APPENDIX H

TABULATED GHS STABILITY DATA FOR MEDIUM SIZED CMD

Part: HULL Component: HULL.C Side: CL Effectiveness: 1.000

Origin Depth: 23.200 Trim: zero Heel: zero

HULL.C COMPONENT FORM

Volume = 692780 Cubic Ft LCB = 324.30a TCB = 0.00 VCB = 13.73

B L O C K D I M E N S I O N S

Length = 630.39 Breadth = 90.41 Depth (deepest point) = 23.25
Length/Breadth = 6.97 Length/Depth = 27.12 Breadth/Depth = 3.889
Breadth - Length/10 = 27.37 Ft Block Coefficient = 0.523
Displacement-Length Ratio = 79.0 Length-Volume Ratio = 7.13

W A T E R P L A N E

Area = 44643.7 Square Ft LCA = 361.90 TCA = 0.00
Moments of Inertia: IL = 1.064E+09 Ft^4 IT = 2.454E+07 Ft^4
Length = 630.39 Breadth = 90.41 Waterplane Coefficient = 0.783

M A X I M U M S E C T I O N

Area = 1908.6 Square Ft Coefficient = 0.911

P R I S M A T I C C O E F F I C I E N T S

Cp = 0.576 Cvp = 0.668

ALL OF SHIP 'CMD03' HAS BEEN USED.

ASSET/MONOLA VERSION 1.0 - WEIGHT MODULE - 1/07/94 10.33.31.

PRINTED REPORT NO. 1 - SUMMARY

SWBS	GROUP		WEIGHT LTON	WEIGHT PER CENT	LCG FT	VCG FT
100	HULL STRUCTURE		6764.7	34.4	308.53	43.44
200	PROPULSION PLANT		1058.4	5.4	366.77	26.68
300	ELECTRIC PLANT		970.8	4.9	316.76	30.24
400	COMMAND + SURVEILLANCE		169.8	0.9	271.04	63.40
500	AUXILIARY SYSTEMS		1008.8	5.1	330.81	40.97
600	OUTFIT + FURNISHINGS		1141.5	5.8	270.00	58.13
700	ARMAMENT		1134.0	5.8	392.44	44.05
	L I G H T S H I P		12248.1	62.3	319.70	42.44
M21	PD MARGIN	(WT = 2.4%)	+ 294.0		(KG = 2.4%)	+ 1.02
M22	CD MARGIN	(WT = 2.4%)	+ 301.0		(KG = 2.4%)	+ 1.04
M11	D & B MARGIN	(WT = 5.3%)	+ 680.7		(KG = 5.3%)	+ 2.36
M23	CON MOD MARGIN	(WT = 1.4%)	+ 179.8		(KG = 1.4%)	+ .62
M24	GFM MARGIN	(WT = .6%)	+ 77.1		(KG = .6%)	+ .27
	LIGHT SHIP WITH MARGINS		13780.6	70.1	319.70	47.75
F00	FULL LOADS		5887.7	29.9	343.22	21.75
F10	SHIPS FORCE + EFFECTS		46.2		175.22	91.89
F20	MISSION RELATED EXPENDABLES		391.5		233.45	11.26
F30	SHIPS STORES		60.5		128.52	50.41
F40	FUELS + LUBRICANTS		3548.7		334.91	11.43
F50	LIQUIDS + GASES (NON FUEL)		77.5		194.67	16.31
F60	CARGO		1763.3		402.62	42.27
	F U L L L O A D W T		19668.3	100.0	326.75	39.97

ALL OF SHIP 'CMD03' HAS BEEN USED.

ASSET/MONOLA VERSION 1.0 - DESIGN SUMMARY - 1/07/94 10.41.11.

PRINTED REPORT NO. 1 - SUMMARY

SHIP COMMENT TABLE

PRINCIPAL CHARACTERISTICS - FT	
LBP	630.0
LOA	653.8
BEAM, DWL	90.0
BEAM, WEATHER DECK	99.5
DEPTH @ STA 10	62.0
DRAFT TO KEEL DWL	23.2
DRAFT TO KEEL LWL	23.2
FREEBOARD @ STA 3	42.8
GMT	9.0
CP	0.570
CX	0.910

SPEED(KT): MAX= 30.6 SUST= 29.3
ENDURANCE: 6000.0 NM AT 16.0 KTS

TRANSMISSION TYPE: ELECT
MAIN ENG: 4 GT @ 26250.0 HP

SHAFT POWER/SHAFT: 48930.0 HP
PROPELLERS: 2 - FP - 17.5 FT DIA

SEP GEN: 2 F DIESEL @ 2000.0 KW

24 HR LOAD	4346.6
MAX MARG ELECT LOAD	12874.5

	OFF	CPO	ENL	TOTAL
MANNING	42	27	340	409
ACCOM	43	28	351	422

WEIGHT SUMMARY - LTON	
GROUP 1 - HULL STRUCTURE	6764.7
GROUP 2 - PROP PLANT	1058.4
GROUP 3 - ELECT PLANT	970.8
GROUP 4 - COMM + SURVEIL	169.8
GROUP 5 - AUX SYSTEMS	1008.8
GROUP 6 - OUTFIT + FURN	1141.5
GROUP 7 ARMAMENT	1134.0
SUM GROUPS 1-7	12248.1
DESIGN MARGIN	1532.5
LIGHTSHIP WEIGHT	13780.6
LOADS	5887.7
FULL LOAD DISPLACEMENT	19668.3
FULL LOAD KG: FT	40.0
MILITARY PAYLOAD WT LTON	1929.0
USABLE FUEL WT - LTON	1775.1

AREA SUMMARY - FT2	
HULL AREA -	142335.8
SUPERSTRUCTURE AREA -	80230.2
TOTAL AREA	222566.0

VOLUME SUMMARY - FT3	
HULL VOLUME -	2684135.0
SUPERSTRUCTURE VOLUME	802301.8
TOTAL VOLUME	3486436.8

HYDROSTATIC PROPERTIES
No Trim, No Heel, VCG = 39.97

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	KML	KMT
2.000	737.62	282.59a	1.16	39.85	286.55a	66857	5232.6	165.53
4.000	1,795.90	286.00a	2.26	47.86	290.07a	93001	3006.7	99.95
6.000	3,022.71	288.42a	3.39	54.35	293.93a	118579	2287.4	77.04
8.000	4,401.09	290.85a	4.53	60.43	298.41a	146344	1945.0	65.80
10.000	5,921.97	293.50a	5.68	66.20	303.81a	177214	1754.4	58.88
12.000	7,579.91	296.47a	6.85	71.90	310.33a	212525	1646.3	54.42
14.000	9,378.91	299.91a	8.04	77.99	318.32a	255460	1600.4	51.89
16.000	11,332.54	304.00a	9.24	84.80	328.79a	311027	1612.3	50.64
18.000	13,462.97	309.03a	10.47	92.87	342.96a	388750	1694.2	50.42
20.000	15,792.74	315.15a	11.73	100.75	356.55a	470599	1747.1	50.87
22.000	18,268.41	321.18a	12.99	104.94	361.48a	510065	1639.5	50.20
24.000	20,813.58	326.15a	14.22	107.00	361.83a	527895	1493.0	48.45
26.000	23,401.89	330.08a	15.41	108.69	361.41a	542183	1367.3	47.04
28.000	26,030.81	333.22a	16.58	110.38	360.98a	556549	1264.9	46.10
30.000	28,700.56	335.77a	17.74	112.12	360.33a	571845	1181.4	45.53
32.000	31,412.91	337.86a	18.88	113.91	359.47a	587984	1112.3	45.23
34.000	34,168.03	339.56a	20.02	115.68	358.58a	604086	1052.8	45.15
36.000	36,965.93	340.97a	21.16	117.49	357.61a	620661	1001.9	45.25
38.000	39,808.39	342.11a	22.29	119.38	356.34a	638636	959.1	45.50
40.000	42,696.12	343.03a	23.42	121.26	355.07a	656617	921.0	45.86
42.000	45,629.14	343.76a	24.55	123.15	353.83a	674662	887.0	46.31
44.000	48,607.74	344.33a	25.68	125.07	352.33a	693727	857.6	46.84
46.000	51,631.28	344.76a	26.82	126.92	351.05a	710914	828.8	47.44
48.000	54,700.44	345.08a	27.95	128.85	349.59a	730173	804.7	48.10
50.000	57,816.00	345.28a	29.08	130.78	348.05a	749866	783.0	48.81
52.000	60,978.23	345.38a	30.22	132.73	346.44a	770183	763.6	49.56
54.000	64,187.13	345.39a	31.36	134.67	344.78a	790995	746.0	50.34
56.000	67,442.59	345.32a	32.50	136.62	343.07a	812405	730.1	51.16
58.000	70,744.85	345.17a	33.65	138.59	341.27a	834303	715.6	52.00
60.000	74,094.16	344.96a	34.79	140.56	339.50a	856433	702.2	52.88

Distances in FEET.-------Specific Gravity = 1.025.----------Moment in Ft-LT.
Draft is from Baseline.

CURVES OF FORM
HULL.C Component of Part HULL

Trim: zero Heel: zero

Ref Pt Depth	Volume (Cu Ft)	Block Coef	Displ/ Length	WaterPl Coef	MaxSect Coef	PrismaticCoefs Long	Vert
2.00	25822	0.400	8.3	0.530	0.782	0.523	0.754
4.00	62869	0.428	17.2	0.554	0.842	0.515	0.773
6.00	105816	0.442	25.6	0.577	0.863	0.516	0.766
8.00	154069	0.452	33.4	0.599	0.875	0.521	0.754
10.00	207310	0.463	40.5	0.623	0.885	0.525	0.742
12.00	265350	0.470	46.7	0.644	0.894	0.529	0.729
14.00	328327	0.474	51.5	0.664	0.900	0.530	0.713
16.00	396718	0.475	54.8	0.684	0.904	0.529	0.694
18.00	471298	0.474	56.4	0.708	0.907	0.526	0.669
20.00	552856	0.490	63.4	0.753	0.907	0.542	0.652
22.00	639522	0.512	73.1	0.778	0.911	0.564	0.658
24.00	728621	0.530	82.9	0.786	0.911	0.583	0.674
26.00	819230	0.544	92.8	0.790	0.911	0.599	0.689
28.00	911260	0.557	102.7	0.795	0.910	0.614	0.701
30.00	1004720	0.568	112.6	0.800	0.909	0.626	0.710
32.00	1099671	0.577	122.6	0.805	0.907	0.637	0.717
34.00	1196120	0.585	132.7	0.810	0.906	0.647	0.723
36.00	1294066	0.592	142.9	0.815	0.904	0.656	0.727
38.00	1393572	0.599	153.1	0.820	0.903	0.664	0.730
40.00	1494663	0.605	163.4	0.825	0.901	0.672	0.733
42.00	1597339	0.610	173.7	0.831	0.899	0.679	0.734
44.00	1701611	0.615	184.1	0.836	0.897	0.686	0.735
46.00	1807456	0.619	194.4	0.841	0.895	0.692	0.736
48.00	1914898	0.623	204.6	0.845	0.894	0.697	0.736
50.00	2023964	0.626	214.9	0.850	0.892	0.703	0.736
52.00	2134664	0.629	225.2	0.855	0.890	0.708	0.736
54.00	2246998	0.632	235.5	0.860	0.888	0.712	0.735
56.00	2360962	0.634	245.8	0.864	0.886	0.717	0.734
58.00	2476564	0.637	256.2	0.869	0.884	0.721	0.733
60.00	2593814	0.639	266.6	0.873	0.882	0.725	0.732

Distances in FEET.-----Length is true waterline.----------

HULL Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.00

Part: HULL Component: HULL.C Side: CL Effectiveness: 1.000
Origin Depth: 23.200 Trim: zero Heel: zero

HULL.C COMPONENT SECTIONS

Section Location	Baseline Depth	Section Area	TCtr	VCtr	Waterline Width	Ctr
23.80f	23.20					
...						
0.39f	23.20	0.00	0.00	23.20	0.58	-0.00
0.00	23.20	0.42	0.00	22.87	0.73	-0.00
4.90a	23.20	21.93	0.00	16.45	2.59	-0.00
9.81a	23.20	45.43	0.00	14.85	4.45	0.00
26.14a	23.20	137.57	0.00	14.64	10.84	0.00
42.46a	23.20	233.82	0.00	14.54	17.31	0.00
58.78a	23.20	338.38	0.00	14.47	23.96	0.00
75.11a	23.20	461.50	0.00	14.19	30.70	0.00
91.43a	23.20	585.90	0.00	13.98	37.46	0.00
107.76a	23.20	707.23	0.00	13.85	44.03	0.00
124.09a	23.20	832.03	0.00	13.68	50.39	0.00
140.42a	23.20	959.26	0.00	13.50	56.51	0.00
156.74a	23.20	1083.81	0.00	13.33	62.20	0.00
173.07a	23.20	1206.20	0.00	13.16	67.44	0.00
189.40a	23.20	1324.33	0.00	13.00	72.13	0.00
205.72a	23.20	1437.51	0.00	12.85	76.30	0.00
222.04a	23.20	1542.54	0.00	12.71	79.84	0.00
238.37a	23.20	1638.54	0.00	12.58	82.86	0.00
254.70a	23.20	1722.99	0.00	12.47	85.27	0.00
271.02a	23.20	1794.49	0.00	12.37	87.13	0.00
287.35a	23.20	1849.32	0.00	12.29	88.50	0.00
303.67a	23.20	1888.26	0.00	12.24	89.45	0.00
319.99a	23.20	1907.19	0.00	12.23	90.01	0.00
336.32a	23.20	1908.56	0.00	12.25	90.28	0.00
352.64a	23.20	1888.16	0.00	12.33	90.41	0.00
368.97a	23.20	1843.32	0.00	12.48	90.17	0.00
385.30a	23.20	1774.65	0.00	12.70	89.90	0.00
401.63a	23.20	1700.56	0.00	12.95	89.62	0.00
420.66a	23.20	1585.85	0.00	13.44	89.21	0.00
439.69a	23.20	1452.89	0.00	14.11	88.93	0.00
458.72a	23.20	1304.98	0.00	14.93	88.64	0.00
477.75a	23.20	1152.06	0.00	15.83	88.25	0.00
496.78a	23.20	992.96	0.00	16.78	87.82	0.00
515.81a	23.20	844.66	0.00	17.68	87.06	0.00
534.84a	23.20	704.09	0.00	18.53	85.89	0.00
553.88a	23.20	578.03	0.00	19.30	84.03	0.00
572.91a	23.20	472.59	0.00	19.91	81.09	0.00
591.94a	23.20	376.88	0.00	20.46	77.13	0.00
610.97a	23.20	287.36	0.00	20.92	71.44	0.00
630.00a	23.20	211.50	0.00	21.37	63.70	0.00

Distances in FEET.----------

HULL.C Component of Part HULL

Trim: zero Heel: zero

Section Location	Reference Point Depth at 2.00	10.00	20.00	30.00	40.00	50.00	60.00
23.80f							
22.62f							0.00
15.64f						0.00	74.80
11.90f						10.87	114.81
9.40f					0.00	49.28	173.59
4.04f				0.00	42.24	131.89	299.98
0.00				14.38	74.01	194.00	395.02
0.77a			0.00	19.87	83.08	207.43	413.51
3.89a		0.00	11.51	41.99	119.67	261.56	488.06
4.90a		2.44	15.25	49.19	131.56	279.16	512.29
8.35a	0.00	8.62	27.77	75.11	173.42	340.16	595.33
9.81a	1.35	11.22	33.04	86.03	191.05	365.84	630.29
26.14a	3.75	33.01	105.21	223.45	403.27	665.54	1028.52
42.46a	5.75	56.65	181.31	365.13	618.31	963.43	1417.14
58.78a	7.10	83.00	264.85	515.88	841.50	1265.59	1802.64
75.11a	10.26	121.44	366.54	685.50	1081.83	1579.49	2191.44
91.43a	14.49	162.31	469.45	856.27	1322.01	1888.70	2568.44
107.76a	19.15	201.26	569.83	1022.14	1552.68	2183.31	2923.76
124.09a	26.13	245.92	674.27	1190.16	1782.94	2472.42	3266.88
140.42a	34.40	294.89	781.84	1358.45	2009.05	2751.65	3592.81
156.74a	43.28	345.44	888.11	1521.15	2224.82	3015.08	3897.03
173.07a	52.64	397.82	993.69	1678.51	2430.25	3262.51	4179.07
189.40a	61.93	450.91	1096.63	1827.86	2621.86	3490.23	4435.47
205.72a	70.97	503.72	1196.30	1968.66	2799.64	3698.55	4666.90
222.04a	79.47	555.04	1289.83	2097.35	2959.72	3883.63	4869.94
238.37a	87.54	603.95	1376.01	2213.15	3100.92	4044.58	5044.10
254.70a	94.58	648.12	1452.46	2313.26	3220.83	4179.00	5187.06
271.02a	100.90	687.18	1517.76	2396.88	3319.59	4288.08	5301.32
287.35a	106.13	718.39	1568.10	2460.54	3393.99	4369.36	5385.47
303.67a	109.59	740.13	1603.89	2505.56	3446.25	4425.88	5443.27
319.99a	110.87	749.69	1620.85	2527.98	3472.67	4454.71	5472.83
336.32a	109.21	747.47	1621.25	2531.19	3478.17	4461.19	5479.49
352.64a	105.43	729.60	1600.68	2511.42	3458.64	4441.74	5460.04
368.97a	96.35	693.27	1556.63	2465.23	3411.32	4393.72	5411.67
385.30a	83.79	640.94	1488.95	2394.87	3338.98	4320.22	5337.57
401.63a	72.62	584.29	1415.95	2318.91	3260.63	4240.58	5257.60
420.66a	45.10	493.97	1303.17	2202.04	3141.18	4119.30	5135.45
439.69a	15.73	388.32	1170.95	2066.83	3003.21	3979.44	4994.62
453.94a	0.00	303.26	1061.39	1954.91	2889.69	3864.62	4879.03
458.72a		274.71	1024.61	1917.33	2851.58	3826.07	4840.22
477.75a		165.85	873.06	1761.56	2692.46	3665.25	4678.29
496.78a		75.28	716.28	1600.28	2528.78	3500.10	4512.03

Section Location	Reference Point Depth at 2.00	10.00	20.00	30.00	40.00	50.00	60.00
515.81a		17.42	571.27	1447.43	2372.55	3342.04	4352.60
530.60a		0.00	466.14	1333.04	2253.82	3221.38	4230.72
534.84a			435.94	1300.19	2219.71	3186.72	4195.72
553.88a			317.86	1163.90	2075.40	3038.53	4045.47
572.91a			224.73	1043.34	1942.75	2900.54	3904.91
591.94a			144.85	924.54	1804.36	2753.86	3755.34
610.97a			81.53	808.16	1666.54	2606.56	3604.64
630.00a			32.56	685.98	1509.60	2436.84	3430.59

Distances in FEET.------Areas in square FEET.----------

HULL Reference Point: Long.= 0.00 Trans.= 0.00 Vert.= 0.00

CROSS CURVES OF STABILITY
Showing righting arms in heel at VCG = 39.97

Trim: zero at zero heel (trim righting arm held at zero)

Displacement LONG TONS	Heel Angles in Degrees 5.00s	10.00s	15.00s	20.00s	25.00s	30.00s
737.62	9.03s	12.07s	12.51s	11.69s	10.17s	8.29s
1,795.90	5.00s	8.21s	9.23s	9.06s	8.20s	6.92s
3,022.71	3.17s	5.77s	7.08s	7.31s	6.84s	5.93s
4,401.09	2.21s	4.16s	5.54s	6.05s	5.87s	5.23s
5,921.97	1.63s	3.15s	4.42s	5.09s	5.13s	4.72s
7,579.91	1.27s	2.51s	3.62s	4.35s	4.54s	4.33s
9,378.91	1.05s	2.12s	3.08s	3.76s	4.07s	4.04s
11,332.54	0.94s	1.89s	2.70s	3.33s	3.72s	3.85s
13,462.97	0.92s	1.75s	2.45s	3.02s	3.46s	3.75s
15,792.74	0.91s	1.65s	2.27s	2.82s	3.31s	3.73s
18,268.41	0.85s	1.54s	2.13s	2.68s	3.22s	3.75s
20,813.58	0.74s	1.41s	2.00s	2.57s	3.16s	3.79s
23,401.89	0.63s	1.27s	1.88s	2.48s	3.12s	3.85s
26,030.81	0.55s	1.15s	1.77s	2.41s	3.11s	3.92s
28,700.56	0.50s	1.05s	1.68s	2.37s	3.12s	4.01s
31,412.91	0.47s	0.99s	1.62s	2.35s	3.16s	4.12s
34,168.03	0.46s	0.98s	1.59s	2.35s	3.23s	4.26s
36,965.93	0.47s	0.99s	1.61s	2.38s	3.31s	4.36s
39,808.39	0.49s	1.03s	1.66s	2.45s	3.42s	4.34s
42,696.12	0.52s	1.09s	1.74s	2.54s	3.54s	4.22s
45,629.14	0.56s	1.16s	1.85s	2.68s	3.57s	4.01s
48,607.74	0.61s	1.25s	1.98s	2.84s	3.49s	3.71s
51,631.28	0.66s	1.36s	2.13s	2.95s	3.33s	3.35s
54,700.44	0.72s	1.47s	2.29s	2.92s	3.07s	2.92s
57,816.00	0.78s	1.59s	2.42s	2.77s	2.72s	2.45s
60,978.23	0.84s	1.72s	2.39s	2.49s	2.29s	1.92s
64,187.13	0.91s	1.82s	2.17s	2.07s	1.76s	1.33s
67,442.59	0.98s	1.72s	1.76s	1.51s	1.13s	0.67s
70,744.85	1.04s	1.32s	1.13s	0.79s	0.38s	-0.08s
74,094.16	0.74s	0.58s	0.26s	-0.13s	-0.53s	-0.94s

LONG TONS	35.00s	40.00s	45.00s	50.00s	55.00s	60.00s
737.62	6.19s	3.95s	1.68s	-0.52s	-2.52s	-4.10s
1,795.90	5.39s	3.73s	2.00s	0.36s	-0.98s	-1.66s
3,022.71	4.74s	3.44s	2.17s	1.07s	0.33s	0.48s
4,401.09	4.32s	3.29s	2.33s	1.65s	1.51s	2.25s
5,921.97	4.05s	3.28s	2.60s	2.24s	2.58s	3.44s
7,579.91	3.88s	3.36s	2.95s	2.90s	3.50s	4.21s
9,378.91	3.81s	3.53s	3.38s	3.62s	4.24s	4.70s
11,332.54	3.82s	3.78s	3.89s	4.36s	4.84s	5.03s
13,462.97	3.92s	4.11s	4.46s	5.02s	5.34s	5.30s
15,792.74	4.10s	4.50s	5.09s	5.60s	5.74s	5.49s
18,268.41	4.30s	4.91s	5.63s	6.04s	5.99s	5.53s
20,813.58	4.49s	5.29s	6.01s	6.25s	6.01s	5.40s
23,401.89	4.68s	5.61s	6.20s	6.25s	5.87s	5.15s
26,030.81	4.87s	5.80s	6.20s	6.09s	5.59s	4.80s

28,700.56	5.06s	5.84s	6.06s	5.82s	5.23s	4.39s
31,412.91	5.17s	5.73s	5.79s	5.45s	4.81s	3.94s
34,168.03	5.15s	5.51s	5.44s	5.02s	4.34s	3.45s
36,965.93	5.01s	5.19s	5.01s	4.54s	3.83s	2.94s
39,808.39	4.77s	4.80s	4.53s	4.01s	3.29s	2.42s
42,696.12	4.45s	4.35s	4.00s	3.45s	2.73s	1.88s
45,629.14	4.06s	3.85s	3.43s	2.85s	2.14s	1.33s
48,607.74	3.62s	3.31s	2.84s	2.24s	1.54s	0.76s
51,631.28	3.13s	2.74s	2.22s	1.62s	0.94s	0.20s
54,700.44	2.60s	2.14s	1.60s	0.99s	0.33s	-0.37s
57,816.00	2.03s	1.53s	0.96s	0.35s	-0.28s	-0.93s
60,978.23	1.44s	0.91s	0.33s	-0.27s	-0.87s	-1.48s
64,187.13	0.82s	0.28s	-0.29s	-0.87s	-1.44s	-2.00s
67,442.59	0.16s	-0.37s	-0.91s	-1.45s	-1.98s	-2.48s
70,744.85	-0.56s	-1.04s	-1.52s	-2.00s	-2.46s	-2.90s
74,094.16	-1.35s	-1.76s	-2.15s	-2.54s	-2.90s	-3.24s

Distances in FEET.--Specific Gravity = 1.025.----------

RIGHTING ARMS vs HEEL ANGLE

LCG = 324.30a TCG = 0.00 VCG = 39.97

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Righting Arms in Trim	in Heel	--> Area
23.200	0.00	0.00	19,789.77	0.00	0.000	0.00
23.124	0.01f	5.00s	19,789.77	0.00	0.788s	1.97
22.960	0.06f	10.00s	19,782.98	0.03f	1.468s	7.65
22.693	0.15f	15.00s	19,789.65	0.01a	2.053s	16.50
22.266	0.26f	20.00s	19,789.62	0.01a	2.612s	28.17
21.614	0.40f	25.00s	19,789.63	0.01a	3.179s	42.64
20.668	0.55f	30.00s	19,789.66	0.01a	3.775s	60.01
19.356	0.71f	35.00s	19,789.71	0.01a	4.414s	80.47
17.610	0.87f	40.00s	19,789.75	0.01a	5.142s	104.32
15.518	1.03f	45.00s	19,789.72	0.00	5.877s	131.86
13.344	1.21f	50.00s	19,788.32	0.00	6.193s	162.21
13.047	1.23f	50.67s	19,790.55	0.00	6.197s	166.38
11.072	1.38f	55.00s	19,785.05	0.02f	6.026s	192.96
8.706	1.54f	60.00s	19,789.76	0.00	5.470s	221.87

Distances in FEET.--Specific Gravity = 1.025.----Area in Ft-Deg.

RESIDUAL RIGHTING ARMS vs HEEL ANGLE

LCG = 324.30a TCG = 0.00 VCG = 39.97

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Residual Arms in Trim	in Heel	--> Area
23.200	0.00	0.00	19,789.77	0.00	-1.266s	0.00
23.166	0.00	2.50s	19,789.80	0.05a	-0.864s	-2.66
23.124	0.01f	5.00s	19,789.71	0.00	-0.478s	-4.34
23.051	0.03f	7.50s	19,789.56	0.00	-0.122s	-5.08
23.019	0.04f	8.44s	19,789.53	0.00	0.003s	-5.14
22.959	0.06f	10.00s	19,789.53	0.00	0.202s	-4.98
22.842	0.10f	12.50s	19,788.81	0.00	0.502s	-4.10
22.692	0.15f	15.00s	19,788.41	0.00	0.787s	-2.48
22.501	0.20f	17.50s	19,787.96	0.01a	1.066s	-0.17
22.264	0.26f	20.00s	19,787.55	0.01a	1.346s	2.85
21.972	0.33f	22.50s	19,787.15	0.00	1.627s	6.57
21.613	0.40f	25.00s	19,786.81	0.00	1.913s	10.99
21.182	0.48f	27.50s	19,786.53	0.00	2.207s	16.14
20.667	0.55f	30.00s	19,786.22	0.00	2.509s	22.03
20.061	0.63f	32.50s	19,785.91	0.00	2.823s	28.69
19.354	0.71f	35.00s	19,785.74	0.00	3.148s	36.16
18.539	0.79f	37.50s	19,785.76	0.00	3.493s	44.46
17.608	0.87f	40.00s	19,785.78	0.00	3.875s	53.67
16.578	0.95f	42.50s	19,786.47	0.00	4.278s	63.85
15.516	1.03f	45.00s	19,786.95	0.00	4.611s	74.97
14.425	1.12f	47.50s	19,787.46	0.00	4.858s	86.82
13.248	1.20f	50.00s	19,788.92	0.00	5.070s	99.24
11.950	1.27f	52.50s	19,789.47	0.01f	5.268s	112.16
10.533	1.33f	55.00s	19,789.49	0.00	5.465s	125.57
8.995	1.38f	57.50s	19,789.47	0.00	5.686s	139.51
7.341	1.42f	60.00s	19,789.58	0.00	5.959s	154.06

Distances in FEET.--Specific Gravity = 1.025.----Area in Ft-Deg.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd. heeling moment = 25049.77Cos(heel) + 0.00|Sin(heel)|

RESIDUAL RIGHTING ARMS vs HEEL ANGLE

LCG = 324.30a TCG = 0.00 VCG = 39.97

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Residual Arms in Trim	in Heel	--> Area
23.200	0.00	0.00	19,789.77	0.00	-2.198s	0.00
23.166	0.00	2.50s	19,789.80	0.05a	-1.804s	-5.00
23.124	0.01f	5.00s	19,789.71	0.00	-1.435s	-9.05
23.051	0.03f	7.50s	19,789.56	0.00	-1.096s	-12.20
22.959	0.06f	10.00s	19,789.22	0.00	-0.787s	-14.55
22.842	0.10f	12.50s	19,788.82	0.00	-0.502s	-16.16
22.692	0.15f	15.00s	19,788.41	0.00	-0.232s	-17.08
22.530	0.19f	17.20s	19,789.75	0.00	0.000s	-17.34
22.505	0.20f	17.50s	19,789.75	0.00	0.031s	-17.33
22.264	0.26f	20.00s	19,787.57	0.01a	0.295s	-16.92
21.972	0.33f	22.50s	19,787.15	0.00	0.560s	-15.85
21.613	0.40f	25.00s	19,786.81	0.00	0.831s	-14.11
21.182	0.48f	27.50s	19,786.53	0.00	1.107s	-11.69
20.667	0.55f	30.00s	19,786.22	0.00	1.393s	-8.57
20.061	0.63f	32.50s	19,785.92	0.00	1.689s	-4.72
19.354	0.71f	35.00s	19,785.74	0.00	1.996s	-0.11
18.539	0.79f	37.50s	19,785.76	0.00	2.324s	5.29
17.608	0.87f	40.00s	19,785.78	0.00	2.686s	11.55
16.578	0.95f	42.50s	19,786.47	0.00	3.069s	18.74
15.516	1.03f	45.00s	19,786.95	0.00	3.383s	26.81
14.425	1.12f	47.50s	19,787.46	0.00	3.629s	35.59
13.248	1.20f	50.00s	19,788.92	0.00	3.850s	44.93
11.950	1.27f	52.50s	19,789.47	0.01f	4.052s	54.81
10.533	1.33f	55.00s	19,789.49	0.00	4.246s	65.19
8.995	1.38f	57.50s	19,789.47	0.00	4.461s	76.07
7.341	1.42f	60.00s	19,789.58	0.00	4.724s	87.54

Distances in FEET.--Specific Gravity = 1.025.----Area in Ft-Deg.

Note: The Residual Righting Arms shown above are in excess of the turn heeling arms for a 30.0 knot turn with a radius of 1000.0 Ft turning to the left.

RESIDUAL RIGHTING ARMS vs HEEL ANGLE

LCG = 324.30a TCG = 0.00 VCG = 39.97

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Residual Arms in Trim	in Heel	--> Area
23.200	0.00	0.00	19,789.77	0.00	-1.831s	0.00
23.166	0.00	2.50s	19,789.80	0.05a	-1.436s	-4.08
23.124	0.01f	5.00s	19,789.71	0.00	-1.065s	-7.21
23.051	0.03f	7.50s	19,789.56	0.00	-0.723s	-9.43
22.959	0.06f	10.00s	19,789.22	0.00	-0.411s	-10.85
22.842	0.10f	12.50s	19,788.82	0.00	-0.124s	-11.51
22.780	0.12f	13.64s	19,789.33	0.00	0.001s	-11.58
22.693	0.15f	15.00s	19,789.34	0.00	0.149s	-11.48
22.501	0.20f	17.50s	19,787.97	0.01a	0.415s	-10.78
22.264	0.26f	20.00s	19,787.56	0.01a	0.681s	-9.41
21.972	0.33f	22.50s	19,787.14	0.00	0.949s	-7.37
21.613	0.40f	25.00s	19,786.81	0.00	1.222s	-4.65
21.182	0.48f	27.50s	19,786.53	0.00	1.502s	-1.25
20.667	0.55f	30.00s	19,786.22	0.00	1.790s	2.86
20.061	0.63f	32.50s	19,785.91	0.00	2.089s	7.71
19.354	0.71f	35.00s	19,785.74	0.00	2.399s	13.32
18.539	0.79f	37.50s	19,785.76	0.00	2.730s	19.73
17.608	0.87f	40.00s	19,785.78	0.00	3.095s	27.01
16.578	0.95f	42.50s	19,786.46	0.00	3.482s	35.23
15.516	1.03f	45.00s	19,786.95	0.00	3.799s	44.33
14.425	1.12f	47.50s	19,787.46	0.00	4.045s	54.15
13.248	1.20f	50.00s	19,788.93	0.00	4.264s	64.54
11.950	1.27f	52.50s	19,789.47	0.01f	4.465s	75.45
10.533	1.33f	55.00s	19,789.49	0.00	4.660s	86.86
8.995	1.38f	57.50s	19,789.47	0.00	4.876s	98.78
7.341	1.42f	60.00s	19,789.58	0.00	5.141s	111.29

Distances in FEET.--Specific Gravity - 1.025.----Area in Ft-Deg.

Note: The Residual Righting Arms shown above are in excess of the turn heeling arms for a 30.0 knot turn with a radius of 1200.0 Ft turning to the left.

RESIDUAL RIGHTING ARMS vs HEEL ANGLE

LCG = 324.30a TCG = 0.00 VCG = 39.97

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	--> Area
23.200	0.00	0.00	19,789.77	0.00	-1.831s	0.00
23.124	0.01f	5.00s	19,789.74	0.00	-1.065s	-7.24
22.965	0.06f	10.00s	19,789.88	0.02f	-0.412s	-10.88
22.787	0.12f	13.63s	19,789.75	0.03f	0.000s	-11.61
22.693	0.15f	15.00s	19,789.36	0.00	0.149s	-11.51
22.266	0.26f	20.00s	19,789.83	0.01a	0.681s	-9.42
21.614	0.40f	25.00s	19,789.88	0.01a	1.222s	-4.66
20.669	0.55f	30.00s	19,789.92	0.01a	1.791s	2.86
19.356	0.71f	35.00s	19,789.98	0.01a	2.400s	13.32
17.610	0.87f	40.00s	19,789.99	0.00	3.096s	27.02
15.518	1.03f	45.00s	19,789.84	0.00	3.798s	44.26
13.344	1.21f	50.00s	19,788.34	0.00	4.087s	64.14
13.144	1.22f	50.45s	19,790.97	0.00	4.089s	66.00
11.072	1.38f	55.00s	19,784.79	0.02f	3.901s	84.31
8.706	1.54f	60.00s	19,789.76	0.00	3.338s	102.57

Distances in FEET.--Specific Gravity = 1.025.----Area in Ft-Deg.

Note: The Residual Righting Arms shown above are in excess of the turn heeling arms for a 30.0 knot turn with a radius of 1200.0 Ft turning to the left.

RESIDUAL RIGHTING ARMS vs HEEL ANGLE

LCG = 324.30a TCG = 0.00 VCG = 39.97

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Residual Arms in Trim	in Heel	--> Area
23.200	0.00	0.00	19,789.77	0.00	-0.625s	0.00
23.128	0.00f	3.92s	19,782.50	0.05a	0.000s	-1.23
23.119	0.01f	5.00s	19,783.89	0.01f	0.163s	-1.14
22.961	0.06f	10.00s	19,789.73	0.01f	0.843s	1.42
22.693	0.15f	15.00s	19,789.65	0.01a	1.428s	7.14
22.266	0.26f	20.00s	19,789.62	0.01a	1.987s	15.69
21.614	0.40f	25.00s	19,789.63	0.01a	2.554s	27.04
20.668	0.55f	30.00s	19,789.66	0.01a	3.151s	41.28
19.356	0.71f	35.00s	19,789.71	0.01a	3.789s	58.62
17.610	0.87f	40.00s	19,789.75	0.01a	4.517s	79.34
15.518	1.03f	45.00s	19,789.72	0.00	5.252s	103.76
13.344	1.21f	50.00s	19,788.32	0.00	5.568s	130.99
13.046	1.23f	50.68s	19,790.46	0.00	5.572s	134.75
11.072	1.38f	55.00s	19,785.06	0.02f	5.401s	158.61
8.706	1.54f	60.00s	19,789.76	0.00	4.845s	184.40

Distances in FEET.--Specific Gravity = 1.025.----Area in Ft-Deg.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd. heeling moment = 12365.99Cos(heel) + 0.00|Sin(heel)|

LONGITUDINAL STRENGTH

LOCATION	WEIGHT	BUOYANCY	SHEAR	MOMENT
Ft	LT/Ft	LT/Ft	LT	LT-Ft
0.25f	0.00	0.00	0.0	0
0.00	0.00	0.01	0.0	0
0.00	0.10	0.01	0.0	0
4.90a	1.01	0.61	-1.2	4
9.81a	1.93	1.27	-3.8	18
26.14a	4.97	3.86	-18.3	195
42.46a	8.00	6.57	-39.0	661
58.78a	11.04	9.52	-63.2	1,499
75.11a	14.08	13.01	-84.4	2,720
90.00a		16.22	-97.1	4,084
90.00a	0.66*	16.22	-97.7	4,084
91.43a	17.12	16.53	-98.6	4,225
107.76a	20.16	19.98	-104.9	5,901
124.09a	23.20	23.53	-103.7	7,622
140.42a	26.24	27.15	-93.6	9,252
156.74a	29.28	30.70	-74.6	10,643
173.07a	32.32	34.20	-47.7	11,658
189.40a	35.36	37.58	-14.2	12,177
205.72a	38.40	40.82	23.7	12,111
215.00a	40.13	42.53	46.1	11,791
222.04a	40.13	43.83	67.6	11,399
228.00a		44.84	92.7	10,927
228.00a	136.40*	44.84	-43.7	10,927
238.37a	40.13	46.59	14.2	11,099
248.00a		48.03	83.4	10,644
248.00a	100.00*	48.03	-16.6	10,644
250.00a		48.33	-0.5	10,662
250.00a	66.00*	48.33	-66.5	10,662
254.70a	40.13	49.03	-26.3	10,883
271.02a	40.13	51.09	135.9	10,041
287.35a	40.13	52.68	327.9	6,297
300.00a		53.57	492.4	1,123
300.00a	66.00*	53.57	426.4	1,123
303.67a	40.13	53.82	476.2	-531
319.99a	40.13	54.39	704.4	-10,149
324.00a		54.41	761.6	-13,083
324.00a	1,050.00*	54.41	-288.4	-13,083
330.00a		54.43	-202.6	-11,608
330.00a	260.00*	54.43	-462.6	-11,608
336.32a	40.13	54.46	-372.1	-8,967
347.00a		54.10	-221.0	-5,799
347.00a	0.66*	54.10	-221.7	-5,799
352.64a	40.13	53.90	-143.3	-4,767
363.00a		53.11	-4.8	-4,004
363.00a	402.00*	53.11	-406.8	-4,004
368.97a	40.13	52.65	-330.6	-1,802
385.30a	40.13	50.72	-141.9	2,020

LOCATION	WEIGHT	BUOYANCY	SHEAR	MOMENT
Ft	LT/Ft	LT/Ft	LT	LT-Ft
401.63a	40.13	48.63	14.1	3,023
410.00a		47.20	79.3	2,627
410.00a	66.00*	47.20	13.3	2,627
420.66a	40.13	45.39	79.0	2,122
425.00a	40.13	44.53	100.0	1,733
439.69a	37.26	41.62	164.4	-204
450.00a		39.35	208.0	-2,121
450.00a	260.00*	39.35	-52.0	-2,121
458.72a	33.54	37.43	-17.2	-1,818
477.75a	29.83	33.09	50.8	-2,150
496.78a	26.11	28.58	105.4	-3,653
515.81a	22.40	24.37	147.6	-6,068
534.84a	18.68	20.38	182.6	-9,211
547.00a		18.10	203.9	-11,555
547.00a	240.00*	18.10	-36.1	-11,555
553.88a	14.96	16.81	-23.6	-11,347
560.00a		15.84	-11.6	-11,236
560.00a	260.00*	15.84	-271.6	-11,236
572.91a	11.25	13.81	-241.6	-7,912
591.94a	7.53	11.09	-183.3	-3,831
610.97a	3.82	8.54	-104.5	-1,050
630.00a	0.10	6.36	0.0	-3
630.00a	0.00			

* Point weight in LONG TONS----------

S U M M A R Y

Max. Shear:	761.6 LT	at	324.00a
Max. Bending Moment:	-13,083 LT-Ft	at	324.00a (Sagging)

FLOODABLE LENGTHS

Initial Origin Depth = 23.20 Initial Trim = 0.00 Degrees
Vertical C.G. = 39.97 Permeability =0.900

ORIGIN DEPTH	Deg TRIM	F L O O D E D CENTER	LENGTH	MARGIN	GMt
51.19	-3.51	80.00	230.04	9.25	3.75
51.19	-3.51	96.00	198.90	9.25	3.76
51.21	-3.47	112.00	180.27	9.25	4.00
51.25	-3.40	128.00	169.78	9.25	3.85
51.29	-3.31	144.00	163.70	9.25	3.74
51.33	-3.21	160.00	160.89	9.25	4.26
51.38	-3.10	176.00	160.32	9.25	4.34
51.44	-2.99	192.00	164.23	9.25	4.66
51.49	-2.86	208.00	171.48	9.25	5.05
51.57	-2.71	224.00	180.68	9.25	4.82
51.66	-2.49	240.00	192.78	9.25	4.73
51.87	-2.04	256.00	212.22	9.25	5.49
52.12	-1.47	272.00	236.10	9.25	8.02
52.40	-0.82	288.00	263.89	9.25	10.84
52.72	-0.06	304.00	296.48	9.25	13.90
45.12	0.69	320.00	273.12	9.25	11.72
38.34	1.31	336.00	249.47	9.25	9.86
32.78	1.81	352.00	229.46	9.25	8.61
28.24	2.23	368.00	212.91	9.25	7.76
24.95	2.52	384.00	196.99	9.25	6.93
22.17	2.78	400.00	184.31	9.25	6.16
19.78	2.99	416.00	174.65	9.25	5.43
17.62	3.19	432.00	167.14	9.25	4.71
15.79	3.36	448.00	161.79	9.25	3.97
14.14	3.50	464.00	157.57	9.25	3.24
12.69	3.64	480.00	154.74	9.25	2.49
11.37	3.76	496.00	152.91	9.25	1.73
10.18	3.86	512.00	152.02	9.25	0.98
9.15	3.96	528.00	151.75	9.25	0.23
8.18	4.04	544.00	152.17	9.25	-0.51
7.65	4.09	560.00	165.39	9.25	-0.96

FLOODABLE LENGTHS

Initial Origin Depth = 23.20 Initial Trim = 0.00 Degrees
Vertical C.G. = 0.00 Permeability =0.800

ORIGIN DEPTH	Deg TRIM	F L O O D E D CENTER	LENGTH	MARGIN	GMt
51.25	-3.39	96.00	245.84	9.25	43.89
51.25	-3.38	112.00	217.04	9.25	43.96
51.28	-3.33	128.00	201.45	9.25	44.25
51.31	-3.25	144.00	192.46	9.25	44.14
51.36	-3.16	160.00	188.14	9.25	44.16
51.41	-3.06	176.00	188.55	9.25	44.81
51.46	-2.95	192.00	193.47	9.25	44.63
51.51	-2.82	208.00	200.85	9.25	44.93
51.59	-2.66	224.00	210.58	9.25	45.17
51.69	-2.43	240.00	224.43	9.25	44.60
51.91	-1.96	256.00	246.41	9.25	45.87
52.14	-1.42	272.00	272.78	9.25	48.19
52.41	-0.81	288.00	303.51	9.25	50.68
52.70	-0.11	304.00	339.14	9.25	53.24
45.95	0.62	320.00	316.05	9.25	51.49
39.34	1.22	336.00	288.04	9.25	49.63
33.88	1.71	352.00	264.95	9.25	48.34
29.34	2.13	368.00	245.79	9.25	47.44
25.68	2.46	384.00	229.51	9.25	46.74
22.95	2.71	400.00	214.83	9.25	45.98
20.55	2.92	416.00	203.54	9.25	45.26
18.41	3.12	432.00	194.61	9.25	44.55
16.56	3.29	448.00	188.22	9.25	43.83
14.89	3.44	464.00	183.25	9.25	43.11
13.37	3.57	480.00	179.95	9.25	42.37
12.05	3.69	496.00	177.75	9.25	41.63
10.85	3.80	512.00	176.61	9.25	40.88
9.78	3.90	528.00	176.41	9.25	40.12
8.97	3.97	544.00	182.03	9.25	39.46

Invalid command

FLOODABLE LENGTHS

Initial Origin Depth = 23.20 Initial Trim = 0.00 Degrees
Vertical C.G. = 0.00 Permeability =0.700

ORIGIN DEPTH	Deg TRIM	F L O O D E D CENTER	LENGTH	MARGIN	GMt
51.30	-3.28	112.00	271.25	9.25	43.92
51.31	-3.27	128.00	244.09	9.25	44.03
51.33	-3.21	144.00	230.19	9.25	44.41
51.37	-3.13	160.00	225.38	9.25	44.46
51.41	-3.04	176.00	225.96	9.25	44.66
51.46	-2.93	192.00	230.98	9.25	44.98
51.52	-2.80	208.00	238.46	9.25	45.21
51.60	-2.64	224.00	249.13	9.25	44.95
51.71	-2.39	240.00	264.89	9.25	44.37
51.92	-1.92	256.00	291.49	9.25	46.08
52.15	-1.40	272.00	323.01	9.25	48.24
52.41	-0.81	288.00	359.82	9.25	50.39
52.69	-0.14	304.00	403.35	9.25	52.48
46.59	0.56	320.00	377.03	9.25	51.03
40.10	1.15	336.00	341.02	9.25	49.23
34.66	1.64	352.00	311.66	9.25	47.93
30.09	2.06	368.00	287.80	9.25	46.99
26.26	2.41	384.00	268.37	9.25	46.33
23.21	2.68	400.00	251.74	9.25	45.71
20.82	2.90	416.00	237.96	9.25	45.04
18.70	3.09	432.00	226.66	9.25	44.37
16.80	3.26	448.00	218.26	9.25	43.71
15.12	3.42	464.00	212.36	9.25	43.02
13.63	3.55	480.00	208.35	9.25	42.31
12.28	3.67	496.00	204.96	9.25	41.61
11.05	3.78	512.00	203.60	9.25	40.88
10.00	3.88	528.00	203.52	9.25	40.12