0	0.900 MT/m3 Lub Oil	35.89	-113.890	-14.688	20.946	22.41	15.0	1.0000
43	No.2 CYL.STORE TK.(P)	98.0	0.900 MT/m3 Lub Oil	38.43	-112.292	-14.883	20.940	27.09	15.0	1.0000
44	M/E L.O.STORE TK.	98.0	0.900 MT/m3 Lub Oil	32.83	-121.798	13.118	21.178	3.51	15.0	1.0000
45	A/E L.O.STORE TK.	98.0	0.900 MT/m3 Lub Oil	11.82	-124.291	10.960	21.428	0.81	15.0	1.0000
	Lub. Oil Total			140.57	-116.401	-3.834	18.014	74.43		

No	Fr. Water	FILL %	DESCRIPTION	WEIGHT MT	LCG m +fwdMS	TCG m +stbCL	VCG m abvBL	F.SURF. MT m
46	F.W.TK.(P)	100.0	1.000 MT/m3 Fresh Water	267.02	-131.293	-9.717	21.994	0.00
47	F.W.TK.(S)	100.0	1.000 MT/m3 Fresh Water	190.65	-132.176	9.546	22.006	0.00
48	DISTILLED WATER TK.	100.0	1.000 MT/m3 Fresh Water	76.38	-129.089	10.145	21.966	0.00
	Fr. Water Total			534.05	-131.293	0.000	21.994	0.00

No	Miscel	FILL %	DESCRIPTION	WEIGHT MT	LCG m +fwdMS	TCG m +stbCL	VCG m abvBL	F.SURF. MT m
49	C.W.TK.							
	Miscel Total			0.00				

No	Constants	WEIGHT MT	Length m	Width m	Height m	LCG m +fwdMS	TCG m +stbCL	VCG m abvBL
50	Crew&Effect	3.40	15.20	45.00	16.80	-110.300	0.000	34.000
51	Provision	7.80	8.80	45.00	1.60	-113.500	0.000	26.400
52	E/R_Store	13.60	25.60	45.00	12.00	-115.500	0.000	19.600
53	St_Gear_Store	20.50	9.60	45.00	12.00	-139.350	0.000	19.600
54	Deck_Store	13.60	4.55	45.00	1.60	25.955	0.000	26.400
55	Bosun_Store	20.50	12.00	45.00	2.00	133.420	0.000	20.200
56	Spare_Anchor	12.90	5.46	45.00	0.80	111.040	0.000	26.000
57	Misc_Hull_Part	166.20	279.00	45.00	5.50	-2.650	0.000	2.750
58	Small_Tanks_E/R	208.52	12.00	45.00	15.79	-122.552	0.000	7.893
59	Other_Constant							
	Constants Total	467.02				-58.161	0.000	8.996

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-4563.6	-8975.0	50.8
73.99	-77.335	-2043.0	-10872.0	18.8
74.01	-77.325	-2039.2	-10872.0	18.8
101.99	-51.855	310.0	9046.0	3.4
102.01	-51.845	313.1	9046.0	3.5
129.99	-26.375	268.6	11531.0	2.3
130.01	-26.365	271.3	11531.0	2.4
158.99	0.015	101.9	10571.0	1.0
159.01	0.025	104.5	10571.0	1.0
187.99	26.405	53.3	9838.0	0.5
188.01	26.415	56.2	9838.0	0.6
215.99	51.885	260.8	10585.0	2.5
216.01	51.895	263.7	10585.0	2.5
243.99	77.365	586.9	7983.0	7.4
244.01	77.375	589.8	7983.0	7.4
271.99	102.845	1241.8	10427.0	11.9
272.01	102.855	1245.1	10427.0	11.9
298.99	127.415	3037.4	9706.0	31.3

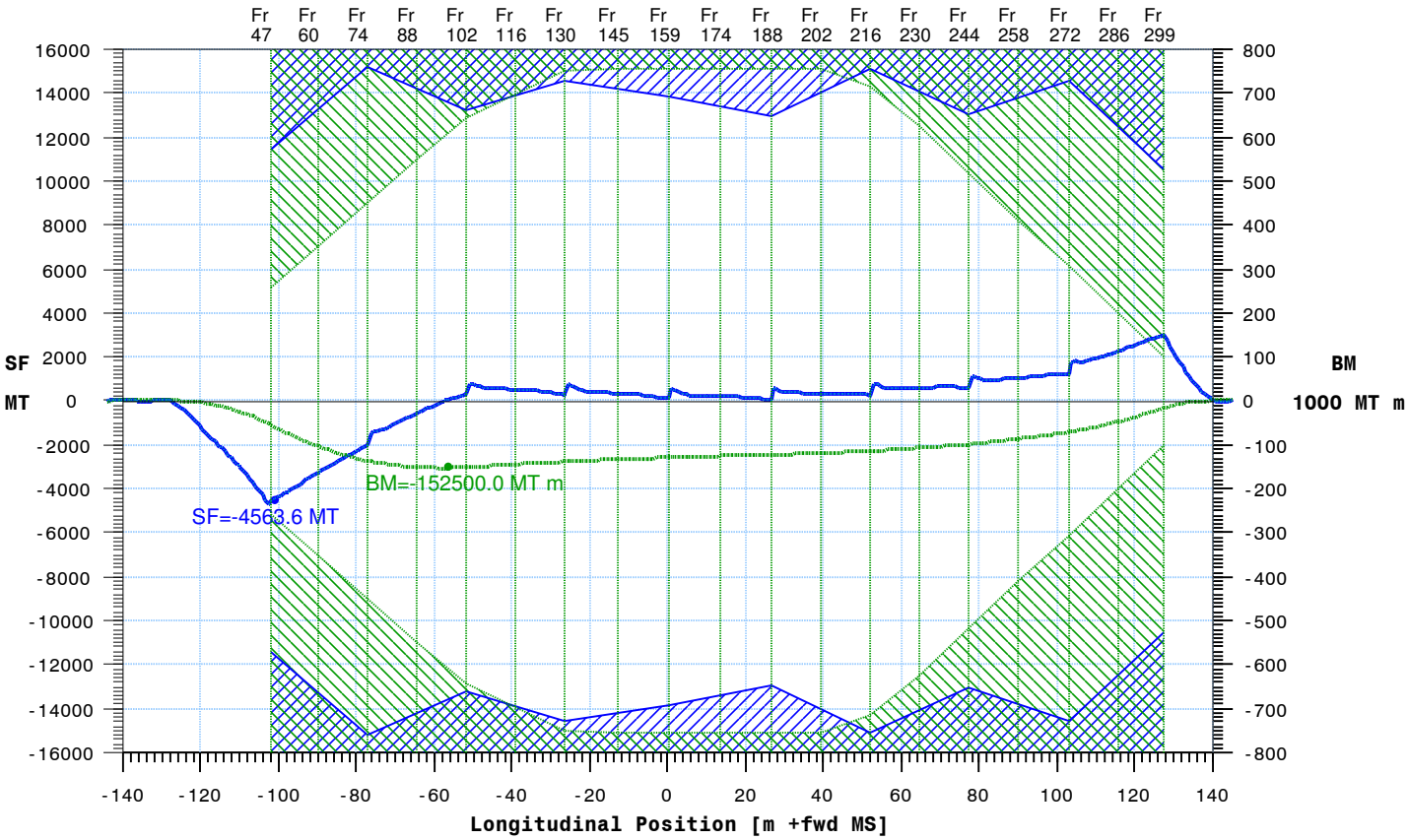
B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-56281.3	-152320.0	36.9
60.0	-90.070	-102784.0	-205949.0	49.9
74.0	-77.330	-136383.0	-263704.0	51.7
88.0	-64.590	-150520.0	-321459.0	46.8
102.0	-51.850	-151567.0	-374000.0	40.5
116.0	-39.110	-143975.0	-374000.0	38.5
130.0	-26.370	-138611.0	-374000.0	37.1
145.0	-12.720	-132573.0	-374000.0	35.4
159.0	0.020	-129479.0	-374000.0	34.6
174.0	13.670	-125487.0	-374000.0	33.6
188.0	26.410	-123539.0	-374000.0	33.0
202.0	39.150	-118653.0	-374000.0	31.7
216.0	51.890	-114443.0	-374000.0	30.6
230.0	64.630	-106598.0	-339411.0	31.4
244.0	77.370	-98643.5	-281656.0	35.0
258.0	90.110	-86087.4	-223901.0	38.4
272.0	102.850	-71478.4	-166147.0	43.0
286.0	115.590	-46990.2	-108392.0	43.4
299.0	127.420	-15856.5	-54763.0	29.0

LONGITUDINAL STRENGTH CRITERIA

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-4563.6	MT	-8975.0	50.8	-101.895	47.0	PASS - SEAGOING LIMITS
Cr. Bending Moment	-128366.0	MT m	-247203.0	51.9	-80.970	70.0	PASS - SEAGOING LIMITS
MAX Shearing Force	3037.4	MT			127.415	299.0	
MIN Shearing Force	-4563.6	MT			-101.895	47.0	
HOG Bending Moment	386.8	MT m			-127.720	14.7	
SAG Bending Moment	-152500.0	MT m			-57.448	95.8	

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-4563.6	-11414.0	40.0
73.99	-77.335	-2043.0	-15196.0	13.4
74.01	-77.325	-2039.2	-15196.0	13.4
101.99	-51.855	310.0	13234.0	2.3
102.01	-51.845	313.1	13234.0	2.4
129.99	-26.375	268.6	14570.0	1.8
130.01	-26.365	271.3	14570.0	1.9
158.99	0.015	101.9	13862.0	0.7
159.01	0.025	104.5	13862.0	0.8
187.99	26.405	53.3	12992.0	0.4
188.01	26.415	56.2	12992.0	0.4
215.99	51.885	260.8	15065.0	1.7
216.01	51.895	263.7	15065.0	1.8
243.99	77.365	586.9	13016.0	4.5
244.01	77.375	589.8	13016.0	4.5
271.99	102.845	1241.8	14610.0	8.5
272.01	102.855	1245.1	14610.0	8.5
298.99	127.415	3037.4	10540.0	28.8

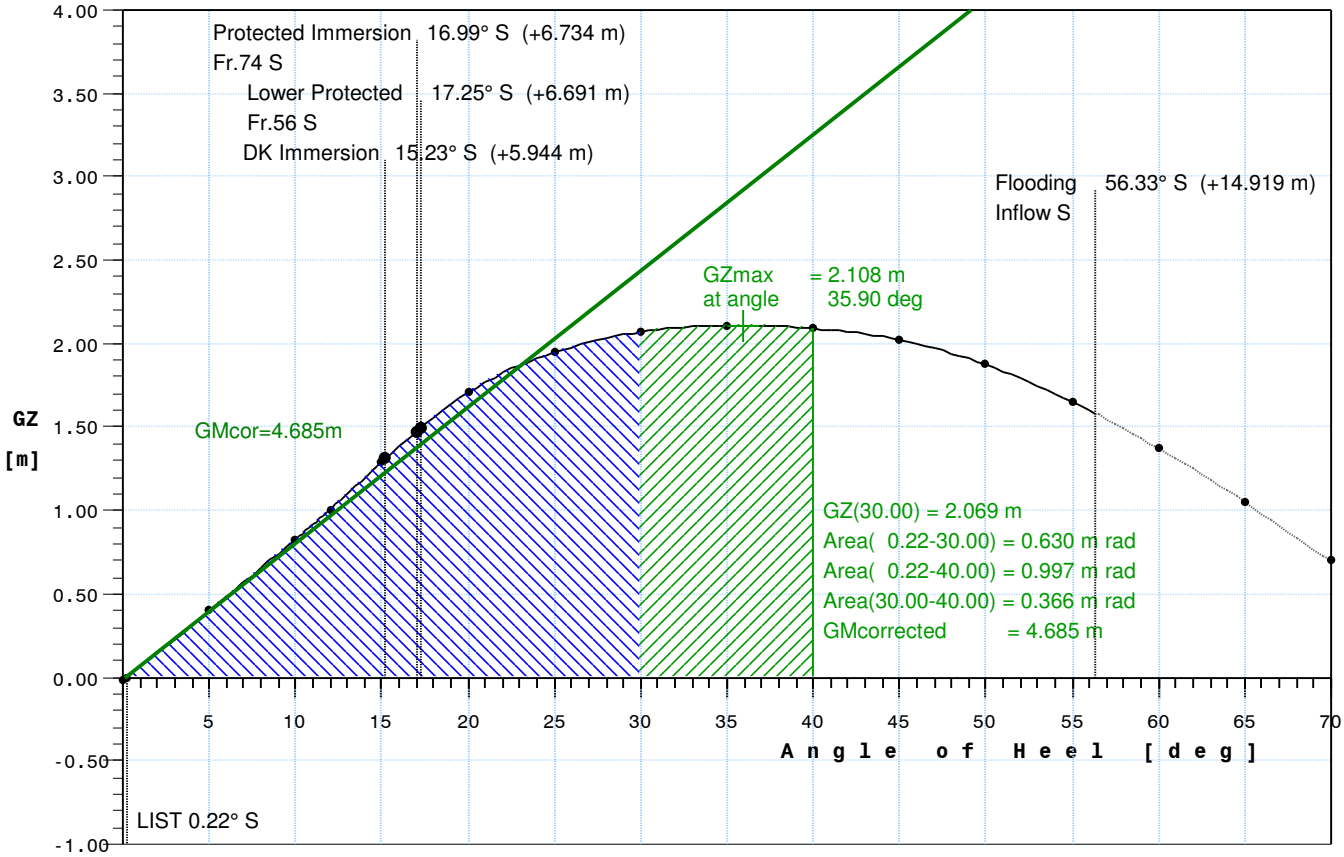
B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-56281.3	-259560.0	21.7
60.0	-90.070	-102784.0	-350946.0	29.3
74.0	-77.330	-136383.0	-449363.0	30.4
88.0	-64.590	-150520.0	-547779.0	27.5
102.0	-51.850	-151567.0	-642280.0	23.6
116.0	-39.110	-143975.0	-697315.0	20.6
130.0	-26.370	-138611.0	-751985.0	18.4
145.0	-12.720	-132573.0	-755560.0	17.5
159.0	0.020	-129479.0	-755560.0	17.1
174.0	13.670	-125487.0	-755560.0	16.6
188.0	26.410	-123539.0	-755560.0	16.4
202.0	39.150	-118653.0	-755560.0	15.7
216.0	51.890	-114443.0	-713453.0	16.0
230.0	64.630	-106598.0	-624575.0	17.1
244.0	77.370	-98643.5	-518296.0	19.0
258.0	90.110	-86087.4	-412017.0	20.9
272.0	102.850	-71478.4	-305739.0	23.4
286.0	115.590	-46990.2	-199460.0	23.6
299.0	127.420	-15856.5	-100773.0	15.7

LONGITUDINAL STRENGTH CRITERIA

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-4563.6	MT	-11414.0	40.0	-101.895	47.0	PASS - HARBOUR LIMITS
Cr. Bending Moment	-128366.0	MT m	-421244.0	30.5	-80.970	70.0	PASS - HARBOUR LIMITS
MAX Shearing Force	3037.4	MT			127.415	299.0	
MIN Shearing Force	-4563.6	MT			-101.895	47.0	
HOG Bending Moment	386.8	MT m			-127.720	14.7	
SAG Bending Moment	-152500.0	MT m			-57.448	95.8	

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



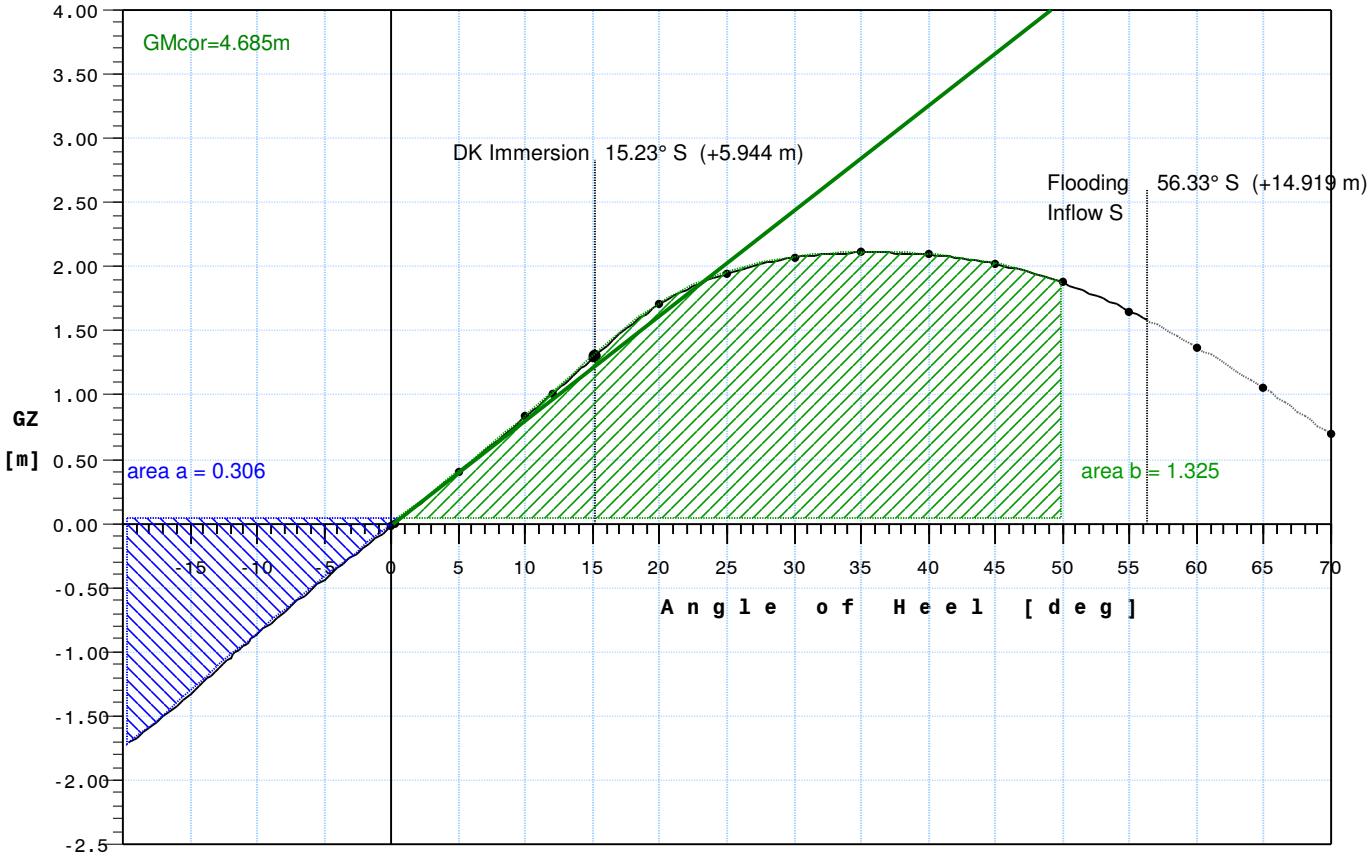
RIGHTING ARM vs HEEL ANGLE and OPENINGS

Heel deg	Trim [m]	Draft m abvBL	LCG [m] +fwdMS	TCG [m] +stbd	VCG [m] +abvBL	Cross KN [m]	Right. Arm m	area m rad	Protec. margin m	Flood. margin m
0.00	1.220A	18.100	7.247	0.019	13.916	0.000	-0.019	0.000	6.777	14.942
0.22	1.219A	18.100	7.247	0.019	13.916	0.073	0.000	0.000	6.691	14.919
5.00	1.208A	18.097	7.247	0.019	13.916	1.633	0.398	0.016	4.839	14.368
10.00	1.172A	18.086	7.247	0.019	13.916	3.271	0.828	0.070	2.880	13.702
12.00	1.150A	18.079	7.247	0.019	13.916	3.928	1.008	0.102	2.094	13.412
15.00	1.110A	18.066	7.247	0.019	13.916	4.919	1.289	0.162	0.915	12.951
15.23	1.108A	18.068	7.247	0.019	13.916	4.990	1.310	0.167	0.822	12.911
17.25	1.090A	18.084	7.247	0.019	13.916	5.618	1.493	0.217	0.000	12.552
20.00	1.066A	18.107	7.247	0.019	13.916	6.499	1.707	0.294	-1.121	12.035
25.00	0.969A	18.346	7.247	0.019	13.916	7.863	1.948	0.454	-3.311	10.871
30.00	0.797A	18.783	7.248	0.019	13.916	9.063	2.069	0.630	-5.610	9.497
35.00	0.539A	19.430	7.248	0.019	13.916	10.128	2.108	0.813	-7.981	7.941
40.00	0.210A	20.312	7.248	0.019	13.916	11.077	2.091	0.997	-10.398	6.223
45.00	0.221F	21.463	7.248	0.019	13.916	11.902	2.020	1.176	-12.815	4.383
50.00	0.746F	22.897	7.248	0.019	13.916	12.576	1.873	1.347	-15.172	2.472
55.00	1.374F	24.691	7.248	0.019	13.916	13.095	1.652	1.501	-17.432	0.522
56.33	1.564F	25.249	7.248	0.019	13.916	13.184	1.582	1.539	-18.014	0.000
60.00	2.166F	27.020	7.248	0.019	13.916	13.468	1.372	1.634	-19.573	-1.446
65.00	3.227F	30.199	7.248	0.019	13.916	13.707	1.050	1.740	-21.575	-3.413
70.00	4.771F	34.868	7.248	0.019	13.916	13.817	0.697	1.816	-23.421	-5.364

GENERAL STABILITY CRITERIA

CRITERION	ACTUAL	UNIT	REGULATION		STATUS
Area under GZ(0.2°-30.0°)	0.630	m rad	min	0.055	PASS
Area under GZ(0.2°-40.0°)	0.997	m rad	min	0.090	PASS
Area under GZ(30.0°-40.0°)	0.366	m rad	min	0.030	PASS
GZ maximum	2.108	m	min	0.200	PASS
GZ maximum at angle greater	35.90	deg	min	25.00	PASS
Metacentric Height GMcor	4.685	m	min	0.150	PASS

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



HEEL RESULTING FROM STEADY WIND PRESSURE

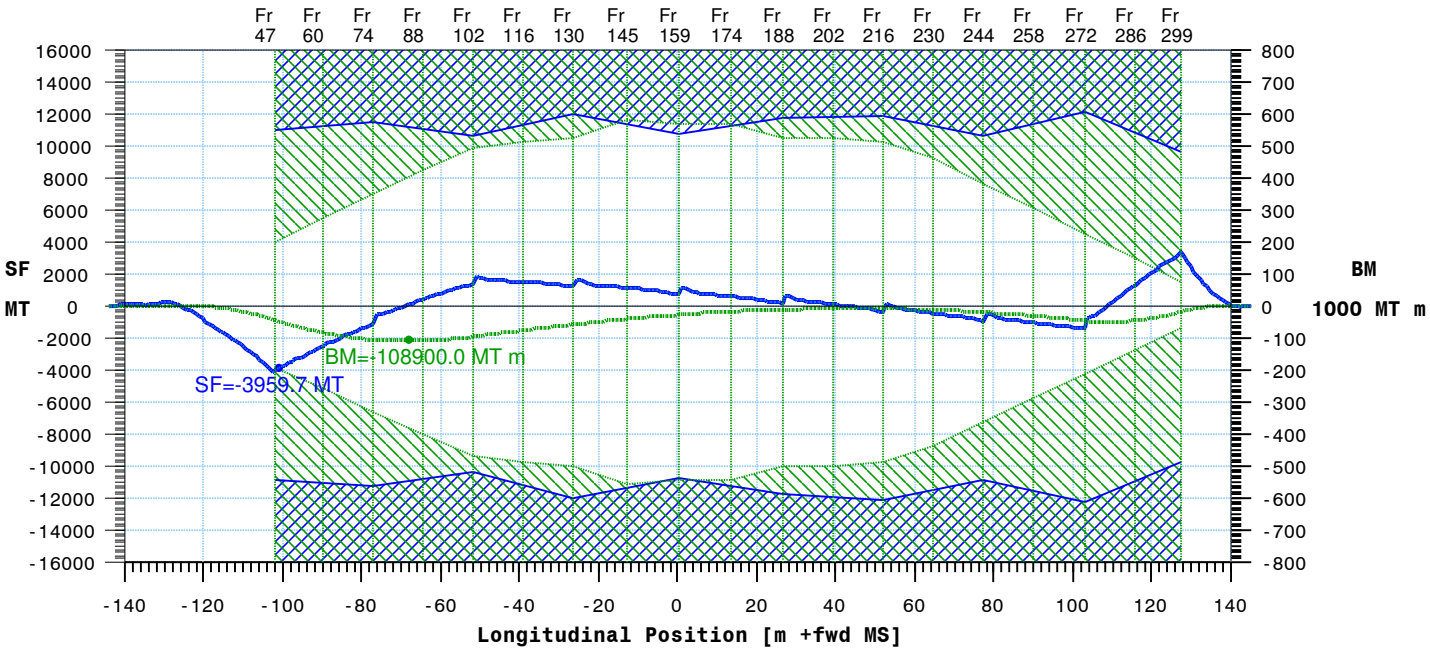
Mean Draft (moulded)	Tms	18.100	m	Water Line Length	Lwl	279.000	m
Projected Area (Hull)	Ah	5347.9	m2	Block Coefficient	Cb	0.849	
Vertical Arm (Hull)	Zh	18.252	m	Factor k (Ak=0.0 m2)	k	1.000	
Projected Area (Cargo)	Ac	0.0	m2	Factor X1	X1	0.983	
Vertical Arm (Cargo)	Zc	0.000	m	Factor X2	X2	1.000	
Projected Lateral Area	A	5347.9	m2	Factor r	r	0.593	
Vertical distance Z	Z	12.161	m	Factor s	s	0.060	
Steady Wind Pressure	P	504.0	N/m2	Metacentric Height	GMc	4.685	m
Displacement	D	197852.0	MT	Rolling period	T	12.899	sec
Wind Heeling Lever lw1	lw1	0.017	m	Angle of Roll	a1	20.13	deg
Angle of Heel due to lw1	a0	0.431	deg	Deck Edge Immersion angle		15.23	deg
HEEL FROM GUSTING WIND				EXTREME RIGHTING ANGLE			
Wind Heeling Lever lw2	lw2	0.025	m	Flooding angle	af	56.33	
Angle of Heel due to lw2	alw2	0.535	deg	2nd angle	a2	50.00	deg

SEVERE WIND & ROLLING CRITERIA

CRITERION	ACTUAL	UNIT	REGULATION	STATUS
Heel under steady wind	0.431	deg	max 12.18	PASS
Capsizing Energy (area a)	0.306	m rad	max 1.325	PASS

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER

NO.1 CARGO HOLD IN FLOODED CONDITION (IACS UR S17)



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-3959.7	-10829.0	36.6
73.99	-77.335	-1141.6	-11296.0	10.1
74.01	-77.325	-1137.7	-11296.0	10.1
101.99	-51.855	1329.5	10605.0	12.5
102.01	-51.845	1332.7	10605.0	12.6
129.99	-26.375	1201.1	11994.0	10.0
130.01	-26.365	1203.6	11994.0	10.0
158.99	0.015	727.6	10717.0	6.8
159.01	0.025	730.1	10717.0	6.8
187.99	26.405	151.9	11770.0	1.3
188.01	26.415	154.6	11770.0	1.3
215.99	51.885	-358.5	-12107.0	3.0
216.01	51.895	-356.0	-12107.0	2.9
243.99	77.365	-955.9	-10818.0	8.8
244.01	77.375	-953.4	-10818.0	8.8
271.99	102.845	-1421.0	-12287.0	11.6
272.01	102.855	-1417.4	-12287.0	11.5
298.99	127.415	3335.3	9631.0	34.6

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-44461.5	-190969.0	23.3
60.0	-90.070	-82866.6	-258205.0	32.1
74.0	-77.330	-105835.0	-330614.0	32.0
88.0	-64.590	-107942.0	-403023.0	26.8
102.0	-51.850	-96207.7	-470219.0	20.5
116.0	-39.110	-75685.9	-484873.0	15.6
130.0	-26.370	-57947.7	-499527.0	11.6
145.0	-12.720	-40010.1	-554374.0	7.2
159.0	0.020	-27771.4	-543665.0	5.1
174.0	13.670	-16845.7	-543665.0	3.1
188.0	26.410	-11791.8	-500528.0	2.4
202.0	39.150	-7719.7	-500528.0	1.5
216.0	51.890	-8897.1	-489170.0	1.8
230.0	64.630	-11667.8	-437833.0	2.7
244.0	77.370	-20211.7	-363331.0	5.6
258.0	90.110	-30688.4	-288828.0	10.6
272.0	102.850	-46262.0	-214326.0	21.6
286.0	115.590	-44963.5	-139824.0	32.2
299.0	127.420	-17227.9	-70643.0	24.4

LONGITUDINAL STRENGTH CRITERIA WITH NO.1 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-3959.7	MT	-10829.0	36.6	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-38997.2	MT m	-118538.0	32.9	119.230	290.0	PASS - FLOODED LIMITS
MAX Shearing Force	3335.3	MT			127.415	299.0	
MIN Shearing Force	-3959.7	MT			-101.895	47.0	
HOG Bending Moment	2062.0	MT m			-125.887	17.0	
SAG Bending Moment	-108900.0	MT m			-69.139	83.0	

No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
1	NO.1 CARGO HOLD		Flooded (0.30 perm)	4075.76	3976.35	114.688	0.033	11.360
	Damage Inflow			4075.76	3976.35	114.688	0.033	11.360

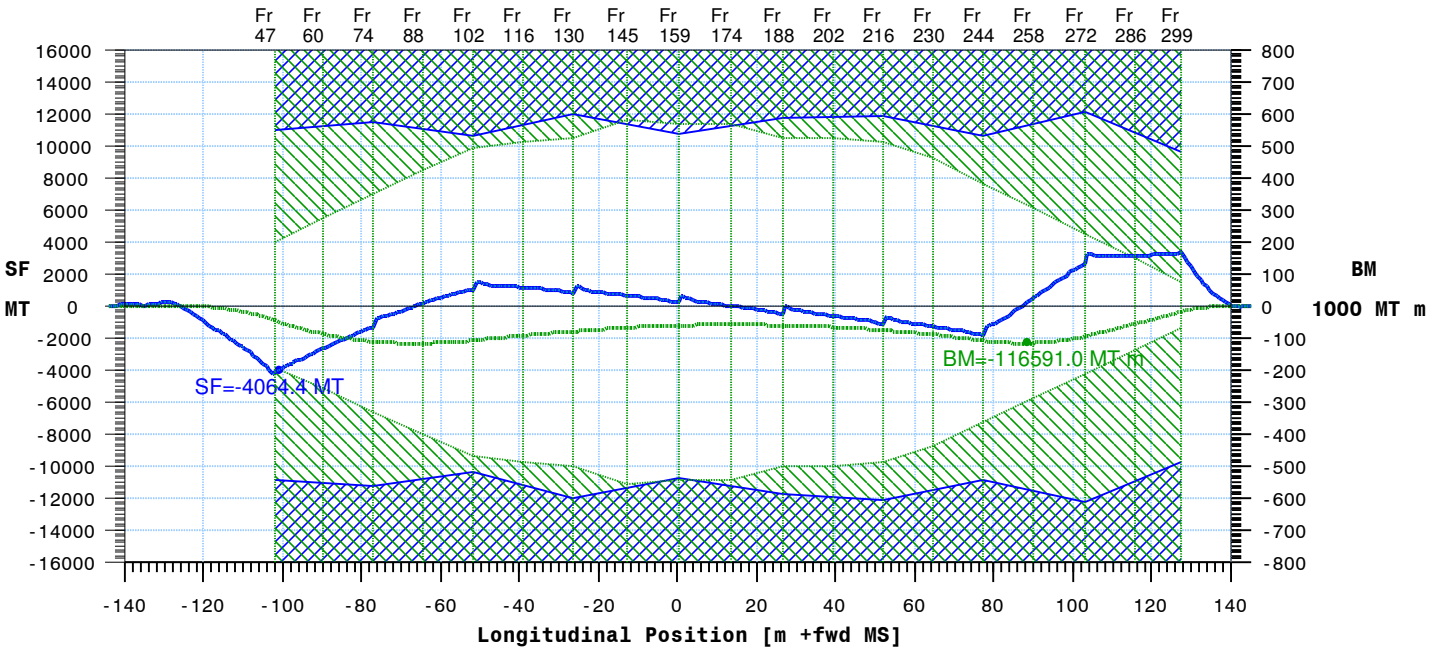
HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.196	m
DRAFT CORRESPONDING	Tcf	18.438	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	18.818	m	METACENTRIC HEIGHT	GM	4.280	m
DRAFT A.P.	Tap	18.105	m	FREE SURFACE MOMENT	FSM	7828.95	MT m
DRAFT MEAN	Tms	18.461	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	0.713	m by HEAD	METACENTRIC HEIGHT CORR.	GMc	4.241	m
LONG. CENTER BUOYANCY	LCB	7.259	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.955	m
LONG. CENTER FLOTATION	LCF	-9.162	m +fwdMS	PROPELLER IMMERSION	P.I	216.0	%
MOMENT TO CHANGE TRIM	MCT	1954.20	MT m / cm	AHEAD VISIBILITY	A.V	170.9	m
TONS PER CENTIMETRE	TPC	116.39	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER

NO.2 CARGO HOLD IN FLOODED CONDITION (IACS UR S17)



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-4064.4	-10829.0	37.5
73.99	-77.335	-1341.2	-11296.0	11.9
74.01	-77.325	-1337.4	-11296.0	11.8
101.99	-51.855	1024.4	10605.0	9.7
102.01	-51.845	1027.5	10605.0	9.7
129.99	-26.375	786.5	11994.0	6.6
130.01	-26.365	789.0	11994.0	6.6
158.99	0.015	195.7	10717.0	1.8
159.01	0.025	198.1	10717.0	1.8
187.99	26.405	-501.5	-11770.0	4.3
188.01	26.415	-498.9	-11770.0	4.2
215.99	51.885	-1133.2	-12107.0	9.4
216.01	51.895	-1130.7	-12107.0	9.3
243.99	77.365	-1855.7	-10818.0	17.2
244.01	77.375	-1852.4	-10818.0	17.1
271.99	102.845	2650.3	12072.0	22.0
272.01	102.855	2654.8	12072.0	22.0
298.99	127.415	3364.2	9631.0	34.9

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-46284.9	-190969.0	24.2
60.0	-90.070	-86187.6	-258205.0	33.4
74.0	-77.330	-111375.0	-330614.0	33.7
88.0	-64.590	-116359.0	-403023.0	28.9
102.0	-51.850	-108173.0	-470219.0	23.0
116.0	-39.110	-91883.7	-484873.0	19.0
130.0	-26.370	-79074.9	-499527.0	15.8
145.0	-12.720	-67206.1	-554374.0	12.1
159.0	0.020	-61379.5	-543665.0	11.3
174.0	13.670	-58139.4	-543665.0	10.7
188.0	26.410	-61032.8	-500528.0	12.2
202.0	39.150	-65668.1	-500528.0	13.1
216.0	51.890	-76325.2	-489170.0	15.6
230.0	64.630	-89360.1	-437833.0	20.4
244.0	77.370	-108965.0	-363331.0	30.0
258.0	90.110	-115839.0	-288828.0	40.1
272.0	102.850	-95518.2	-214326.0	44.6
286.0	115.590	-55562.2	-139824.0	39.7
299.0	127.420	-17358.7	-70643.0	24.6

LONGITUDINAL STRENGTH CRITERIA WITH NO.2 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-4064.4	MT	-10829.0	37.5	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-95531.4	MT m	-214355.0	44.6	102.845	272.0	PASS - FLOODED LIMITS
MAX Shearing Force	3364.2	MT			127.415	299.0	
MIN Shearing Force	-4064.4	MT			-101.895	47.0	
HOG Bending Moment	1816.7	MT m			-126.150	16.7	
SAG Bending Moment	-116591.0	MT m			87.130	254.7	

No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
2	NO.2 CARGO HOLD		Flooded (0.30 perm)	5243.86	5115.96	90.759	0.030	11.123
	Damage Inflow			5243.86	5115.96	90.759	0.030	11.123

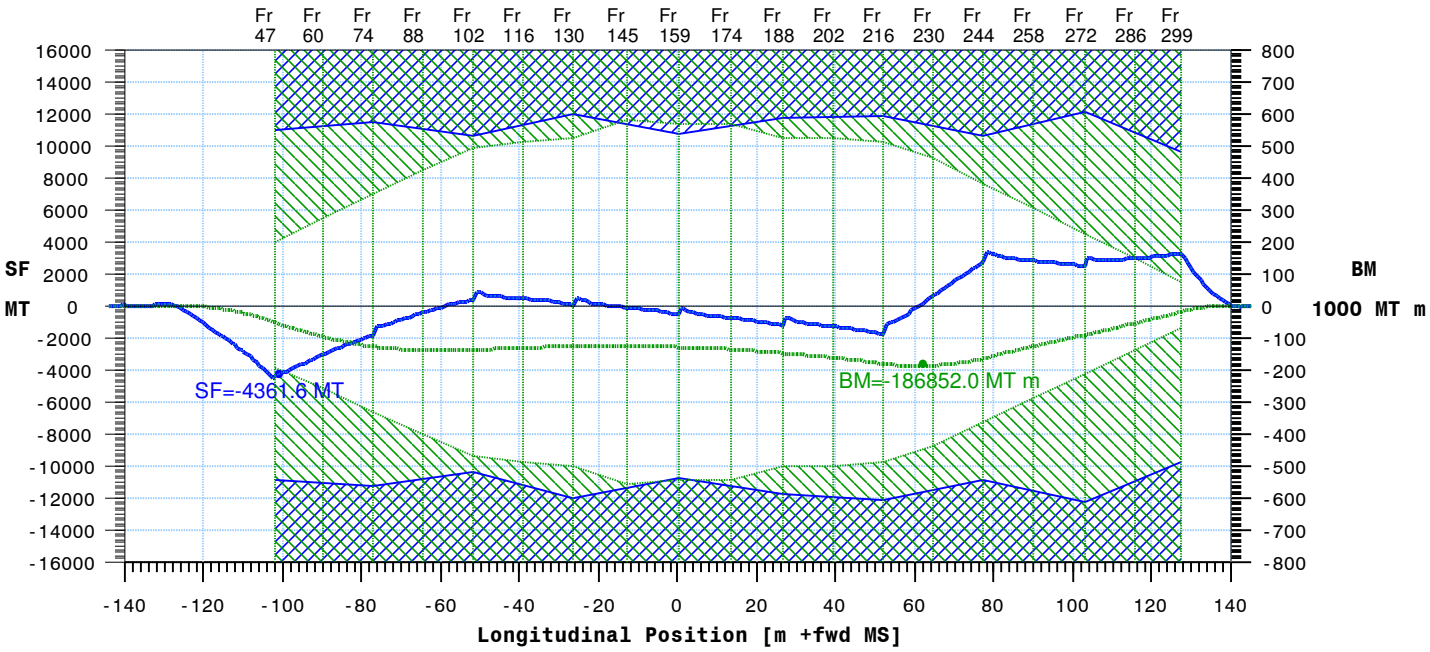
HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.130	m
DRAFT CORRESPONDING	Tcf	18.538	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	18.933	m	METACENTRIC HEIGHT	GM	4.214	m
DRAFT A.P.	Tap	18.186	m	FREE SURFACE MOMENT	FSM	7829.95	MT m
DRAFT MEAN	Tms	18.559	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	0.747	m by HEAD	METACENTRIC HEIGHT CORR.	GMc	4.174	m
LONG. CENTER BUOYANCY	LCB	7.259	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.955	m
LONG. CENTER FLOTATION	LCF	-8.116	m +fwdMS	PROPELLER IMMERSION	P.I	216.9	%
MOMENT TO CHANGE TRIM	MCT	2099.21	MT m / cm	AHEAD VISIBILITY	A.V	168.5	m
TONS PER CENTIMETRE	TPC	116.14	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER

NO.3 CARGO HOLD IN FLOODED CONDITION (IACS UR S17)



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-4361.6	-10829.0	40.3
73.99	-77.335	-1830.8	-11296.0	16.2
74.01	-77.325	-1827.0	-11296.0	16.2
101.99	-51.855	386.7	10605.0	3.6
102.01	-51.845	389.7	10605.0	3.7
129.99	-26.375	59.8	11994.0	0.5
130.01	-26.365	62.3	11994.0	0.5
158.99	0.015	-560.7	-10717.0	5.2
159.01	0.025	-558.3	-10717.0	5.2
187.99	26.405	-1224.0	-11770.0	10.4
188.01	26.415	-1221.4	-11770.0	10.4
215.99	51.885	-1762.6	-12107.0	14.6
216.01	51.895	-1759.2	-12107.0	14.5
243.99	77.365	2741.7	10577.0	25.9
244.01	77.375	2746.1	10577.0	26.0
271.99	102.845	2504.5	12072.0	20.7
272.01	102.855	2507.3	12072.0	20.8
298.99	127.415	3299.9	9631.0	34.3

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-51862.1	-190969.0	27.2
60.0	-90.070	-95849.6	-258205.0	37.1
74.0	-77.330	-126668.0	-330614.0	38.3
88.0	-64.590	-138409.0	-403023.0	34.3
102.0	-51.850	-137926.0	-470219.0	29.3
116.0	-39.110	-130107.0	-484873.0	26.8
130.0	-26.370	-126336.0	-499527.0	25.3
145.0	-12.720	-124565.0	-554374.0	22.5
159.0	0.020	-128350.0	-543665.0	23.6
174.0	13.670	-135388.0	-543665.0	24.9
188.0	26.410	-147656.0	-500528.0	29.5
202.0	39.150	-161261.0	-500528.0	32.2
216.0	51.890	-180296.0	-489170.0	36.9
230.0	64.630	-185649.0	-437833.0	42.4
244.0	77.370	-163729.0	-363331.0	45.1
258.0	90.110	-125100.0	-288828.0	43.3
272.0	102.850	-90977.8	-214326.0	42.4
286.0	115.590	-53893.2	-139824.0	38.5
299.0	127.420	-17058.3	-70643.0	24.1

LONGITUDINAL STRENGTH CRITERIA WITH NO.3 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-4361.6	MT	-10829.0	40.3	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-166161.0	MT m	-368653.0	45.1	76.460	243.0	PASS - FLOODED LIMITS
MAX Shearing Force	3299.9	MT			127.415	299.0	
MIN Shearing Force	-4361.6	MT			-101.895	47.0	
HOG Bending Moment	1043.1	MT m			-126.990	15.6	
SAG Bending Moment	-186852.0	MT m			60.888	225.9	

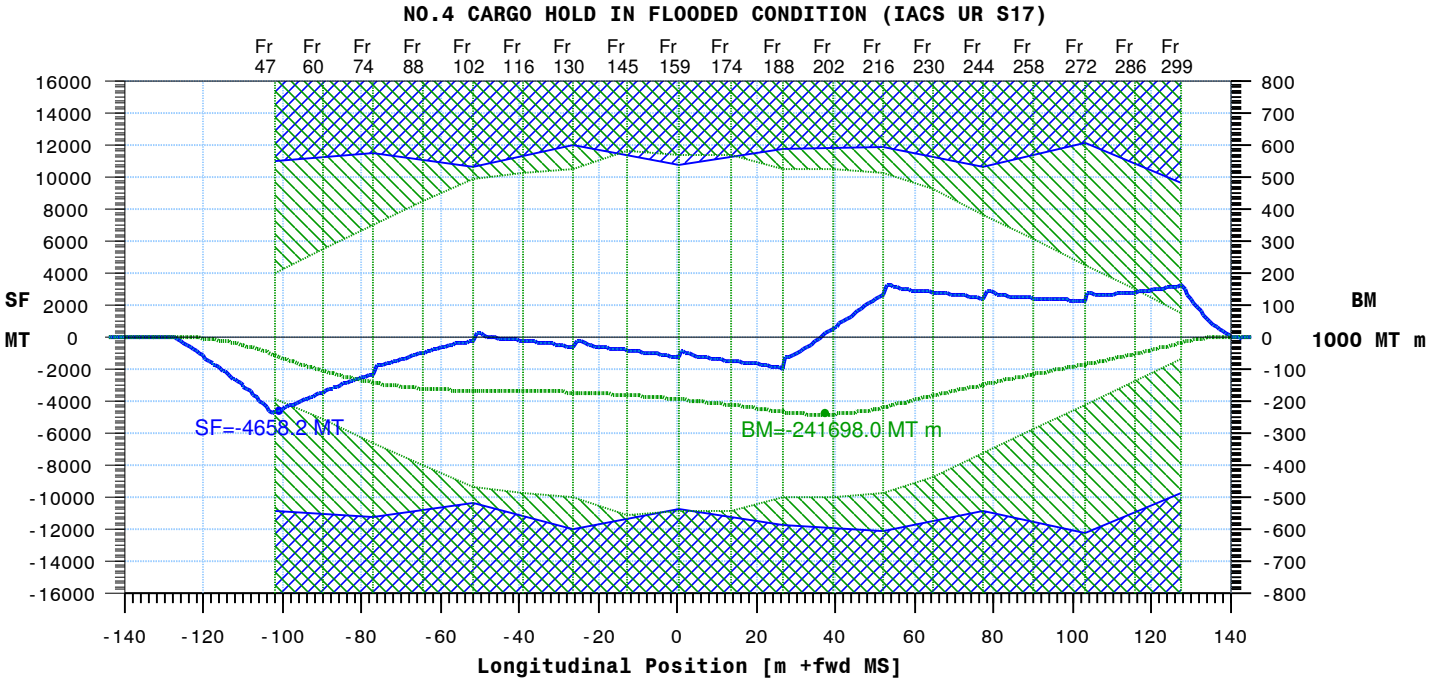
No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
3	NO.3 CARGO HOLD		Flooded (0.30 perm)	5220.42	5093.09	65.337	0.032	11.020
	Damage Inflow			5220.42	5093.09	65.337	0.032	11.020

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.099	m
DRAFT CORRESPONDING	Tcf	18.554	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	18.653	m	METACENTRIC HEIGHT	GM	4.184	m
DRAFT A.P.	Tap	18.463	m	FREE SURFACE MOMENT	FSM	7818.67	MT m
DRAFT MEAN	Tms	18.558	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	0.190	m by HEAD	METACENTRIC HEIGHT CORR.	GMc	4.144	m
LONG. CENTER BUOYANCY	LCB	7.251	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.955	m
LONG. CENTER FLOTATION	LCF	-6.021	m +fwdMS	PROPELLER IMMERSION	P.I	220.3	%
MOMENT TO CHANGE TRIM	MCT	2263.06	MT m / cm	AHEAD VISIBILITY	A.V	180.2	m
TONS PER CENTIMETRE	TPC	116.14	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-4658.2	-10829.0	43.0
73.99	-77.335	-2318.0	-11296.0	20.5
74.01	-77.325	-2314.3	-11296.0	20.5
101.99	-51.855	-246.9	-10392.0	2.4
102.01	-51.845	-243.9	-10392.0	2.3
129.99	-26.375	-661.2	-11987.0	5.5
130.01	-26.365	-658.7	-11987.0	5.5
158.99	0.015	-1310.0	-10717.0	12.2
159.01	0.025	-1307.6	-10717.0	12.2
187.99	26.405	-1938.5	-11770.0	16.5
188.01	26.415	-1935.1	-11770.0	16.4
215.99	51.885	2661.3	11911.0	22.3
216.01	51.895	2665.7	11911.0	22.4
243.99	77.365	2388.5	10577.0	22.6
244.01	77.375	2391.1	10577.0	22.6
271.99	102.845	2215.3	12072.0	18.4
272.01	102.855	2218.2	12072.0	18.4
298.99	127.415	3236.3	9631.0	33.6

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-57446.7	-190969.0	30.1
60.0	-90.070	-105508.0	-258205.0	40.9
74.0	-77.330	-141933.0	-330614.0	42.9
88.0	-64.590	-160396.0	-403023.0	39.8
102.0	-51.850	-167566.0	-470219.0	35.6
116.0	-39.110	-168160.0	-484873.0	34.7
130.0	-26.370	-173359.0	-499527.0	34.7
145.0	-12.720	-181603.0	-554374.0	32.8
159.0	0.020	-194913.0	-543665.0	35.9
174.0	13.670	-212130.0	-543665.0	39.0
188.0	26.410	-233674.0	-500528.0	46.7
202.0	39.150	-240947.0	-500528.0	48.1
216.0	51.890	-220369.0	-489170.0	45.0
230.0	64.630	-182437.0	-437833.0	41.7
244.0	77.370	-149067.0	-363331.0	41.0
258.0	90.110	-116120.0	-288828.0	40.2
272.0	102.850	-86405.7	-214326.0	40.3
286.0	115.590	-52241.8	-139824.0	37.4
299.0	127.420	-16763.6	-70643.0	23.7

LONGITUDINAL STRENGTH CRITERIA WITH NO.4 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-4658.2	MT	-10829.0	43.0	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-241698.0	MT m	-500528.0	48.3	36.223	198.8	PASS - FLOODED LIMITS
MAX Shearing Force	3236.3	MT			127.415	299.0	
MIN Shearing Force	-4658.2	MT			-101.895	47.0	
HOG Bending Moment	342.0	MT m			-127.802	14.6	
SAG Bending Moment	-241698.0	MT m			36.223	198.8	

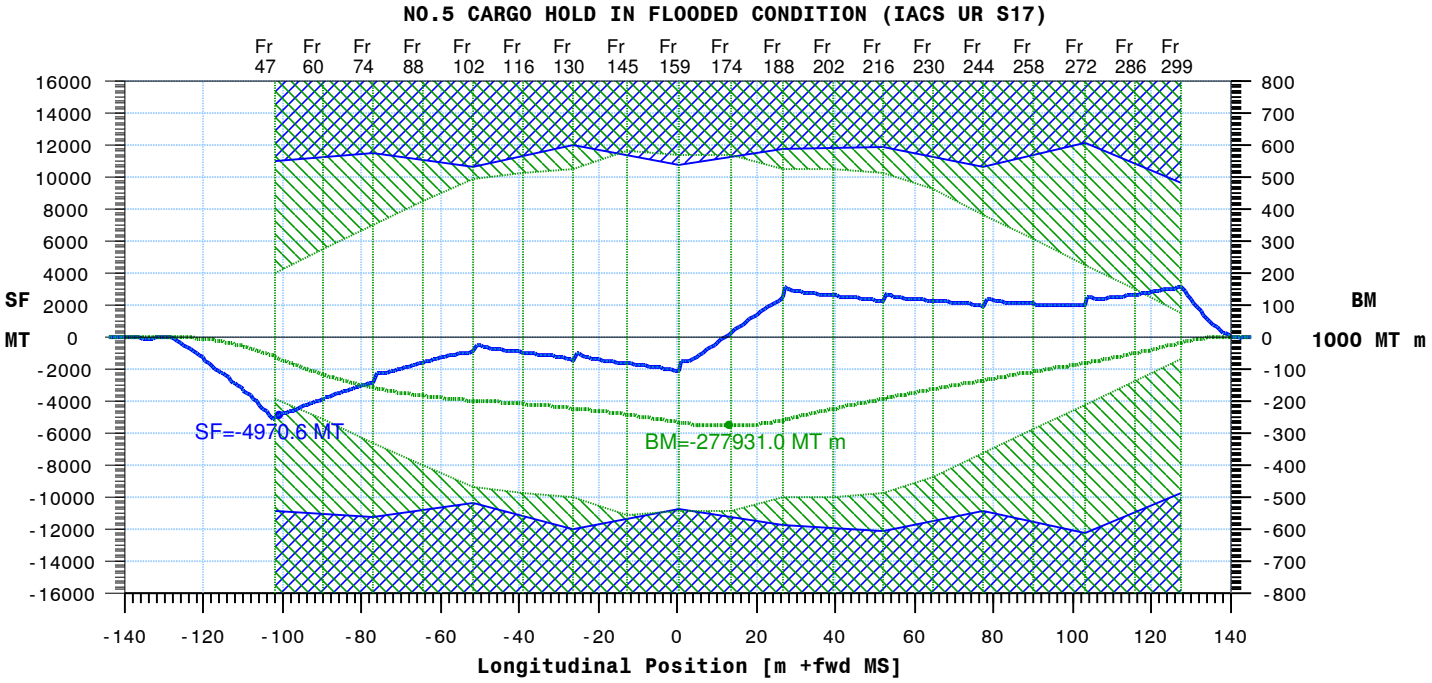
No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
4	NO.4 CARGO HOLD		Flooded (0.30 perm)	5189.35	5062.78	39.851	0.033	10.975
	Damage Inflow			5189.35	5062.78	39.851	0.033	10.975

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.087	m
DRAFT CORRESPONDING	Tcf	18.560	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	18.373	m	METACENTRIC HEIGHT	GM	4.171	m
DRAFT A.P.	Tap	18.737	m	FREE SURFACE MOMENT	FSM	7820.76	MT m
DRAFT MEAN	Tms	18.555	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	0.364	m by STERN	METACENTRIC HEIGHT CORR.	GMc	4.132	m
LONG. CENTER BUOYANCY	LCB	7.242	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.955	m
LONG. CENTER FLOTATION	LCF	-3.809	m +fwdMS	PROPELLER IMMERSION	P.I	223.7	%
MOMENT TO CHANGE TRIM	MCT	2378.10	MT m / cm	AHEAD VISIBILITY	A.V	192.7	m
TONS PER CENTIMETRE	TPC	116.17	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-4970.6	-10829.0	45.9
73.99	-77.335	-2834.1	-11296.0	25.1
74.01	-77.325	-2830.4	-11296.0	25.1
101.99	-51.855	-923.9	-10392.0	8.9
102.01	-51.845	-920.9	-10392.0	8.9
129.99	-26.375	-1441.3	-11987.0	12.0
130.01	-26.365	-1438.9	-11987.0	12.0
158.99	0.015	-2135.8	-10717.0	19.9
159.01	0.025	-2132.6	-10717.0	19.9
187.99	26.405	2443.5	11770.0	20.8
188.01	26.415	2447.9	11770.0	20.8
215.99	51.885	2217.9	11911.0	18.6
216.01	51.895	2220.5	11911.0	18.6
243.99	77.365	1933.5	10577.0	18.3
244.01	77.375	1936.1	10577.0	18.3
271.99	102.845	1949.7	12072.0	16.2
272.01	102.855	1952.7	12072.0	16.2
298.99	127.415	3178.1	9631.0	33.0

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-63326.4	-190969.0	33.2
60.0	-90.070	-115684.0	-258205.0	44.8
74.0	-77.330	-158039.0	-330614.0	47.8
88.0	-64.590	-183637.0	-403023.0	45.6
102.0	-51.850	-198967.0	-470219.0	42.3
116.0	-39.110	-208577.0	-484873.0	43.0
130.0	-26.370	-223448.0	-499527.0	44.7
145.0	-12.720	-242574.0	-554374.0	43.8
159.0	0.020	-266329.0	-543665.0	49.0
174.0	13.670	-277663.0	-543665.0	51.1
188.0	26.410	-259851.0	-500528.0	51.9
202.0	39.150	-224547.0	-500528.0	44.9
216.0	51.890	-193531.0	-489170.0	39.6
230.0	64.630	-162664.0	-437833.0	37.2
244.0	77.370	-135576.0	-363331.0	37.3
258.0	90.110	-107879.0	-288828.0	37.4
272.0	102.850	-82205.4	-214326.0	38.4
286.0	115.590	-50725.5	-139824.0	36.3
299.0	127.420	-16494.6	-70643.0	23.3

LONGITUDINAL STRENGTH CRITERIA WITH NO.5 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-4970.6	MT	-10829.0	45.9	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-269309.0	MT m	-515934.0	52.2	21.860	183.0	PASS - FLOODED LIMITS
MAX Shearing Force	3178.1	MT			127.415	299.0	
MIN Shearing Force	-4970.6	MT			-101.895	47.0	
HOG Bending Moment	136.9	MT m			140.493	315.3	
SAG Bending Moment	-277931.0	MT m			11.915	172.1	

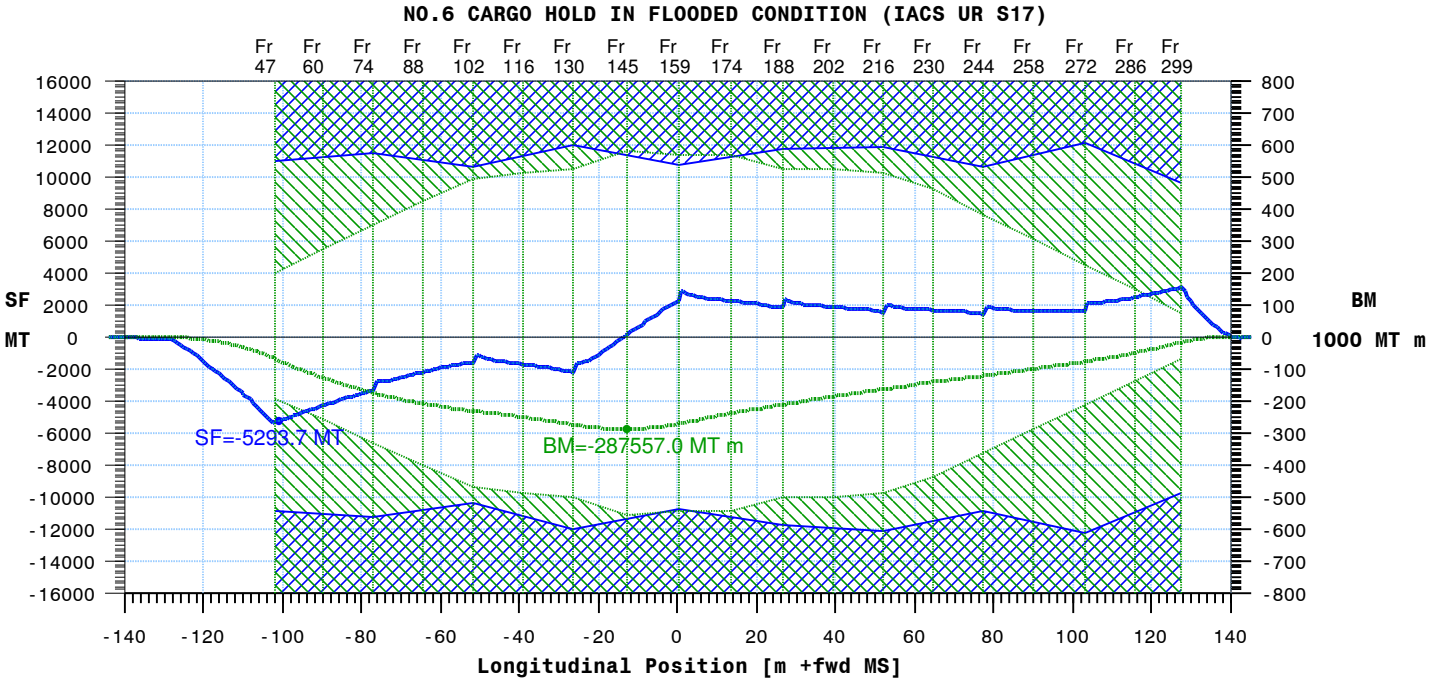
No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
5	NO.5 CARGO HOLD		Flooded (0.30 perm)	5335.40	5205.27	14.015	0.033	11.023
	Damage Inflow			5335.40	5205.27	14.015	0.033	11.023

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.078	m
DRAFT CORRESPONDING	Tcf	18.572	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	18.114	m	METACENTRIC HEIGHT	GM	4.162	m
DRAFT A.P.	Tap	19.021	m	FREE SURFACE MOMENT	FSM	7835.67	MT m
DRAFT MEAN	Tms	18.567	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	0.908	m by STERN	METACENTRIC HEIGHT CORR.	GMc	4.123	m
LONG. CENTER BUOYANCY	LCB	7.233	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.955	m
LONG. CENTER FLOTATION	LCF	-1.547	m +fwdMS	PROPELLER IMMERSION	P.I	227.1	%
MOMENT TO CHANGE TRIM	MCT	2440.02	MT m / cm	AHEAD VISIBILITY	A.V	205.7	m
TONS PER CENTIMETRE	TPC	116.12	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-5293.7	-10829.0	48.9
73.99	-77.335	-3363.9	-11296.0	29.8
74.01	-77.325	-3360.3	-11296.0	29.7
101.99	-51.855	-1614.1	-10392.0	15.5
102.01	-51.845	-1611.2	-10392.0	15.5
129.99	-26.375	-2229.9	-11987.0	18.6
130.01	-26.365	-2226.7	-11987.0	18.6
158.99	0.015	2274.1	10717.0	21.2
159.01	0.025	2278.3	10717.0	21.3
187.99	26.405	1833.0	11770.0	15.6
188.01	26.415	1835.7	11770.0	15.6
215.99	51.885	1555.0	11911.0	13.1
216.01	51.895	1557.7	11911.0	13.1
243.99	77.365	1424.4	10577.0	13.5
244.01	77.375	1427.1	10577.0	13.5
271.99	102.845	1654.7	12072.0	13.7
272.01	102.855	1657.8	12072.0	13.7
298.99	127.415	3114.0	9631.0	32.3

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-69435.3	-190969.0	36.4
60.0	-90.070	-126227.0	-258205.0	48.9
74.0	-77.330	-174680.0	-330614.0	52.8
88.0	-64.590	-207591.0	-403023.0	51.5
102.0	-51.850	-231254.0	-470219.0	49.2
116.0	-39.110	-250037.0	-484873.0	51.6
130.0	-26.370	-274707.0	-499527.0	55.0
145.0	-12.720	-287462.0	-554374.0	51.9
159.0	0.020	-271465.0	-543665.0	49.9
174.0	13.670	-237883.0	-543665.0	43.8
188.0	26.410	-211655.0	-500528.0	42.3
202.0	39.150	-185674.0	-500528.0	37.1
216.0	51.890	-163462.0	-489170.0	33.4
230.0	64.630	-140615.0	-437833.0	32.1
244.0	77.370	-120568.0	-363331.0	33.2
258.0	90.110	-98734.6	-288828.0	34.2
272.0	102.850	-77558.5	-214326.0	36.2
286.0	115.590	-49055.0	-139824.0	35.1
299.0	127.420	-16200.7	-70643.0	22.9

LONGITUDINAL STRENGTH CRITERIA WITH NO.6 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-5293.7	MT	-10829.0	48.9	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-274718.0	MT m	-499547.0	55.0	-26.365	130.0	PASS - FLOODED LIMITS
MAX Shearing Force	3114.0	MT			127.415	299.0	
MIN Shearing Force	-5293.7	MT			-101.895	47.0	
HOG Bending Moment	137.0	MT m			140.491	315.3	
SAG Bending Moment	-287557.0	MT m			-13.773	143.8	

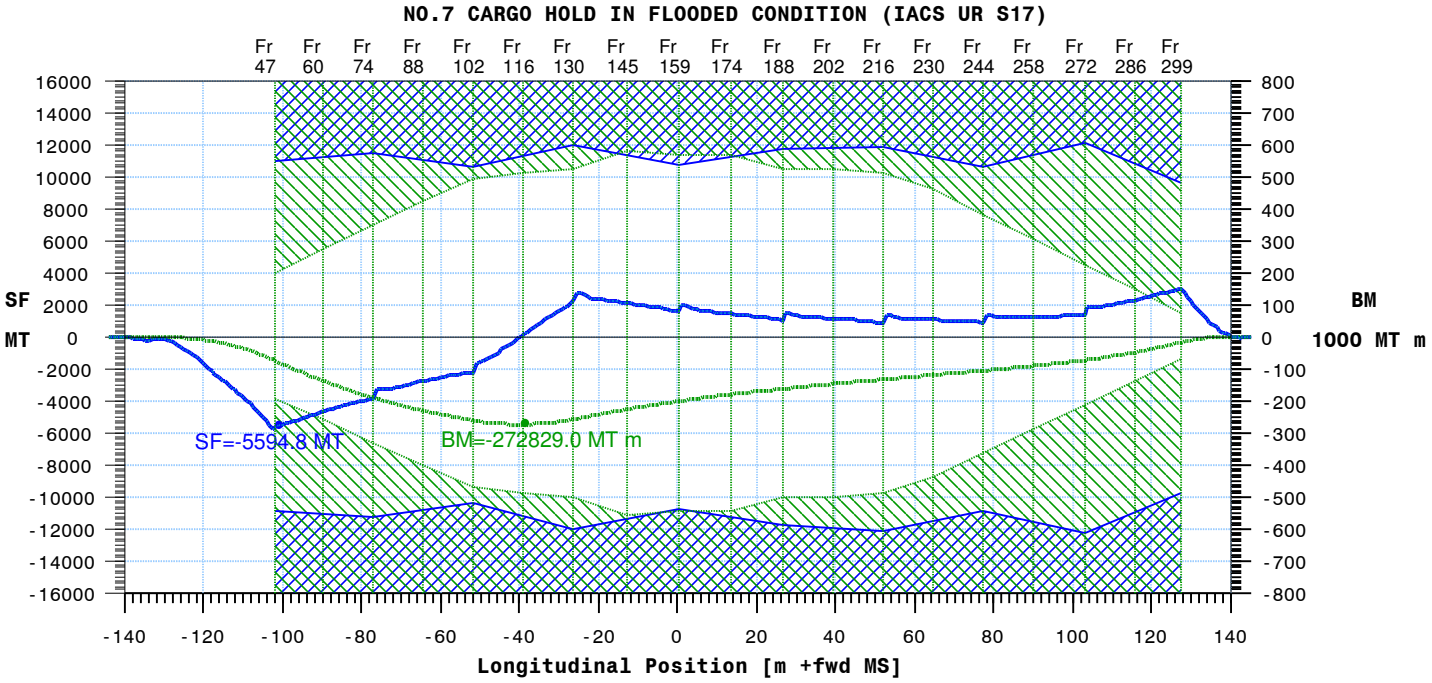
No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
6	NO.6 CARGO HOLD		Flooded (0.30 perm)	5376.14	5245.02	-12.374	0.031	11.080
	Damage Inflow			5376.14	5245.02	-12.374	0.031	11.080

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.110	m
DRAFT CORRESPONDING	Tcf	18.566	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	17.826	m	METACENTRIC HEIGHT	GM	4.194	m
DRAFT A.P.	Tap	19.315	m	FREE SURFACE MOMENT	FSM	7865.01	MT m
DRAFT MEAN	Tms	18.570	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	1.489	m by STERN	METACENTRIC HEIGHT CORR.	GMc	4.155	m
LONG. CENTER BUOYANCY	LCB	7.224	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.956	m
LONG. CENTER FLOTATION	LCF	0.898	m +fwdMS	PROPELLER IMMERSION	P.I	230.7	%
MOMENT TO CHANGE TRIM	MCT	2444.55	MT m / cm	AHEAD VISIBILITY	A.V	220.9	m
TONS PER CENTIMETRE	TPC	116.20	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-5594.8	-10829.0	51.7
73.99	-77.335	-3854.2	-11296.0	34.1
74.01	-77.325	-3850.7	-11296.0	34.1
101.99	-51.855	-2247.8	-10392.0	21.6
102.01	-51.845	-2244.1	-10392.0	21.6
129.99	-26.375	2205.0	11994.0	18.4
130.01	-26.365	2209.2	11994.0	18.4
158.99	0.015	1598.1	10717.0	14.9
159.01	0.025	1600.4	10717.0	14.9
187.99	26.405	1056.9	11770.0	9.0
188.01	26.415	1059.6	11770.0	9.0
215.99	51.885	879.3	11911.0	7.4
216.01	51.895	882.1	11911.0	7.4
243.99	77.365	909.1	10577.0	8.6
244.01	77.375	911.9	10577.0	8.6
271.99	102.845	1357.9	12072.0	11.2
272.01	102.855	1361.0	12072.0	11.3
298.99	127.415	3050.0	9631.0	31.7

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-75155.8	-190969.0	39.4
60.0	-90.070	-136073.0	-258205.0	52.7
74.0	-77.330	-190178.0	-330614.0	57.5
88.0	-64.590	-229843.0	-403023.0	57.0
102.0	-51.850	-261171.0	-470219.0	55.5
116.0	-39.110	-272768.0	-484873.0	56.3
130.0	-26.370	-257416.0	-499527.0	51.5
145.0	-12.720	-225186.0	-554374.0	40.6
159.0	0.020	-201323.0	-543665.0	37.0
174.0	13.670	-178760.0	-543665.0	32.9
188.0	26.410	-162612.0	-500528.0	32.5
202.0	39.150	-146262.0	-500528.0	29.2
216.0	51.890	-133041.0	-489170.0	27.2
230.0	64.630	-118355.0	-437833.0	27.0
244.0	77.370	-105447.0	-363331.0	29.0
258.0	90.110	-89540.9	-288828.0	31.0
272.0	102.850	-72897.1	-214326.0	34.0
286.0	115.590	-47383.5	-139824.0	33.9
299.0	127.420	-15907.4	-70643.0	22.5

LONGITUDINAL STRENGTH CRITERIA WITH NO.7 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-5594.8	MT	-10829.0	51.7	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-202389.0	MT m	-351302.0	57.6	-73.690	78.0	PASS - FLOODED LIMITS
MAX Shearing Force	3050.0	MT			127.415	299.0	
MIN Shearing Force	-5594.8	MT			-101.895	47.0	
HOG Bending Moment	137.0	MT m			140.489	315.3	
SAG Bending Moment	-272829.0	MT m			-39.962	115.1	

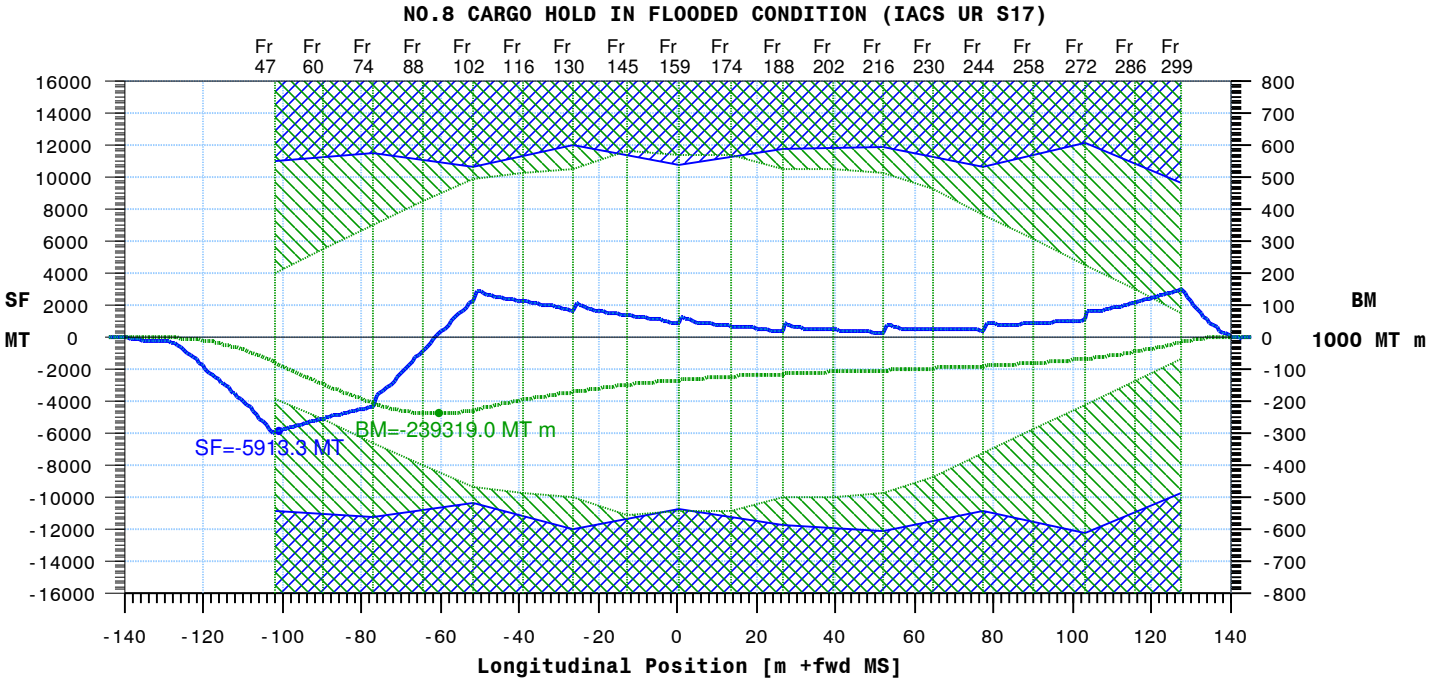
No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
7	NO.7 CARGO HOLD		Flooded (0.30 perm)	5299.78	5170.52	-38.423	0.029	11.135
	Damage Inflow			5299.78	5170.52	-38.423	0.029	11.135

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.180	m
DRAFT CORRESPONDING	Tcf	18.540	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	17.537	m	METACENTRIC HEIGHT	GM	4.264	m
DRAFT A.P.	Tap	19.590	m	FREE SURFACE MOMENT	FSM	7905.46	MT m
DRAFT MEAN	Tms	18.563	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	2.053	m by STERN	METACENTRIC HEIGHT CORR.	GMc	4.224	m
LONG. CENTER BUOYANCY	LCB	7.215	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.956	m
LONG. CENTER FLOTATION	LCF	3.111	m +fwdMS	PROPELLER IMMERSION	P.I	234.1	%
MOMENT TO CHANGE TRIM	MCT	2393.54	MT m / cm	AHEAD VISIBILITY	A.V	237.3	m
TONS PER CENTIMETRE	TPC	116.42	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-5913.3	-10829.0	54.6
73.99	-77.335	-4374.9	-11296.0	38.7
74.01	-77.325	-4370.7	-11296.0	38.7
101.99	-51.855	2275.6	10605.0	21.5
102.01	-51.845	2280.3	10605.0	21.5
129.99	-26.375	1630.7	11994.0	13.6
130.01	-26.365	1633.1	11994.0	13.6
158.99	0.015	839.7	10717.0	7.8
159.01	0.025	842.1	10717.0	7.9
187.99	26.405	326.7	11770.0	2.8
188.01	26.415	329.4	11770.0	2.8
215.99	51.885	237.7	11911.0	2.0
216.01	51.895	240.5	11911.0	2.0
243.99	77.365	416.4	10577.0	3.9
244.01	77.375	419.3	10577.0	4.0
271.99	102.845	1072.6	12072.0	8.9
272.01	102.855	1075.9	12072.0	8.9
298.99	127.415	2988.3	9631.0	31.0

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-81203.6	-190969.0	42.5
60.0	-90.070	-146490.0	-258205.0	56.7
74.0	-77.330	-206591.0	-330614.0	62.5
88.0	-64.590	-237960.0	-403023.0	59.0
102.0	-51.850	-228221.0	-470219.0	48.5
116.0	-39.110	-196294.0	-484873.0	40.5
130.0	-26.370	-171334.0	-499527.0	34.3
145.0	-12.720	-149094.0	-554374.0	26.9
159.0	0.020	-134848.0	-543665.0	24.8
174.0	13.670	-122611.0	-543665.0	22.6
188.0	26.410	-115920.0	-500528.0	23.2
202.0	39.150	-108654.0	-500528.0	21.7
216.0	51.890	-103953.0	-489170.0	21.3
230.0	64.630	-97030.5	-437833.0	22.2
244.0	77.370	-90937.5	-363331.0	25.0
258.0	90.110	-80706.1	-288828.0	27.9
272.0	102.850	-68412.5	-214326.0	31.9
286.0	115.590	-45774.1	-139824.0	32.7
299.0	127.420	-15624.8	-70643.0	22.1

LONGITUDINAL STRENGTH CRITERIA WITH NO.8 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-5913.3	MT	-10829.0	54.6	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-213523.0	MT m	-340958.0	62.6	-75.510	76.0	PASS - FLOODED LIMITS
MAX Shearing Force	2988.3	MT			127.415	299.0	
MIN Shearing Force	-5913.3	MT			-101.895	47.0	
HOG Bending Moment	137.1	MT m			140.488	315.3	
SAG Bending Moment	-239319.0	MT m			-61.333	91.6	

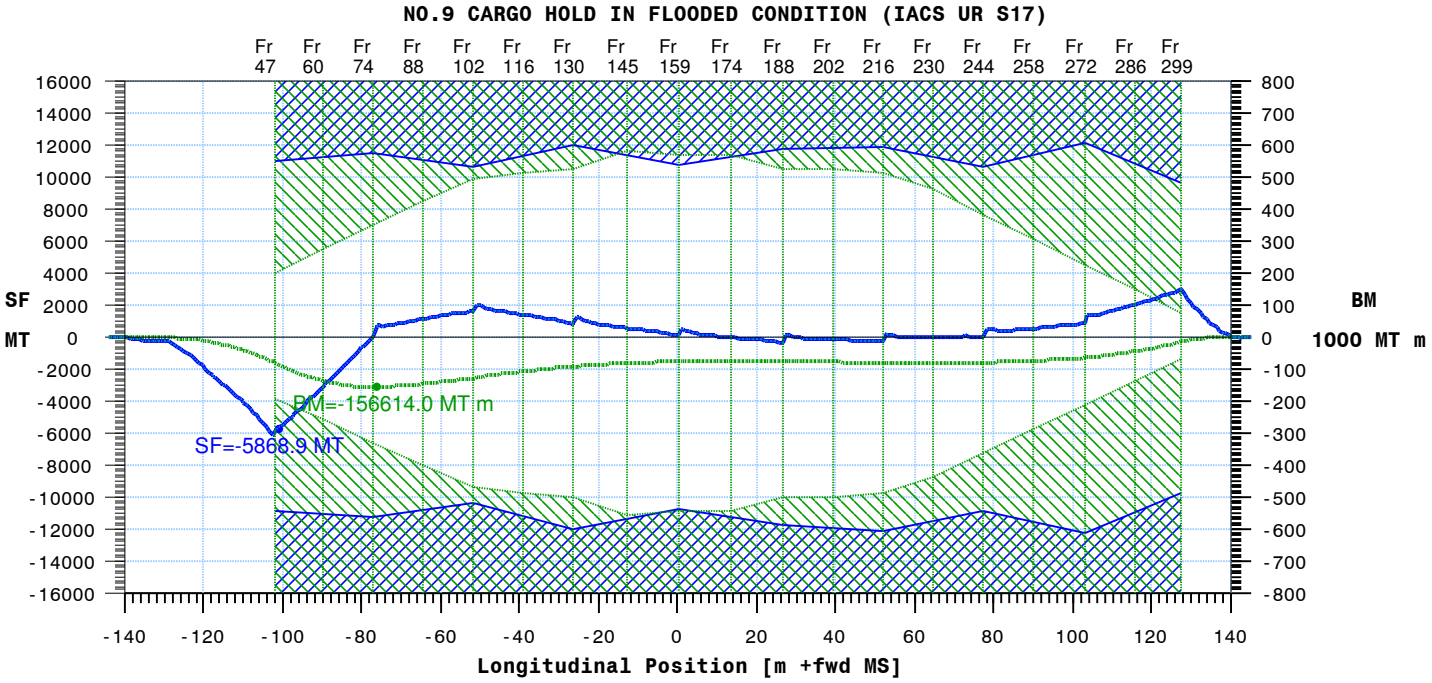
No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
8	NO.8 CARGO HOLD		Flooded (0.30 perm)	5352.07	5221.53	-63.846	0.026	11.301
	Damage Inflow			5352.07	5221.53	-63.846	0.026	11.301

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.246	m
DRAFT CORRESPONDING	Tcf	18.518	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	17.257	m	METACENTRIC HEIGHT	GM	4.331	m
DRAFT A.P.	Tap	19.877	m	FREE SURFACE MOMENT	FSM	7956.17	MT m
DRAFT MEAN	Tms	18.567	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	2.619	m by STERN	METACENTRIC HEIGHT CORR.	GMc	4.290	m
LONG. CENTER BUOYANCY	LCB	7.207	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.956	m
LONG. CENTER FLOTATION	LCF	5.171	m +fwdMS	PROPELLER IMMERSION	P.I	237.6	%
MOMENT TO CHANGE TRIM	MCT	2294.25	MT m / cm	AHEAD VISIBILITY	A.V	255.0	m
TONS PER CENTIMETRE	TPC	116.56	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.

7. HOMOGENEOUS FULL LOAD DEPARTURE FULL BUNKER



S H E A R F O R C E S

Frame No.	Position m+fwdMS	Sh.Force MT	Limit MT	Perc. %
47.01	-101.895	-5868.9	-10829.0	54.2
73.99	-77.335	-14.2	-11296.0	0.1
74.01	-77.325	-9.0	-11296.0	0.1
101.99	-51.855	1581.5	10605.0	14.9
102.01	-51.845	1584.3	10605.0	14.9
129.99	-26.375	812.1	11994.0	6.8
130.01	-26.365	814.4	11994.0	6.8
158.99	0.015	80.4	10717.0	0.8
159.01	0.025	82.8	10717.0	0.8
187.99	26.405	-340.8	-11770.0	2.9
188.01	26.415	-338.0	-11770.0	2.9
215.99	51.885	-310.5	-12107.0	2.6
216.01	51.895	-307.6	-12107.0	2.5
243.99	77.365	17.7	10577.0	0.2
244.01	77.375	20.6	10577.0	0.2
271.99	102.845	852.2	12072.0	7.1
272.01	102.855	855.5	12072.0	7.1
298.99	127.415	2942.6	9631.0	30.6

B E N D I N G M O M E N T S

Frame No.	Position m+fwdMS	B.Moment MT m	Limit MT m	Perc. %
47.0	-101.900	-82698.8	-190969.0	43.3
60.0	-90.070	-136445.0	-258205.0	52.8
74.0	-77.330	-156614.0	-330614.0	47.4
88.0	-64.590	-146108.0	-403023.0	36.3
102.0	-51.850	-128215.0	-470219.0	27.3
116.0	-39.110	-106936.0	-484873.0	22.1
130.0	-26.370	-92522.6	-499527.0	18.5
145.0	-12.720	-81284.9	-554374.0	14.7
159.0	0.020	-76928.6	-543665.0	14.1
174.0	13.670	-74769.3	-543665.0	13.8
188.0	26.410	-76897.5	-500528.0	15.4
202.0	39.150	-77787.7	-500528.0	15.5
216.0	51.890	-80482.1	-489170.0	16.5
230.0	64.630	-80099.1	-437833.0	18.3
244.0	77.370	-79593.3	-363331.0	21.9
258.0	90.110	-73901.0	-288828.0	25.6
272.0	102.850	-65008.5	-214326.0	30.3
286.0	115.590	-44570.3	-139824.0	31.9
299.0	127.420	-15416.2	-70643.0	21.8

LONGITUDINAL STRENGTH CRITERIA WITH NO.9 CARGO HOLD FLOODED

DESCRIPTION	ACT.VALUE	UNIT	PER.LIMIT	PERCENT	POSITION	FRAME.No	STATUS
Cr. Shearing Force	-5868.9	MT	-10829.0	54.2	-101.895	47.0	PASS - FLOODED LIMITS
Cr. Bending Moment	-137851.0	MT m	-260791.0	52.9	-89.615	60.5	PASS - FLOODED LIMITS
MAX Shearing Force	2942.6	MT			127.415	299.0	
MIN Shearing Force	-5868.9	MT			-101.895	47.0	
HOG Bending Moment	137.1	MT m			140.487	315.3	
SAG Bending Moment	-156614.0	MT m			-77.314	74.0	

No	Inflow	FILL %	DESCRIPTION	WEIGHT MT	VOLUME m3	LCG m+fwdMS	TCG m+stbCL	VCG m abvBL
9	NO.9 CARGO HOLD		Flooded (0.30 perm)	4617.59	4504.96	-89.070	0.029	12.028
	Damage Inflow			4617.59	4504.96	-89.070	0.029	12.028

HYDROSTATICS - BASED ON DIRECT STABILITY CALCULATIONS

DISPLACEMENT	Displ	197852.00	MT	TRANSVERSE METACENTRE	KM	18.254	m
DRAFT CORRESPONDING	Tcf	18.430	m	VERT. CENTER OF GRAVITY	KG	13.916	m
DRAFT F.P.	Tfp	17.052	m	METACENTRIC HEIGHT	GM	4.338	m
DRAFT A.P.	Tap	19.958	m	FREE SURFACE MOMENT	FSM	7985.26	MT m
DRAFT MEAN	Tms	18.505	m	FREE SURFACE CORRECTION	GGc	0.040	m
TRIM	trim	2.907	m by STERN	METACENTRIC HEIGHT CORR.	GMc	4.298	m
LONG. CENTER BUOYANCY	LCB	7.202	m +fwdMS	VERT. CEN. GRAVITY CORR.	KGc	13.956	m
LONG. CENTER FLOTATION	LCF	7.163	m +fwdMS	PROPELLER IMMERSION	P.I	238.6	%
MOMENT TO CHANGE TRIM	MCT	2148.23	MT m / cm	AHEAD VISIBILITY	A.V	266.1	m
TONS PER CENTIMETRE	TPC	116.60	MT/cm	SEA WATER DENSITY	den	1.025	MT/m3

Note: Drafts are measured from the bottom of hull. Keel thickness of 0.020 m is included.