

DEPARTMENT OF TRANSPORTATION  
U. S. COAST GUARD  
CG-998 (Rev. 7-87)

# UNITED STATES COAST GUARD

## STABILITY TEST DATA

SCANDIES ROSE

OFFICIAL No. \_\_\_\_\_

Gross tons \_\_\_\_\_



Description of vessel RAKED STEM, SQUARE STERN  
Type FISHING (CRABBER)  
Builder BENDER SHIPBUILDING MOBILE, ALABAMA  
Hull No. \_\_\_\_\_ Date Built \_\_\_\_\_  
Hull STEEL, MACHINERY AFT, SHORT FORELE,  
SINGLE CHINE  
Machinery (2) GENERAL MOTORS 12V149 DIESELS

Owner LEIF NORDA  
Owner's address \_\_\_\_\_  
Vessel inclined at DUWAMISH SHIPYARD SEATTLE, WASHINGTON  
Date AUG. 28, 1988 Time 10:30 AM  
Test requested by OWNER  
Plans furnished by OWNER  
Offsets measured by B. CULVER/R. MERRILL  
Curves of form computed by B. CULVER/R. MERRILL  
Test conducted by B. CULVER/R. MERRILL  
Stability calculations made by B. CULVER/R. MERRILL  
Duplicate vessels \_\_\_\_\_

Classed by \_\_\_\_\_ Inspected  Safety certificate  Load line   
Route: Ocean  Coastwise  Great Lakes  Bays  Rivers   
Specify route, if limited \_\_\_\_\_

Previous Edition May Be Used

U. S. GOVERNMENT PRINTING OFFICE 16-35871-4

GPO 531-381

No part of a report of a marine casualty investigation shall be admissible as evidence in any civil or administrative proceeding, other than an administrative proceeding initiated by the United States. 46 U.S.C. §6308.

DEPARTMENT OF TRANSPORTATION  
U. S. COAST GUARD  
CG-993-8 (Rev. 7-67)

STABILITY TEST

SCANDIES ROSE

Page \_\_\_ of \_\_\_

SHIP LIGHT-CONDITION I

Ship complete in every respect, with water in boilers at steaming level and liquids in machinery and piping, but with all tanks and bunkers empty and no passengers, crew, cargo, stores, or baggage on board

LIST OF MAJOR EQUIPMENT, ETC., INCLUDED IN CONDITION I, AS SHOWN BALLAST, BOATS, RAFTS, CARGO BOOMS, ANCHORS, GUNS, ARMOR, ETC.					ITEMS	DISPLACEMENT AND WEIGHT Tons	C. G. ABOVE BASE		C. G. FROM M. P.			
ITEMS	WEIGHT Tons	C. G. ABOVE BASE Feet	C. G. FROM M. P.				LEVER	VERTICAL MOMENTS Ft.-tons	FEET AFT	AFTER MOMENTS Ft.-tons	FEET FOR'D	FORWARD MOMENTS Ft.-tons
			Feet For'd	Feet Aft								
					Ship in Condition U	690.49	11.93	8237.55	11.24	7761.11		
					Weight to complete	3.00	15.50	46.50			2.00	6.00
						693.49		8284.05		7755.11		
					Foreign weight—to be deducted	208.14		1444.22		2542.02		
					Ship in Condition I	485.35	14.09	6839.83	10.74	5213.09		
					Molded keel } draft at longitudinal center of flotation corresponding to above displacement for SALT water—					7.526		feet.
					Transverse metacenter above base at L. C. F. draft, uncorrected for trim					19.42		feet.
					Transverse metacenter above base, corrected for trim					21.22		feet.
					C. G. above base					14.09		feet.
					Metacentric height, uncorrected for trim, G. M.					5.33		feet.
					Metacentric height, corrected for trim, G. M.					7.13		feet.
					Longitudinal metacenter above C. G. at L. C. F. draft	150.40						feet.
					Moment to alter trim 1 foot at L. C. F. draft, $\frac{\text{Long'l. GM} \times \Delta}{L}$	503.91						feet-tons.
					C. B. of ship on even keel at L. C. F. draft, aft, <del>10.74</del> of M	1.10						feet.
					C. G. aft, <del>10.74</del> of M	10.74						feet.
					Trimming lever	9.64						feet.
					Trim, aft, <del>10.74</del>							feet.
					$\frac{\text{Displacement} \times \text{lever}}{\text{Moment to trim}}$	9.28						feet.
					Longitudinal center of flotation, aft, <del>10.74</del> of M					5.31		feet.
					Difference between L. C. F. and M draft					1.38		feet.
					Molded draft amidships					7.15		feet.
					Draft on draft marks, forward							feet inches.
					Draft on draft marks, aft							feet inches.

PREVIOUS EDITIONS ARE OBSOLETE

GPO 971 26

STABILITY TEST SCANDIES ROSE

WEIGHTS TO DEDUCT

DATA FOR TANKS				ITEMS (Include list of tanks completely empty)	WEIGHT Tons	C. G. ABOVE BASE		C. G. FROM M. P.			
LIQUID	SOUND'G	Net Inertia of Free Surface	INERTIA FEET <sup>3</sup> /TON			LEVER	VERTICAL MOMENTS Ft.-tons	FEET AFT	AFTER MOMENTS Ft.-tons	FEET FOR'D	FORWARD MOMENTS Ft.-tons
				FUEL - FWD DOUBLE BOTTOM	7.02	2.01	14.11			25.15	176.55
				FUEL - FWD WINGS P/S	24.98	5.98	149.38			25.19	629.25
				FUEL - MIDSHIPS WINGS P/S	42.46	5.69	241.60			7.86	333.74
				FUEL - AFT WINGS P/S	39.07	5.63	219.96	11.00	429.77		
				FUEL - AFT STORAGE TANK(S)	18.64	10.40	193.86	49.60	1924.54		
		399.30	11.12	WATER (12750 GAL.)	47.47	8.50	403.49	33.00	1566.51		
				LUBE OIL	4.02	12.90	51.86	47.75	191.96		
				MISC. TOOLS & EQUIPMENT	.22	12.50	2.75	20.00	4.40		
				INCLINING WEIGHTS	2.07	16.70	34.57			1.00	2.07
				PERSONNEL	1.07	12.50	13.37	10.00	10.70		
		4436.46	105.63	FUEL - MIDSHIPS DOUBLE BOTTOM	5.20	.50	13.52			7.86	40.87
		3992.81	95.07	FUEL - AFT DOUBLE BOTTOM	4.68	.50	2.34	11.00	51.48		
		857.22	20.41	FUEL - AFT STORAGE TANK (P)	11.24	9.20	103.41	48.50	545.14		
			232.23		208.14	6.94	1444.22		3724.50		1182.48
									(1182.48)		
								12.21	2542.02		

NOTE: Furnish tank sounding tables and plan of sounding tube locations unless previously submitted.)

U. S. GOVERNMENT PRINTING OFFICE 16-36870-5

GPO 938024

# STABILITY TEST SCANDIES ROSE

## SHIP AT TIME OF STABILITY TEST—CONDITION 0

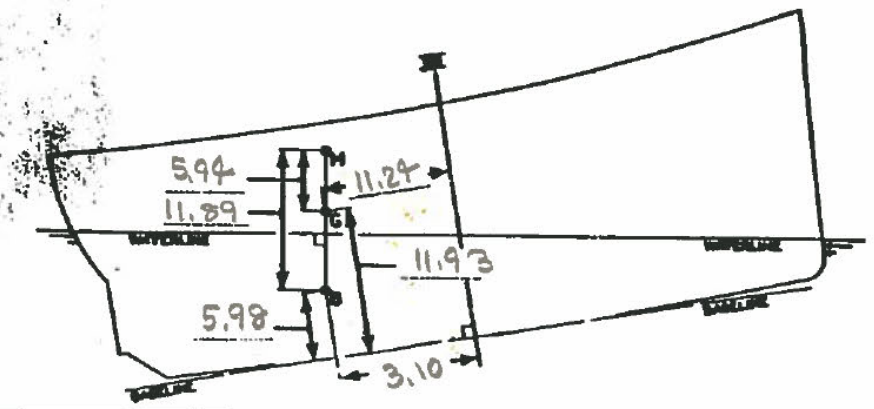
	FROM HYDROSTATIC CURVES	FROM INDEPENDENT CALCULATION
Corrected displacement	690.49 tons	..... tons
Mean virtual metacentric height obtained from plot of inclining moments versus tangents of angles of heel $\frac{\text{moment}}{\text{displacement} \times \text{tangent}}$	5.60 feet	..... feet
Correction for free surface	.34 feet	..... feet
Mean metacentric height G. M. =	5.94 feet	..... feet
Transverse metacenter above base line corresponding to draft at L. C. F. (corrected for hog or sag)	17.67 feet	..... feet
Transverse metacenter above base line corrected (for trim, and hog or sag)	17.87 feet	..... feet
C. G. above base line	11.93 feet	..... feet. (From figure)
Longitudinal metacenter above C. G.	141.01 feet (NO TRIM)	..... feet
Moment to alter trim 1 foot, $\frac{\text{Longi. GM} \times \Delta}{L}$	748.96 ft.-tons	..... ft.-tons
Trim by <del>stern</del> bow	7.50 feet	..... feet
Trimming lever $\frac{\text{Trim} \times \text{moment to trim}}{\text{displacement}}$	8.135 feet	..... feet
L. C. B., <del>forward</del> aft of M, which is ..... feet forward, aft of frame No. ....	3.102 feet	..... feet
C. G. <del>forward</del> aft of M	11.24 feet	..... feet. (From figure)

Period of complete roll ..... seconds

Apparent radius of gyration of vessel  $r = \frac{T\sqrt{GM}}{1.108}$  ..... feet

Rolling constant  $C = \frac{T\sqrt{GM}}{B}$  .....

\* Water in bilges. The bilges should be entirely free of water; but should this be impossible, correction should be made in the derived G. M. The details of this correction should form part of this report.  
 † If the trim is excessive, independent calculations should be made to obtain the positions of center of buoyancy and transverse metacenter and the position of the center of gravity determined therefrom. These calculations should be incorporated in this booklet. (See Page 2a)



PREVIOUS EDITION MAY BE USED

PLOT OF TANGENTS

SHIP SCANDIES ROSE

PAGE \_\_\_\_\_ OF \_\_\_\_\_

PERIOD OF ROLL CONSTANT

COMPLETE ROLL (T) \_\_\_\_\_ SECONDS

ROLL CONSTANT (C) =  $\frac{T}{B} \sqrt{GM \text{ "AS INCLINED" (FT)}}$

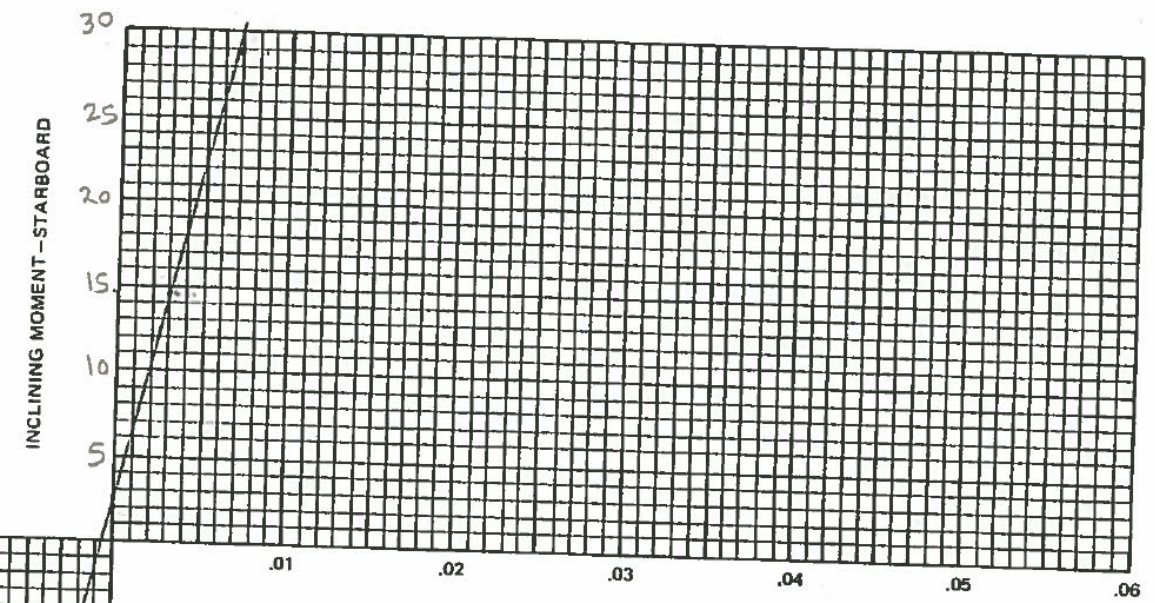
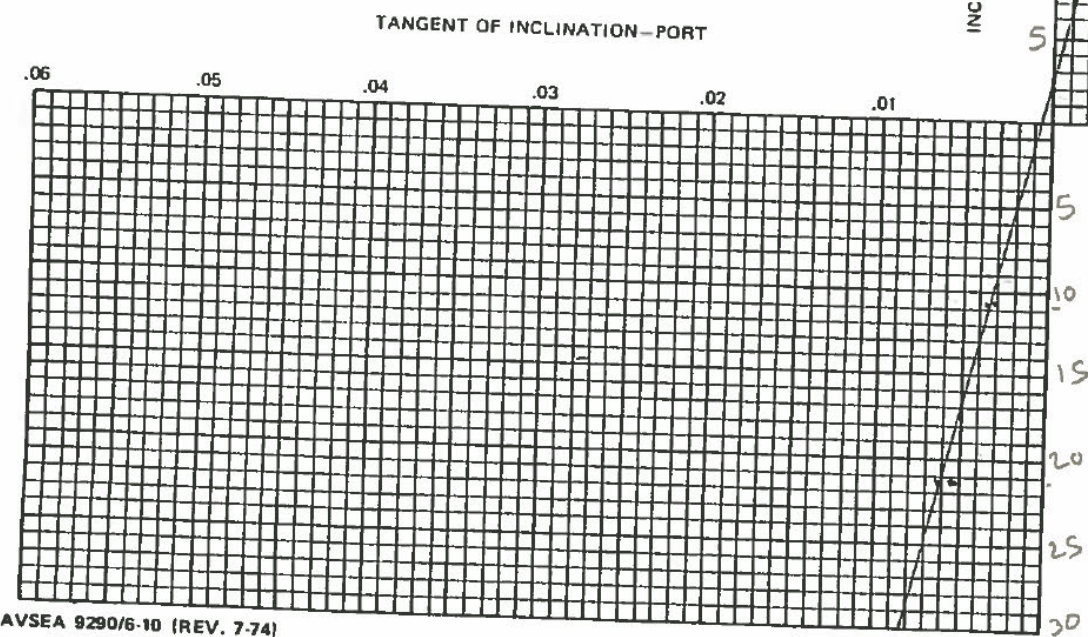
C = \_\_\_\_\_

C = \_\_\_\_\_

T = AVERAGE TIME OF COMPLETE ROLL (PORT TO STARBOARD TO PORT) IN SECONDS

B = MAXIMUM BEAM TO OUTSIDE OF PLATING ON D.W.L. FOR SURFACE SHIPS (FT)

B = MAXIMUM BEAM OF SHIP'S HULL FOR SUBMARINES (FT)



SLOPE =  $\frac{\text{INCLINING MOMENT}}{\text{TANGENT}} = \frac{50}{0.13}$   
 = 3866.55 FOOT TONS  
 BY LINEAR REGRESSION

The ratio "inclining moment ÷ tangent" above is the slope of the line which best represents the points plotted.

NAVSEA 9290/6-10 (REV. 7-74)  
 (Formerly NAVSHIPS 263-3)

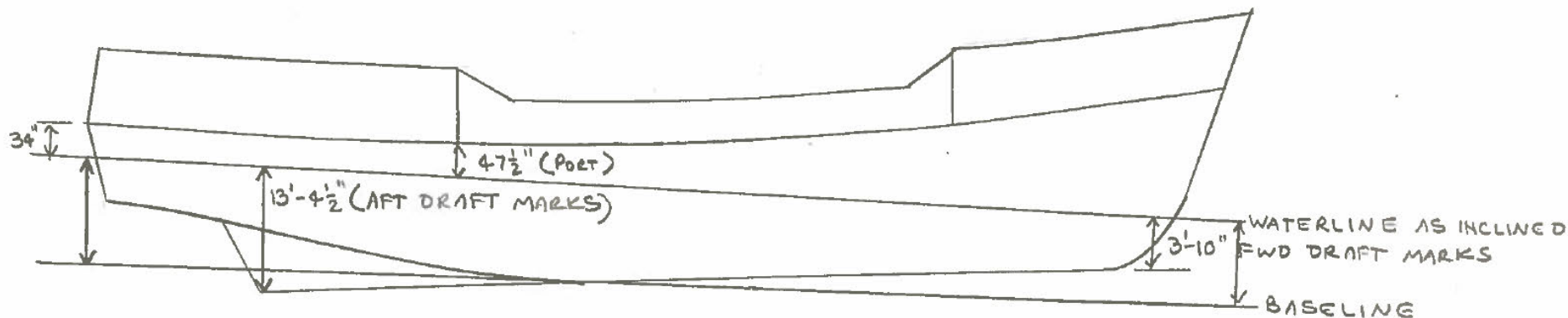
SHIP AT TIME OF STABILITY TEST—CONDITION 0

PENDULUMS			No.	WEIGHT		DISTANCE FROM INITIAL POSITION		MOMENT ft.-tons	TOTAL INCLINING MOMENT		PENDULUM DEFLECTIONS			TANGENT									
No.	LOCATION	LENGTH TO BATTERY Inches		No.	Tons	PORT	STARBOARD		ft.-tons	PORT	STARBOARD	No.	PORT	STARBOARD	PORT	STARBOARD							
						Feet	Feet			ft.-tons	ft.-tons		Inches	Inches	Inches	Inches							
1st	INSIDE FORECASTLE	84.5	1st trial	1	12.40	168.5	7.72	14.62															
				2	11.20	165.5	6.90																
2d	FWD OF DECKHOUSE	88.38 <del>87.5</del> AA	2d trial	1	.55	14.04	7.72	28.92															
				2	.50	13.79	6.90																
				3	.53	14.46	7.66																
				4	.48	13.83	6.64																
3d			3d trial	1	-	-	-	0															
				2	-	-	-																
4th	MIDSHIPS		4th trial	1	-	-	-	10.67															
				2	-	-	-																
				3	.53	9.31	4.93																
				4	.48	11.96	5.74																
5th	STEEL DRUMS FILLED WITH CONCRETE		5th trial	1	.55	8.96	4.93	21.34															
				2	.50	11.48	5.74																
				3	.53	9.31	4.93																
				4	.48	11.96	5.74																
6th			6th trial	1	-	-	-																
				2	-	-	-																
7th			7th trial	1	-	-	-																
				2	-	-	-																
8th			8th trial	1	-	-	-																
				2	-	-	-																

**STABILITY TEST** SCANDIES ROSE

All tons used in this calculation are of 2240 pounds

**SHIP AT TIME OF STABILITY TEST—CONDITION O**



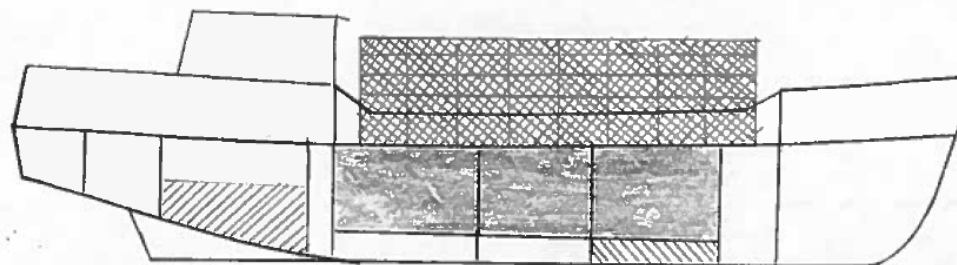
**SKETCH SHOWING HOG, SAG, TRIM, DRAG, AND LOCATION OF DRAFT MARKS, FREEBOARDS, AND PERPENDICULARS**  
 (Except where accuracy of draft marks have been verified by U. S. C. G., freeboards must be furnished)

Draft when inclined (check) <input checked="" type="checkbox"/> (From draft marks) <input type="checkbox"/> (From freeboards)	Forward	3 feet 10 inches	Mean of forward and after drafts	8.58 feet
	Aft	13 feet 4 1/2 inches	Hog or sag	— feet
	Amidships (Must be recorded) Port	— feet — inches	Trim <del>7.50</del> aft	7.50 feet
	Starboard	— feet — inches	Longitudinal center of flotation <del>9.80</del> aft	9.80 feet
Distance between "curves of form" perpendiculars	130.00 feet	Molded Keel } draft at center of flotation	9.15 feet	
Bottom of keel below base line	24 inches	Molded Keel } draft at L. C. F. corrected for hog or sag	9.15 feet	
Molded Keel } drafts corrected to "curves of form" perpendiculars for use in calculations.	Forward	4.83 feet	Total displacement at above draft F. W., S. W.	— tons
	Aft	12.33 feet	Specific gravity of water	1.014 equals — cubic feet per ton.
	Mean of amidships P and S	— feet	Total displacement corrected for density	690.49 tons

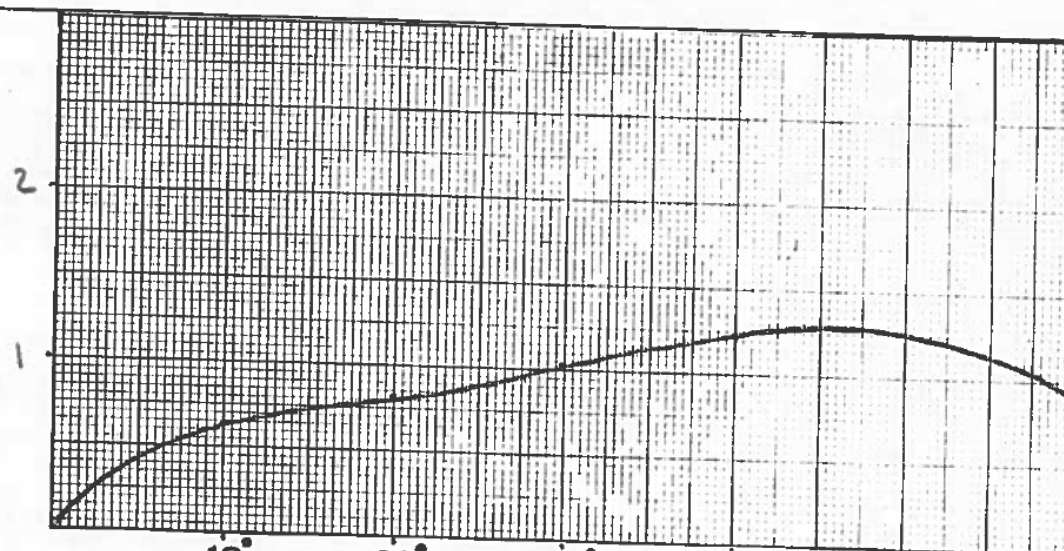
SCANDIES ROSE

CONDITION #3 FISHING, MOVING POTS, 3 HOLDS FULL, 50% FUEL, 212 POTS

ITEM	F.S.	WEIGHT	VCG	V. MOM.	LCG	L. MOM.
LIGHT SHIP		485.35	14.09	6839.83	-10.74	- 5213.09
CREW & STORES		3.00	16.00	48.00	-33.00	- 99.00
FRESH WATER	11.12	23.74	6.75		-33.00	
LUBE OIL		2.01	10.80		-47.75	
FUEL-FWD DBL BTM		7.02	2.01		+25.15	
FUEL-MIDSHIP WINGS	17.14	27.49	3.92		+7.83	
FUEL-AFT WINGS		39.07	5.63		-11.00	
CENTER HOLD		138.28	8.00		+8.00	
AFT HOLD		129.45	8.00		-11.00	
FWD HOLD		110.63	8.00		+26.00	
1 <sup>ST</sup> TIER (80 POTS)		28.57	19.00		+3.00	
2 <sup>ND</sup> TIER (44 POTS)		14.11	23.83		+3.00	
3 <sup>RD</sup> TIER (44 POTS)		12.77	26.50		+3.00	
4 <sup>TH</sup> TIER (44 POTS)		12.77	29.17		+3.00	
	28.26	1029.26	11.65	11987.23	-3.31	-3410.70



RIGHTING ARM (GZ), FT.



HEEL ANGLE (Deg)

13.000 -1.891		IMO <sub>2</sub> NVIC 5-86		YES	NO
KM Trans.	16.25	AREA TO 30° > 10.34 Ft-Deg.	20.39	✓	
VCG	11.65	AREA TO 40° > 16.92 Ft-Deg.	31.57	✓	
GM-Uncorr.	4.60	AREA 30 to 40° > 5.64 Ft-Deg.	11.18	✓	
F.S. Corr.	.03	Max. GZ > 25°	40°	✓	
GM - Corr.	4.57	Max GZ > .66 Ft.	1.22	✓	
TRIM 23" BY BOW		GM > 1.18 Ft.	4.57	✓	

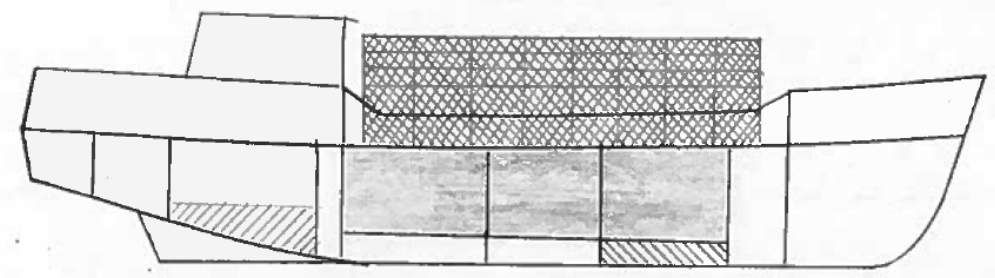
HEEL	10°	20°	30°	40°	60°
GZ'	.639	.841	1.026	1.241	.901
Free Surface	.005	.009	.014	.018	.024
GZ	.634	.832	1.012	1.223	.877



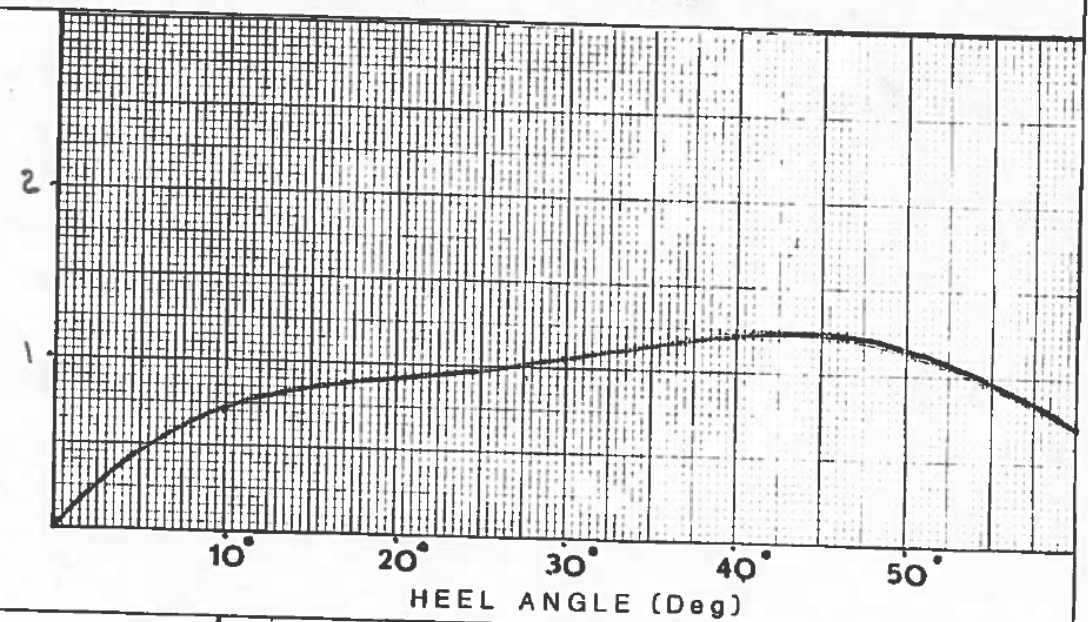
SCANDIES ROSE

CONDITION #4 FISHING, 25% FUEL, 212 POTS, 3 Holds FULL

ITEM	F.S.	WEIGHT	VCG	V. MOM.	LCG	L. MOM.
LIGHT SHIP		485.35	14.09	6839.83	-10.74	- 5213.09
CREW & STORES		3.00	16.00	48.00	-33.00	- 99.00
FRESH WATER	11.12	11.87	5.90		-33.00	
LUBE OIL		1.00	9.50		-47.75	
FUEL-FWD DBL BSM		7.02	2.01		+25.15	
FUEL-AFT WINGS	15.42	11.61	2.04		-11.00	
CENTER HOLD		138.28	8.00		+8.00	
AFT HOLD		124.45	8.00		-11.00	
FWD. HOLD		110.63	8.00		+26.00	
1 <sup>ST</sup> TIER (80 POTS)		28.57	19.00		+3.00	
2 <sup>ND</sup> TIER (44 POTS)		14.11	23.83		+3.00	
3 <sup>RD</sup> TIER (44 POTS)		12.77	26.50		+3.00	
4 <sup>TH</sup> TIER (44 POTS)		12.77	29.17		+3.00	
	26.54	961.43	12.05	11580.77	-3.00	-2883.95



RIGHTING ARM (GZ), FT.



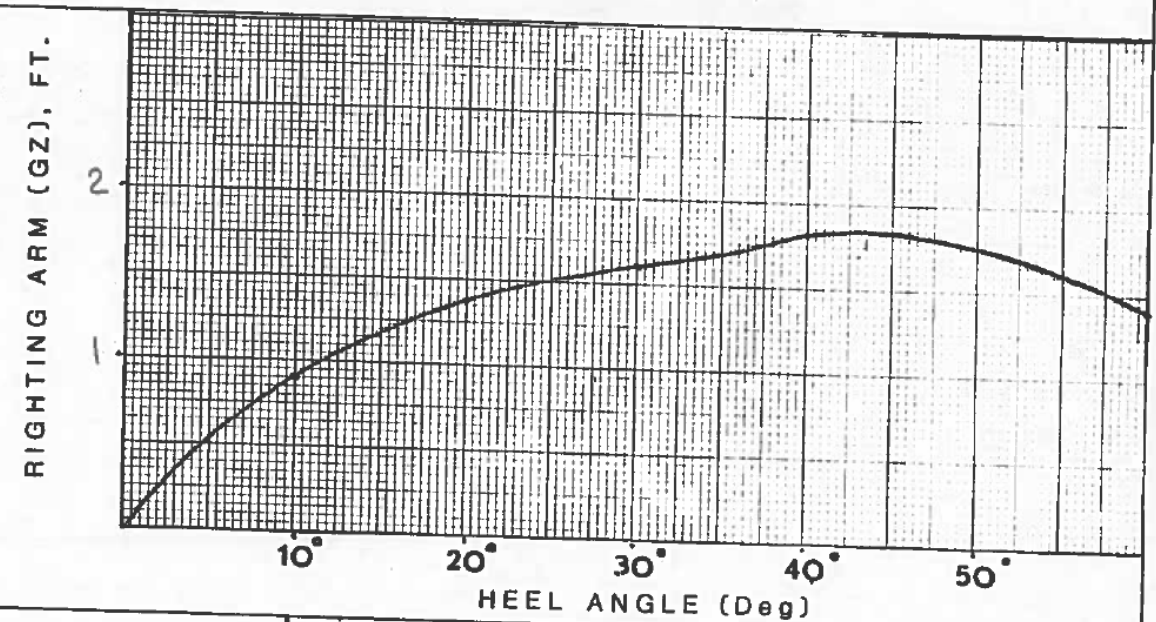
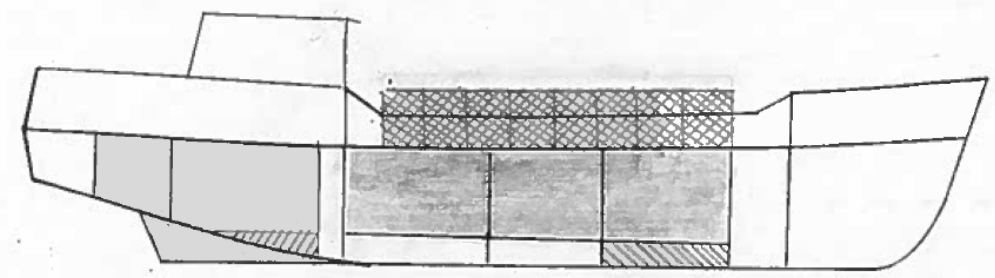
	10°	20°	30°	40°	60°
HEEL	10°	20°	30°	40°	60°
GZ'	.707	.941	1.063	1.203	0.736
Free Surface	.005	.009	.014	.018	.024
GZ	.702	.932	1.049	1.203	.712

12.354 -1.893		IMO <sub>2</sub> NVIC 5-86		YES	NO
KM Trans.	16.38	AREA TO 30° > 10.34 Ft-Deg.	22.31	✓	
VCG	12.05	AREA TO 40° > 16.92 Ft-Deg.	33.57	✓	
GM-Uncorr.	4.33	AREA 30 to 40 > 5.64 Ft-Deg.	11.26	✓	
F.S. Corr.	.03 FT	Max. GZ > 25°	40°	✓	
GM - Corr.	4.30	Max GZ > .66 Ft.	1.20	✓	
TRIM 23" BY 80W		GM > 1.18 Ft.	4.30	✓	

SCANDIES ROSE

CONDITION #5 BURNED OUT, 10% FUEL, 50 POTS, 3 HOLDS FULL

ITEM	F.S.	WEIGHT	VCG	V. MOM.	LCG	L. MOM.
LIGHT SHIP		485.35	14.09	6839.83	-10.74	- 5213.09
CREW & STORES		3.00	16.00	48.00	-33.00	- 99.00
FRESH WATER	11.12	4.75	6.50		-33.00	
LUBE OIL		.40	8.00		-47.75	
FUEL-FWD DBL BTM		7.02	2.01		+25.15	
FUEL-AFT WINGS	15.42	7.70	1.80		-11.00	
CENTER HOLD		138.28	8.00		+8.00	
AFT HOLD		124.45	8.00		-11.00	
FWD. HOLD		110.63	8.00		+26.00	
1 <sup>ST</sup> TWR 50 POTS		17.86	19.00		+3.00	
	26.54	899.44	11.92	10274.85	-3.03	-2728.41



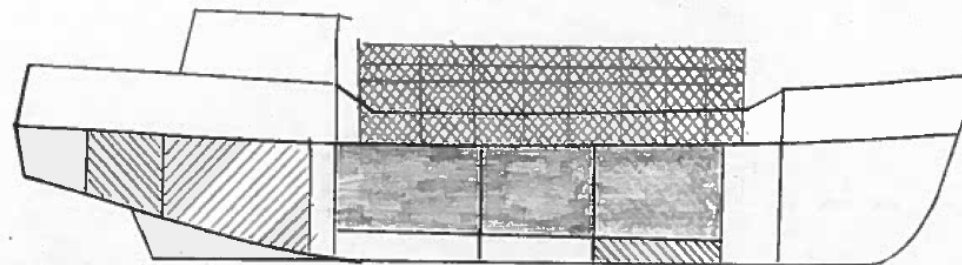
11.731 -1.455		IMO 2 NVIC 5-86	YES	NO	
KM Trans.	16.54	AREA TO 30° > 10.34 Ft-Deg.	31.45	✓	
VCG	11.42	AREA TO 40° > 16.92 Ft-Deg.	48.68	✓	
GM-Uncorr.	5.12	AREA 30 to 40 > 5.64 Ft-Deg.	17.23	✓	
F.S. Corr.	.03	Max. GZ > 25°	40°	✓	
GM - Corr.	5.09	Max GZ > .66 Ft.	1.84	✓	
TRIM	17" BY BOW	GM > 1.18 Ft.	5.12	✓	

	10°	20°	30°	40°	60°
HEEL	10°	20°	30°	40°	60°
GZ'	.905	1.378	1.623	1.856	1.450
Free Surface	.005	.010	.015	.019	.026
GZ	.900	1.368	1.608	1.837	1.424

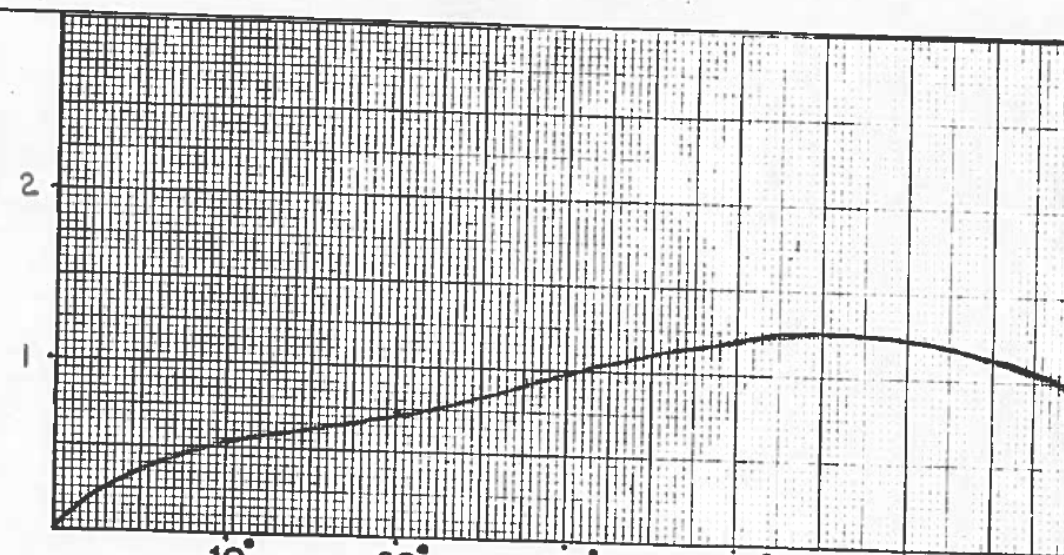
SCANDIES ROSE

CONDITION #6 DEPARTURE FULL FUEL 3 HOLDS FULL, 168 POTS

ITEM	F.S.	WEIGHT	VCG	V. MOM.	LCG	L. MOM.
LIGHT SHIP		485.35	14.09	6839.83	-10.74	-5213.09
CREW & STORES		3.00	16.00	48.00	-33.00	-99.00
FRESH WATER	11.12	47.47	8.50		-33.00	
LUBE OIL		4.02	12.90		-47.75	
FUEL-FWD DBL BTM		7.02	2.01		+25.15	
FUEL-FWD WINGTKS	12.28	24.98	5.98		+25.19	
FUEL-MIDSHIP WING		42.46	5.69		+7.86	
FUEL-AFT WINGS		39.07	5.63		-11.00	
FUEL-AFT STORAGE		18.64	10.40		-49.60	
CENTER HOLD		138.28	8.00		+8.00	
FWD HOLD		110.63	8.00		+26.00	
AFT HOLD		124.45	8.00		-11.00	
1 <sup>ST</sup> TIER (80 POTS)		28.57	19.00		+3.00	
2 <sup>ND</sup> TIER (44 POTS)		14.11	26.50		+3.00	
3 <sup>RD</sup> TIER (44 POTS)		12.77	29.17		+3.00	
TOTAL	23.90	1100.82	11.30	12436.97	-4.09	-4509.88



RIGHTING ARM (GZ), FT.



HEEL ANGLE (Deg)

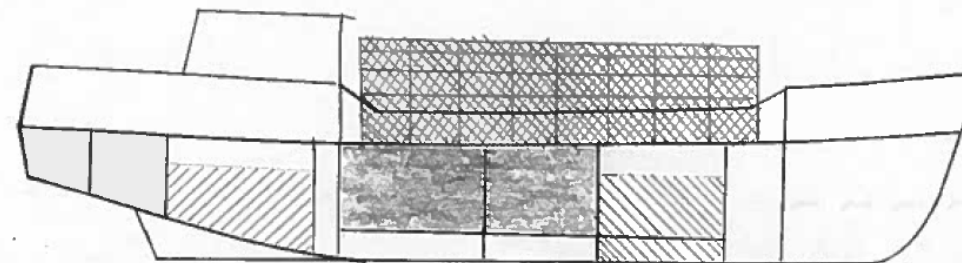
13.638 -1.219		IMO 5-86	YES	NO	
KM Trans.	16.16	AREA TO 30° > 10.34 Ft-Deg.	18.19	✓	
VCG	11.30	AREA TO 40° > 16.92 Ft-Deg.	29.29	✓	
GM-Uncorr.	4.86	AREA 30 to 40° > 5.64 Ft-Deg.	11.09	✓	
F.S. Corr.	.02	Max. GZ > 25°	40°	✓	
GM - Corr.	4.84	Max GZ > 66 Ft.	1.22	✓	
TRIM 15" BY BOW		GM > 1.18 Ft.	4.84	✓	

	10°	20°	30°	40°	60°
HEEL					
GZ'	.528	.745	1.009	1.234	1.012
Free Surface	.004	.007	.011	.014	.018
GZ	.524	.738	.998	1.220	.994

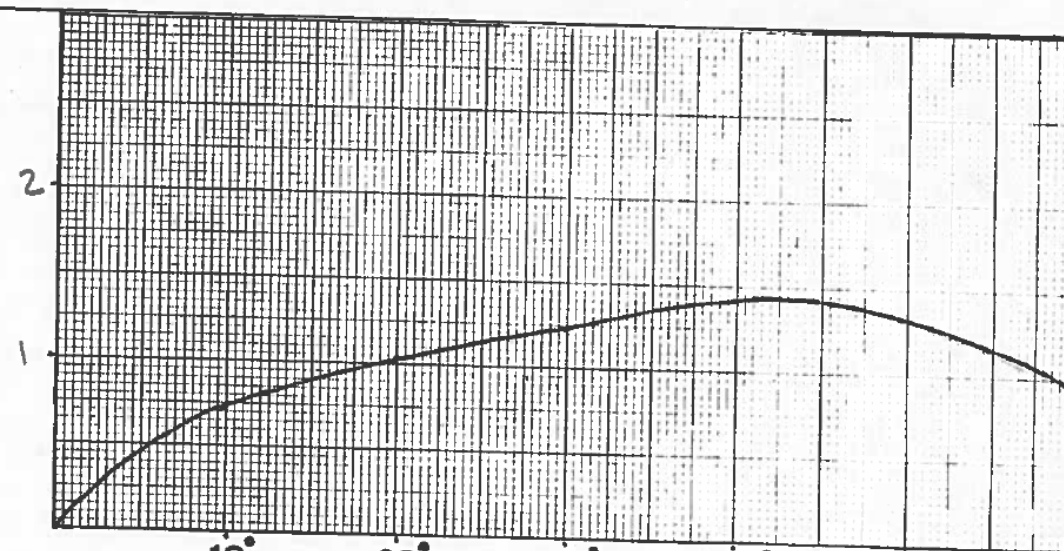
SCANDIES ROSE

CONDITION #2 ARRIVAL ON FISHING GROUNDS, 75% FUEL & WATER

ITEM	F.S.	WEIGHT	VCG	V. MOM.	LCG	L. MOM.
LIGHT SHIP		485.35	14.09	6839.83	-10.74	-5213.09
CREW & STORES		3.00	16.00	48.00	-33.00	-99.00
FRESH WATER	11.12	35.60	7.50		-33.00	
LUBE OIL		4.02	12.90		-47.75	
FUEL-FWD DBLSTM		7.02	2.01		+25.15	
FUEL-FWD WINGS	12.28	24.98	5.98		+25.19	
FUEL-MID WINGS		42.46	5.69		+7.86	
FUEL-AFT WINGS		39.07	5.63		-11.00	
CENTER HOLD		138.28	8.00		+8.00	
AFT HOLD		124.45	8.00		-11.00	
1 <sup>ST</sup> TIER (80 POTS)		28.57	19.00		+3.00	
2 <sup>ND</sup> TIER (44 POTS)		14.11	23.83		+3.00	
3 <sup>RD</sup> TIER (44 POTS)		12.77	26.50		+3.00	
4 <sup>TH</sup> TIER (44 POTS)		12.77	29.17		+3.00	
	23.90	972.45	11.85	11522.31	-6.20	-6026.70



RIGHTING ARM (GZ), FT.



HEEL ANGLE (Deg)

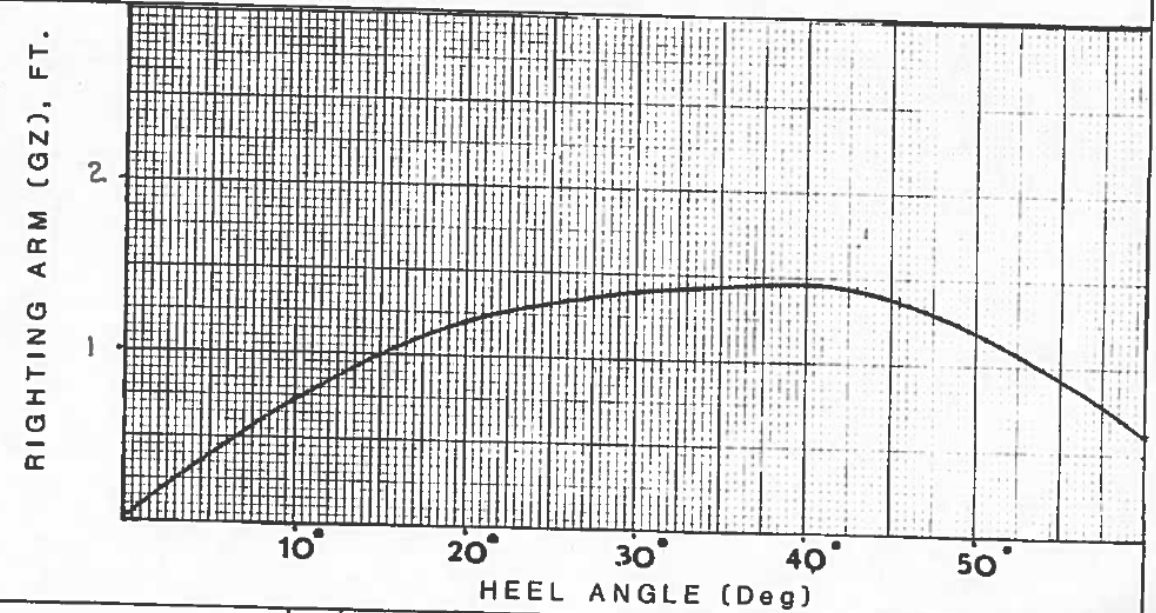
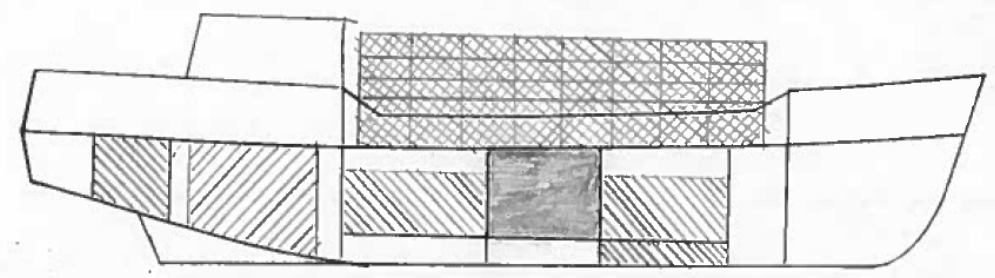
12.216 1.967		IMO 5 NVIC 5-86		YES	NO
KM Trans.	16.32	AREA TO 30° > 10.34 Ft-Deg.	24.64	✓	
VCG	11.85	AREA TO 40° > 16.92 Ft-Deg.	37.99	✓	
GM-Uncorr.	4.47	AREA 30 to 40° > 5.64 Ft-Deg.	13.35	✓	
F.S. Corr.	.02	Max. GZ > 25°	40°	✓	
GM - Corr.	4.45	Max GZ > .66 Ft.	1.43	✓	
TRIM 24" BY STERN		GM > 1.18 Ft.	4.45	✓	

	10°	20°	30°	40°	60°
HEEL					
GZ'	.732	1.054	1.254	1.444	0.912
Free Surface	.004	.008	.012	.015	.021
GZ	.728	1.046	1.242	1.429	.891

SCANDIES ROSE

CONDITION #1 DEPARTURE, FULL FUEL, 212 POTS

ITEM	F.S.	WEIGHT	VCG	V. MOM.	LCG	L. MOM.
LIGHT SHIP		485.35	14.09	6839.83	-10.74	- 5213.09
CREW & STORES		3.00	16.00	48.00	-33.00	- 99.00
FRESH WATER	11.12	47.47	8.50	403.49	-33.00	- 1566.51
LUBE OIL		4.02	12.90	51.86	-47.75	- 191.96
FUEL-FWD DBL BTM		7.02	2.01	14.11	+25.15	+ 176.55
FUEL-FWD WINGTKS		24.98	5.98	149.38	+25.19	+ 629.25
FUEL-MIDSHIP WING		42.46	5.67	241.60	+7.86	+ 333.79
FUEL-AFT WINGS		39.07	5.63	219.96	-11.00	- 429.77
FUEL-AFT STORAGE	49.32	18.64	10.40	193.86	-49.60	- 924.54
CENTER HOLD		138.28	8.00	1106.24	+8.00	+ 1106.24
1 <sup>ST</sup> TIER (80 POTS)		28.57	19.00	542.83	+3.00	+ 85.71
2 <sup>ND</sup> TIER (44 POTS)		14.11	23.83	336.24	+3.00	+ 42.33
3 <sup>RD</sup> TIER (44 POTS)		12.77	26.50	338.40	+3.00	+ 38.31
4 <sup>TH</sup> TIER (44 POTS)		12.77	29.17	372.50	+3.00	+ 38.31
<b>TOTAL</b>	<b>69.47</b>	<b>878.51</b>	<b>12.36</b>	<b>10857.06</b>	<b>-6.80</b>	<b>-5974.00</b>



11.249 2.947	IMO 5-86	YES	NO	
KM Trans. 16.61	AREA TO 30° > 10.34 Ft-Deg.	27.08	✓	
VCG 12.36	AREA TO 40° > 16.92 Ft-Deg.	41.43	✓	
GM-Uncorr. 4.25	AREA 30 to 40 > 5.64 Ft-Deg.	14.35	✓	
F.S. Corr. .07	Max. GZ > 25°	40°	✓	
GM - Corr. 4.18	Max GZ > .66 Ft.	1.48	✓	
TRIM 35" BY STERN	GM > 1.18 Ft.	4.18	✓	

HEEL	10°	20°	30°	40°	60°
GZ'	.754	1.228	1.429	1.519	0.714
Free Surface	.012	.024	.034	.044	.060
GZ	.742	1.204	1.395	1.475	.654