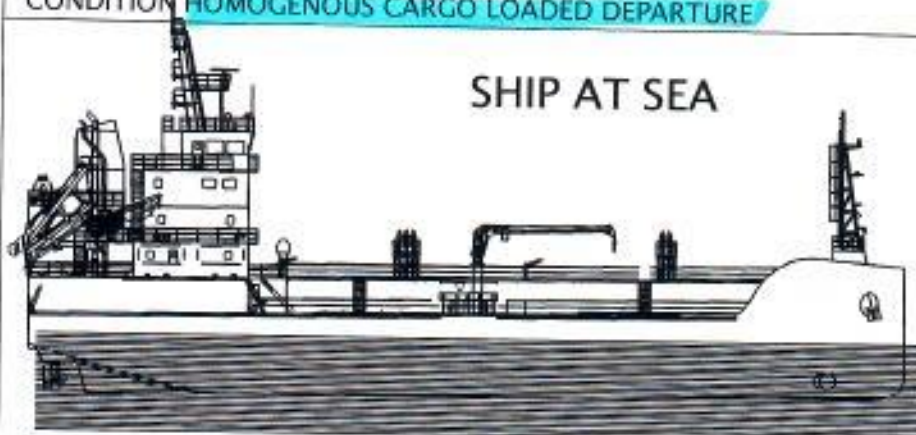


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M/T BAHAMA BLUE

CONDITION **HOMOGENOUS CARGO LOADED DEPARTURE**

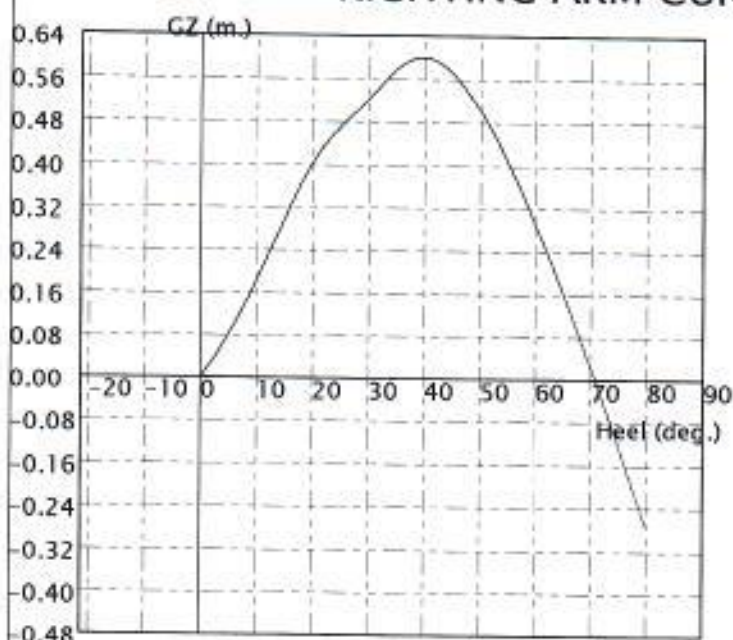
31/01/2021



SHIP AT SEA

Draught correspondig	4.059 (m.)
Draft A.P.	:4.292 (m.)
Draft M.	:4.042 (m.)
Draft F.P.	:3.792 (m.)
Trim	:0.500 (m.)
Heel	:0.2 (deg)
Propeller immersion	:239.20(%)
Sea water density	:1.025 (t/m3)

RIGHTING ARM CURVE and IMO CRITERIA



	CURRENT	IMO
Metecenter Height GM (m.):	0.632	0.150
Area up to 30 Deg.(m.r.)	0.148	0.055
Area up to 40.0 Deg.(m.r.)	0.249	0.090
Area btw. 30 and 40.0 deg.(m.r.)	0.101	0.030
GZ at 30 Deg. (m.)	0.524	
Maximum GZ. (m.)	0.601	0.200
Maximum GZ location (Deg.)	39.70	25.00
Downflooding Angle (Deg.)	56.6	
Deck Imm. Angle (deg.)	14.5	

STATIC AND DYNAMIC STABILITY

HEEL ANGLE	:	0	10	20	30	40	50	60	70	80
KN	(m.):	0.000	0.928	1.845	2.617	3.283	3.692	3.890	3.922	3.807
VCGxsin (PHI)	(m.):	0.000	0.753	1.483	2.167	2.786	3.321	3.754	4.073	4.269
FSM COR.	(m.):	0.000	0.011	0.022	0.032	0.041	0.049	0.055	0.060	0.063
CARGO TANK FSM COR	(m.):	0.000	0.146	0.081	0.055	0.041	0.031	0.024	0.019	0.015
TR. HEELING ARM	(m.):	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.000
RIGHTINING ARM	(m.):	-0.002	0.184	0.404	0.524	0.601	0.504	0.293	0.024	-0.275
DYNAMIC STABILITY	(m.r.):	0.000	0.015	0.066	0.148	0.249	0.348	0.418	0.446	0.447

31.01.2021.

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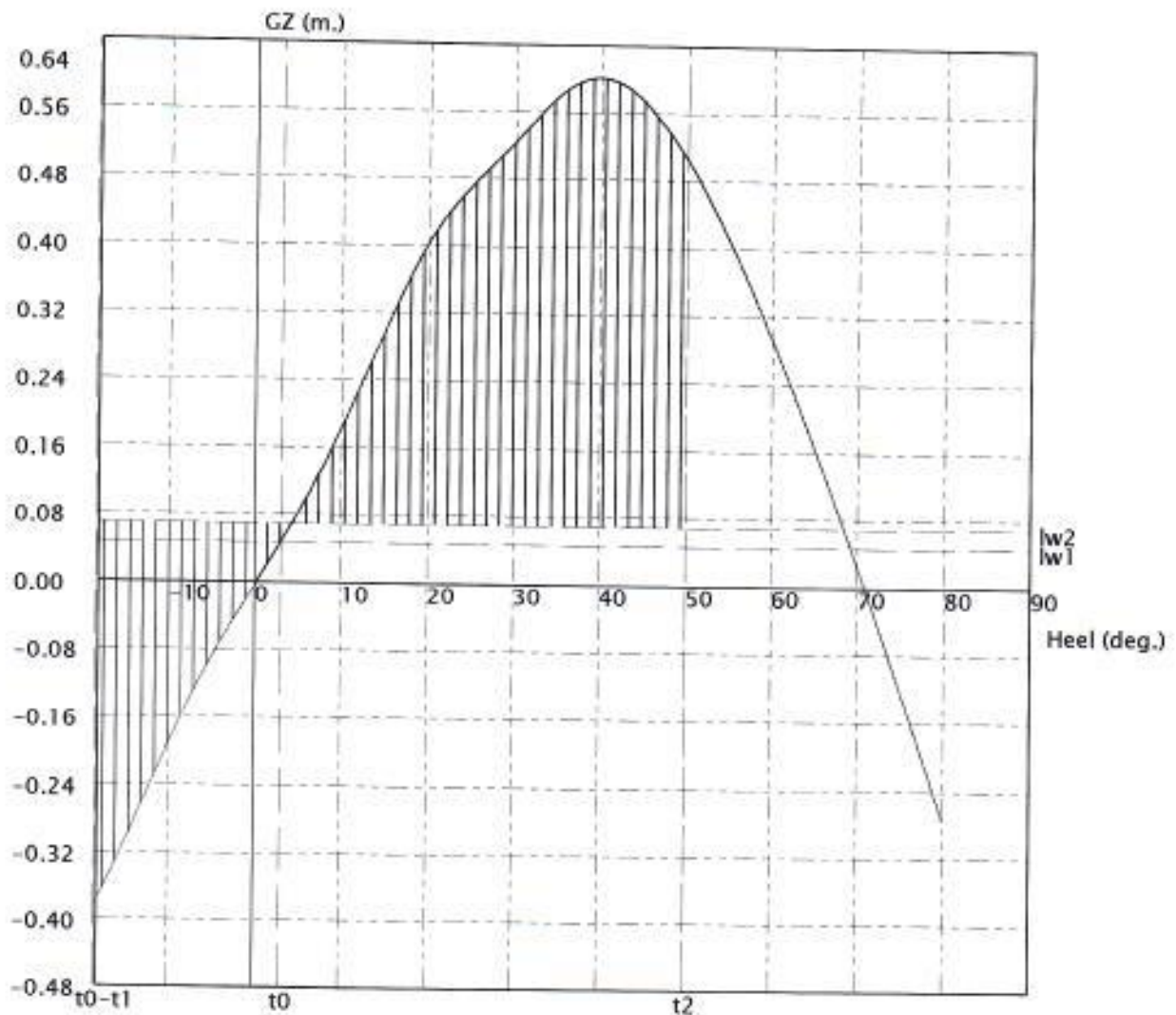
HYDROSTATICS FOR ACTUAL CONDITION

Volume	V	:2670.3	(m3.)
Sea water density	d	:1.025	(t/m3.)
Displacement	disp.	2737.1	(t.)
Draught correspondig	d lcf.	:4.059	(m.)
Longitudinal center of flotation	LCF	:28.823	(m.)
Longitudinal center of bouyancy	LCB	:30.151	(m.)
Moment to change trim 1 cm.	MT1 cm	:39.126	(t.m./cm)
Total trim over perpendiculars	t	:0.500	(m.)
Draught at Fore Perpendicular	df	:3.792	(m.)
Draught at Aft Perpendicular	da	:4.292	(m.)
Transverse metecenter above baseline	KM	:5.300	(m.)
Vertical center of gravity	VCG	:4.335	(m.)
Transverse Metecenter Height	GM	:0.965	(m.)
Free surface correction	GG'	:0.334	(m.)
Corrected Metecenter Height	GM'	:0.632	(m.)
Transverse Moment		:-4.61	(t.m.)
List		:-0.15	(deg.)
Tonnes per 1 cm immersion	Tpcm	:7.520	(t./cm.)
Draught at Aft Mark	d aft mark	:4.301	(m.)
Draught at Mid Mark	d mid mark	4.064	(m.)
Draught at Fore Mark	d fore mark	3.832	(m.)

DEADWEIGHT SUMMARY

	WEIGHT (ton)	VCG (m.)	LCG (m.)	TCG (m.)	FSM (tm.)	HM (tm.)
CARGO TANKS	1697.31	3.430	34.682	0.000	737.96	-
BALLAST	0.00	0.000	0.000	0.000	0.00	-
FUELOIL	0.00	0.000	0.000	0.000	0.00	-
MDO	10.58	1.500	31.580	0.000	65.02	-
LUB OIL	0.00	0.000	0.000	0.000	0.00	-
WATER	26.93	1.358	47.277	0.000	72.11	-
MISC.	26.79	1.333	7.501	0.069	37.79	-
EXTRA WEIGHT	1.50	11.500	7.350	-1.067	0.00	-
DWT	1763.11	3.362	34.419	0.000	912.89	0.00
LIGHT SHIP	973.99	6.095	22.424	-0.005	0.00	0.00
DISPLACEMENT	2737.10	4.335	30.151	-0.002	912.89	0.00

SEVERE WIND & ROLLING CRITERION (WEATHER CRITERION)



Theta0 (Angle of heel under action of steady wind) :	3.0	<= 11.6deg.
Thetadeck (Deck Immersion Angle) :	14.5	
Theta1 (Angle of roll to windward due to wave action) :	21.5	
Thetaf (Angle of downflooding (tetaF)) :	56.6	
Theta2 (Angle of downflooding (tetaF) or 50 deg or tetaC whichever less) :	50.0	
Lw1 (The wind heeling lever) :	0.046	
Lw2 = 1.5*Lw1	0.069	
Area A (m.rad.)	0.084	
Area B (m.rad.)	0.290	=>Area A

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CARGO AREA TANKS DETAILS

CARGO TANKS	SG (t/m3)	FILL %	WEIGHT (ton)	VCGt(m.)	LCGt(m.)	TCGt(m.)	FSM (tm.)
CARGO TANK 1 P	0.9851	98.00	184.89	3.438	49.675	-2.475	82.5
CARGO TANK 1 S	0.9851	98.00	184.89	3.438	49.675	2.475	82.5
CARGO TANK 2 P	0.9851	98.00	217.14	3.428	40.599	-2.492	96.2
CARGO TANK 2 S	0.9851	98.00	217.14	3.428	40.599	2.492	96.2
CARGO TANK 3 P	0.9851	98.00	217.14	3.428	30.800	-2.492	96.2
CARGO TANK 3 S	0.9851	98.00	217.14	3.428	30.800	2.492	96.2
CARGO TANK 4 P	0.9851	98.00	201.67	3.428	21.350	-2.492	89.3
CARGO TANK 4 S	0.9851	98.00	201.67	3.428	21.350	2.492	89.3
SLOP TANK P	0.9851	98.00	27.82	3.428	15.787	-3.446	4.8
SLOP TANK S	0.9851	98.00	27.82	3.428	15.787	3.446	4.8
TOTAL CARGO			1697.308	3.430	34.682	0.000	738.0

BALLAST TANKS	SG (t/m3)	FILL %	WEIGHT (ton)	VCGt(m.)	LCGt(m.)	TCGt(m.)	FSM (tm.)
WATER BALLAST TANK 1 P	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
WATER BALLAST TANK 1 S	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
WATER BALLAST TANK 2 P	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
WATER BALLAST TANK 2 S	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
WATER BALLAST TANK 3 P	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
WATER BALLAST TANK 3 S	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
WATER BALLAST TANK 4 P	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
WATER BALLAST TANK 4 S	1.0250	0.00	0.000	0.000	0.000	0.000	0.0
TOTAL BALLAST			0.000	0.000	0.000	0.000	0.0

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ENGINE ROOM AREA TANKS DETAILS

MDO TANKS	SG (t/m3)	FILL %	WEIGHT (ton)	VCGt(m.)	LCGt(m.)	TCGt(m.)	FSM (tm.)
MDO STORAGE TANK 1 P	0.8500	10.00	2.44	1.384	54.589	-1.967	6.6
MDO STORAGE TANK 1 S	0.8500	10.00	2.44	1.384	54.589	1.967	6.6
MDO STORAGE TANK 2 P	0.8500	10.00	2.08	1.257	11.200	-1.950	23.1
MDO STORAGE TANK 2 S	0.8500	10.00	2.08	1.257	11.200	1.950	23.1
MDO SERVICE TANK S LS	0.8500	10.00	0.77	2.520	13.650	1.950	2.9
MDO SERVICE TANK P	0.8500	10.00	0.77	2.520	13.650	-1.950	2.9
TOTAL MDO			10.583	1.500	31.580	0.000	65.0
FW TANKS	SG (t/m3)	FILL %	WEIGHT (ton)	VCGt(m.)	LCGt(m.)	TCGt(m.)	FSM (tm.)
FRESH WATER FP TANK	1.0000	15.00	21.52	0.736	58.948	0.000	70.9
FRESH WATER TANK P	1.0000	10.00	2.70	3.840	0.788	-4.913	0.6
FRESH WATER TANK S	1.0000	10.00	2.70	3.840	0.788	4.913	0.6
TOTAL FW			26.928	1.358	47.277	0.000	72.1
MISC.TANKS	SG (t/m3)	FILL %	WEIGHT (ton)	VCGt(m.)	LCGt(m.)	TCGt(m.)	FSM (tm.)
SLUDGE TANK	1.0000	50.00	5.79	1.171	9.592	-4.674	2.3
SEWAGE HOLDING TANK	1.0000	50.00	7.57	1.449	5.906	-1.972	25.8
DIRTY OIL TANK	1.0000	50.00	3.14	1.605	5.979	3.562	3.4
BILGE WATER OILY TANK	1.0000	50.00	5.79	1.171	9.592	4.674	2.3
OVERFLOW TANK	1.0000	50.00	4.51	1.364	5.875	1.245	4.0
TOTAL MISC.			26.794	1.333	7.501	0.069	37.8

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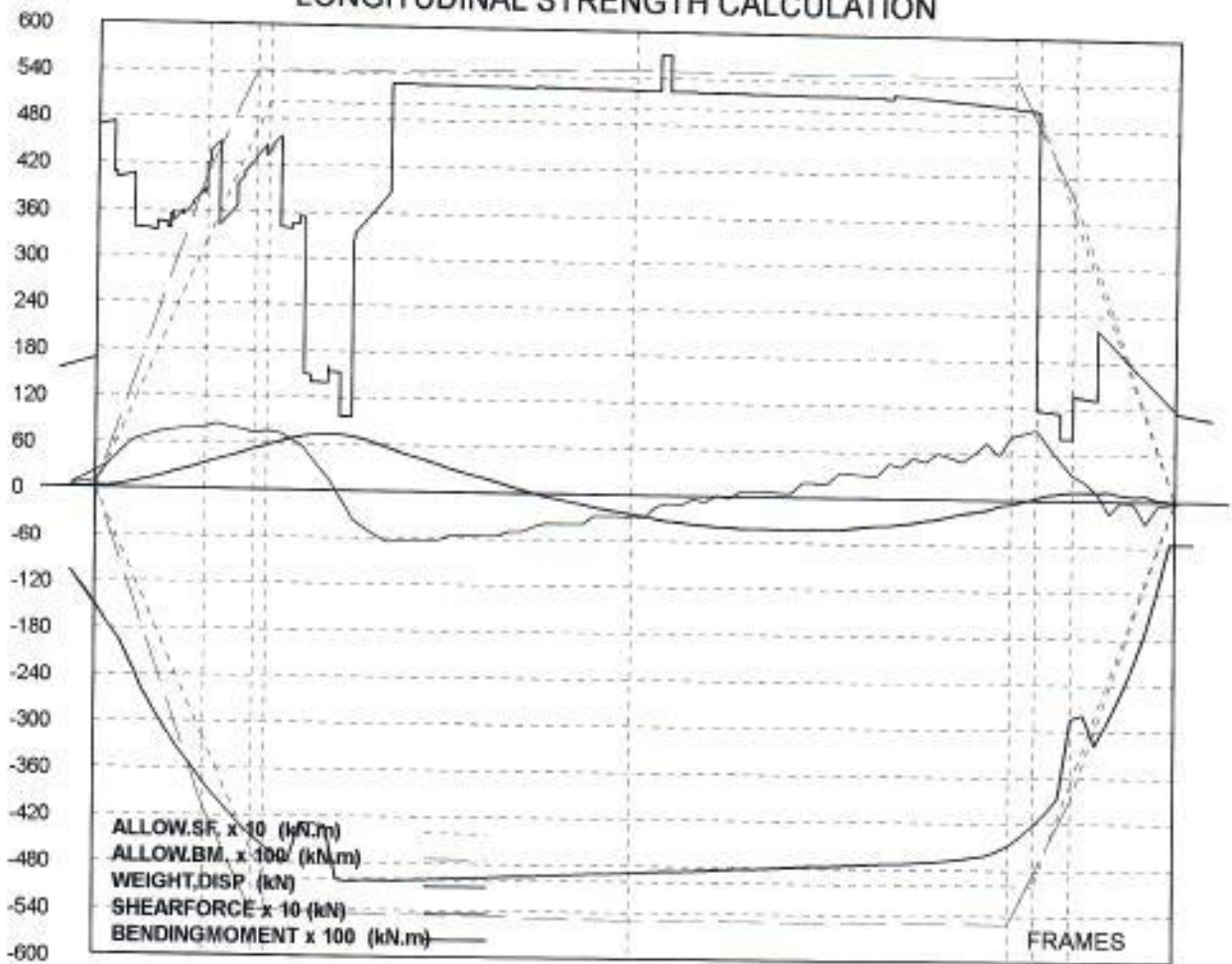
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EXTRA WEIGHTS DETAILS

WEIGHT NAME	WEIGHT (t.)	LCG(m.)	VCG (m.)	TCG (m.)	FSM (m.)	x1(start fr.)	x2(end fr.)
CREW & EFFECT	1.00	7.700	12.500	0.000	0.0	2	20
PROVISION	0.50	6.650	9.500	-3.200	0.0	7	12
TOTAL EXTRAS	1.50	7.350	11.500	-1.067	0.0		

HOGGING

LONGITUDINAL STRENGTH CALCULATION



SAGGING 9 14 44 75 80
13 77

FRAMES	9	13	14	44	75	77	80
ACTUAL B.M.(kN.m)	3403	5381	5801	-2516	-584	322	1144
ALLOWABLE B.M.	40855	54123	54152	-55000	-55000	48584	38959
RELATIVE TO ACT. B.M.(%)	8.3	9.9	10.7	4.6	1.1	0.7	2.9
ACTUAL S.F. (kN)	808	741	763	-291	820	924	326
ALLOWABLE S.F.	3214	4643	5000	-5000	5000	5000	3688
RELATIVE TO ACT. S.F.(%)	25.2	16.0	15.3	5.8	16.4	18.5	8.8

MAXIMUM REL PERC ALLOWABLE BM.(%): 20.1
 MAXIMUM REL PERC ALLOWABLE SF.(%): 25.2
 MAXIMUM BENDING MOMENT : 7335 kN.m
 MAXIMUM SHEAR FORCE (+) : 924 kN.
 MAXIMUM SHEAR FORCE (-) : 653 kN.
 ALLOWABLES ARE SEAGOING VALUES
 POSITION ON SHIP FRAME: 19
 POSITION ON SHIP FRAME: 9
 POSITION ON SHIP FRAME : 19
 POSITION ON SHIP FRAME : 77
 POSITION ON SHIP FRAME : 24