Loading Manual Trim and Stability Booklet

REP.No.
Rev. 1

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CONTENTS

1. INTRODUCTION

The present booklet has been prepared due to vessel conversion from Oil Tanker into Floating Storage Offloading Unit (FSO).

The following drawings used for the preparation of this booklet:

1. "TRIM & STABILITY CALCULATION" Drw No PF 303 01 29 April 1999

2. INSTRUCTIONS TO THE MASTER

General Precautions Against Capsizing

(1) Compliance with the stability creteria does not ensure immunity against capsizing regardless of the circumstances or absolve the master from his responsibilities. Master should therefore exercise prudence and good seamanship having regarding to the season of the year, weather forecasts and the navigational zone and should take appropriate action as to speed and course warranted by prevailing curcumstances as well as SOLAS regulation for subdivision and damage stability.
(2) Care should be taken to ensure that the cargo allocated to the holds is capable of being stowed so that compliance with the criteria can be achieved. If necessary, the amount should be limited to the extent that ballast weight may be required.
(3) Before voyage commences care would be taken to ensure that the cargo and sizeable pieces of equipment are properly stowed or lashed through all navigations for keeping the expected stability.
(4) The number of partially filled or slack tanks should be kept to a minimum because of their adverse effect on stability.
(5) Weathertight or watertight closing devivces such as doors, hatches, etc. shall be kept closed during navigation.

(6) Master should note that stability can be adversely affected by such influences as beam wind on ships with large windage area, icing on top sides rolling characteristics and following seas.

(7) Minimum forward draft
The draught at F.P in any Heavy Weather condition to be not less than 7.80 m

Instruction at loading condition

(1) The vessel should comply with the required minimum stability of IMO RESOLUSION A.749(18). To keep necessary righting lever and metacentric height, care should be taken on the following points.

a) Cargo weight distribution in vertical direction
b) Filling up proper ballast water in tanks
c) Minimizing free surface effect of ballast water and oil

3. VESSEL PARTICULARS

Vessel's Name ..... :
Type ..... : FSO
IMO Number ..... :
..... :
Flag ..... :
Classification Society ..... : BUREAU VERITAS

Builders ..... : SAMSUNG HEAVY INDUSTRIES CO., LTD.

Year Built ..... : 1999

Length O.A ..... : 333.000 (m)
Length B.P ..... : 318.000 (m)
Breadth Mld ..... : 58.000 (m)
Depth Mld ..... : 31.250 (m)

Draft (Extreme) ..... : 22.525 (m)
Displacement ..... : 350849 (MT)
DeadWeight ..... : 309347 (MT)

LightShip Weight ..... : 41502.1 (MT)
- // - LCG ..... : -10.290 (m)
- // - VCG ..... : 15.965 (m)
- // - TCG ..... : -0.048 (m)

FRAME SPACING

Difference AP and Frame O ... : 0.000 (m)

Up To Frame	Spacing (m)
16	0.800
61	0.850
111	5.080
140	0.850

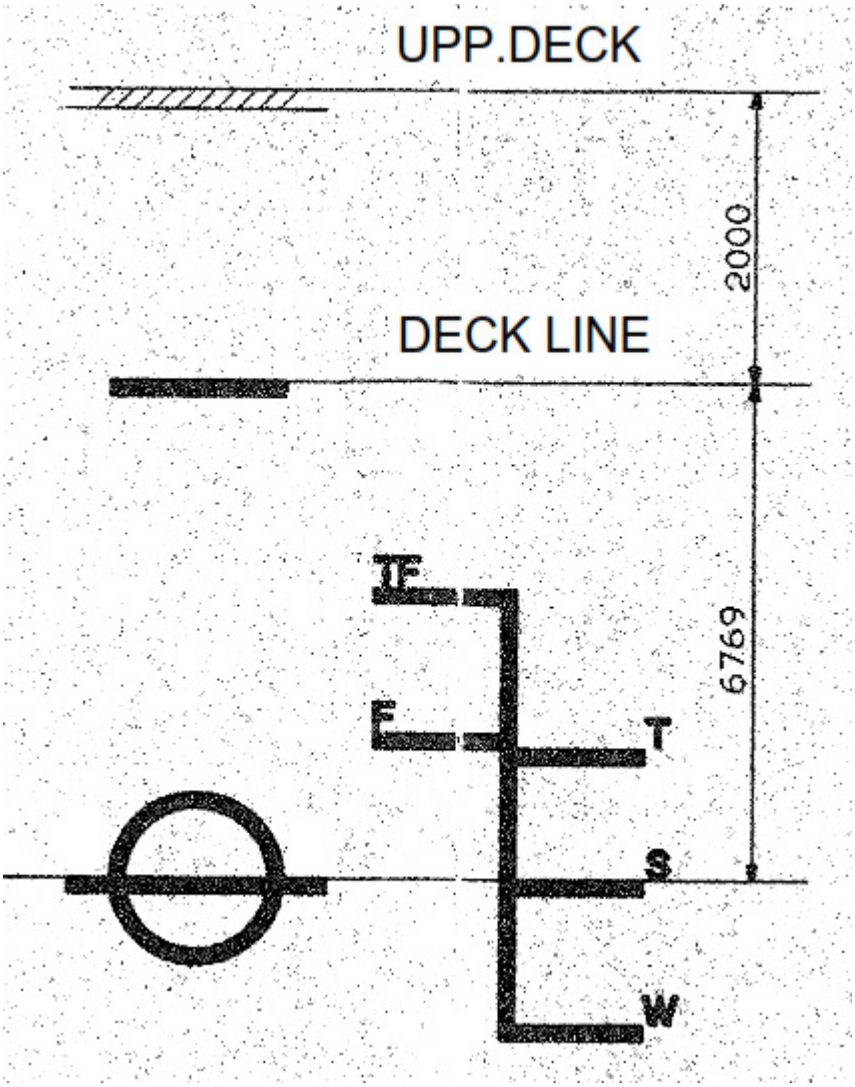
NOTES: All vertical distances are measured from the base line.
Drafts are measured below of keel

All longitudinal distances are measured from amidships with
+ve Forward amidships
-ve Aft amidships

All Transverse distances are measured from center line with
+ve Starboard
-ve Port

3.1 Freeboard and Draft Table

Mark	Description	Freeboard (m)	Draft Ext. (m)	Displacement (MT)	Deadweight (MT)
TF	Tropical Fresh	7.796	23.498	358785.3	317283.2
F	Fresh	8.265	23.029	350828.9	309326.8
T	Tropical	8.300	22.994	358991.7	317489.6
S	Summer	8.769	22.525	350849.2	309347.1
W	Winter	9.238	22.056	342720.0	301217.9



4. SYMBOL ABBREVIATIONS

BG : Trimming lever
CG : Centre of gravity
CO : Cylinder oil
DO : Diesel oil
FO : Fuel oil
FSM : Free surface moment
FW : Fresh water
CGo : Virtual rise of the CG due to the free surface effects
GM : Transverse metacentric height
GoM : Transverse metacentric height corrected for free surface effects
GZ : Righting arm
HM : Heeling moment
KG : Vertical centre of gravity of the vessel
KM (T) : Vertical distance of transverse metacentre above base line
KGo : Virtual position of CG above base line
LBP : Length between perpendiculars
LCB : Longitudinal centre of buoyancy
LCG : Longitudinal centre of gravity
LCF : Longitudinal centre of flotation
LO : Lubricating oil
LOA : Length overall
LT : Long tonne
MT (T) : Metric tonne
MCT : Moment to change trim
SG : Specific gravity
SM : Second moment
SW : Salt water
TPC : Tonnes per cm immersion
TPI : Tonnes per inch immersion
VCG : Vertical centre of gravity
WB : Water ballast

Greek Symbols

Θ : Angle of heel
Θf : Angle of flooding

Note: All vertical distances are measured from the base line.
All longitudinal distances are measured from amidships with
+ve forward amidships
- ve aft amidships

5. UNITS CONVERSION TABLES

Unless otherwise stated, the metric system of units is used through the present booklet.

Metric to British

1 mm	=	0.03937 in = 0.003281 ft.
1 cm	=	0.3937 in = 0.03281 ft.
1 m	=	39.37 in = 3.28084 ft.
1 m^2	=	10.7639 ft^2
1 m^3	=	35.3147 ft^3
1 kg	=	2.20462 lb
1 MT (1000 Kg)	=	2204.62 lb = 0.9842 LT
1 MT/m^3	=	0.02787 LT/ft^3 (Specific gravity conversion)
1 m^3/MT	=	35.8816 ft^3/LT (Stowage factor conversion)
1 MCT - 1 cm	=	8.2017 MCT - 1 in
1 TPC	=	2.49987 TPI

British to Metric

1 in	=	25.4 mm = 2.54 cm = 0.0254 m
1 ft	=	304.8 mm = 30.48 cm = 0.3048 m
1 ft^2	=	0.0929 m^2
1 ft^3	=	0.02832 m^3
1 lb	=	0.45359 kg
1 LT (2240 lb.)	=	1016.047 kg = 1.016 MT
1 LT/ft^3	=	35.8816 MT/m^3 (Specific gravity conversion)
1 ft^3/LT	=	0.02787 m^3/MT (Stowage factor conversion)
1 MCT - 1 in	=	0.1219 MCT - 1 cm
1 TPI	=	0.4000 TPC

Other useful relations

1 rad	=	57.29578 degrees
1 m^3 of fresh water	=	1 grt (grime)
1000 m^3 fresh water	=	1 kgrt
1 m^3 of fresh water	=	1 MT
1 m^3 of salt water	=	1.025 MT
1 MT of salt water	=	0.9756 m^3

6. GENERAL STABILITY REQUIREMENTS

1. Intact Stability Criteria according to IMO RES. A.749(18)
As this ship is required to comply with IMO Resolution A.749(18) and REGULATION 10(2) of Annex I of the International convention on load lines, 1966, it is most important to ensure that in any sailing conditions the stability complies with the following minimum criteria:

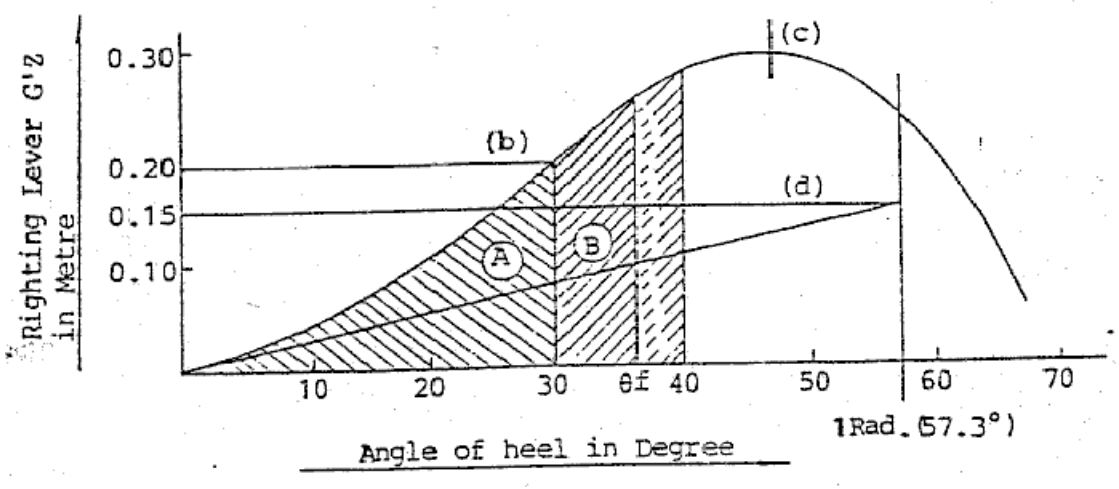
1.1 The area under the righting lever curve (G'Z curve) should not be less than 0.055 metre-radians up to ∂=30° angle of heel and not less than 0.09 metre-radians up to ∂=40° or the angle of flooding ∂f*, if this angle is less than 40°.
Additionally, the area under the righting lever curve (G'Z curve) between the angles of heel of 30° and 40° or between 30° and ∂f, if this angle is less than 40°, should not be less than 0.03 metre-radians.

* ∂f is an angle of heel at which openings in the hull, superstructures or deckhouses which cannot be closed weathertight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.

1.2 The righting lever G'Z should be at least 0.20 metre at an angle of heel equal to or greater than 30°.

1.3 The maximum righting arm should occur at an angle of heel preferably exceeding 30° but not less than 25°.

1.4 The initial metacentric height G'M should not be less than 0.15 metre.



Stability criteria recommended by IMO RESOLUTION A.749(18)

a) Area A to be at least 0.055 metre-radians
Area B to be at least 0.030 metre-radians
Area A+B to be at least 0.090 metre-radians
b) Lever to be at least 0.20m at an angle of heel of at least 30°
c) Maximum lever should occur preferably at an angle of heel exceeding 30° and not less than 25°
d) Initial G'M should not be less than 0.15m.

2. Intact stability Criteria according to IMO RES. A.562(14)

This ship is also required to comply with IMO Resolution A562(14) "Recommendation on a severe wind and rolling criterion (weather criterion) for the intact stability of passenger and cargo ships over 24 meters in length and over", therefore the stability in any sailing conditions to comply with the following minimum criteria:

2.1 The ship is subjected to a steady wind pressure acting perpendicular to the ship's centerline which results in a steady wind heeling lever (lwl).

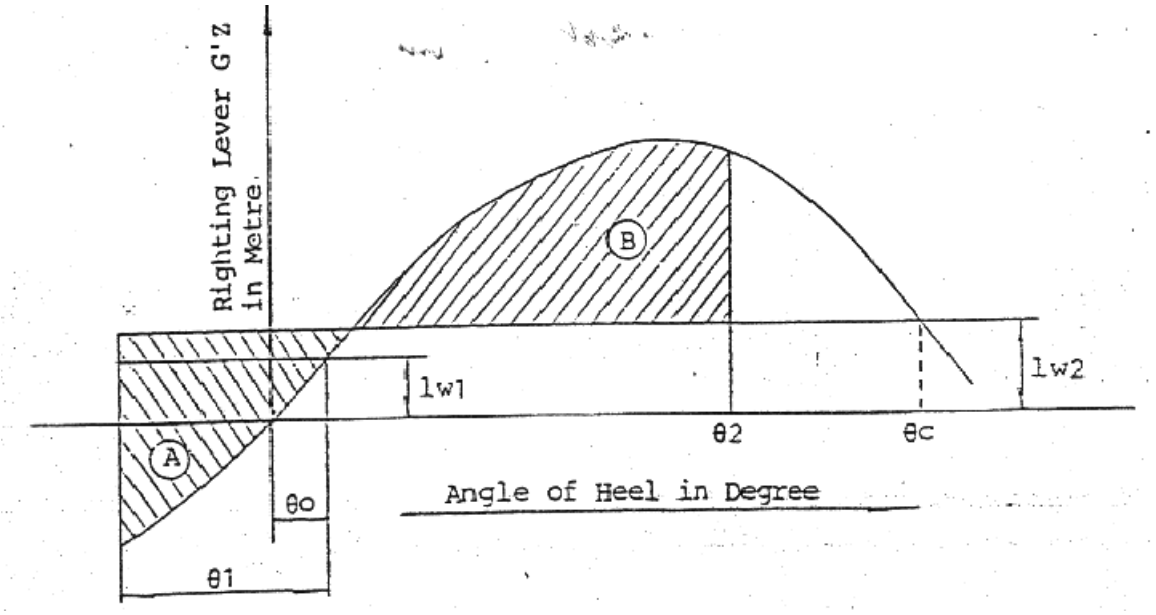
2.2 From the resultant angle of equilibrium (θo), the ship is assumed to roll owing to wave action to an angle of roll ($\theta 1$) to windward. Attention should be paid to the effect of steady wind so that excessive resultant angles of heel are avoided*.

2.3 The ship is then subjected to a gust wind pressure which results in a gust wind heeling lever (lw2).

2.4 Under these circumstances, "area (B)" should be equal to or greater than "area (A)".

2.5 Free surface effects should be accounted for in the standard conditions of loading, e.g. according to appendix 1 to resolution A.167(ES.IV).

The angle of heel under action of steady wind (θo) should be limited to a certain angle to the satisfaction of the administration. As a guide, 16° or 80% of the angle of deck edge immersion, whichever is less, is suggested.



Severe Wind and Rolling

The angles in the above figure are defined as follows:
θo = angle of heel under action of steady wind
$\theta 1$ = angle of roll to windward due to wave action
$\theta 2$ = angle of downflooding (θf) or 50° or θc whichever is less,
where; θf = angle of heel at which openings in the hull, superstructures or deckhouses which cannot be closed

weathertight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.

θc = angle of second intercept between gust wind heeling lever lw2 and G'Z curves

2.6 The wind heeling levers lw1 and lw2 referred to in 3.1 and 3.3 are constant values at all angles of inclination and should be calculated as follows.

$lw1 = (P \cdot A \cdot Z)/\Delta$ (m) and $lw2 = 1.5\ lw1$ (m)

where; P = 0.0514 t/m2

A = projected lateral area of the portion of the ship and deck cargo above the waterline (m2)

Z = vertical distance from the centre of A to the centre of the underwater lateral area or approximately to a point at one half the draught (m)

Δ = displacement (t)

2.7 The angle of roll ($\theta 1$) referred to in 3.2 should be calculated as follows:

$$\theta 1 = 109K \cdot X1 \cdot X2 \cdot \sqrt{r \cdot s}\ (\text{degrees})$$

where; X1 = factor as shown in table 1

X2 = factor as shown in table 2

K = factor as follows:

K = 1.0 for round-bilged ship having no bilge or bar keels

K = 0.7 for a ship having sharp bilges

K = as shown in table 3 for a ship having bilge keels, a bar keel or both

In calculations K = 1.00

$r = 0.73 \pm 0.6\ OG/d$

with; OG = distance between the centre of gravity and the waterline (m) (+ if centre of gravity is above the waterline, - if it is below)

d = mean moulded draught of the ship (m)

s = factor as shown in table 4

Table 1

Values of factor X1

B/d	X1
≤ 2.4	1.00
2.5	0.98
2.6	0.96
2.7	0.95
2.8	0.93
2.9	0.91
3.0	0.90
3.1	0.88
3.2	0.86
3.3	0.84
3.4	0.82
≥ 3.5	0.80

Table 2

Values of factor X2

Cb	X2
≤ 0.45	0.75
0.50	0.82
0.55	0.89
0.60	0.95
0.65	0.97
≥ 0.70	1.00

Table 3	
Values of factor k	
Ak.100/L B	**K**
0.0	1.00
1.0	0.98
1.5	0.95
2.0	0.88
2.5	0.79
3.0	0.74
3.5	0.72
≥ 4.0	0.70

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

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

Rolling period $T = 2\ CB\sqrt{GM}$ (seconds)
Where; C = 0.373 + 0.023 (B/d) - 0.043 (L/100)

The symbols in the above tables and formula for the rolling period are defined as follows:

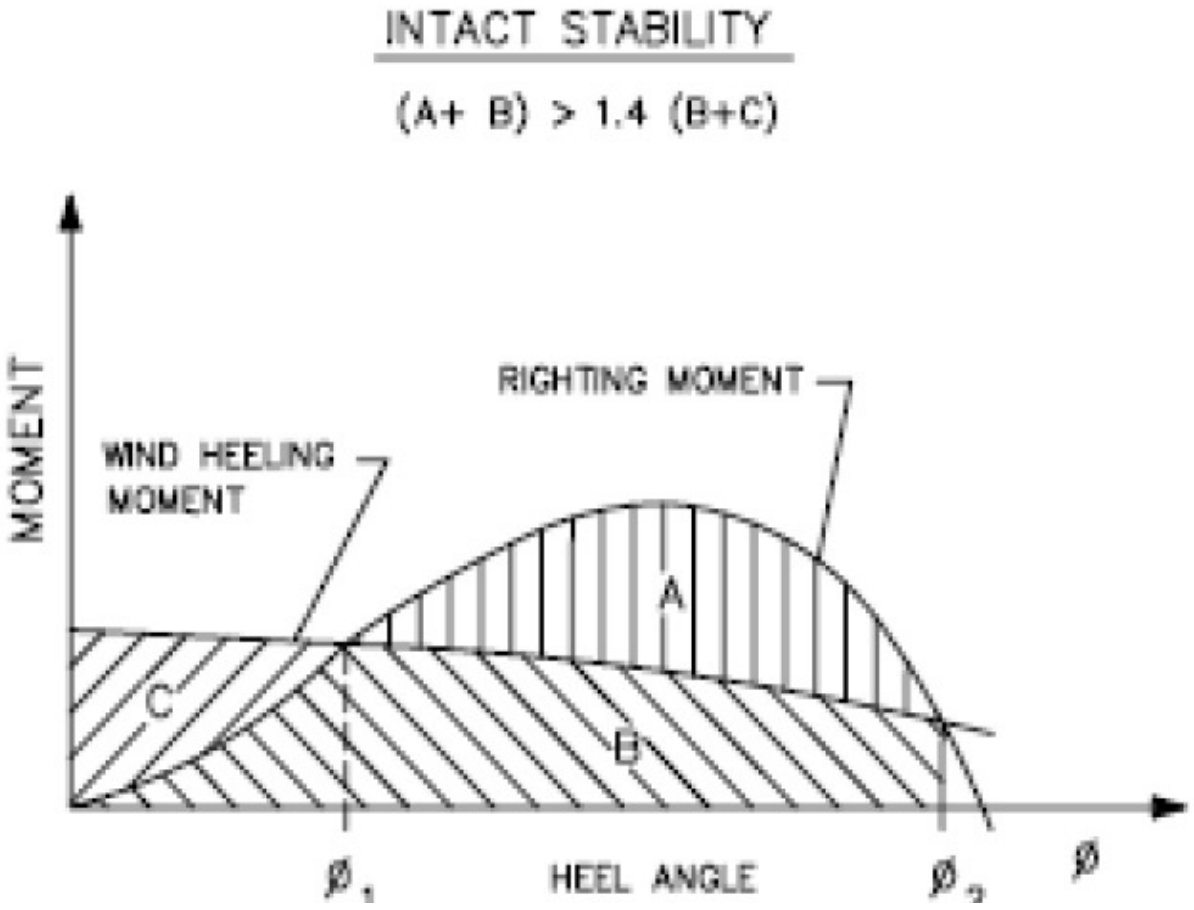
L = waterline length of the ship (m)
B = moulded breadth of the ship (m)
d = mean moulded draught of the ship (m)
Cb = block coefficient
Ak = total overall area of bilge keels, or area of the lateral projection of the bar keel, or sum of these areas (m2)
Total area of bilge keels is 49 m2
G'M = metacentric height corrected for free surface effect (m)

2. Weather Criterio

The stability of a unit in each mode of its operation should meet the following criteria

i) The area under the Righting moment curve to the second intercept or downflooding angle, whichever is less, should not be less than 40% in excess of the area under the wind heeling moment curve to the same limiting angle.

ii) The righting moment curve should be positive over the entire range of angles from upright to the second intercept.



Curves of Righting moment and wind heeling moments with supporting calculations are to be prepared taking into account the maximum deck cargo and equipment in the most unfavorable position applicable. The righting moment curves and wind heeling moment curves should be related to the most critical axes.Account should be taken of the free surface of liquid in tanks.

Where equipment is of such a nature that it can be lowered and stowed, additional wind heeling moment curves may be required and such data should clearly indicate the position of such equipment.

The curves of wind heeling moments should be drawn for wind forces calculated by the following formula

$$F = 0.5\ C_s\ C_h\ P\ V^2\ A$$

Where
F = Wind Force (Newtons)
C_s = Shape coefficient depending on the shape of the structural member exposed to wind (see table 1)
C_h = Height coefficient depending on the height above sea level of the structural member exposed to wind (see table 2)
P = Air Mass density (1.222 kg/m^3)
V = Wind velocity (m/sec)
A = Projected area of all exposed surfaces in either upright or heeling condition (Sq M)

Wind forces should be considered from any direction relative to the unit and the value of wind velocity should be as follows :

A wind velocity of 100knots should be used for normal operating conditions.

In calculating projected areas to the vertical plane, the area of surfaces exposed to wind due to heel and trim such as underdeck surfaces etc. should be included using the appropriate shape factor. Open truss work may be approximated by taking 30% of the projected block area of both front and back section, ie 60% of the projected area of one side.

In calculating the wind heeling moments, the lever of the wind overturning force should be taken vertically from the center of pressure of all surfaces exposed to the wind to the center of lateral resistance of the underwater body of the unit. The unit is to be assumed floating free of mooring restraint.

The wind heeling moment curve should be calculated for a sufficient number of heeling angles to define the curve. For ship shaped hulls the curves may be assumed to vary as a cosine function of the vessel heel.

TABLE 1
Values of Coefficient C_s

Shape	**C_s**
Spherical	0.4
Cylindrical	0.5
Large flat surface (hull, deckhouse, smooth under deck areas)	1.0
Drilling derrick	1.25
Wires	1.2
Exposed beams and girders on deck	1.3
Small parts	1.4
Isolated shapes (crane, beam etc.)	1.5
Clustered deckhouses or similar structures	1.1

TABLE 2
Values of Coefficient C_h

Height above sea level (metres)	**C_h**
0 - 15.3	1.00
15.3 - 30.5	1.10
30.5 - 46.0	1.20
46.0 - 61.0	1.30
61.0 - 76.0	1.37
76.0 - 91.5	1.43
91.5 - 106.5	1.48
106.5 - 122.0	1.52
122.0 - 137.0	1.56
137.0 - 152.5	1.60
152.5 - 167.5	1.63
167.5 - 183.0	1.67
183.0 - 198.0	1.70
198.0 - 213.5	1.72
213.5 - 228.5	1.75
228.5 - 244.0	1.77
244.0 - 256.0	1.79
Above 256.0	1.80

7. DATA FOR LOADING CALCULATION

7.1 Tank Capacities

Compartment Capacity Tables

CARGO

Compartment Name	Frame Aft - Fwd	Volume 100% m3	LCG (m)	VCG (m)	TCG (m)	I(max) (m4)
1.No1 C.O.T. (C)	F101 - F111	29625.5	118.733	17.61	0.00	37075
2.No1 C.O.T. (P)	F101 - F111	16653.9	117.301	17.88	-16.46	12475
3.No1 C.O.T. (S)	F101 - F111	16653.9	117.301	17.88	16.46	12475
4.No2 C.O.T. (C)	F91 - F101	32411.4	69.850	17.61	0.00	44831
5.No2 C.O.T. (P)	F91 - F101	20554.5	69.850	17.75	-18.09	13283
6.No2 C.O.T. (S)	F91 - F101	20554.5	69.850	17.75	18.09	13283
7.No3 C.O.T. (C)	F81 - F91	32411.4	19.050	17.61	0.00	44831
8.No3 C.O.T. (P)	F81 - F91	20554.5	19.050	17.75	-18.09	13283
9.No3 C.O.T. (S)	F81 - F91	20554.5	19.050	17.75	18.09	13283
10.No4 C.O.T. (C)	F71 - F81	32411.4	-31.750	17.61	0.00	44831
11.No4 C.O.T. (P)	F71 - F81	20554.5	-31.750	17.75	-18.09	13283
12.No4 C.O.T. (S)	F71 - F81	20554.5	-31.750	17.75	18.09	13283
13.No5 C.O.T. (C)	F61 - F71	30308.1	-81.105	17.79	0.00	39406
14.No5 C.O.T. (P)	F64 - F71	13354.3	-74.274	18.52	-17.80	9299
15.No5 C.O.T. (S)	F64 - F71	13354.3	-74.274	18.52	17.80	9299
16.Slop Tank (P)	F61 - F64	5042.6	-100.288	20.64	-15.99	5177
17.Slop Tank (S)	F61 - F64	5042.6	-100.288	20.64	15.99	5177
CARGO Total		**350596.4**				

FUEL OIL

Compartment Name	Frame Aft - Fwd	Volume 100% m3	LCG (m)	VCG (m)	TCG (m)	I(max) (m4)
18.No1 HFO Stor Tk(P)	F56 - F61	1300.2	-110.075	22.22	-14.76	1731
19.No1 HFO Stor Tk(S)	F56 - F61	920.3	-109.896	21.94	16.52	843
20.No2 HFO Stor Tk(P)	F20 - F56	3239.6	-124.006	24.42	-17.64	1705
21.No2 HFO Stor Tk(S)	F20 - F56	2688.3	-125.409	25.71	17.70	1705
22.No1 HFO Sett.Tk(S)	F52 - F56	184.1	-113.900	18.23	17.77	327
23.No2 HFO Sett.Tk(S)	F48 - F52	176.4	-117.274	18.25	17.62	298
24.HFO Service Tk (S)	F43 - F48	161.5	-121.048	18.62	16.91	226
FUEL OIL Total		**8670.4**				

DIESEL OIL

Compartment Name	Frame Aft - Fwd	Volume 100% m3	LCG (m)	VCG (m)	TCG (m)	I(max) (m4)
25.DO Storage Tank(S)	F56 - F60	319.5	-110.569	23.87	10.80	71
26.DO Service Tank(S)	F56 - F61	53.3	-110.052	17.84	8.24	2
DIESEL OIL Total		**372.8**				

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LUB OIL

Compartment Name	Frame Aft - Fwd	Volume 100% m3	LCG (m)	VCG (m)	TCG (m)	I(max) (m4)
27.M/E LO Sump Tk(C)	F33 - F48	57.0	-125.154	2.33	0.00	42
28.No1 Cyl.Stor.Tk(S)	F43 - F48	83.0	-121.272	25.24	9.00	14
29.No2 Cyl.Stor.Ts(S)	F39 - F43	73.9	-124.945	25.24	9.16	14
30.Turb LO Stor.Tk(S)	F46 - F48	9.2	-119.850	25.25	10.52	0
31.MELO Storage Tk(S)	F32 - F36	73.5	-130.900	25.25	9.15	14
32.MELO Settling T(S)	F36 - F39	55.2	-127.925	25.25	9.15	10
33.GELO Storage Tk(S)	F30 - F32	13.8	-133.237	25.25	8.24	1
34.GELO Settling T(S)	F30 - F32	13.8	-133.238	25.25	10.07	1
LUB OIL Total		**379.5**				

WATER BALLAST

Compartment Name	Frame Aft - Fwd	Volume 100% m3	LCG (m)	VCG (m)	TCG (m)	I(max) (m4)
35.Fore Peak Tank (C)	F111 - F137	4812.4	152.867	9.48	0.00	16629
36.No1 W.B.Tk (P)	F101 - F111	8789.5	120.992	11.48	-18.53	54569
37.No1 W.B.Tk (S)	F101 - F111	8789.5	120.992	11.48	18.53	54569
38.No2 W.B.Tk (P)	F91 - F101	9731.2	69.746	9.48	-21.32	100171
39.No2 W.B.Tk (S)	F91 - F101	9731.2	69.746	9.48	21.32	100171
40.No3 W.B.Tk (P)	F81 - F91	9782.4	19.050	9.42	-21.35	102880
41.No3 W.B.Tk (S)	F81 - F91	9782.4	19.050	9.42	21.35	102880
42.No4 W.B.Tk (P)	F71 - F81	9514.4	-31.315	9.64	-21.19	92140
43.No4 W.B.Tk (S)	F71 - F81	9514.4	-31.315	9.64	21.19	92140
44.No5 W.B.Tk (P)	F56 - F71	8009.9	-82.363	12.10	-20.01	33101
45.No5 W.B.Tk (S)	F56 - F71	8009.9	-82.363	12.10	20.01	33101
46.Aft Peak Tank (C)	F-8 - F17	2015.8	-153.074	20.20	-0.06	27781
WATER BALLAST Total		**98483.0**				

FRESH WATER

Compartment Name	Frame Aft - Fwd	Volume 100% m3	LCG (m)	VCG (m)	TCG (m)	I(max) (m4)
47.Distilled W.Tk (P)	F10 - F16	256.5	-148.505	26.11	-11.91	330
48.Fresh Water Tk (S)	F10 - F16	256.5	-148.505	26.11	11.91	330
FRESH WATER Total		**513.0**				

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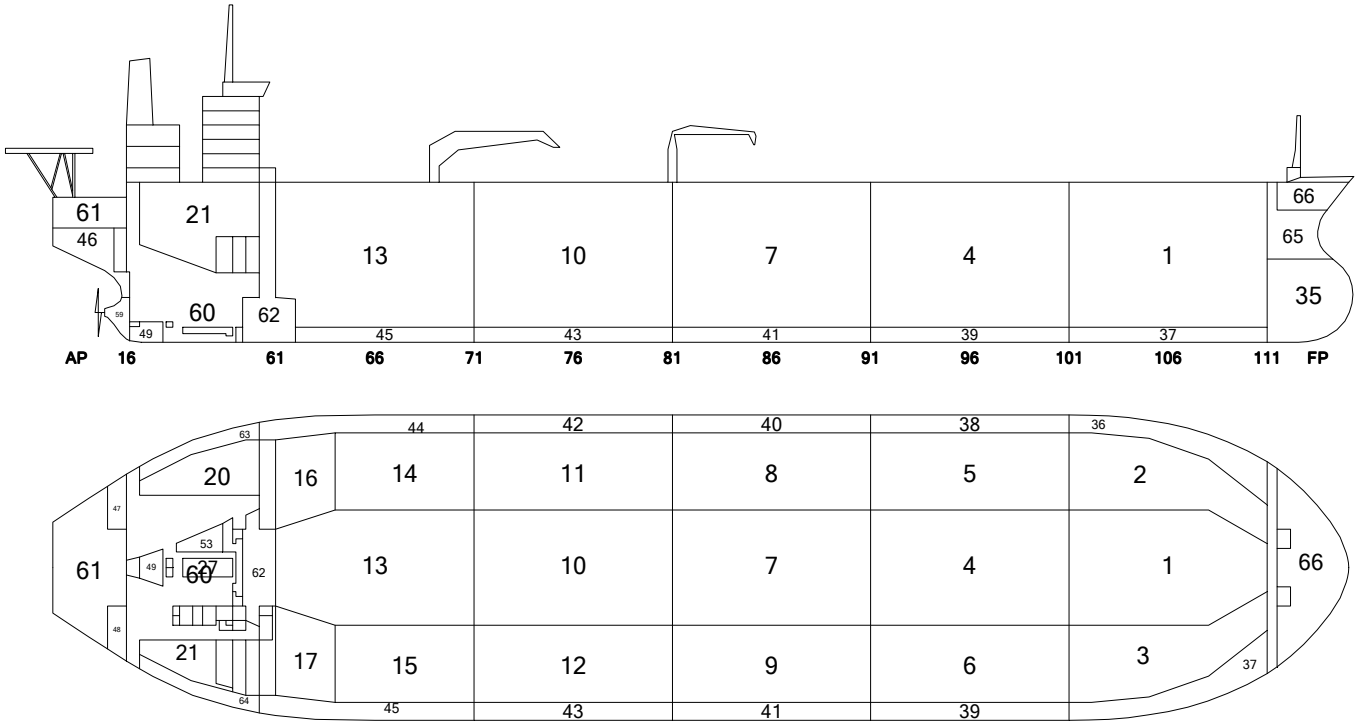
MISCELLANEOUS

Compartment Name	Frame Aft – Fwd	Volume 100% m3	LCG (m)	VCG (m)	TCG (m)	I(max) (m4)
49.Bilge Hold Tank(C)	F17 – F27	111.9	-140.097	2.42	0.00	91
50.B/W Tank (C)	F17 – F20	8.7	-144.012	3.66	0.00	10
51.LO Drain Tank (P)	F28 – F30	3.4	-135.150	3.58	-0.87	1
52.LO Drain Tank (S)	F28 – F30	3.4	-135.150	3.58	0.87	1
53.Sep.Bilge Oil T(P)	F31 – F45	108.7	-126.074	2.60	-4.54	66
54.FO Overflow Tk (C)	F45 – F51	142.8	-118.430	1.96	-2.14	1056
55.B/W Tank (P)	F48 – F51	6.6	-118.067	3.07	-6.15	3
56.B/W Tank (S)	F48 – F51	6.6	-118.067	3.07	6.15	3
57.MELO Puri.Tank (S)	F44 – F48	4.3	-120.700	13.90	10.94	2
58.FO Puri Slud.Tk(S)	F48 – F52	4.3	-117.300	13.90	10.94	2
59.Cooling W.Tank (C)	F11 – F17	44.2	-147.068	4.78	-0.01	6
MISCELLANEOUS Total		**444.9**				

Arrangement of Tanks



Compartments List

Ref No	Compartment Name	Ref No	Compartment Name	Ref No	Compartment Name
1	No1 C.O.T. (C)	25	DO Storage Tank(S)	49	Bilge Hold Tank(C)
2	No1 C.O.T. (P)	26	DO Service Tank(S)	50	B/W Tank (C)
3	No1 C.O.T. (S)	27	M/E LO Sump Tk(C)	51	LO Drain Tank (P)
4	No2 C.O.T. (C)	28	No1 Cyl.Stor.Tk(S)	52	LO Drain Tank (S)
5	No2 C.O.T. (P)	29	No2 Cyl.Stor.Ts(S)	53	Sep.Bilge Oil T(P)
6	No2 C.O.T. (S)	30	Turb LO Stor.Tk(S)	54	FO Overflow Tk (C)
7	No3 C.O.T. (C)	31	MELO Storage Tk(S)	55	B/W Tank (P)
8	No3 C.O.T. (P)	32	MELO Settling T(S)	56	B/W Tank (S)
9	No3 C.O.T. (S)	33	GELO Storage Tk(S)	57	MELO Puri.Tank (S)
10	No4 C.O.T. (C)	34	GELO Settling T(S)	58	FO Puri Slud.Tk(S)
11	No4 C.O.T. (P)	35	Fore Peak Tank (C)	59	Cooling W.Tank (C)
12	No4 C.O.T. (S)	36	No1 W.B.Tk (P)	60	Engine Room
13	No5 C.O.T. (C)	37	No1 W.B.Tk (S)	61	Steering Gear Room
14	No5 C.O.T. (P)	38	No2 W.B.Tk (P)	62	Pump Room
15	No5 C.O.T. (S)	39	No2 W.B.Tk (S)	63	Cofferd. in E/R(P)
16	Slop Tank (P)	40	No3 W.B.Tk (P)	64	Cofferd. in E/R(S)
17	Slop Tank (S)	41	No3 W.B.Tk (S)	65	Void Space Fwd (C)
18	No1 HFO Stor Tk(P)	42	No4 W.B.Tk (P)	66	Bosun's Store
19	No1 HFO Stor Tk(S)	43	No4 W.B.Tk (S)	67	Chain Locker (P)
20	No2 HFO Stor Tk(P)	44	No5 W.B.Tk (P)	68	Chain Locker (S)
21	No2 HFO Stor Tk(S)	45	No5 W.B.Tk (S)	69	Emcy Fire Pump Rm
22	No1 HFO Sett.Tk(S)	46	Aft Peak Tank (C)		
23	No2 HFO Sett.Tk(S)	47	Distilled W.Tk (P)		
24	HFO Service Tk (S)	48	Fresh Water Tk (S)		

7.2 Compartment Data

1.No1 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	118.723	0.000	0.0
0.0130	13.00	3.026	118.723	0.000	474.8
0.0330	34.00	3.037	118.723	0.000	1241.7
0.0930	94.00	3.066	118.723	0.000	3432.9
0.1130	115.00	3.077	118.723	0.000	4199.8
0.2130	216.00	3.126	118.723	0.000	7888.3
0.2330	237.00	3.137	118.723	0.000	8655.2
0.2930	297.00	3.166	118.723	0.000	10846.4
0.3130	318.00	3.177	118.723	0.000	11613.3
0.3530	358.00	3.196	118.723	0.000	13074.1
0.3730	379.00	3.207	118.723	0.000	13841.0
0.4130	419.00	3.226	118.723	0.000	15301.8
0.4330	440.00	3.237	118.723	0.000	16068.7
0.4930	500.00	3.266	118.723	0.000	18259.9
0.5130	521.00	3.277	118.723	0.000	19026.8
0.5530	561.00	3.296	118.723	0.000	20487.6
0.5730	582.00	3.307	118.723	0.000	21254.5
0.6130	622.00	3.326	118.723	0.000	22715.3
0.6330	643.00	3.337	118.723	0.000	23482.2
0.6730	683.00	3.356	118.723	0.000	24943.0
0.6930	704.00	3.367	118.723	0.000	25709.9
0.7530	764.00	3.396	118.723	0.000	27901.1
0.7730	785.00	3.407	118.723	0.000	28668.0
0.8130	825.00	3.426	118.723	0.000	30128.8
0.8330	846.00	3.437	118.723	0.000	30895.7
0.8730	886.00	3.456	118.723	0.000	32356.5
0.8930	907.00	3.467	118.723	0.000	33123.4
0.9530	967.00	3.496	118.723	0.000	35314.6
0.9730	988.00	3.507	118.723	0.000	36081.5
1.0002	1015.20	3.520	118.723	0.000	37074.8
1.0130	1028.00	3.526	118.723	0.000	37074.8
1.0330	1049.00	3.537	118.723	0.000	37074.8
1.0730	1089.00	3.556	118.723	0.000	37074.8
1.0930	1110.00	3.567	118.723	0.000	37074.8
1.1530	1170.00	3.596	118.723	0.000	37074.8
1.1730	1191.00	3.607	118.723	0.000	37074.8
1.2130	1231.00	3.626	118.723	0.000	37074.8
1.2330	1252.00	3.637	118.723	0.000	37074.8
1.2730	1292.00	3.656	118.723	0.000	37074.8
1.2930	1313.00	3.667	118.723	0.000	37074.8
1.3330	1353.00	3.686	118.723	0.000	37074.8
1.3530	1374.00	3.697	118.723	0.000	37074.8
1.4130	1434.00	3.726	118.723	0.000	37074.8
1.4330	1455.00	3.737	118.723	0.000	37074.8
1.4730	1495.00	3.756	118.723	0.000	37074.8
1.4930	1516.00	3.767	118.723	0.000	37074.8
1.5330	1556.00	3.786	118.723	0.000	37074.8
1.5530	1577.00	3.797	118.723	0.000	37074.8
1.6130	1637.00	3.826	118.723	0.000	37074.8
1.6330	1658.00	3.837	118.723	0.000	37074.8
1.6730	1698.00	3.856	118.723	0.000	37074.8
1.6930	1719.00	3.867	118.723	0.000	37074.8
1.7330	1759.00	3.886	118.723	0.000	37074.8
1.7530	1780.00	3.897	118.723	0.000	37074.8
1.8130	1840.00	3.926	118.723	0.000	37074.8
1.8330	1861.00	3.937	118.723	0.000	37074.8
1.8730	1901.00	3.956	118.723	0.000	37074.8
1.8930	1922.00	3.967	118.723	0.000	37074.8
1.9330	1962.00	3.986	118.723	0.000	37074.8
1.9530	1983.00	3.997	118.723	0.000	37074.8
1.9930	2023.00	4.016	118.723	0.000	37074.8
2.0130	2044.00	4.027	118.723	0.000	37074.8
2.0730	2104.00	4.056	118.723	0.000	37074.8

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1.No1 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.0930	2125.00	4.067	118.723	0.000	37074.8
2.1930	2226.00	4.116	118.723	0.000	37074.8
2.2130	2247.00	4.127	118.723	0.000	37074.8
2.2730	2307.00	4.156	118.723	0.000	37074.8
2.2930	2328.00	4.167	118.723	0.000	37074.8
2.3330	2368.00	4.186	118.723	0.000	37074.8
2.3530	2389.00	4.197	118.723	0.000	37074.8
2.3930	2429.00	4.216	118.723	0.000	37074.8
2.4130	2450.00	4.227	118.723	0.000	37074.8
2.4730	2510.00	4.256	118.723	0.000	37074.8
2.4930	2531.00	4.267	118.723	0.000	37074.8
2.5330	2571.00	4.286	118.723	0.000	37074.8
2.5530	2592.00	4.297	118.723	0.000	37074.8
2.5930	2632.00	4.316	118.723	0.000	37074.8
2.6130	2653.00	4.327	118.723	0.000	37074.8
2.6530	2693.00	4.346	118.723	0.000	37074.8
2.6730	2714.00	4.357	118.723	0.000	37074.8
2.7330	2774.00	4.386	118.723	0.000	37074.8
2.7530	2795.00	4.397	118.723	0.000	37074.8
2.7930	2835.00	4.416	118.723	0.000	37074.8
2.8130	2856.00	4.427	118.723	0.000	37074.8
2.8530	2896.00	4.446	118.723	0.000	37074.8
2.8730	2917.00	4.457	118.723	0.000	37074.8
2.9330	2977.00	4.486	118.723	0.000	37074.8
2.9530	2998.00	4.497	118.723	0.000	37074.8
2.9930	3038.00	4.516	118.723	0.000	37074.8
3.0130	3059.00	4.527	118.723	0.000	37074.8
3.0530	3099.00	4.546	118.723	0.000	37074.8
3.0730	3120.00	4.557	118.723	0.000	37074.8
3.1330	3180.00	4.586	118.723	0.000	37074.8
3.1530	3201.00	4.597	118.723	0.000	37074.8
3.1930	3241.00	4.616	118.723	0.000	37074.8
3.2130	3262.00	4.627	118.723	0.000	37074.8
3.3130	3363.00	4.676	118.723	0.000	37074.8
3.3330	3384.00	4.687	118.723	0.000	37074.8
3.3930	3444.00	4.716	118.723	0.000	37074.8
3.4130	3465.00	4.727	118.723	0.000	37074.8
3.5130	3566.00	4.776	118.723	0.000	37074.8
3.5330	3587.00	4.787	118.723	0.000	37074.8
3.5930	3647.00	4.816	118.723	0.000	37074.8
3.6130	3668.00	4.827	118.723	0.000	37074.8
3.6530	3708.00	4.846	118.723	0.000	37074.8
3.6730	3729.00	4.857	118.723	0.000	37074.8
3.7130	3769.00	4.876	118.723	0.000	37074.8
3.7330	3790.00	4.887	118.723	0.000	37074.8
3.7730	3830.00	4.906	118.723	0.000	37074.8
3.7930	3851.00	4.917	118.723	0.000	37074.8
3.8530	3911.00	4.946	118.723	0.000	37074.8
3.8730	3932.00	4.957	118.723	0.000	37074.8
3.9130	3972.00	4.976	118.723	0.000	37074.8
3.9330	3993.00	4.987	118.723	0.000	37074.8
3.9730	4033.00	5.006	118.723	0.000	37074.8
3.9930	4054.00	5.017	118.723	0.000	37074.8
4.0530	4114.00	5.046	118.723	0.000	37074.8
4.0730	4135.00	5.057	118.723	0.000	37074.8
4.1130	4175.00	5.076	118.723	0.000	37074.8
4.1330	4196.00	5.087	118.723	0.000	37074.8
4.1730	4236.00	5.106	118.723	0.000	37074.8
4.1930	4257.00	5.117	118.723	0.000	37074.8
4.2530	4317.00	5.146	118.723	0.000	37074.8
4.2730	4338.00	5.157	118.723	0.000	37074.8
4.3130	4378.00	5.176	118.723	0.000	37074.8

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1.No1 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.3330	4399.00	5.187	118.723	0.000	37074.8
4.3730	4439.00	5.206	118.723	0.000	37074.8
4.3930	4460.00	5.217	118.723	0.000	37074.8
4.4330	4500.00	5.236	118.723	0.000	37074.8
4.4530	4521.00	5.247	118.723	0.000	37074.8
4.5130	4581.00	5.276	118.723	0.000	37074.8
4.5330	4602.00	5.287	118.723	0.000	37074.8
4.5730	4642.00	5.306	118.723	0.000	37074.8
4.5930	4663.00	5.317	118.723	0.000	37074.8
4.6330	4703.00	5.336	118.723	0.000	37074.8
4.6530	4724.00	5.347	118.723	0.000	37074.8
4.7130	4784.00	5.376	118.723	0.000	37074.8
4.7330	4805.00	5.387	118.723	0.000	37074.8
4.7730	4845.00	5.406	118.723	0.000	37074.8
4.7930	4866.00	5.417	118.723	0.000	37074.8
4.8330	4906.00	5.436	118.723	0.000	37074.8
4.8530	4927.00	5.447	118.723	0.000	37074.8
4.9130	4987.00	5.476	118.723	0.000	37074.8
4.9330	5008.00	5.487	118.723	0.000	37074.8
4.9730	5048.00	5.506	118.723	0.000	37074.8
4.9930	5069.00	5.517	118.723	0.000	37074.8
5.0330	5109.00	5.536	118.723	0.000	37074.8
5.0530	5130.00	5.547	118.723	0.000	37074.8
5.0930	5170.00	5.566	118.723	0.000	37074.8
5.1130	5191.00	5.577	118.723	0.000	37074.8
5.1730	5251.00	5.606	118.723	0.000	37074.8
5.1930	5272.00	5.617	118.723	0.000	37074.8
5.2330	5312.00	5.636	118.723	0.000	37074.8
5.2530	5333.00	5.647	118.723	0.000	37074.8
5.2930	5373.00	5.666	118.723	0.000	37074.8
5.3130	5394.00	5.677	118.723	0.000	37074.8
5.3730	5454.00	5.706	118.723	0.000	37074.8
5.3930	5475.00	5.717	118.723	0.000	37074.8
5.4330	5515.00	5.736	118.723	0.000	37074.8
5.4530	5536.00	5.747	118.723	0.000	37074.8
5.4930	5576.00	5.766	118.723	0.000	37074.8
5.5130	5597.00	5.777	118.723	0.000	37074.8
5.5730	5657.00	5.806	118.723	0.000	37074.8
5.5930	5678.00	5.817	118.723	0.000	37074.8
5.6330	5718.00	5.836	118.723	0.000	37074.8
5.6530	5739.00	5.847	118.723	0.000	37074.8
5.6930	5779.00	5.866	118.723	0.000	37074.8
5.7130	5800.00	5.877	118.723	0.000	37074.8
5.7530	5840.00	5.896	118.723	0.000	37074.8
5.7730	5861.00	5.907	118.723	0.000	37074.8
5.8330	5921.00	5.936	118.723	0.000	37074.8
5.8530	5942.00	5.947	118.723	0.000	37074.8
5.8930	5982.00	5.966	118.723	0.000	37074.8
5.9130	6003.00	5.977	118.723	0.000	37074.8
5.9530	6043.00	5.996	118.723	0.000	37074.8
5.9730	6064.00	6.007	118.723	0.000	37074.8
6.0330	6124.00	6.036	118.723	0.000	37074.8
6.0530	6145.00	6.047	118.723	0.000	37074.8
6.1730	6267.00	6.107	118.723	0.000	37074.8
6.8730	6977.00	6.456	118.723	0.000	37074.8
8.5730	8703.00	7.307	118.723	0.000	37074.8
8.6730	8804.00	7.356	118.723	0.000	37074.8
8.8730	9008.00	7.457	118.723	0.000	37074.8
8.9730	9109.00	7.507	118.723	0.000	37074.8
9.0730	9211.00	7.557	118.723	0.000	37074.8
9.1730	9312.00	7.606	118.723	0.000	37074.8
9.2730	9414.00	7.657	118.723	0.000	37074.8

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1.No1 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
9.3730	9515.00	7.706	118.723	0.000	37074.8
9.4730	9617.00	7.757	118.723	0.000	37074.8
9.5730	9718.00	7.806	118.723	0.000	37074.8
9.6730	9820.00	7.857	118.723	0.000	37074.8
9.7730	9921.00	7.906	118.723	0.000	37074.8
9.8730	10023.00	7.957	118.723	0.000	37074.8
11.7730	11951.00	8.906	118.723	0.000	37074.8
11.9730	12155.00	9.007	118.723	0.000	37074.8
12.0730	12256.00	9.056	118.723	0.000	37074.8
12.1730	12358.00	9.107	118.723	0.000	37074.8
13.8730	14083.00	9.956	118.723	0.000	37074.8
13.9730	14185.00	10.007	118.723	0.000	37074.8
14.8730	15098.00	10.456	118.723	0.000	37074.8
15.0730	15302.00	10.557	118.723	0.000	37074.8
15.1730	15403.00	10.606	118.723	0.000	37074.8
15.2730	15505.00	10.657	118.723	0.000	37074.8
16.7730	17027.00	11.406	118.723	0.000	37074.8
17.8730	18144.00	11.957	118.723	0.000	37074.8
17.9730	18245.00	12.006	118.723	0.000	37074.8
18.1730	18449.00	12.107	118.723	0.000	37074.8
18.2730	18550.00	12.156	118.723	0.000	37074.8
18.3730	18652.00	12.207	118.723	0.000	37074.8
18.4730	18753.00	12.256	118.723	0.000	37074.8
18.5730	18855.00	12.307	118.723	0.000	37074.8
20.2730	20580.00	13.156	118.723	0.000	37074.8
20.3730	20682.00	13.207	118.723	0.000	37074.8
21.2730	21595.00	13.656	118.723	0.000	37074.8
21.4730	21799.00	13.757	118.723	0.000	37074.8
21.5730	21900.00	13.806	118.723	0.000	37074.8
21.6730	22002.00	13.857	118.723	0.000	37074.8
21.7730	22103.00	13.906	118.723	0.000	37074.8
21.8730	22205.00	13.957	118.723	0.000	37074.8
21.9730	22306.00	14.006	118.723	0.000	37074.8
22.0730	22408.00	14.057	118.723	0.000	37074.8
22.1730	22509.00	14.106	118.723	0.000	37074.8
22.2730	22611.00	14.157	118.723	0.000	37074.8
22.3730	22712.00	14.206	118.723	0.000	37074.8
22.4730	22814.00	14.257	118.723	0.000	37074.8
24.3730	24742.00	15.206	118.723	0.000	37074.8
24.5730	24946.00	15.307	118.723	0.000	37074.8
24.6730	25047.00	15.356	118.723	0.000	37074.8
24.9730	25352.00	15.507	118.723	0.000	37074.8
24.9998	25379.00	15.520	118.723	0.000	37074.8
25.0930	25473.00	15.566	118.723	0.000	37074.8
25.1130	25494.00	15.577	118.723	0.000	37074.8
25.1530	25534.00	15.596	118.723	0.000	37074.8
25.1730	25555.00	15.607	118.723	0.000	37074.8
25.2130	25595.00	15.626	118.723	0.000	37074.8
25.2330	25616.00	15.637	118.723	0.000	37074.8
25.2930	25676.00	15.666	118.723	0.000	37074.8
25.3130	25697.00	15.677	118.723	0.000	37074.8
25.3530	25737.00	15.696	118.723	0.000	37074.8
25.3730	25758.00	15.707	118.723	0.000	37074.8
25.4130	25798.00	15.726	118.723	0.000	37074.8
25.4330	25819.00	15.737	118.723	0.000	37074.8
25.4930	25879.00	15.766	118.723	0.000	37074.8
25.5130	25900.00	15.777	118.723	0.000	37074.8
25.5530	25940.00	15.796	118.723	0.000	37074.8
25.5730	25961.00	15.807	118.723	0.000	37074.8
25.6130	26001.00	15.826	118.723	0.000	37074.8
25.6330	26022.00	15.837	118.723	0.000	37074.8
25.6730	26062.00	15.856	118.723	0.000	37074.8

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1.No1 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
25.6930	26083.00	15.867	118.723	0.000	37074.8
25.7530	26143.00	15.896	118.723	0.000	37074.8
25.7730	26164.00	15.907	118.723	0.000	37074.8
25.8130	26204.00	15.926	118.723	0.000	37074.8
25.8330	26225.00	15.937	118.723	0.000	37074.8
25.8730	26265.00	15.956	118.723	0.000	37074.8
25.8930	26286.00	15.967	118.723	0.000	37074.8
25.9530	26346.00	15.996	118.723	0.000	37074.8
25.9730	26367.00	16.007	118.723	0.000	37074.8
26.0130	26407.00	16.026	118.723	0.000	37074.8
26.0330	26428.00	16.037	118.723	0.000	37074.8
26.0730	26468.00	16.056	118.723	0.000	37074.8
26.0930	26489.00	16.067	118.723	0.000	37074.8
26.1530	26549.00	16.096	118.723	0.000	37074.8
26.1730	26570.00	16.107	118.723	0.000	37074.8
26.2130	26610.00	16.126	118.723	0.000	37074.8
26.2330	26631.00	16.137	118.723	0.000	37074.8
26.2730	26671.00	16.156	118.723	0.000	37074.8
26.2930	26692.00	16.167	118.723	0.000	37074.8
26.3330	26732.00	16.186	118.723	0.000	37074.8
26.3530	26753.00	16.197	118.723	0.000	37074.8
26.4130	26813.00	16.226	118.723	0.000	37074.8
26.4330	26834.00	16.237	118.723	0.000	37074.8
26.4730	26874.00	16.256	118.723	0.000	37074.8
26.4930	26895.00	16.267	118.723	0.000	37074.8
26.5330	26935.00	16.286	118.723	0.000	37074.8
26.5530	26956.00	16.297	118.723	0.000	37074.8
26.6130	27016.00	16.326	118.723	0.000	37074.8
26.6330	27037.00	16.337	118.723	0.000	37074.8
26.6730	27077.00	16.356	118.723	0.000	37074.8
26.6930	27098.00	16.367	118.723	0.000	37074.8
26.7330	27138.00	16.386	118.723	0.000	37074.8
26.7530	27159.00	16.397	118.723	0.000	37074.8
26.8130	27219.00	16.426	118.723	0.000	37074.8
26.8330	27240.00	16.437	118.723	0.000	37074.8
26.8730	27280.00	16.456	118.723	0.000	37074.8
26.8930	27301.00	16.467	118.723	0.000	37074.8
26.9330	27341.00	16.486	118.723	0.000	37074.8
26.9530	27362.00	16.497	118.723	0.000	37074.8
26.9930	27402.00	16.516	118.723	0.000	37074.8
27.0130	27423.00	16.527	118.723	0.000	37074.8
27.0730	27483.00	16.556	118.723	0.000	37074.8
27.0930	27504.00	16.567	118.723	0.000	37074.8
27.1330	27544.00	16.586	118.723	0.000	37074.8
27.1530	27565.00	16.597	118.723	0.000	37074.8
27.1930	27605.00	16.616	118.723	0.000	37074.8
27.2130	27626.00	16.627	118.723	0.000	37074.8
27.2730	27686.00	16.656	118.723	0.000	37074.8
27.2930	27707.00	16.667	118.723	0.000	37074.8
27.3330	27747.00	16.686	118.723	0.000	37074.8
27.3530	27768.00	16.697	118.723	0.000	37074.8
27.3930	27808.00	16.716	118.723	0.000	37074.8
27.4130	27829.00	16.727	118.723	0.000	37074.8
27.4730	27889.00	16.756	118.723	0.000	37074.8
27.4930	27910.00	16.767	118.723	0.000	37074.8
27.5330	27950.00	16.786	118.723	0.000	37074.8
27.5530	27971.00	16.797	118.723	0.000	37074.8
27.5930	28011.00	16.816	118.723	0.000	37074.8
27.6130	28032.00	16.827	118.723	0.000	37074.8
27.6530	28072.00	16.846	118.723	0.000	37074.8
27.6730	28093.00	16.857	118.723	0.000	37074.8
27.7330	28153.00	16.886	118.723	0.000	37074.8

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1.No1 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
27.7530	28174.00	16.897	118.723	0.000	37074.8
27.7930	28214.00	16.916	118.723	0.000	37074.8
27.8130	28235.00	16.927	118.723	0.000	37074.8
27.8530	28275.00	16.946	118.723	0.000	37074.8
27.8730	28296.00	16.957	118.723	0.000	37074.8
27.9330	28356.00	16.986	118.723	0.000	37074.8
27.9530	28377.00	16.997	118.723	0.000	37074.8
27.9930	28417.00	17.016	118.723	0.000	37074.8
28.0130	28438.00	17.027	118.723	0.000	36944.3
28.0530	28478.00	17.046	118.723	0.000	36557.5
28.0730	28499.00	17.057	118.723	0.000	36354.5
28.1330	28559.00	17.086	118.723	0.000	35774.3
28.1530	28580.00	17.097	118.723	0.000	35571.3
28.1930	28620.00	17.116	118.723	0.000	35184.5
28.2130	28641.00	17.127	118.723	0.000	34981.5
28.2530	28681.00	17.146	118.723	0.000	34594.7
28.2730	28702.00	17.157	118.723	0.000	34391.7
28.3130	28742.00	17.176	118.723	0.000	34004.9
28.3330	28763.00	17.187	118.723	0.000	33801.9
28.3930	28823.00	17.216	118.723	0.000	33221.8
28.4130	28844.00	17.227	118.723	0.000	33018.7
28.4530	28884.00	17.246	118.723	0.000	32632.0
28.4730	28905.00	17.257	118.723	0.000	32428.9
28.5130	28945.00	17.276	118.724	0.000	32042.2
28.5330	28966.00	17.287	118.724	0.000	31839.1
28.5930	29026.00	17.316	118.724	0.000	31259.0
28.6130	29047.00	17.327	118.724	0.000	31055.9
28.6530	29087.00	17.346	118.724	0.000	30669.2
28.6730	29108.00	17.357	118.724	0.000	30466.1
28.7130	29148.00	17.376	118.724	0.000	30079.4
28.7330	29169.00	17.387	118.724	0.000	29876.3
28.7930	29229.00	17.416	118.724	0.000	29296.2
28.8130	29250.00	17.427	118.724	0.000	29093.2
28.8530	29290.00	17.446	118.724	0.000	28706.4
28.8730	29311.00	17.457	118.724	0.000	28503.4
28.9130	29351.00	17.476	118.724	0.000	28116.6
28.9330	29372.00	17.487	118.724	0.000	27913.6
28.9730	29412.00	17.506	118.724	0.000	27526.8
28.9930	29431.00	17.516	118.724	0.000	27343.1
29.0330	29467.00	17.534	118.725	0.000	22988.2
29.0530	29484.00	17.542	118.726	0.000	20522.5
29.0730	29500.00	17.550	118.727	0.000	18201.9
29.0930	29515.00	17.557	118.728	0.000	16026.4
29.1130	29529.00	17.564	118.728	0.000	13995.8
29.1530	29555.00	17.577	118.730	0.000	10224.9
29.1730	29566.00	17.583	118.730	0.000	8629.4
29.2130	29586.00	17.592	118.731	0.000	5728.7
29.2530	29602.00	17.600	118.732	0.000	3408.1
29.2930	29614.00	17.606	118.732	0.000	1667.7
29.3130	29618.00	17.608	118.733	0.000	1087.5
29.3530	29624.00	17.611	118.733	0.000	217.3
29.3930	29625.50	17.612	118.733	0.000	0.0
30.0730	29625.50	17.612	118.733	0.000	0.0

2.No1 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	115.638	-14.902	0.0
0.0110	5.00	3.026	115.638	-14.902	68.8
0.0310	13.00	3.037	115.638	-14.902	178.9
0.0510	20.00	3.046	115.638	-14.902	275.3
0.0710	28.00	3.056	115.638	-14.902	385.4
0.0910	35.00	3.065	115.638	-14.902	481.7
0.1110	43.00	3.076	115.638	-14.902	591.8
0.1310	50.00	3.085	115.638	-14.902	688.2
0.1510	58.00	3.095	115.638	-14.902	798.3
0.1710	65.00	3.104	115.638	-14.902	894.6
0.1910	73.00	3.115	115.638	-14.902	1004.7
0.2110	80.00	3.124	115.638	-14.902	1101.1
0.2510	96.00	3.145	115.638	-14.902	1321.3
0.2710	103.00	3.154	115.638	-14.902	1417.6
0.3110	119.00	3.175	115.638	-14.902	1637.8
0.3310	126.00	3.184	115.638	-14.902	1734.2
0.3910	150.00	3.215	115.638	-14.902	2064.5
0.4110	157.00	3.224	115.638	-14.902	2160.8
0.4910	189.00	3.265	115.638	-14.902	2601.3
0.5110	196.00	3.274	115.638	-14.902	2697.6
0.8710	340.00	3.461	115.638	-14.902	4679.5
0.8910	349.00	3.473	115.638	-14.902	4803.4
0.9710	381.00	3.515	115.638	-14.902	5243.8
0.9910	390.00	3.526	115.638	-14.902	5367.7
1.0510	414.00	3.556	115.650	-14.910	5456.9
1.0710	423.00	3.567	115.656	-14.913	5482.2
1.1110	439.00	3.586	115.665	-14.919	5527.1
1.1310	448.00	3.597	115.670	-14.923	5552.3
1.1710	464.00	3.616	115.679	-14.929	5597.2
1.1910	473.00	3.627	115.684	-14.932	5622.5
1.2110	481.00	3.637	115.688	-14.935	5645.0
1.2310	490.00	3.648	115.694	-14.938	5670.2
1.2710	506.00	3.667	115.703	-14.944	5715.1
1.2910	515.00	3.678	115.708	-14.948	5740.4
1.3110	523.00	3.688	115.712	-14.950	5762.8
1.3310	532.00	3.699	115.717	-14.954	5788.1
1.3510	540.00	3.708	115.722	-14.957	5810.5
1.3710	549.00	3.719	115.727	-14.960	5835.8
1.3910	557.00	3.729	115.732	-14.963	5858.2
1.4310	575.00	3.751	115.742	-14.970	5908.7
1.4510	583.00	3.761	115.746	-14.973	5931.2
1.4710	592.00	3.771	115.751	-14.976	5956.4
1.4910	600.00	3.781	115.756	-14.979	5978.9
1.5310	618.00	3.803	115.766	-14.986	6029.4
1.5510	626.00	3.813	115.771	-14.989	6051.8
1.6110	653.00	3.845	115.786	-14.999	6127.6
1.6310	661.00	3.855	115.790	-15.002	6150.1
1.7110	697.00	3.899	115.811	-15.015	6251.1
1.7310	705.00	3.908	115.815	-15.018	6273.5
1.9110	786.00	4.007	115.861	-15.048	6500.8
1.9310	794.00	4.016	115.866	-15.051	6523.3
1.9510	803.00	4.027	115.871	-15.054	6548.5
1.9710	813.00	4.039	115.877	-15.058	6576.6
1.9961	824.30	4.053	115.883	-15.062	6608.3
2.1510	894.00	4.132	115.916	-15.087	6807.8
2.1710	904.00	4.144	115.920	-15.091	6836.4
2.2510	940.00	4.184	115.937	-15.104	6939.4
2.2710	950.00	4.196	115.942	-15.107	6968.0
2.3110	968.00	4.216	115.950	-15.114	7019.5
2.3310	978.00	4.228	115.955	-15.118	7048.1
2.3710	996.00	4.248	115.963	-15.124	7099.6
2.3910	1006.00	4.259	115.968	-15.128	7128.3
2.4310	1024.00	4.280	115.976	-15.134	7179.8

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2.No1 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.4510	1034.00	4.291	115.981	-15.138	7208.4
2.4710	1043.00	4.302	115.985	-15.141	7234.1
2.4910	1053.00	4.313	115.990	-15.145	7262.8
2.5110	1062.00	4.323	115.994	-15.148	7288.5
2.5310	1072.00	4.334	115.999	-15.152	7317.1
2.5510	1081.00	4.345	116.003	-15.155	7342.9
2.5710	1091.00	4.356	116.008	-15.158	7371.5
2.5910	1100.00	4.366	116.012	-15.162	7397.3
2.6110	1110.00	4.378	116.017	-15.165	7425.9
2.6310	1119.00	4.388	116.021	-15.169	7451.6
2.6510	1129.00	4.399	116.025	-15.172	7480.2
2.6710	1138.00	4.409	116.030	-15.176	7506.0
2.7110	1158.00	4.432	116.039	-15.183	7563.2
2.7310	1167.00	4.442	116.043	-15.186	7589.0
2.7710	1187.00	4.465	116.053	-15.193	7646.2
2.7910	1196.00	4.475	116.057	-15.196	7672.0
2.8310	1216.00	4.498	116.066	-15.204	7729.2
2.8510	1225.00	4.508	116.070	-15.207	7755.0
2.9110	1255.00	4.542	116.084	-15.218	7840.8
2.9310	1264.00	4.553	116.089	-15.221	7866.6
2.9968	1296.90	4.590	116.104	-15.233	7960.7
3.0510	1324.00	4.619	116.115	-15.242	8040.3
3.0710	1333.00	4.629	116.118	-15.246	8066.7
3.2910	1443.00	4.746	116.161	-15.284	8389.7
3.3110	1454.00	4.758	116.166	-15.288	8422.0
3.4110	1504.00	4.812	116.185	-15.305	8568.8
3.4310	1515.00	4.823	116.189	-15.309	8601.1
3.5110	1555.00	4.866	116.205	-15.323	8718.6
3.5310	1566.00	4.878	116.209	-15.327	8750.9
3.5710	1586.00	4.899	116.217	-15.334	8809.6
3.5910	1597.00	4.911	116.222	-15.338	8841.9
3.6310	1617.00	4.933	116.229	-15.345	8900.7
3.6510	1628.00	4.944	116.234	-15.349	8933.0
3.6710	1638.00	4.955	116.238	-15.352	8962.3
3.6910	1649.00	4.967	116.242	-15.356	8994.6
3.7310	1669.00	4.988	116.250	-15.363	9053.4
3.7510	1680.00	5.000	116.254	-15.367	9085.7
3.7710	1690.00	5.011	116.258	-15.370	9115.0
3.7910	1701.00	5.023	116.262	-15.374	9147.3
3.8110	1711.00	5.033	116.266	-15.378	9176.7
3.8310	1722.00	5.045	116.271	-15.381	9209.0
3.8510	1732.00	5.056	116.275	-15.385	9238.3
3.8910	1754.00	5.079	116.283	-15.393	9303.0
3.9110	1764.00	5.090	116.287	-15.396	9332.3
3.9310	1775.00	5.102	116.291	-15.400	9364.6
3.9510	1785.00	5.112	116.295	-15.403	9394.0
3.9910	1807.00	5.136	116.304	-15.411	9458.6
4.0110	1817.00	5.146	116.307	-15.414	9488.6
4.0510	1839.00	5.169	116.315	-15.422	9555.1
4.0710	1849.00	5.179	116.318	-15.425	9585.4
4.1310	1882.00	5.212	116.329	-15.436	9685.2
4.1510	1892.00	5.222	116.332	-15.440	9715.5
4.2310	1936.00	5.267	116.347	-15.454	9848.6
4.2510	1946.00	5.277	116.351	-15.458	9878.8
4.5710	2122.00	5.454	116.409	-15.517	10411.2
4.5910	2134.00	5.467	116.413	-15.521	10447.5
4.6910	2189.00	5.522	116.432	-15.539	10613.9
4.7110	2201.00	5.534	116.436	-15.544	10650.2
4.7710	2234.00	5.568	116.447	-15.555	10750.0
4.7910	2246.00	5.580	116.451	-15.559	10786.3
4.8310	2268.00	5.602	116.458	-15.566	10852.8
4.8510	2280.00	5.614	116.462	-15.570	10889.1

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2.No1 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.8910	2302.00	5.636	116.470	-15.577	10955.7
4.9110	2314.00	5.648	116.474	-15.582	10992.0
4.9310	2325.00	5.660	116.477	-15.585	11025.3
4.9510	2337.00	5.672	116.481	-15.589	11061.6
4.9710	2348.00	5.683	116.485	-15.593	11094.8
4.9910	2360.00	5.695	116.489	-15.597	11131.1
5.0110	2371.00	5.706	116.492	-15.601	11158.2
5.0310	2383.00	5.717	116.496	-15.604	11185.3
5.0510	2394.00	5.728	116.499	-15.608	11210.1
5.0710	2406.00	5.739	116.502	-15.612	11237.2
5.0910	2417.00	5.750	116.505	-15.615	11262.0
5.1110	2429.00	5.761	116.509	-15.619	11289.0
5.1310	2440.00	5.772	116.512	-15.623	11313.8
5.1510	2452.00	5.783	116.515	-15.627	11340.9
5.1710	2463.00	5.794	116.518	-15.630	11365.7
5.2110	2487.00	5.817	116.525	-15.638	11419.8
5.2310	2498.00	5.827	116.528	-15.641	11444.6
5.2710	2522.00	5.850	116.535	-15.649	11498.7
5.2910	2533.00	5.861	116.538	-15.653	11523.5
5.3510	2569.00	5.895	116.548	-15.664	11604.7
5.3710	2580.00	5.905	116.551	-15.668	11629.5
5.4310	2616.00	5.940	116.561	-15.679	11710.6
5.4510	2627.00	5.950	116.564	-15.683	11735.4
5.9710	2939.00	6.249	116.652	-15.783	12438.9
5.9974	2955.10	6.264	116.657	-15.788	12475.2
6.0710	3000.00	6.305	116.666	-15.799	12475.2
6.2710	3120.00	6.415	116.691	-15.827	12475.2
6.3710	3181.00	6.471	116.703	-15.842	12475.2
6.6710	3361.00	6.636	116.740	-15.885	12475.2
6.7710	3422.00	6.692	116.752	-15.900	12475.2
6.9710	3542.00	6.801	116.777	-15.928	12475.2
6.9971	3557.90	6.816	116.780	-15.932	12475.2
7.0710	3603.00	6.856	116.787	-15.940	12475.2
7.3710	3783.00	7.016	116.813	-15.970	12475.2
7.4710	3844.00	7.070	116.822	-15.980	12475.2
7.6710	3964.00	7.177	116.839	-16.001	12475.2
7.7710	4025.00	7.231	116.848	-16.011	12475.2
7.9972	4160.70	7.352	116.868	-16.034	12475.2
8.0710	4205.00	7.391	116.873	-16.040	12475.2
8.1710	4266.00	7.444	116.879	-16.047	12475.2
8.4710	4446.00	7.602	116.899	-16.070	12475.2
8.5710	4507.00	7.655	116.905	-16.078	12475.2
8.7710	4627.00	7.760	116.918	-16.094	12475.2
8.8710	4688.00	7.814	116.925	-16.101	12475.2
8.9970	4763.60	7.880	116.933	-16.111	12475.2
9.1710	4868.00	7.970	116.942	-16.121	12475.2
9.2710	4929.00	8.023	116.947	-16.127	12475.2
9.4710	5049.00	8.127	116.957	-16.139	12475.2
9.5710	5110.00	8.179	116.962	-16.145	12475.2
9.8710	5290.00	8.335	116.978	-16.163	12475.2
9.9710	5351.00	8.388	116.983	-16.168	12475.2
9.9967	5366.40	8.401	116.984	-16.170	12475.2
10.1710	5471.00	8.491	116.991	-16.178	12475.2
10.2710	5532.00	8.543	116.995	-16.183	12475.2
10.5710	5712.00	8.697	117.007	-16.197	12475.2
10.6710	5773.00	8.750	117.011	-16.202	12475.2
10.8710	5893.00	8.853	117.019	-16.211	12475.2
10.9710	5954.00	8.905	117.023	-16.216	12475.2
10.9963	5969.20	8.918	117.024	-16.217	12475.2
11.2710	6134.00	9.059	117.033	-16.228	12475.2
11.3710	6195.00	9.111	117.036	-16.232	12475.2
11.5710	6315.00	9.213	117.043	-16.239	12475.2

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2.No1 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
11.6710	6376.00	9.265	117.046	-16.243	12475.2
11.9710	6556.00	9.418	117.056	-16.255	12475.2
11.9972	6572.00	9.432	117.057	-16.256	12475.2
12.0710	6617.00	9.470	117.059	-16.258	12475.2
12.3710	6797.00	9.623	117.067	-16.268	12475.2
12.4710	6858.00	9.674	117.070	-16.271	12475.2
12.6710	6978.00	9.776	117.076	-16.278	12475.2
12.7710	7039.00	9.828	117.079	-16.281	12475.2
12.9975	7174.90	9.943	117.085	-16.288	12475.2
13.0710	7219.00	9.980	117.087	-16.290	12475.2
13.1710	7280.00	10.032	117.089	-16.293	12475.2
13.3710	7400.00	10.133	117.094	-16.298	12475.2
13.4710	7461.00	10.185	117.096	-16.301	12475.2
13.7710	7641.00	10.337	117.103	-16.309	12475.2
13.8710	7702.00	10.389	117.105	-16.312	12475.2
13.9972	7777.70	10.453	117.108	-16.315	12475.2
14.0710	7822.00	10.490	117.109	-16.317	12475.2
14.1710	7883.00	10.542	117.111	-16.319	12475.2
14.4710	8063.00	10.693	117.117	-16.326	12475.2
14.5710	8124.00	10.745	117.119	-16.329	12475.2
14.7710	8244.00	10.846	117.123	-16.334	12475.2
14.8710	8305.00	10.897	117.125	-16.336	12475.2
14.9968	8380.50	10.961	117.128	-16.339	12475.2
15.1710	8485.00	11.049	117.131	-16.342	12475.2
15.2710	8546.00	11.100	117.133	-16.344	12475.2
15.4710	8666.00	11.202	117.136	-16.348	12475.2
15.5710	8727.00	11.253	117.138	-16.350	12475.2
15.8710	8907.00	11.405	117.143	-16.356	12475.2
15.9710	8968.00	11.456	117.145	-16.358	12475.2
15.9965	8983.30	11.469	117.145	-16.359	12475.2
16.2710	9148.00	11.607	117.149	-16.364	12475.2
16.3710	9209.00	11.658	117.151	-16.365	12475.2
16.5710	9329.00	11.759	117.154	-16.369	12475.2
16.6710	9390.00	11.810	117.155	-16.370	12475.2
16.9710	9570.00	11.961	117.160	-16.376	12475.2
16.9974	9586.10	11.975	117.160	-16.376	12475.2
17.0710	9631.00	12.013	117.161	-16.377	12475.2
17.2710	9751.00	12.113	117.164	-16.380	12475.2
17.3710	9812.00	12.165	117.165	-16.382	12475.2
17.6710	9992.00	12.316	117.169	-16.387	12475.2
17.7710	10053.00	12.367	117.170	-16.388	12475.2
17.9710	10173.00	12.468	117.173	-16.392	12475.2
17.9972	10189.00	12.481	117.173	-16.392	12475.2
18.0710	10234.00	12.519	117.174	-16.393	12475.2
18.3710	10414.00	12.669	117.177	-16.397	12475.2
18.4710	10475.00	12.720	117.179	-16.399	12475.2
18.6710	10595.00	12.820	117.181	-16.401	12475.2
18.7710	10656.00	12.871	117.182	-16.403	12475.2
18.9973	10791.80	12.985	117.185	-16.406	12475.2
19.0710	10836.00	13.022	117.186	-16.407	12475.2
19.1710	10897.00	13.073	117.187	-16.408	12475.2
19.3710	11017.00	13.174	117.189	-16.410	12475.2
19.4710	11078.00	13.225	117.190	-16.412	12475.2
19.7710	11258.00	13.376	117.193	-16.415	12475.2
19.8710	11319.00	13.427	117.194	-16.416	12475.2
19.9970	11394.60	13.490	117.195	-16.418	12475.2
20.0710	11439.00	13.527	117.196	-16.419	12475.2
20.1710	11500.00	13.578	117.197	-16.420	12475.2
20.4710	11680.00	13.729	117.200	-16.423	12475.2
20.5710	11741.00	13.780	117.201	-16.424	12475.2
20.8710	11921.00	13.930	117.204	-16.428	12475.2
20.9710	11982.00	13.981	117.205	-16.429	12475.2

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2.No1 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
20.9967	11997.40	13.994	117.205	-16.429	12475.2
21.1710	12102.00	14.081	117.207	-16.431	12475.2
21.2710	12163.00	14.132	117.207	-16.432	12475.2
21.5710	12343.00	14.282	117.210	-16.435	12475.2
21.6710	12404.00	14.333	117.211	-16.436	12475.2
21.8710	12524.00	14.433	117.213	-16.438	12475.2
21.9710	12585.00	14.484	117.214	-16.439	12475.2
21.9965	12600.30	14.497	117.214	-16.439	12475.2
22.2710	12765.00	14.635	117.216	-16.441	12475.2
22.3710	12826.00	14.686	117.217	-16.442	12475.2
22.5710	12946.00	14.786	117.218	-16.444	12475.2
22.6710	13007.00	14.837	117.219	-16.445	12475.2
22.9710	13187.00	14.988	117.221	-16.448	12475.2
22.9974	13203.10	15.001	117.221	-16.448	12475.2
23.0710	13248.00	15.038	117.222	-16.449	12475.2
23.2710	13368.00	15.139	117.223	-16.450	12475.2
23.3710	13429.00	15.189	117.224	-16.451	12475.2
23.6710	13609.00	15.340	117.226	-16.453	12475.2
23.7710	13670.00	15.391	117.226	-16.454	12475.2
23.9710	13790.00	15.491	117.228	-16.456	12475.2
24.0710	13851.00	15.542	117.229	-16.457	12475.2
24.3710	14031.00	15.691	117.231	-16.459	12475.2
24.4710	14092.00	15.742	117.231	-16.460	12475.2
24.7710	14272.00	15.892	117.233	-16.462	12475.2
24.7910	14285.00	15.903	117.234	-16.462	12475.2
24.9972	14408.70	16.006	117.235	-16.464	12475.2
25.1110	14477.00	16.063	117.236	-16.465	12475.2
25.1310	14490.00	16.074	117.236	-16.465	12475.2
25.4710	14694.00	16.244	117.238	-16.467	12475.2
25.4910	14707.00	16.255	117.238	-16.467	12475.2
25.8310	14911.00	16.425	117.240	-16.470	12475.2
25.8510	14924.00	16.436	117.240	-16.470	12475.2
25.9968	15011.50	16.509	117.241	-16.471	12475.2
26.1910	15128.00	16.606	117.242	-16.472	12475.2
26.2110	15141.00	16.617	117.242	-16.472	12475.2
26.5310	15333.00	16.777	117.244	-16.474	12475.2
26.5510	15346.00	16.788	117.244	-16.474	12475.2
26.8910	15550.00	16.957	117.245	-16.476	12475.2
26.9110	15563.00	16.968	117.246	-16.476	12475.2
27.2510	15767.00	17.138	117.248	-16.479	12475.2
27.2710	15780.00	17.149	117.248	-16.479	12475.2
27.6110	15984.00	17.319	117.250	-16.481	12475.2
27.6310	15997.00	17.330	117.250	-16.481	12475.2
27.9510	16189.00	17.490	117.252	-16.483	12475.2
27.9710	16202.00	17.500	117.252	-16.483	12475.2
27.9963	16217.20	17.513	117.252	-16.483	12475.2
28.3110	16406.00	17.671	117.272	-16.473	7074.5
28.3310	16419.00	17.682	117.273	-16.472	6702.6
28.3710	16443.00	17.702	117.276	-16.471	6016.1
28.3910	16454.00	17.711	117.277	-16.470	5701.4
28.4310	16478.00	17.731	117.280	-16.469	5014.9
28.4710	16500.00	17.749	117.282	-16.467	4385.6
28.5510	16540.00	17.783	117.286	-16.465	3241.3
28.6110	16567.00	17.805	117.289	-16.464	2469.0
28.6710	16591.00	17.825	117.292	-16.462	1782.4
28.7110	16605.00	17.837	117.293	-16.462	1382.0
28.7510	16617.00	17.847	117.294	-16.461	1038.7
28.8110	16632.00	17.860	117.296	-16.460	609.6
28.8310	16636.00	17.863	117.296	-16.460	495.2
28.8910	16645.00	17.870	117.297	-16.459	237.7
28.9310	16649.00	17.874	117.298	-16.459	123.3
28.9510	16650.00	17.875	117.298	-16.459	94.7

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2.No1 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
28.9710	16651.00	17.875	117.298	-16.459	66.1
28.9990	16651.70	17.876	117.298	-16.459	46.1
29.0110	16652.00	17.876	117.298	-16.459	39.8
29.0710	16653.00	17.877	117.300	-16.458	18.8
29.0910	16653.90	17.878	117.301	-16.458	0.0
29.5710	16653.90	17.878	117.301	-16.458	0.0

3.No1 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	115.638	14.902	0.0
0.0070	4.00	3.025	115.638	14.902	55.1
0.0270	11.00	3.034	115.638	14.902	151.4
0.0470	19.00	3.045	115.638	14.902	261.5
0.0670	26.00	3.054	115.638	14.902	357.8
0.0870	34.00	3.064	115.638	14.902	468.0
0.1070	41.00	3.073	115.638	14.902	564.3
0.1270	49.00	3.084	115.638	14.902	674.4
0.1470	56.00	3.093	115.638	14.902	770.7
0.1670	64.00	3.103	115.638	14.902	880.9
0.1870	71.00	3.112	115.638	14.902	977.2
0.2270	87.00	3.133	115.638	14.902	1197.4
0.2470	94.00	3.142	115.638	14.902	1293.8
0.2870	110.00	3.163	115.638	14.902	1514.0
0.3070	117.00	3.172	115.638	14.902	1610.3
0.3470	133.00	3.193	115.638	14.902	1830.5
0.3670	140.00	3.202	115.638	14.902	1926.9
0.4270	164.00	3.233	115.638	14.902	2257.2
0.4470	171.00	3.242	115.638	14.902	2353.5
0.5470	211.00	3.294	115.638	14.902	2904.1
0.5670	218.00	3.303	115.638	14.902	3000.4
0.8270	322.00	3.438	115.638	14.902	4431.8
0.8470	331.00	3.450	115.638	14.902	4555.6
0.9470	371.00	3.502	115.638	14.902	5106.2
0.9670	380.00	3.513	115.638	14.902	5230.0
0.9970	392.00	3.529	115.638	14.902	5395.2
1.0270	404.00	3.544	115.645	14.906	5428.9
1.0470	413.00	3.554	115.650	14.910	5454.1
1.0870	429.00	3.574	115.659	14.916	5499.0
1.1070	438.00	3.585	115.664	14.919	5524.3
1.1470	454.00	3.604	115.673	14.925	5569.2
1.1670	463.00	3.615	115.678	14.928	5594.4
1.2070	479.00	3.634	115.687	14.934	5639.3
1.2270	488.00	3.645	115.692	14.938	5664.6
1.2470	496.00	3.655	115.697	14.940	5687.0
1.2670	505.00	3.666	115.702	14.944	5712.3
1.2870	513.00	3.676	115.707	14.947	5734.7
1.3070	522.00	3.687	115.712	14.950	5760.0
1.3270	530.00	3.696	115.716	14.953	5782.5
1.3470	539.00	3.707	115.721	14.956	5807.7
1.3670	547.00	3.717	115.726	14.959	5830.2
1.3870	556.00	3.728	115.731	14.963	5855.4
1.4070	564.00	3.737	115.735	14.966	5877.9
1.4470	582.00	3.759	115.746	14.972	5928.4
1.4670	590.00	3.769	115.750	14.975	5950.8
1.4870	599.00	3.780	115.755	14.979	5976.1
1.5070	607.00	3.790	115.760	14.982	5998.5
1.5470	625.00	3.811	115.770	14.988	6049.0

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3.No1 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.5670	633.00	3.821	115.775	14.991	6071.5
1.6270	660.00	3.854	115.790	15.001	6147.3
1.6470	668.00	3.864	115.794	15.004	6169.7
1.7270	704.00	3.907	115.815	15.017	6270.7
1.7470	712.00	3.917	115.819	15.020	6293.2
1.9966	824.30	4.053	115.883	15.062	6608.3
2.1270	883.00	4.120	115.910	15.083	6776.3
2.1470	893.00	4.131	115.915	15.087	6804.9
2.2270	929.00	4.172	115.932	15.100	6907.9
2.2470	939.00	4.183	115.937	15.104	6936.5
2.3070	966.00	4.214	115.949	15.113	7013.8
2.3270	976.00	4.225	115.954	15.117	7042.4
2.3670	994.00	4.246	115.962	15.123	7093.9
2.3870	1004.00	4.257	115.967	15.127	7122.5
2.4070	1013.00	4.267	115.971	15.130	7148.3
2.4270	1023.00	4.279	115.976	15.134	7176.9
2.4670	1041.00	4.299	115.984	15.140	7228.4
2.4870	1051.00	4.311	115.989	15.144	7257.0
2.5070	1060.00	4.321	115.993	15.147	7282.8
2.5270	1070.00	4.332	115.998	15.151	7311.4
2.5470	1079.00	4.342	116.002	15.154	7337.2
2.5670	1089.00	4.354	116.007	15.158	7365.8
2.5870	1098.00	4.364	116.011	15.161	7391.5
2.6070	1108.00	4.375	116.016	15.165	7420.1
2.6270	1117.00	4.386	116.020	15.168	7445.9
2.6470	1127.00	4.397	116.025	15.172	7474.5
2.6670	1136.00	4.407	116.029	15.175	7500.3
2.7070	1156.00	4.430	116.038	15.182	7557.5
2.7270	1165.00	4.440	116.042	15.185	7583.3
2.7670	1185.00	4.463	116.052	15.193	7640.5
2.7870	1194.00	4.473	116.056	15.196	7666.2
2.8270	1214.00	4.496	116.065	15.203	7723.5
2.8470	1223.00	4.506	116.069	15.206	7749.2
2.9070	1253.00	4.540	116.083	15.217	7835.1
2.9270	1262.00	4.550	116.088	15.220	7860.8
2.9968	1296.90	4.590	116.104	15.233	7960.7
3.0470	1322.00	4.617	116.114	15.242	8034.4
3.0670	1331.00	4.627	116.117	15.245	8060.8
3.2870	1441.00	4.744	116.160	15.283	8383.8
3.3070	1452.00	4.756	116.165	15.287	8416.1
3.4270	1512.00	4.820	116.188	15.308	8592.3
3.4470	1523.00	4.832	116.193	15.312	8624.6
3.5070	1553.00	4.864	116.204	15.322	8712.7
3.5270	1564.00	4.876	116.209	15.326	8745.0
3.5670	1584.00	4.897	116.217	15.333	8803.8
3.5870	1595.00	4.909	116.221	15.337	8836.1
3.6270	1615.00	4.930	116.229	15.344	8894.8
3.6470	1626.00	4.942	116.233	15.348	8927.1
3.6870	1646.00	4.964	116.241	15.355	8985.8
3.7070	1657.00	4.975	116.245	15.359	9018.1
3.7270	1667.00	4.986	116.249	15.362	9047.5
3.7470	1678.00	4.998	116.253	15.366	9079.8
3.7670	1688.00	5.009	116.257	15.369	9109.1
3.7870	1699.00	5.020	116.262	15.373	9141.4
3.8070	1709.00	5.031	116.265	15.377	9170.8
3.8270	1720.00	5.043	116.270	15.381	9203.1
3.8470	1730.00	5.054	116.274	15.384	9232.5
3.8670	1741.00	5.065	116.278	15.388	9264.8
3.8870	1751.00	5.076	116.282	15.391	9294.1
3.9270	1773.00	5.100	116.291	15.399	9358.7
3.9470	1783.00	5.110	116.294	15.403	9388.1
3.9670	1794.00	5.122	116.299	15.406	9420.4

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3.No1 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.9870	1804.00	5.133	116.303	15.410	9449.8
3.9975	1809.80	5.139	116.305	15.412	9466.8
4.0270	1826.00	5.155	116.310	15.417	9515.8
4.0470	1836.00	5.165	116.314	15.421	9546.1
4.1070	1869.00	5.199	116.325	15.432	9645.9
4.1270	1879.00	5.209	116.328	15.435	9676.1
4.2070	1923.00	5.253	116.343	15.450	9809.2
4.2270	1933.00	5.263	116.346	15.453	9839.5
4.6070	2142.00	5.475	116.416	15.524	10471.7
4.6270	2154.00	5.487	116.420	15.528	10508.0
4.7070	2198.00	5.531	116.435	15.543	10641.1
4.7270	2210.00	5.543	116.439	15.547	10677.4
4.7870	2243.00	5.577	116.450	15.558	10777.2
4.8070	2255.00	5.589	116.454	15.562	10813.5
4.8470	2277.00	5.611	116.461	15.569	10880.1
4.8670	2289.00	5.623	116.465	15.573	10916.4
4.8870	2300.00	5.634	116.469	15.577	10949.6
4.9070	2312.00	5.646	116.473	15.581	10985.9
4.9470	2334.00	5.669	116.480	15.588	11052.5
4.9670	2346.00	5.681	116.484	15.592	11088.8
4.9870	2357.00	5.692	116.488	15.596	11122.1
4.9970	2363.00	5.698	116.490	15.598	11140.2
5.0070	2369.00	5.704	116.492	15.600	11153.7
5.0270	2380.00	5.714	116.495	15.603	11178.5
5.0470	2392.00	5.726	116.498	15.607	11205.6
5.0670	2403.00	5.736	116.501	15.611	11230.4
5.0870	2415.00	5.748	116.505	15.615	11257.4
5.1070	2426.00	5.758	116.508	15.618	11282.3
5.1270	2438.00	5.770	116.511	15.622	11309.3
5.1470	2449.00	5.780	116.514	15.626	11334.1
5.1870	2473.00	5.803	116.521	15.633	11388.2
5.2070	2484.00	5.814	116.524	15.637	11413.0
5.2470	2508.00	5.837	116.531	15.645	11467.1
5.2670	2519.00	5.847	116.534	15.648	11491.9
5.3070	2543.00	5.870	116.541	15.656	11546.0
5.3270	2554.00	5.881	116.544	15.659	11570.9
5.4070	2602.00	5.926	116.557	15.675	11679.1
5.4270	2613.00	5.937	116.561	15.678	11703.9
5.5270	2673.00	5.994	116.577	15.697	11839.2
5.5470	2684.00	6.005	116.581	15.701	11864.0
5.7670	2816.00	6.131	116.618	15.743	12161.6
5.8670	2877.00	6.189	116.635	15.763	12299.1
5.9972	2955.10	6.264	116.657	15.788	12475.2
6.0670	2997.00	6.302	116.666	15.798	12475.2
6.1670	3058.00	6.358	116.678	15.813	12475.2
6.4670	3238.00	6.523	116.715	15.856	12475.2
6.5670	3299.00	6.579	116.727	15.870	12475.2
6.7670	3419.00	6.689	116.752	15.899	12475.2
6.8670	3480.00	6.745	116.764	15.913	12475.2
6.9968	3557.90	6.816	116.780	15.932	12475.2
7.1670	3660.00	6.907	116.795	15.949	12475.2
7.2670	3721.00	6.961	116.804	15.960	12475.2
7.4670	3841.00	7.068	116.821	15.980	12475.2
7.5670	3902.00	7.122	116.830	15.990	12475.2
7.8670	4082.00	7.282	116.857	16.021	12475.2
7.9670	4143.00	7.336	116.865	16.031	12475.2
7.9965	4160.70	7.352	116.868	16.034	12475.2
8.1670	4263.00	7.442	116.879	16.047	12475.2
8.2670	4324.00	7.495	116.886	16.055	12475.2
8.5670	4504.00	7.653	116.905	16.078	12475.2
8.6670	4565.00	7.706	116.912	16.086	12475.2
8.9670	4745.00	7.864	116.931	16.109	12475.2

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3.No1 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
8.9975	4763.60	7.880	116.933	16.111	12475.2
9.0670	4806.00	7.917	116.937	16.115	12475.2
9.2670	4926.00	8.020	116.947	16.127	12475.2
9.3670	4987.00	8.073	116.952	16.133	12475.2
9.6670	5167.00	8.229	116.967	16.150	12475.2
9.7670	5228.00	8.281	116.972	16.156	12475.2
9.9670	5348.00	8.385	116.982	16.168	12475.2
9.9972	5366.40	8.401	116.984	16.170	12475.2
10.0670	5409.00	8.438	116.987	16.173	12475.2
10.3670	5589.00	8.592	116.999	16.187	12475.2
10.4670	5650.00	8.644	117.003	16.192	12475.2
10.6670	5770.00	8.747	117.011	16.201	12475.2
10.7670	5831.00	8.799	117.015	16.206	12475.2
10.9973	5969.20	8.918	117.024	16.217	12475.2
11.0670	6011.00	8.954	117.026	16.220	12475.2
11.1670	6072.00	9.006	117.030	16.224	12475.2
11.3670	6192.00	9.108	117.036	16.231	12475.2
11.4670	6253.00	9.160	117.040	16.235	12475.2
11.7670	6433.00	9.313	117.049	16.247	12475.2
11.8670	6494.00	9.365	117.053	16.251	12475.2
11.9970	6572.00	9.432	117.057	16.256	12475.2
12.0670	6614.00	9.468	117.059	16.258	12475.2
12.1670	6675.00	9.519	117.062	16.261	12475.2
12.4670	6855.00	9.672	117.070	16.271	12475.2
12.5670	6916.00	9.724	117.073	16.274	12475.2
12.8670	7096.00	9.876	117.081	16.284	12475.2
12.9670	7157.00	9.928	117.084	16.287	12475.2
12.9968	7174.90	9.943	117.085	16.288	12475.2
13.1670	7277.00	10.029	117.089	16.293	12475.2
13.2670	7338.00	10.081	117.091	16.295	12475.2
13.5670	7518.00	10.233	117.098	16.303	12475.2
13.6670	7579.00	10.285	117.100	16.306	12475.2
13.8670	7699.00	10.386	117.105	16.311	12475.2
13.9670	7760.00	10.438	117.107	16.314	12475.2
13.9965	7777.70	10.453	117.108	16.315	12475.2
14.2670	7940.00	10.590	117.113	16.321	12475.2
14.3670	8001.00	10.641	117.115	16.324	12475.2
14.5670	8121.00	10.742	117.119	16.329	12475.2
14.6670	8182.00	10.794	117.121	16.331	12475.2
14.9670	8362.00	10.945	117.127	16.338	12475.2
14.9973	8380.50	10.961	117.128	16.339	12475.2
15.0670	8423.00	10.997	117.129	16.340	12475.2
15.2670	8543.00	11.098	117.133	16.344	12475.2
15.3670	8604.00	11.149	117.134	16.346	12475.2
15.6670	8784.00	11.301	117.139	16.352	12475.2
15.7670	8845.00	11.352	117.141	16.354	12475.2
15.9670	8965.00	11.454	117.144	16.358	12475.2
15.9970	8983.30	11.469	117.145	16.359	12475.2
16.0670	9026.00	11.505	117.146	16.360	12475.2
16.3670	9206.00	11.656	117.151	16.365	12475.2
16.4670	9267.00	11.707	117.152	16.367	12475.2
16.7670	9447.00	11.858	117.157	16.372	12475.2
16.8670	9508.00	11.909	117.158	16.374	12475.2
16.9972	9586.10	11.975	117.160	16.376	12475.2
17.0670	9628.00	12.010	117.161	16.377	12475.2
17.1670	9689.00	12.061	117.162	16.379	12475.2
17.4670	9869.00	12.212	117.166	16.384	12475.2
17.5670	9930.00	12.264	117.167	16.385	12475.2
17.7670	10050.00	12.364	117.170	16.388	12475.2
17.8670	10111.00	12.416	117.171	16.390	12475.2
17.9970	10189.00	12.481	117.173	16.392	12475.2
18.1670	10291.00	12.566	117.175	16.394	12475.2

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3.No1 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
18.2670	10352.00	12.617	117.176	16.396	12475.2
18.4670	10472.00	12.718	117.179	16.399	12475.2
18.5670	10533.00	12.769	117.180	16.400	12475.2
18.8670	10713.00	12.919	117.183	16.404	12475.2
18.9670	10774.00	12.970	117.185	16.406	12475.2
18.9967	10791.80	12.985	117.185	16.406	12475.2
19.1670	10894.00	13.071	117.187	16.408	12475.2
19.2670	10955.00	13.122	117.188	16.409	12475.2
19.5670	11135.00	13.273	117.191	16.413	12475.2
19.6670	11196.00	13.324	117.192	16.414	12475.2
19.8670	11316.00	13.424	117.194	16.416	12475.2
19.9670	11377.00	13.475	117.195	16.418	12475.2
19.9963	11394.60	13.490	117.195	16.418	12475.2
20.2670	11557.00	13.626	117.198	16.421	12475.2
20.3670	11618.00	13.677	117.199	16.422	12475.2
20.5670	11738.00	13.777	117.201	16.424	12475.2
20.6670	11799.00	13.828	117.202	16.425	12475.2
20.9670	11979.00	13.979	117.205	16.429	12475.2
20.9972	11997.40	13.994	117.205	16.429	12475.2
21.0670	12040.00	14.030	117.206	16.430	12475.2
21.3670	12220.00	14.180	117.208	16.433	12475.2
21.4670	12281.00	14.231	117.209	16.434	12475.2
21.6670	12401.00	14.331	117.211	16.436	12475.2
21.7670	12462.00	14.382	117.212	16.437	12475.2
21.9975	12600.30	14.497	117.214	16.439	12475.2
22.0670	12642.00	14.532	117.214	16.440	12475.2
22.1670	12703.00	14.583	117.215	16.441	12475.2
22.3670	12823.00	14.683	117.217	16.442	12475.2
22.4670	12884.00	14.734	117.217	16.443	12475.2
22.7670	13064.00	14.885	117.219	16.446	12475.2
22.8670	13125.00	14.936	117.220	16.447	12475.2
23.0670	13245.00	15.036	117.221	16.449	12475.2
23.1670	13306.00	15.087	117.222	16.449	12475.2
23.4670	13486.00	15.237	117.224	16.452	12475.2
23.5670	13547.00	15.288	117.225	16.453	12475.2
23.7670	13667.00	15.388	117.226	16.454	12475.2
23.8670	13728.00	15.439	117.227	16.455	12475.2
23.9968	13805.90	15.504	117.228	16.456	12475.2
24.1670	13908.00	15.589	117.229	16.457	12475.2
24.2670	13969.00	15.640	117.230	16.458	12475.2
24.4670	14089.00	15.740	117.231	16.460	12475.2
24.5670	14150.00	15.791	117.232	16.461	12475.2
24.9070	14354.00	15.960	117.234	16.463	12475.2
24.9270	14367.00	15.971	117.235	16.463	12475.2
24.9965	14408.70	16.006	117.235	16.464	12475.2
25.2670	14571.00	16.141	117.237	16.466	12475.2
25.2870	14584.00	16.152	117.237	16.466	12475.2
25.6270	14788.00	16.323	117.239	16.468	12475.2
25.6470	14801.00	16.333	117.239	16.469	12475.2
25.9670	14993.00	16.494	117.241	16.471	12475.2
25.9870	15006.00	16.504	117.241	16.471	12475.2
25.9962	15011.50	16.509	117.241	16.471	12475.2
26.3270	15210.00	16.674	117.243	16.473	12475.2
26.3470	15223.00	16.685	117.243	16.473	12475.2
26.6870	15427.00	16.855	117.244	16.475	12475.2
26.7070	15440.00	16.866	117.245	16.475	12475.2
27.0270	15632.00	17.026	117.246	16.477	12475.2
27.0470	15645.00	17.036	117.246	16.477	12475.2
27.3870	15849.00	17.206	117.248	16.479	12475.2
27.4070	15862.00	17.217	117.248	16.479	12475.2
27.7470	16066.00	17.387	117.250	16.481	12475.2
27.7670	16079.00	17.398	117.251	16.482	12475.2

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3.No1 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
27.9973	16217.20	17.513	117.252	16.483	12475.2
28.1070	16283.00	17.568	117.259	16.479	10593.0
28.1270	16296.00	17.579	117.260	16.479	10221.1
28.4070	16464.00	17.719	117.278	16.469	5415.4
28.4870	16508.00	17.756	117.283	16.467	4156.7
28.5670	16548.00	17.789	117.287	16.465	3012.5
28.5870	16557.00	17.797	117.288	16.464	2755.0
28.6070	16565.00	17.804	117.289	16.464	2526.2
28.6270	16574.00	17.811	117.290	16.463	2268.7
28.6470	16582.00	17.818	117.291	16.463	2039.9
28.7270	16610.00	17.841	117.294	16.461	1238.9
28.7470	16616.00	17.846	117.294	16.461	1067.3
28.8070	16631.00	17.859	117.296	16.460	638.2
28.8470	16639.00	17.865	117.297	16.460	409.4
28.8870	16645.00	17.870	117.297	16.459	237.7
28.9070	16647.00	17.872	117.298	16.459	180.5
28.9270	16649.00	17.874	117.298	16.459	123.3
28.9470	16650.00	17.875	117.298	16.459	94.7
28.9870	16651.00	17.875	117.298	16.459	66.1
29.0010	16651.70	17.876	117.298	16.459	46.1
29.0670	16653.00	17.877	117.300	16.458	18.8
29.0870	16653.90	17.878	117.301	16.458	0.0
29.5670	16653.90	17.878	117.301	16.458	0.0

4.No2 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	69.850	0.000	0.0
0.0030	3.00	3.021	69.850	0.000	121.1
0.0230	26.00	3.032	69.850	0.000	1049.1
0.1030	114.00	3.071	69.850	0.000	4599.7
0.1230	137.00	3.082	69.850	0.000	5527.7
0.1830	203.00	3.111	69.850	0.000	8190.7
0.2030	226.00	3.122	69.850	0.000	9118.7
0.2830	314.00	3.161	69.850	0.000	12669.4
0.3030	337.00	3.172	69.850	0.000	13597.4
0.3630	403.00	3.201	69.850	0.000	16260.4
0.3830	426.00	3.212	69.850	0.000	17188.4
0.4630	514.00	3.251	69.850	0.000	20739.1
0.4830	537.00	3.262	69.850	0.000	21667.1
0.5430	603.00	3.291	69.850	0.000	24330.1
0.5630	626.00	3.302	69.850	0.000	25258.1
0.6430	714.00	3.341	69.850	0.000	28808.8
0.6630	737.00	3.352	69.850	0.000	29736.8
0.7230	803.00	3.381	69.850	0.000	32399.8
0.7430	826.00	3.392	69.850	0.000	33327.8
0.8230	914.00	3.431	69.850	0.000	36878.4
0.8430	937.00	3.442	69.850	0.000	37806.5
0.9030	1003.00	3.471	69.850	0.000	40469.4
0.9230	1026.00	3.482	69.850	0.000	41397.5
1.0004	1111.10	3.520	69.850	0.000	44831.1
1.0230	1137.00	3.532	69.850	0.000	44831.1
1.0830	1203.00	3.561	69.850	0.000	44831.1
1.1030	1226.00	3.572	69.850	0.000	44831.1
1.1830	1314.00	3.611	69.850	0.000	44831.1
1.2030	1337.00	3.622	69.850	0.000	44831.1
1.2630	1403.00	3.651	69.850	0.000	44831.1
1.2830	1426.00	3.662	69.850	0.000	44831.1

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4.No2 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.3630	1514.00	3.701	69.850	0.000	44831.1
1.3830	1537.00	3.712	69.850	0.000	44831.1
1.4430	1603.00	3.741	69.850	0.000	44831.1
1.4630	1626.00	3.752	69.850	0.000	44831.1
1.5430	1714.00	3.791	69.850	0.000	44831.1
1.5630	1737.00	3.802	69.850	0.000	44831.1
1.6230	1803.00	3.831	69.850	0.000	44831.1
1.6430	1826.00	3.842	69.850	0.000	44831.1
1.7230	1914.00	3.881	69.850	0.000	44831.1
1.7430	1937.00	3.892	69.850	0.000	44831.1
1.8030	2003.00	3.921	69.850	0.000	44831.1
1.8230	2026.00	3.932	69.850	0.000	44831.1
1.9030	2114.00	3.971	69.850	0.000	44831.1
1.9230	2137.00	3.982	69.850	0.000	44831.1
1.9830	2203.00	4.011	69.850	0.000	44831.1
1.9997	2222.20	4.020	69.850	0.000	44831.1
2.0830	2314.00	4.061	69.850	0.000	44831.1
2.1030	2337.00	4.072	69.850	0.000	44831.1
2.1630	2403.00	4.101	69.850	0.000	44831.1
2.1830	2426.00	4.112	69.850	0.000	44831.1
2.2630	2514.00	4.151	69.850	0.000	44831.1
2.2830	2537.00	4.162	69.850	0.000	44831.1
2.3430	2603.00	4.191	69.850	0.000	44831.1
2.3630	2626.00	4.202	69.850	0.000	44831.1
2.4430	2714.00	4.241	69.850	0.000	44831.1
2.4630	2737.00	4.252	69.850	0.000	44831.1
2.5230	2803.00	4.281	69.850	0.000	44831.1
2.5430	2826.00	4.292	69.850	0.000	44831.1
2.6230	2914.00	4.331	69.850	0.000	44831.1
2.6430	2937.00	4.342	69.850	0.000	44831.1
2.7030	3003.00	4.371	69.850	0.000	44831.1
2.7230	3026.00	4.382	69.850	0.000	44831.1
2.8030	3114.00	4.421	69.850	0.000	44831.1
2.8230	3137.00	4.432	69.850	0.000	44831.1
2.8830	3203.00	4.461	69.850	0.000	44831.1
2.9030	3226.00	4.472	69.850	0.000	44831.1
2.9830	3314.00	4.511	69.850	0.000	44831.1
3.0030	3337.00	4.522	69.850	0.000	44831.1
3.0630	3403.00	4.551	69.850	0.000	44831.1
3.0830	3426.00	4.562	69.850	0.000	44831.1
3.1630	3514.00	4.601	69.850	0.000	44831.1
3.1830	3537.00	4.612	69.850	0.000	44831.1
3.2430	3603.00	4.641	69.850	0.000	44831.1
3.2630	3626.00	4.652	69.850	0.000	44831.1
3.3430	3714.00	4.691	69.850	0.000	44831.1
3.3630	3737.00	4.702	69.850	0.000	44831.1
3.4230	3803.00	4.731	69.850	0.000	44831.1
3.4430	3826.00	4.742	69.850	0.000	44831.1
3.5230	3914.00	4.781	69.850	0.000	44831.1
3.5430	3937.00	4.792	69.850	0.000	44831.1
3.6030	4003.00	4.821	69.850	0.000	44831.1
3.6230	4026.00	4.832	69.850	0.000	44831.1
3.7030	4114.00	4.871	69.850	0.000	44831.1
3.7230	4137.00	4.882	69.850	0.000	44831.1
3.7830	4203.00	4.911	69.850	0.000	44831.1
3.8030	4226.00	4.922	69.850	0.000	44831.1
3.8830	4314.00	4.961	69.850	0.000	44831.1
3.9030	4337.00	4.972	69.850	0.000	44831.1
3.9630	4403.00	5.001	69.850	0.000	44831.1
3.9830	4426.00	5.012	69.850	0.000	44831.1
4.0630	4514.00	5.051	69.850	0.000	44831.1
4.0830	4537.00	5.062	69.850	0.000	44831.1

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4.No2 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.1430	4603.00	5.091	69.850	0.000	44831.1
4.1630	4626.00	5.102	69.850	0.000	44831.1
4.2430	4714.00	5.141	69.850	0.000	44831.1
4.2630	4737.00	5.152	69.850	0.000	44831.1
4.3230	4803.00	5.181	69.850	0.000	44831.1
4.3430	4826.00	5.192	69.850	0.000	44831.1
4.4230	4914.00	5.231	69.850	0.000	44831.1
4.4430	4937.00	5.242	69.850	0.000	44831.1
4.5030	5003.00	5.271	69.850	0.000	44831.1
4.5230	5026.00	5.282	69.850	0.000	44831.1
4.6030	5114.00	5.321	69.850	0.000	44831.1
4.6230	5137.00	5.332	69.850	0.000	44831.1
4.6830	5203.00	5.361	69.850	0.000	44831.1
4.7030	5226.00	5.372	69.850	0.000	44831.1
4.7830	5314.00	5.411	69.850	0.000	44831.1
4.8030	5337.00	5.422	69.850	0.000	44831.1
4.8630	5403.00	5.451	69.850	0.000	44831.1
4.8830	5426.00	5.462	69.850	0.000	44831.1
4.9630	5514.00	5.501	69.850	0.000	44831.1
4.9830	5537.00	5.512	69.850	0.000	44831.1
5.0430	5603.00	5.541	69.850	0.000	44831.1
5.0630	5626.00	5.552	69.850	0.000	44831.1
5.1430	5714.00	5.591	69.850	0.000	44831.1
5.1630	5737.00	5.602	69.850	0.000	44831.1
5.2230	5803.00	5.631	69.850	0.000	44831.1
5.2430	5826.00	5.642	69.850	0.000	44831.1
5.3230	5914.00	5.681	69.850	0.000	44831.1
5.3430	5937.00	5.692	69.850	0.000	44831.1
5.4030	6003.00	5.721	69.850	0.000	44831.1
5.4230	6026.00	5.732	69.850	0.000	44831.1
5.5030	6114.00	5.771	69.850	0.000	44831.1
5.5230	6137.00	5.782	69.850	0.000	44831.1
5.5830	6203.00	5.811	69.850	0.000	44831.1
5.6030	6226.00	5.822	69.850	0.000	44831.1
5.6830	6314.00	5.861	69.850	0.000	44831.1
5.7030	6337.00	5.872	69.850	0.000	44831.1
5.7630	6403.00	5.901	69.850	0.000	44831.1
5.7830	6426.00	5.912	69.850	0.000	44831.1
5.8630	6514.00	5.951	69.850	0.000	44831.1
5.8830	6537.00	5.962	69.850	0.000	44831.1
5.9430	6603.00	5.991	69.850	0.000	44831.1
5.9630	6626.00	6.002	69.850	0.000	44831.1
6.0430	6714.00	6.041	69.850	0.000	44831.1
6.0630	6737.00	6.052	69.850	0.000	44831.1
6.0830	6759.00	6.062	69.850	0.000	44831.1
6.5830	7314.00	6.311	69.850	0.000	44831.1
6.6830	7426.00	6.362	69.850	0.000	44831.1
7.4830	8314.00	6.761	69.850	0.000	44831.1
7.5830	8426.00	6.812	69.850	0.000	44831.1
8.3830	9314.00	7.211	69.850	0.000	44831.1
8.4830	9426.00	7.262	69.850	0.000	44831.1
9.2830	10314.00	7.661	69.850	0.000	44831.1
9.3830	10426.00	7.712	69.850	0.000	44831.1
10.1830	11314.00	8.111	69.850	0.000	44831.1
10.2830	11426.00	8.162	69.850	0.000	44831.1
11.1830	12425.00	8.611	69.850	0.000	44831.1
11.2830	12537.00	8.662	69.850	0.000	44831.1
12.0830	13425.00	9.061	69.850	0.000	44831.1
12.1830	13537.00	9.112	69.850	0.000	44831.1
12.9830	14425.00	9.511	69.850	0.000	44831.1
13.0830	14537.00	9.562	69.850	0.000	44831.1
13.8830	15425.00	9.961	69.850	0.000	44831.1

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4.No2 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
13.9830	15537.00	10.012	69.850	0.000	44831.1
14.7830	16425.00	10.411	69.850	0.000	44831.1
14.8830	16537.00	10.462	69.850	0.000	44831.1
15.6830	17425.00	10.861	69.850	0.000	44831.1
15.7830	17537.00	10.912	69.850	0.000	44831.1
16.5830	18425.00	11.311	69.850	0.000	44831.1
16.6830	18537.00	11.362	69.850	0.000	44831.1
17.4830	19425.00	11.761	69.850	0.000	44831.1
17.5830	19537.00	11.812	69.850	0.000	44831.1
18.3830	20425.00	12.211	69.850	0.000	44831.1
18.4830	20537.00	12.262	69.850	0.000	44831.1
19.2830	21425.00	12.661	69.850	0.000	44831.1
19.3830	21537.00	12.712	69.850	0.000	44831.1
20.1830	22425.00	13.111	69.850	0.000	44831.1
20.2830	22537.00	13.162	69.850	0.000	44831.1
21.0830	23425.00	13.561	69.850	0.000	44831.1
21.1830	23537.00	13.612	69.850	0.000	44831.1
21.9830	24425.00	14.011	69.850	0.000	44831.1
22.0830	24537.00	14.062	69.850	0.000	44831.1
22.8830	25425.00	14.461	69.850	0.000	44831.1
22.9830	25537.00	14.512	69.850	0.000	44831.1
22.9996	25555.40	14.520	69.850	0.000	44831.1
23.7830	26425.00	14.911	69.850	0.000	44831.1
23.8830	26537.00	14.962	69.850	0.000	44831.1
24.6830	27425.00	15.361	69.850	0.000	44831.1
24.7830	27537.00	15.412	69.850	0.000	44831.1
25.0830	27870.00	15.562	69.850	0.000	44831.1
25.1230	27914.00	15.581	69.850	0.000	44831.1
25.1430	27937.00	15.592	69.850	0.000	44831.1
25.2230	28025.00	15.631	69.850	0.000	44831.1
25.2430	28048.00	15.642	69.850	0.000	44831.1
25.3030	28114.00	15.671	69.850	0.000	44831.1
25.3230	28137.00	15.682	69.850	0.000	44831.1
25.4030	28225.00	15.721	69.850	0.000	44831.1
25.4230	28248.00	15.732	69.850	0.000	44831.1
25.4830	28314.00	15.761	69.850	0.000	44831.1
25.5030	28337.00	15.772	69.850	0.000	44831.1
25.5830	28425.00	15.811	69.850	0.000	44831.1
25.6030	28448.00	15.822	69.850	0.000	44831.1
25.6630	28514.00	15.851	69.850	0.000	44831.1
25.6830	28537.00	15.862	69.850	0.000	44831.1
25.7630	28625.00	15.901	69.850	0.000	44831.1
25.7830	28648.00	15.912	69.850	0.000	44831.1
25.8430	28714.00	15.941	69.850	0.000	44831.1
25.8630	28737.00	15.952	69.850	0.000	44831.1
25.9430	28825.00	15.991	69.850	0.000	44831.1
25.9630	28848.00	16.002	69.850	0.000	44831.1
26.0230	28914.00	16.031	69.850	0.000	44831.1
26.0430	28937.00	16.042	69.850	0.000	44831.1
26.1230	29025.00	16.081	69.850	0.000	44831.1
26.1430	29048.00	16.092	69.850	0.000	44831.1
26.2030	29114.00	16.121	69.850	0.000	44831.1
26.2230	29137.00	16.132	69.850	0.000	44831.1
26.3030	29225.00	16.171	69.850	0.000	44831.1
26.3230	29248.00	16.182	69.850	0.000	44831.1
26.3830	29314.00	16.211	69.850	0.000	44831.1
26.4030	29337.00	16.222	69.850	0.000	44831.1
26.4830	29425.00	16.261	69.850	0.000	44831.1
26.5030	29448.00	16.272	69.850	0.000	44831.1
26.5630	29514.00	16.301	69.850	0.000	44831.1
26.5830	29537.00	16.312	69.850	0.000	44831.1
26.6630	29625.00	16.351	69.850	0.000	44831.1

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4.No2 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.6830	29648.00	16.362	69.850	0.000	44831.1
26.7430	29714.00	16.391	69.850	0.000	44831.1
26.7630	29737.00	16.402	69.850	0.000	44831.1
26.8430	29825.00	16.441	69.850	0.000	44831.1
26.8630	29848.00	16.452	69.850	0.000	44831.1
26.9230	29914.00	16.481	69.850	0.000	44831.1
26.9430	29937.00	16.492	69.850	0.000	44831.1
27.0230	30025.00	16.531	69.850	0.000	44831.1
27.0430	30048.00	16.542	69.850	0.000	44831.1
27.1030	30114.00	16.571	69.850	0.000	44831.1
27.1230	30137.00	16.582	69.850	0.000	44831.1
27.2030	30225.00	16.621	69.850	0.000	44831.1
27.2230	30248.00	16.632	69.850	0.000	44831.1
27.2830	30314.00	16.661	69.850	0.000	44831.1
27.3030	30337.00	16.672	69.850	0.000	44831.1
27.3830	30425.00	16.711	69.850	0.000	44831.1
27.4030	30448.00	16.722	69.850	0.000	44831.1
27.4630	30514.00	16.751	69.850	0.000	44831.1
27.4830	30537.00	16.762	69.850	0.000	44831.1
27.5630	30625.00	16.801	69.850	0.000	44831.1
27.5830	30648.00	16.812	69.850	0.000	44831.1
27.6430	30714.00	16.841	69.850	0.000	44831.1
27.6630	30737.00	16.852	69.850	0.000	44831.1
27.7430	30825.00	16.891	69.850	0.000	44831.1
27.7630	30848.00	16.902	69.850	0.000	44831.1
27.8230	30914.00	16.931	69.850	0.000	44831.1
27.8430	30937.00	16.942	69.850	0.000	44831.1
27.9230	31025.00	16.981	69.850	0.000	44831.1
27.9430	31048.00	16.992	69.850	0.000	44831.1
28.0003	31111.00	17.020	69.850	0.000	44831.1
28.0230	31137.00	17.032	69.850	0.000	44515.7
28.1030	31225.00	17.071	69.850	0.000	43448.1
28.1230	31248.00	17.082	69.850	0.000	43169.1
28.1830	31314.00	17.111	69.850	0.000	42368.5
28.2030	31337.00	17.122	69.850	0.000	42089.5
28.2830	31425.00	17.161	69.850	0.000	41021.9
28.3030	31448.00	17.172	69.850	0.000	40742.9
28.3630	31514.00	17.201	69.850	0.000	39942.2
28.3830	31537.00	17.212	69.850	0.000	39663.2
28.4630	31625.00	17.251	69.850	0.000	38595.7
28.4830	31648.00	17.262	69.850	0.000	38316.6
28.5430	31714.00	17.292	69.850	0.000	37516.0
28.5630	31737.00	17.302	69.850	0.000	37237.0
28.6430	31825.00	17.342	69.850	0.000	36169.4
28.6630	31848.00	17.352	69.850	0.000	35890.4
28.7230	31914.00	17.382	69.850	0.000	35089.7
28.7430	31937.00	17.392	69.850	0.000	34810.7
28.8230	32025.00	17.432	69.850	0.000	33743.2
28.8430	32048.00	17.442	69.850	0.000	33464.1
28.9030	32114.00	17.472	69.850	0.000	32663.5
28.9230	32137.00	17.482	69.850	0.000	32384.5
28.9430	32159.00	17.492	69.850	0.000	32117.6
28.9630	32181.00	17.502	69.850	0.000	31850.7
28.9830	32202.00	17.511	69.850	0.000	31595.9
29.0000	32219.00	17.519	69.850	0.000	31389.7
29.0230	32241.00	17.529	69.850	0.000	27800.4
29.0430	32259.00	17.537	69.850	0.000	24863.7
29.0630	32276.00	17.544	69.850	0.000	22090.2
29.0830	32292.00	17.552	69.850	0.000	19479.8
29.1030	32307.00	17.558	69.850	0.000	17032.6
29.1230	32321.00	17.565	69.850	0.000	14748.5
29.1430	32334.00	17.570	69.850	0.000	12627.5

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4.No2 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
29.1630	32346.00	17.576	69.850	0.000	10669.7
29.1830	32357.00	17.581	69.850	0.000	8875.1
29.2030	32367.00	17.585	69.850	0.000	7243.6
29.2230	32376.00	17.589	69.850	0.000	5775.2
29.2430	32384.00	17.593	69.850	0.000	4470.0
29.2630	32391.00	17.596	69.850	0.000	3328.0
29.2830	32397.00	17.599	69.850	0.000	2349.1
29.3030	32402.00	17.601	69.850	0.000	1533.4
29.3230	32406.00	17.603	69.850	0.000	880.8
29.3430	32409.00	17.604	69.850	0.000	391.3
29.3630	32410.00	17.604	69.850	0.000	228.2
29.3830	32411.40	17.605	69.850	0.000	0.0
30.0830	32411.40	17.605	69.850	0.000	0.0

5.No2 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	69.850	-16.215	0.0
0.0070	5.00	3.025	69.850	-16.215	51.3
0.0270	15.00	3.034	69.850	-16.215	153.8
0.0470	26.00	3.045	69.850	-16.215	266.7
0.1070	56.00	3.074	69.850	-16.215	574.3
0.1270	67.00	3.084	69.850	-16.215	687.1
0.1870	97.00	3.113	69.850	-16.215	994.8
0.2070	108.00	3.123	69.850	-16.215	1107.6
0.2270	118.00	3.133	69.850	-16.215	1210.2
0.2470	129.00	3.143	69.850	-16.215	1323.0
0.2870	149.00	3.162	69.850	-16.215	1528.1
0.3070	160.00	3.173	69.850	-16.215	1640.9
0.3270	170.00	3.183	69.850	-16.215	1743.5
0.3470	181.00	3.193	69.850	-16.215	1856.3
0.3670	191.00	3.203	69.850	-16.215	1958.8
0.3870	202.00	3.213	69.850	-16.215	2071.7
0.4070	212.00	3.223	69.850	-16.215	2174.2
0.4270	223.00	3.233	69.850	-16.215	2287.0
0.4470	233.00	3.243	69.850	-16.215	2389.6
0.4670	244.00	3.253	69.850	-16.215	2502.4
0.4870	254.00	3.263	69.850	-16.215	2604.9
0.5070	265.00	3.273	69.850	-16.215	2717.8
0.5270	275.00	3.283	69.850	-16.215	2820.3
0.5670	297.00	3.304	69.850	-16.215	3045.9
0.5870	307.00	3.314	69.850	-16.215	3148.5
0.6270	329.00	3.335	69.850	-16.215	3374.1
0.6470	339.00	3.344	69.850	-16.215	3476.7
0.7070	372.00	3.376	69.850	-16.215	3815.1
0.7270	382.00	3.385	69.850	-16.215	3917.7
0.8070	426.00	3.427	69.850	-16.215	4368.9
0.8270	436.00	3.437	69.850	-16.215	4471.5
0.9965	529.20	3.526	69.850	-16.215	5427.3
1.2070	645.00	3.631	69.850	-16.257	5688.9
1.2270	657.00	3.642	69.850	-16.261	5716.0
1.3070	701.00	3.682	69.850	-16.277	5815.4
1.3270	713.00	3.693	69.850	-16.281	5842.5
1.3670	735.00	3.713	69.850	-16.289	5892.2
1.3870	747.00	3.724	69.850	-16.294	5919.3
1.4470	780.00	3.754	69.850	-16.306	5993.9
1.4670	792.00	3.765	69.850	-16.310	6021.0
1.4870	803.00	3.775	69.850	-16.314	6045.9

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5.No2 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.5070	815.00	3.786	69.850	-16.318	6073.0
1.5470	837.00	3.806	69.850	-16.326	6122.7
1.5670	849.00	3.817	69.850	-16.331	6149.8
1.5870	860.00	3.827	69.850	-16.335	6174.6
1.6070	872.00	3.838	69.850	-16.339	6201.7
1.6270	883.00	3.848	69.850	-16.343	6226.6
1.6470	895.00	3.859	69.850	-16.347	6253.7
1.6670	906.00	3.869	69.850	-16.351	6278.5
1.6870	918.00	3.880	69.850	-16.356	6305.7
1.7070	929.00	3.890	69.850	-16.360	6330.5
1.7470	953.00	3.911	69.850	-16.368	6384.7
1.7670	964.00	3.921	69.850	-16.372	6409.6
1.7870	976.00	3.932	69.850	-16.377	6436.7
1.8070	987.00	3.942	69.850	-16.381	6461.5
1.8470	1011.00	3.964	69.850	-16.389	6515.8
1.8670	1022.00	3.974	69.850	-16.393	6540.6
1.9270	1058.00	4.007	69.850	-16.406	6621.9
1.9470	1069.00	4.017	69.850	-16.410	6646.8
1.9967	1098.80	4.044	69.850	-16.421	6714.1
2.0070	1105.00	4.049	69.850	-16.423	6729.1
2.0270	1116.00	4.059	69.850	-16.427	6755.7
2.1870	1212.00	4.142	69.850	-16.460	6988.0
2.2070	1223.00	4.152	69.850	-16.464	7014.6
2.2870	1271.00	4.193	69.850	-16.481	7130.7
2.3070	1284.00	4.205	69.850	-16.485	7162.2
2.4670	1380.00	4.288	69.850	-16.519	7394.4
2.4870	1393.00	4.299	69.850	-16.523	7425.9
2.5670	1441.00	4.341	69.850	-16.540	7542.0
2.5870	1454.00	4.352	69.850	-16.544	7573.5
2.6270	1478.00	4.373	69.850	-16.553	7631.5
2.6470	1491.00	4.384	69.850	-16.557	7663.0
2.6870	1515.00	4.405	69.850	-16.566	7721.1
2.7070	1528.00	4.416	69.850	-16.570	7752.5
2.7470	1552.00	4.437	69.850	-16.579	7810.6
2.7670	1565.00	4.448	69.850	-16.583	7842.0
2.7870	1577.00	4.459	69.850	-16.587	7871.1
2.8070	1590.00	4.470	69.850	-16.592	7902.5
2.8270	1602.00	4.480	69.850	-16.596	7931.6
2.8470	1615.00	4.492	69.850	-16.600	7963.0
2.8670	1627.00	4.502	69.850	-16.605	7992.0
2.8870	1640.00	4.513	69.850	-16.609	8023.5
2.9070	1652.00	4.524	69.850	-16.613	8052.5
2.9270	1665.00	4.535	69.850	-16.618	8084.0
2.9470	1677.00	4.546	69.850	-16.622	8113.0
2.9670	1690.00	4.557	69.850	-16.626	8144.5
2.9870	1702.00	4.567	69.850	-16.631	8173.5
2.9973	1708.70	4.573	69.850	-16.633	8189.7
3.0270	1728.00	4.589	69.850	-16.639	8239.5
3.0470	1740.00	4.599	69.850	-16.643	8270.4
3.0870	1766.00	4.620	69.850	-16.652	8337.5
3.1070	1778.00	4.630	69.850	-16.656	8368.4
3.1470	1804.00	4.652	69.850	-16.664	8435.5
3.1670	1816.00	4.662	69.850	-16.668	8466.5
3.2270	1855.00	4.694	69.850	-16.681	8567.1
3.2470	1867.00	4.704	69.850	-16.685	8598.0
3.3870	1958.00	4.779	69.850	-16.715	8832.7
3.4070	1970.00	4.789	69.850	-16.719	8863.7
3.5670	2074.00	4.875	69.850	-16.753	9131.9
3.5870	2088.00	4.887	69.850	-16.758	9168.0
3.7270	2179.00	4.962	69.850	-16.788	9402.7
3.7470	2193.00	4.974	69.850	-16.792	9438.8
3.8070	2232.00	5.006	69.850	-16.805	9539.4

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5.No2 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.8270	2246.00	5.018	69.850	-16.810	9575.5
3.8670	2272.00	5.039	69.850	-16.818	9642.6
3.8870	2286.00	5.051	69.850	-16.823	9678.7
3.9270	2312.00	5.072	69.850	-16.832	9745.8
3.9470	2326.00	5.084	69.850	-16.836	9781.9
3.9870	2352.00	5.105	69.850	-16.845	9849.0
3.9970	2359.00	5.111	69.850	-16.847	9867.0
4.0070	2366.00	5.117	69.850	-16.849	9886.2
4.0270	2379.00	5.127	69.850	-16.853	9921.8
4.0470	2393.00	5.138	69.850	-16.858	9960.1
4.0670	2406.00	5.148	69.850	-16.862	9995.8
4.0870	2420.00	5.159	69.850	-16.866	10034.1
4.1070	2433.00	5.170	69.850	-16.870	10069.7
4.1270	2447.00	5.181	69.850	-16.875	10108.1
4.1470	2460.00	5.191	69.850	-16.879	10143.7
4.1670	2474.00	5.202	69.850	-16.883	10182.0
4.1870	2487.00	5.212	69.850	-16.888	10217.6
4.2070	2501.00	5.223	69.850	-16.892	10256.0
4.2270	2514.00	5.234	69.850	-16.896	10291.6
4.2670	2542.00	5.256	69.850	-16.905	10368.3
4.2870	2555.00	5.266	69.850	-16.909	10403.9
4.3070	2569.00	5.277	69.850	-16.914	10442.3
4.3270	2582.00	5.288	69.850	-16.918	10477.9
4.3870	2624.00	5.321	69.850	-16.931	10592.9
4.4070	2637.00	5.331	69.850	-16.935	10628.6
4.4670	2679.00	5.364	69.850	-16.948	10743.6
4.4870	2692.00	5.375	69.850	-16.953	10779.2
4.6070	2776.00	5.441	69.850	-16.979	11009.3
4.6270	2789.00	5.452	69.850	-16.983	11044.9
4.8270	2929.00	5.562	69.850	-17.028	11428.5
4.8470	2944.00	5.574	69.850	-17.032	11469.6
4.9670	3028.00	5.641	69.850	-17.059	11699.7
4.9870	3043.00	5.653	69.850	-17.064	11740.8
4.9966	3049.70	5.658	69.850	-17.066	11759.1
5.0470	3085.00	5.685	69.850	-17.077	11832.8
5.0670	3100.00	5.696	69.850	-17.081	11864.2
5.1270	3142.00	5.728	69.850	-17.094	11951.9
5.1470	3157.00	5.739	69.850	-17.098	11983.3
5.1670	3171.00	5.750	69.850	-17.102	12012.5
5.1870	3186.00	5.761	69.850	-17.107	12043.8
5.2270	3214.00	5.783	69.850	-17.115	12102.3
5.2470	3229.00	5.794	69.850	-17.120	12133.7
5.2670	3243.00	5.805	69.850	-17.124	12162.9
5.2870	3258.00	5.816	69.850	-17.128	12194.3
5.3070	3272.00	5.826	69.850	-17.132	12223.5
5.3270	3287.00	5.838	69.850	-17.137	12254.8
5.3470	3301.00	5.848	69.850	-17.141	12284.1
5.3670	3316.00	5.860	69.850	-17.146	12315.4
5.3870	3330.00	5.870	69.850	-17.150	12344.7
5.4070	3345.00	5.882	69.850	-17.154	12376.0
5.4270	3359.00	5.892	69.850	-17.158	12405.3
5.4470	3374.00	5.904	69.850	-17.163	12436.6
5.4670	3388.00	5.914	69.850	-17.167	12465.8
5.5070	3418.00	5.937	69.850	-17.176	12528.5
5.5270	3432.00	5.948	69.850	-17.180	12557.8
5.5470	3447.00	5.959	69.850	-17.185	12589.1
5.5670	3461.00	5.970	69.850	-17.189	12618.3
5.9971	3779.30	6.211	69.850	-17.284	13283.3
6.9670	4497.00	6.736	69.850	-17.445	13283.3
6.9973	4519.70	6.753	69.850	-17.450	13283.3
7.0670	4572.00	6.790	69.850	-17.458	13283.3
7.9969	5260.10	7.283	69.850	-17.570	13283.3

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5.No2 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
8.9973	6000.40	7.806	69.850	-17.660	13283.3
9.6670	6496.00	8.153	69.850	-17.707	13283.3
9.7670	6571.00	8.205	69.850	-17.714	13283.3
9.9965	6740.80	8.324	69.850	-17.730	13283.3
10.9970	7481.20	8.838	69.850	-17.787	13283.3
11.9974	8221.50	9.350	69.850	-17.833	13283.3
12.4670	8569.00	9.589	69.850	-17.851	13283.3
12.5670	8644.00	9.640	69.850	-17.855	13283.3
12.9966	8961.90	9.859	69.850	-17.871	13283.3
13.9971	9702.30	10.367	69.850	-17.904	13283.3
14.9975	10442.60	10.875	69.850	-17.932	13283.3
15.1670	10568.00	10.961	69.850	-17.936	13283.3
15.2670	10643.00	11.012	69.850	-17.939	13283.3
15.9967	11183.00	11.380	69.850	-17.957	13283.3
17.8670	12567.00	12.325	69.850	-17.995	13283.3
17.9670	12642.00	12.376	69.850	-17.996	13283.3
17.9963	12663.70	12.391	69.850	-17.997	13283.3
18.9969	13404.10	12.895	69.850	-18.013	13283.3
20.6670	14640.00	13.736	69.850	-18.037	13283.3
20.7670	14715.00	13.787	69.850	-18.039	13283.3
20.9965	14884.80	13.903	69.850	-18.042	13283.3
22.9974	16365.50	14.908	69.850	-18.065	13283.3
23.3670	16639.00	15.094	69.850	-18.069	13283.3
23.4670	16714.00	15.145	69.850	-18.070	13283.3
24.5670	17528.00	15.697	69.850	-18.081	13283.3
24.6070	17558.00	15.718	69.850	-18.081	13283.3
24.6270	17572.00	15.727	69.850	-18.081	13283.3
24.7070	17632.00	15.768	69.850	-18.082	13283.3
24.7270	17646.00	15.777	69.850	-18.082	13283.3
24.8070	17706.00	15.818	69.850	-18.083	13283.3
24.8270	17720.00	15.827	69.850	-18.083	13283.3
24.9070	17780.00	15.868	69.850	-18.084	13283.3
24.9270	17794.00	15.878	69.850	-18.084	13283.3
24.9967	17846.30	15.913	69.850	-18.085	13283.3
25.0070	17854.00	15.918	69.850	-18.085	13283.3
25.0270	17868.00	15.928	69.850	-18.085	13283.3
25.1270	17943.00	15.979	69.850	-18.086	13283.3
25.1470	17957.00	15.988	69.850	-18.086	13283.3
25.2270	18017.00	16.029	69.850	-18.087	13283.3
25.2470	18031.00	16.038	69.850	-18.087	13283.3
25.3270	18091.00	16.079	69.850	-18.088	13283.3
25.3470	18105.00	16.089	69.850	-18.088	13283.3
25.4270	18165.00	16.130	69.850	-18.088	13283.3
25.4470	18179.00	16.139	69.850	-18.089	13283.3
25.5270	18239.00	16.180	69.850	-18.089	13283.3
25.5470	18253.00	16.189	69.850	-18.089	13283.3
25.6470	18328.00	16.240	69.850	-18.090	13283.3
25.6670	18342.00	16.250	69.850	-18.090	13283.3
25.7470	18402.00	16.291	69.850	-18.091	13283.3
25.7670	18416.00	16.300	69.850	-18.091	13283.3
25.8470	18476.00	16.341	69.850	-18.092	13283.3
25.8670	18490.00	16.350	69.850	-18.092	13283.3
25.9470	18550.00	16.391	69.850	-18.093	13283.3
25.9670	18564.00	16.401	69.850	-18.093	13283.3
25.9971	18586.60	16.416	69.850	-18.093	13283.3
26.0470	18624.00	16.441	69.850	-18.093	13283.3
26.0670	18638.00	16.451	69.850	-18.094	13283.3
26.1670	18713.00	16.502	69.850	-18.094	13283.3
26.1870	18727.00	16.511	69.850	-18.095	13283.3
26.2670	18787.00	16.552	69.850	-18.095	13283.3
26.2870	18801.00	16.561	69.850	-18.095	13283.3
26.3670	18861.00	16.602	69.850	-18.096	13283.3

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5.No2 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.3870	18875.00	16.612	69.850	-18.096	13283.3
26.4670	18935.00	16.652	69.850	-18.097	13283.3
26.4870	18949.00	16.662	69.850	-18.097	13283.3
26.5670	19009.00	16.702	69.850	-18.098	13283.3
26.5870	19023.00	16.712	69.850	-18.098	13283.3
26.6670	19083.00	16.753	69.850	-18.098	13283.3
26.6870	19097.00	16.762	69.850	-18.099	13283.3
26.7870	19172.00	16.813	69.850	-18.099	13283.3
26.8070	19186.00	16.822	69.850	-18.099	13283.3
26.8870	19246.00	16.863	69.850	-18.100	13283.3
26.9070	19260.00	16.873	69.850	-18.100	13283.3
26.9870	19320.00	16.913	69.850	-18.101	13283.3
27.0070	19334.00	16.923	69.850	-18.101	13283.3
27.0870	19394.00	16.963	69.850	-18.102	13283.3
27.1070	19408.00	16.973	69.850	-18.102	13283.3
27.1870	19468.00	17.013	69.850	-18.103	13283.3
27.2070	19482.00	17.023	69.850	-18.103	13283.3
27.3070	19557.00	17.074	69.850	-18.103	13283.3
27.3270	19571.00	17.083	69.850	-18.104	13283.3
27.4070	19631.00	17.124	69.850	-18.104	13283.3
27.4270	19645.00	17.133	69.850	-18.104	13283.3
27.5070	19705.00	17.174	69.850	-18.105	13283.3
27.5270	19719.00	17.183	69.850	-18.105	13283.3
27.6070	19779.00	17.224	69.850	-18.106	13283.3
27.6270	19793.00	17.233	69.850	-18.106	13283.3
27.7070	19853.00	17.274	69.850	-18.107	13283.3
27.7270	19867.00	17.283	69.850	-18.107	13283.3
27.8270	19942.00	17.334	69.850	-18.108	13283.3
27.8470	19956.00	17.344	69.850	-18.108	13283.3
27.9270	20016.00	17.384	69.850	-18.108	13283.3
27.9470	20030.00	17.394	69.850	-18.109	13283.3
27.9969	20067.40	17.419	69.850	-18.109	13283.3
28.0270	20090.00	17.434	69.850	-18.108	12667.0
28.0470	20104.00	17.444	69.850	-18.107	12285.2
28.1270	20164.00	17.485	69.850	-18.105	10649.0
28.1470	20178.00	17.494	69.850	-18.104	10267.2
28.2270	20238.00	17.535	69.850	-18.101	8631.0
28.2470	20252.00	17.544	69.850	-18.101	8249.2
28.3270	20312.00	17.585	69.850	-18.098	6613.0
28.3470	20326.00	17.595	69.850	-18.097	6231.2
28.3870	20356.00	17.615	69.850	-18.096	5413.1
28.4070	20370.00	17.625	69.850	-18.095	5031.3
28.4470	20396.00	17.642	69.850	-18.094	4322.3
28.5070	20432.00	17.667	69.850	-18.093	3340.6
28.5270	20443.00	17.674	69.850	-18.092	3040.6
28.5670	20463.00	17.688	69.850	-18.091	2495.2
28.6070	20481.00	17.700	69.850	-18.090	2004.3
28.6670	20505.00	17.716	69.850	-18.089	1349.8
28.6870	20512.00	17.721	69.850	-18.089	1158.9
28.7270	20524.00	17.729	69.850	-18.088	831.7
28.7670	20534.00	17.736	69.850	-18.088	559.0
28.8070	20542.00	17.742	69.850	-18.088	340.8
28.8470	20548.00	17.746	69.850	-18.087	177.2
28.8870	20552.00	17.748	69.850	-18.087	68.1
28.9070	20553.00	17.749	69.850	-18.087	40.9
28.9270	20554.00	17.750	69.850	-18.087	13.6
28.9470	20554.50	17.750	69.850	-18.087	0.0
29.5670	20554.50	17.750	69.850	-18.087	0.0

6.No2 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	69.850	16.215	0.0
0.0060	5.00	3.025	69.850	16.215	51.3
0.0860	45.00	3.063	69.850	16.215	461.5
0.1060	56.00	3.074	69.850	16.215	574.3
0.1460	76.00	3.093	69.850	16.215	779.4
0.1660	87.00	3.103	69.850	16.215	892.2
0.2060	107.00	3.122	69.850	16.215	1097.4
0.2260	118.00	3.133	69.850	16.215	1210.2
0.2660	138.00	3.152	69.850	16.215	1415.3
0.2860	149.00	3.162	69.850	16.215	1528.1
0.3060	159.00	3.172	69.850	16.215	1630.7
0.3260	170.00	3.183	69.850	16.215	1743.5
0.3460	180.00	3.192	69.850	16.215	1846.0
0.3660	191.00	3.203	69.850	16.215	1958.8
0.3860	201.00	3.212	69.850	16.215	2061.4
0.4060	212.00	3.223	69.850	16.215	2174.2
0.4260	222.00	3.232	69.850	16.215	2276.8
0.4460	233.00	3.243	69.850	16.215	2389.6
0.4660	243.00	3.252	69.850	16.215	2492.1
0.4860	254.00	3.263	69.850	16.215	2604.9
0.5060	264.00	3.272	69.850	16.215	2707.5
0.5460	286.00	3.293	69.850	16.215	2933.1
0.5660	296.00	3.303	69.850	16.215	3035.7
0.5860	307.00	3.314	69.850	16.215	3148.5
0.6060	317.00	3.323	69.850	16.215	3251.1
0.6660	350.00	3.355	69.850	16.215	3589.5
0.6860	360.00	3.364	69.850	16.215	3692.0
0.7460	393.00	3.396	69.850	16.215	4030.5
0.7660	403.00	3.405	69.850	16.215	4133.0
0.8660	458.00	3.458	69.850	16.215	4697.1
0.8860	468.00	3.467	69.850	16.215	4799.7
0.9973	529.20	3.526	69.850	16.215	5427.3
1.1460	611.00	3.600	69.850	16.245	5612.1
1.1660	623.00	3.611	69.850	16.249	5639.2
1.2660	678.00	3.661	69.850	16.269	5763.5
1.2860	690.00	3.672	69.850	16.273	5790.6
1.3460	723.00	3.702	69.850	16.285	5865.1
1.3660	735.00	3.713	69.850	16.289	5892.2
1.4060	757.00	3.733	69.850	16.297	5941.9
1.4260	769.00	3.744	69.850	16.302	5969.0
1.4660	791.00	3.764	69.850	16.310	6018.7
1.4860	803.00	3.775	69.850	16.314	6045.9
1.5260	825.00	3.795	69.850	16.322	6095.6
1.5460	837.00	3.806	69.850	16.326	6122.7
1.5660	848.00	3.816	69.850	16.330	6147.5
1.5860	860.00	3.827	69.850	16.335	6174.6
1.6060	871.00	3.837	69.850	16.339	6199.5
1.6260	883.00	3.848	69.850	16.343	6226.6
1.6460	894.00	3.858	69.850	16.347	6251.4
1.6660	906.00	3.869	69.850	16.351	6278.5
1.6860	917.00	3.879	69.850	16.355	6303.4
1.7060	929.00	3.890	69.850	16.360	6330.5
1.7260	940.00	3.900	69.850	16.364	6355.4
1.7660	964.00	3.921	69.850	16.372	6409.6
1.7860	975.00	3.931	69.850	16.376	6434.4
1.8260	999.00	3.953	69.850	16.385	6488.6
1.8460	1010.00	3.963	69.850	16.389	6513.5
1.8860	1034.00	3.985	69.850	16.398	6567.7
1.9060	1045.00	3.995	69.850	16.402	6592.6
1.9460	1069.00	4.017	69.850	16.410	6646.8
1.9660	1080.00	4.027	69.850	16.414	6671.6
1.9973	1098.80	4.044	69.850	16.421	6714.1
2.0660	1140.00	4.080	69.850	16.435	6813.8

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6.No2 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.0860	1151.00	4.089	69.850	16.439	6840.4
2.4260	1355.00	4.266	69.850	16.510	7334.0
2.4460	1368.00	4.277	69.850	16.515	7365.4
2.5260	1416.00	4.319	69.850	16.531	7481.5
2.5460	1429.00	4.330	69.850	16.536	7513.0
2.6060	1465.00	4.362	69.850	16.548	7600.1
2.6260	1478.00	4.373	69.850	16.553	7631.5
2.6660	1502.00	4.394	69.850	16.561	7689.6
2.6860	1515.00	4.405	69.850	16.566	7721.1
2.7260	1539.00	4.426	69.850	16.574	7779.1
2.7460	1552.00	4.437	69.850	16.579	7810.6
2.7660	1564.00	4.447	69.850	16.583	7839.6
2.7860	1577.00	4.459	69.850	16.587	7871.1
2.8060	1589.00	4.469	69.850	16.591	7900.1
2.8260	1602.00	4.480	69.850	16.596	7931.6
2.8460	1614.00	4.491	69.850	16.600	7960.6
2.8660	1627.00	4.502	69.850	16.605	7992.0
2.8860	1639.00	4.513	69.850	16.609	8021.1
2.9060	1652.00	4.524	69.850	16.613	8052.5
2.9260	1664.00	4.534	69.850	16.617	8081.6
2.9460	1677.00	4.546	69.850	16.622	8113.0
2.9660	1689.00	4.556	69.850	16.626	8142.0
2.9860	1702.00	4.567	69.850	16.631	8173.5
2.9972	1708.70	4.573	69.850	16.633	8189.7
3.0460	1740.00	4.599	69.850	16.643	8270.4
3.0660	1752.00	4.609	69.850	16.647	8301.4
3.1060	1778.00	4.630	69.850	16.656	8368.4
3.1260	1790.00	4.640	69.850	16.660	8399.4
3.1860	1829.00	4.673	69.850	16.673	8500.0
3.2060	1841.00	4.682	69.850	16.677	8530.9
3.2660	1880.00	4.715	69.850	16.689	8631.5
3.2860	1892.00	4.725	69.850	16.693	8662.5
3.6860	2152.00	4.940	69.850	16.779	9333.1
3.7060	2166.00	4.951	69.850	16.783	9369.2
3.7860	2218.00	4.994	69.850	16.801	9503.3
3.8060	2232.00	5.006	69.850	16.805	9539.4
3.8460	2258.00	5.027	69.850	16.814	9606.5
3.8660	2272.00	5.039	69.850	16.818	9642.6
3.9060	2298.00	5.061	69.850	16.827	9709.7
3.9260	2312.00	5.072	69.850	16.832	9745.8
3.9660	2338.00	5.094	69.850	16.840	9812.8
3.9860	2352.00	5.105	69.850	16.845	9849.0
3.9968	2359.00	5.111	69.850	16.847	9867.0
4.0260	2378.00	5.126	69.850	16.853	9919.1
4.0460	2392.00	5.137	69.850	16.857	9957.4
4.0660	2405.00	5.147	69.850	16.862	9993.0
4.0860	2419.00	5.159	69.850	16.866	10031.4
4.1060	2432.00	5.169	69.850	16.870	10067.0
4.1260	2446.00	5.180	69.850	16.875	10105.3
4.1460	2459.00	5.190	69.850	16.879	10140.9
4.1660	2473.00	5.201	69.850	16.883	10179.3
4.1860	2486.00	5.212	69.850	16.887	10214.9
4.2260	2514.00	5.234	69.850	16.896	10291.6
4.2460	2527.00	5.244	69.850	16.900	10327.2
4.2660	2541.00	5.255	69.850	16.905	10365.6
4.2860	2554.00	5.265	69.850	16.909	10401.2
4.3260	2582.00	5.288	69.850	16.918	10477.9
4.3460	2595.00	5.298	69.850	16.922	10513.5
4.4060	2637.00	5.331	69.850	16.935	10628.6
4.4260	2650.00	5.341	69.850	16.939	10664.2
4.5060	2706.00	5.386	69.850	16.957	10817.6
4.5260	2719.00	5.396	69.850	16.961	10853.2

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6.No2 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.9260	2999.00	5.618	69.850	17.050	11620.2
4.9460	3014.00	5.630	69.850	17.055	11661.3
4.9970	3049.70	5.658	69.850	17.066	11759.1
5.0260	3070.00	5.673	69.850	17.072	11801.5
5.0460	3085.00	5.685	69.850	17.077	11832.8
5.1060	3127.00	5.717	69.850	17.089	11920.6
5.1260	3142.00	5.728	69.850	17.094	11951.9
5.1660	3170.00	5.749	69.850	17.102	12010.4
5.1860	3185.00	5.761	69.850	17.106	12041.8
5.2060	3199.00	5.771	69.850	17.111	12071.0
5.2260	3214.00	5.783	69.850	17.115	12102.3
5.2660	3242.00	5.804	69.850	17.123	12160.8
5.2860	3257.00	5.815	69.850	17.128	12192.2
5.3060	3271.00	5.826	69.850	17.132	12221.4
5.3260	3286.00	5.837	69.850	17.137	12252.8
5.3460	3300.00	5.848	69.850	17.141	12282.0
5.3660	3315.00	5.859	69.850	17.145	12313.3
5.3860	3329.00	5.870	69.850	17.149	12342.6
5.4060	3344.00	5.881	69.850	17.154	12373.9
5.4260	3358.00	5.892	69.850	17.158	12403.2
5.4660	3388.00	5.914	69.850	17.167	12465.8
5.4860	3402.00	5.925	69.850	17.171	12495.1
5.5060	3417.00	5.936	69.850	17.176	12526.4
5.5260	3431.00	5.947	69.850	17.180	12555.7
5.5660	3461.00	5.970	69.850	17.189	12618.3
5.6660	3534.00	6.025	69.850	17.211	12770.9
5.9975	3779.30	6.211	69.850	17.284	13283.3
6.2660	3978.00	6.356	69.850	17.329	13283.3
6.3660	4053.00	6.411	69.850	17.345	13283.3
6.9967	4519.70	6.753	69.850	17.450	13283.3
7.9972	5260.10	7.283	69.850	17.570	13283.3
8.9660	5977.00	7.789	69.850	17.657	13283.3
8.9972	6000.40	7.806	69.850	17.660	13283.3
9.0660	6052.00	7.842	69.850	17.665	13283.3
9.9968	6740.80	8.324	69.850	17.730	13283.3
10.9974	7481.20	8.837	69.850	17.787	13283.3
11.6660	7976.00	9.180	69.850	17.818	13283.3
11.7660	8051.00	9.232	69.850	17.822	13283.3
11.9964	8221.50	9.350	69.850	17.833	13283.3
12.9969	8961.90	9.859	69.850	17.871	13283.3
13.9975	9702.30	10.368	69.850	17.904	13283.3
14.4660	10049.00	10.605	69.850	17.917	13283.3
14.5660	10124.00	10.657	69.850	17.920	13283.3
14.9965	10442.60	10.875	69.850	17.932	13283.3
15.9971	11183.00	11.380	69.850	17.957	13283.3
17.1660	12048.00	11.971	69.850	17.981	13283.3
17.2660	12123.00	12.022	69.850	17.983	13283.3
17.9967	12663.70	12.391	69.850	17.997	13283.3
18.9972	13404.10	12.895	69.850	18.013	13283.3
19.9660	14121.00	13.383	69.850	18.028	13283.3
20.0660	14196.00	13.434	69.850	18.029	13283.3
20.9968	14884.80	13.903	69.850	18.042	13283.3
22.6660	16120.00	14.742	69.850	18.061	13283.3
22.7660	16195.00	14.792	69.850	18.062	13283.3
22.9964	16365.50	14.908	69.850	18.065	13283.3
24.5660	17527.00	15.697	69.850	18.081	13283.3
24.6260	17572.00	15.727	69.850	18.081	13283.3
24.6460	17586.00	15.737	69.850	18.081	13283.3
24.7260	17646.00	15.777	69.850	18.082	13283.3
24.7460	17660.00	15.787	69.850	18.082	13283.3
24.8260	17720.00	15.827	69.850	18.083	13283.3
24.8460	17734.00	15.837	69.850	18.083	13283.3

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6.No2 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
24.9460	17809.00	15.888	69.850	18.084	13283.3
24.9660	17823.00	15.897	69.850	18.085	13283.3
24.9971	17846.30	15.913	69.850	18.085	13283.3
25.0460	17883.00	15.938	69.850	18.085	13283.3
25.0660	17897.00	15.947	69.850	18.086	13283.3
25.1460	17957.00	15.988	69.850	18.086	13283.3
25.1660	17971.00	15.998	69.850	18.086	13283.3
25.2460	18031.00	16.038	69.850	18.087	13283.3
25.2660	18045.00	16.048	69.850	18.087	13283.3
25.3460	18105.00	16.089	69.850	18.088	13283.3
25.3660	18119.00	16.098	69.850	18.088	13283.3
25.4660	18194.00	16.149	69.850	18.089	13283.3
25.4860	18208.00	16.159	69.850	18.089	13283.3
25.5660	18268.00	16.200	69.850	18.090	13283.3
25.5860	18282.00	16.209	69.850	18.090	13283.3
25.6660	18342.00	16.250	69.850	18.090	13283.3
25.6860	18356.00	16.259	69.850	18.091	13283.3
25.7660	18416.00	16.300	69.850	18.091	13283.3
25.7860	18430.00	16.310	69.850	18.091	13283.3
25.8660	18490.00	16.350	69.850	18.092	13283.3
25.8860	18504.00	16.360	69.850	18.092	13283.3
25.9660	18564.00	16.401	69.850	18.093	13283.3
25.9860	18578.00	16.410	69.850	18.093	13283.3
26.0860	18653.00	16.461	69.850	18.094	13283.3
26.1060	18667.00	16.471	69.850	18.094	13283.3
26.1860	18727.00	16.511	69.850	18.095	13283.3
26.2060	18741.00	16.521	69.850	18.095	13283.3
26.2860	18801.00	16.561	69.850	18.095	13283.3
26.3060	18815.00	16.571	69.850	18.095	13283.3
26.3860	18875.00	16.612	69.850	18.096	13283.3
26.4060	18889.00	16.621	69.850	18.096	13283.3
26.4860	18949.00	16.662	69.850	18.097	13283.3
26.5060	18963.00	16.671	69.850	18.097	13283.3
26.6060	19038.00	16.722	69.850	18.098	13283.3
26.6260	19052.00	16.732	69.850	18.098	13283.3
26.7060	19112.00	16.772	69.850	18.099	13283.3
26.7260	19126.00	16.782	69.850	18.099	13283.3
26.8060	19186.00	16.822	69.850	18.099	13283.3
26.8260	19200.00	16.832	69.850	18.100	13283.3
26.9060	19260.00	16.873	69.850	18.100	13283.3
26.9260	19274.00	16.882	69.850	18.100	13283.3
26.9967	19327.00	16.918	69.850	18.101	13283.3
27.0060	19334.00	16.923	69.850	18.101	13283.3
27.0260	19348.00	16.932	69.850	18.101	13283.3
27.1260	19423.00	16.983	69.850	18.102	13283.3
27.1460	19437.00	16.992	69.850	18.102	13283.3
27.2260	19497.00	17.033	69.850	18.103	13283.3
27.2460	19511.00	17.043	69.850	18.103	13283.3
27.3260	19571.00	17.083	69.850	18.104	13283.3
27.3460	19585.00	17.093	69.850	18.104	13283.3
27.4260	19645.00	17.133	69.850	18.104	13283.3
27.4460	19659.00	17.143	69.850	18.105	13283.3
27.5260	19719.00	17.183	69.850	18.105	13283.3
27.5460	19733.00	17.193	69.850	18.105	13283.3
27.6460	19808.00	17.243	69.850	18.106	13283.3
27.6660	19822.00	17.253	69.850	18.106	13283.3
27.7460	19882.00	17.294	69.850	18.107	13283.3
27.7660	19896.00	17.303	69.850	18.107	13283.3
27.8460	19956.00	17.344	69.850	18.108	13283.3
27.8660	19970.00	17.353	69.850	18.108	13283.3
27.9460	20030.00	17.394	69.850	18.109	13283.3
27.9660	20044.00	17.403	69.850	18.109	13283.3

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6.No2 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
27.9972	20067.40	17.419	69.850	18.109	13283.3
28.0460	20104.00	17.444	69.850	18.107	12285.2
28.0660	20118.00	17.453	69.850	18.107	11903.4
28.1460	20178.00	17.494	69.850	18.104	10267.2
28.1660	20192.00	17.504	69.850	18.103	9885.4
28.2660	20267.00	17.555	69.850	18.100	7840.2
28.2860	20281.00	17.564	69.850	18.099	7458.4
28.3660	20341.00	17.605	69.850	18.097	5822.2
28.4060	20369.00	17.624	69.850	18.095	5058.6
28.4660	20408.00	17.650	69.850	18.094	3995.1
28.4860	20420.00	17.659	69.850	18.093	3667.8
28.5260	20442.00	17.674	69.850	18.092	3067.9
28.5860	20472.00	17.694	69.850	18.091	2249.8
28.6060	20481.00	17.700	69.850	18.090	2004.3
28.6460	20497.00	17.711	69.850	18.090	1568.0
28.7060	20518.00	17.725	69.850	18.089	995.3
28.7260	20523.00	17.729	69.850	18.088	859.0
28.7460	20529.00	17.733	69.850	18.088	695.3
28.7660	20534.00	17.736	69.850	18.088	559.0
28.8060	20542.00	17.742	69.850	18.088	340.8
28.8460	20548.00	17.746	69.850	18.087	177.2
28.8860	20552.00	17.748	69.850	18.087	68.1
28.9060	20553.00	17.749	69.850	18.087	40.9
28.9260	20554.00	17.750	69.850	18.087	13.6
28.9460	20554.50	17.750	69.850	18.087	0.0
29.5660	20554.50	17.750	69.850	18.087	0.0

7.No3 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	19.050	0.000	0.0
0.0110	12.00	3.025	19.050	0.000	484.2
0.0310	34.00	3.035	19.050	0.000	1371.9
0.0510	57.00	3.046	19.050	0.000	2299.9
0.1110	123.00	3.075	19.050	0.000	4962.9
0.1310	146.00	3.086	19.050	0.000	5890.9
0.2110	234.00	3.125	19.050	0.000	9441.5
0.2310	257.00	3.136	19.050	0.000	10369.5
0.2910	323.00	3.165	19.050	0.000	13032.5
0.3110	346.00	3.176	19.050	0.000	13960.5
0.3910	434.00	3.215	19.050	0.000	17511.2
0.4110	457.00	3.226	19.050	0.000	18439.2
0.4710	523.00	3.255	19.050	0.000	21102.2
0.4910	546.00	3.266	19.050	0.000	22030.2
0.5710	634.00	3.305	19.050	0.000	25580.9
0.5910	657.00	3.316	19.050	0.000	26508.9
0.6510	723.00	3.345	19.050	0.000	29171.9
0.6710	746.00	3.356	19.050	0.000	30099.9
0.7510	834.00	3.395	19.050	0.000	33650.6
0.7710	857.00	3.406	19.050	0.000	34578.6
0.8310	923.00	3.435	19.050	0.000	37241.6
0.8510	946.00	3.446	19.050	0.000	38169.6
0.9310	1034.00	3.485	19.050	0.000	41720.2
0.9510	1057.00	3.496	19.050	0.000	42648.3
1.0002	1111.10	3.520	19.050	0.000	44831.1
1.0110	1123.00	3.525	19.050	0.000	44831.1
1.0310	1146.00	3.536	19.050	0.000	44831.1
1.1110	1234.00	3.575	19.050	0.000	44831.1

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7.No3 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.1310	1257.00	3.586	19.050	0.000	44831.1
1.1910	1323.00	3.615	19.050	0.000	44831.1
1.2110	1346.00	3.626	19.050	0.000	44831.1
1.2910	1434.00	3.665	19.050	0.000	44831.1
1.3110	1457.00	3.676	19.050	0.000	44831.1
1.3710	1523.00	3.705	19.050	0.000	44831.1
1.3910	1546.00	3.716	19.050	0.000	44831.1
1.4710	1634.00	3.755	19.050	0.000	44831.1
1.4910	1657.00	3.766	19.050	0.000	44831.1
1.5510	1723.00	3.795	19.050	0.000	44831.1
1.5710	1746.00	3.806	19.050	0.000	44831.1
1.6510	1834.00	3.845	19.050	0.000	44831.1
1.6710	1857.00	3.856	19.050	0.000	44831.1
1.7310	1923.00	3.885	19.050	0.000	44831.1
1.7510	1946.00	3.896	19.050	0.000	44831.1
1.8310	2034.00	3.935	19.050	0.000	44831.1
1.8510	2057.00	3.946	19.050	0.000	44831.1
1.9110	2123.00	3.975	19.050	0.000	44831.1
1.9310	2146.00	3.986	19.050	0.000	44831.1
2.0003	2222.20	4.020	19.050	0.000	44831.1
2.0110	2234.00	4.025	19.050	0.000	44831.1
2.0310	2257.00	4.036	19.050	0.000	44831.1
2.0910	2323.00	4.065	19.050	0.000	44831.1
2.1110	2346.00	4.076	19.050	0.000	44831.1
2.1910	2434.00	4.115	19.050	0.000	44831.1
2.2110	2457.00	4.126	19.050	0.000	44831.1
2.2710	2523.00	4.155	19.050	0.000	44831.1
2.2910	2546.00	4.166	19.050	0.000	44831.1
2.3710	2634.00	4.205	19.050	0.000	44831.1
2.3910	2657.00	4.216	19.050	0.000	44831.1
2.4510	2723.00	4.245	19.050	0.000	44831.1
2.4710	2746.00	4.256	19.050	0.000	44831.1
2.5510	2834.00	4.295	19.050	0.000	44831.1
2.5710	2857.00	4.306	19.050	0.000	44831.1
2.6310	2923.00	4.335	19.050	0.000	44831.1
2.6510	2946.00	4.346	19.050	0.000	44831.1
2.7310	3034.00	4.385	19.050	0.000	44831.1
2.7510	3057.00	4.396	19.050	0.000	44831.1
2.8110	3123.00	4.425	19.050	0.000	44831.1
2.8310	3146.00	4.436	19.050	0.000	44831.1
2.9110	3234.00	4.475	19.050	0.000	44831.1
2.9310	3257.00	4.486	19.050	0.000	44831.1
2.9910	3323.00	4.515	19.050	0.000	44831.1
3.0110	3346.00	4.526	19.050	0.000	44831.1
3.0910	3434.00	4.565	19.050	0.000	44831.1
3.1110	3457.00	4.576	19.050	0.000	44831.1
3.1710	3523.00	4.605	19.050	0.000	44831.1
3.1910	3546.00	4.616	19.050	0.000	44831.1
3.2710	3634.00	4.655	19.050	0.000	44831.1
3.2910	3657.00	4.666	19.050	0.000	44831.1
3.3510	3723.00	4.695	19.050	0.000	44831.1
3.3710	3746.00	4.706	19.050	0.000	44831.1
3.4510	3834.00	4.745	19.050	0.000	44831.1
3.4710	3857.00	4.756	19.050	0.000	44831.1
3.5310	3923.00	4.785	19.050	0.000	44831.1
3.5510	3946.00	4.796	19.050	0.000	44831.1
3.6310	4034.00	4.835	19.050	0.000	44831.1
3.6510	4057.00	4.846	19.050	0.000	44831.1
3.7110	4123.00	4.875	19.050	0.000	44831.1
3.7310	4146.00	4.886	19.050	0.000	44831.1
3.8110	4234.00	4.925	19.050	0.000	44831.1
3.8310	4257.00	4.936	19.050	0.000	44831.1

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7.No3 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.8910	4323.00	4.965	19.050	0.000	44831.1
3.9110	4346.00	4.976	19.050	0.000	44831.1
3.9910	4434.00	5.015	19.050	0.000	44831.1
4.0110	4457.00	5.026	19.050	0.000	44831.1
4.0710	4523.00	5.055	19.050	0.000	44831.1
4.0910	4546.00	5.066	19.050	0.000	44831.1
4.1710	4634.00	5.105	19.050	0.000	44831.1
4.1910	4657.00	5.116	19.050	0.000	44831.1
4.2510	4723.00	5.145	19.050	0.000	44831.1
4.2710	4746.00	5.156	19.050	0.000	44831.1
4.3510	4834.00	5.195	19.050	0.000	44831.1
4.3710	4857.00	5.206	19.050	0.000	44831.1
4.4310	4923.00	5.235	19.050	0.000	44831.1
4.4510	4946.00	5.246	19.050	0.000	44831.1
4.5310	5034.00	5.285	19.050	0.000	44831.1
4.5510	5057.00	5.296	19.050	0.000	44831.1
4.6110	5123.00	5.325	19.050	0.000	44831.1
4.6310	5146.00	5.336	19.050	0.000	44831.1
4.7110	5234.00	5.375	19.050	0.000	44831.1
4.7310	5257.00	5.386	19.050	0.000	44831.1
4.7910	5323.00	5.415	19.050	0.000	44831.1
4.8110	5346.00	5.426	19.050	0.000	44831.1
4.8910	5434.00	5.465	19.050	0.000	44831.1
4.9110	5457.00	5.476	19.050	0.000	44831.1
4.9710	5523.00	5.505	19.050	0.000	44831.1
4.9910	5546.00	5.516	19.050	0.000	44831.1
5.0710	5634.00	5.555	19.050	0.000	44831.1
5.0910	5657.00	5.566	19.050	0.000	44831.1
5.1510	5723.00	5.595	19.050	0.000	44831.1
5.1710	5746.00	5.606	19.050	0.000	44831.1
5.2510	5834.00	5.645	19.050	0.000	44831.1
5.2710	5857.00	5.656	19.050	0.000	44831.1
5.3310	5923.00	5.685	19.050	0.000	44831.1
5.3510	5946.00	5.696	19.050	0.000	44831.1
5.4310	6034.00	5.735	19.050	0.000	44831.1
5.4510	6057.00	5.746	19.050	0.000	44831.1
5.5110	6123.00	5.775	19.050	0.000	44831.1
5.5310	6146.00	5.786	19.050	0.000	44831.1
5.6110	6234.00	5.825	19.050	0.000	44831.1
5.6310	6257.00	5.836	19.050	0.000	44831.1
5.6910	6323.00	5.865	19.050	0.000	44831.1
5.7110	6346.00	5.876	19.050	0.000	44831.1
5.7910	6434.00	5.915	19.050	0.000	44831.1
5.8110	6457.00	5.926	19.050	0.000	44831.1
5.8710	6523.00	5.955	19.050	0.000	44831.1
5.8910	6546.00	5.966	19.050	0.000	44831.1
5.9710	6634.00	6.005	19.050	0.000	44831.1
5.9910	6657.00	6.016	19.050	0.000	44831.1
6.0510	6723.00	6.045	19.050	0.000	44831.1
6.0710	6746.00	6.056	19.050	0.000	44831.1
6.8710	7634.00	6.455	19.050	0.000	44831.1
6.9710	7746.00	6.506	19.050	0.000	44831.1
7.7710	8634.00	6.905	19.050	0.000	44831.1
7.8710	8746.00	6.956	19.050	0.000	44831.1
8.6710	9634.00	7.355	19.050	0.000	44831.1
8.7710	9746.00	7.406	19.050	0.000	44831.1
9.5710	10634.00	7.805	19.050	0.000	44831.1
9.6710	10746.00	7.856	19.050	0.000	44831.1
10.5710	11745.00	8.305	19.050	0.000	44831.1
10.6710	11857.00	8.356	19.050	0.000	44831.1
11.4710	12745.00	8.755	19.050	0.000	44831.1
11.5710	12857.00	8.806	19.050	0.000	44831.1

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7.No3 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
12.3710	13745.00	9.205	19.050	0.000	44831.1
12.4710	13857.00	9.256	19.050	0.000	44831.1
13.2710	14745.00	9.655	19.050	0.000	44831.1
13.3710	14857.00	9.706	19.050	0.000	44831.1
14.1710	15745.00	10.105	19.050	0.000	44831.1
14.2710	15857.00	10.156	19.050	0.000	44831.1
15.0710	16745.00	10.555	19.050	0.000	44831.1
15.1710	16857.00	10.606	19.050	0.000	44831.1
15.9710	17745.00	11.005	19.050	0.000	44831.1
16.0710	17857.00	11.056	19.050	0.000	44831.1
16.8710	18745.00	11.455	19.050	0.000	44831.1
16.9710	18857.00	11.506	19.050	0.000	44831.1
17.7710	19745.00	11.905	19.050	0.000	44831.1
17.8710	19857.00	11.956	19.050	0.000	44831.1
18.6710	20745.00	12.355	19.050	0.000	44831.1
18.7710	20857.00	12.406	19.050	0.000	44831.1
19.5710	21745.00	12.805	19.050	0.000	44831.1
19.6710	21857.00	12.856	19.050	0.000	44831.1
20.4710	22745.00	13.255	19.050	0.000	44831.1
20.5710	22857.00	13.306	19.050	0.000	44831.1
21.3710	23745.00	13.705	19.050	0.000	44831.1
21.4710	23857.00	13.756	19.050	0.000	44831.1
22.2710	24745.00	14.155	19.050	0.000	44831.1
22.3710	24857.00	14.206	19.050	0.000	44831.1
23.1710	25745.00	14.605	19.050	0.000	44831.1
23.2710	25857.00	14.656	19.050	0.000	44831.1
24.0710	26745.00	15.055	19.050	0.000	44831.1
24.1710	26857.00	15.106	19.050	0.000	44831.1
24.9710	27745.00	15.505	19.050	0.000	44831.1
25.0710	27857.00	15.556	19.050	0.000	44831.1
25.1510	27945.00	15.595	19.050	0.000	44831.1
25.1710	27968.00	15.606	19.050	0.000	44831.1
25.2310	28034.00	15.635	19.050	0.000	44831.1
25.2510	28057.00	15.646	19.050	0.000	44831.1
25.3310	28145.00	15.685	19.050	0.000	44831.1
25.3510	28168.00	15.696	19.050	0.000	44831.1
25.4110	28234.00	15.725	19.050	0.000	44831.1
25.4310	28257.00	15.736	19.050	0.000	44831.1
25.5110	28345.00	15.775	19.050	0.000	44831.1
25.5310	28368.00	15.786	19.050	0.000	44831.1
25.5910	28434.00	15.815	19.050	0.000	44831.1
25.6110	28457.00	15.826	19.050	0.000	44831.1
25.6910	28545.00	15.865	19.050	0.000	44831.1
25.7110	28568.00	15.876	19.050	0.000	44831.1
25.7710	28634.00	15.905	19.050	0.000	44831.1
25.7910	28657.00	15.916	19.050	0.000	44831.1
25.8710	28745.00	15.955	19.050	0.000	44831.1
25.8910	28768.00	15.966	19.050	0.000	44831.1
25.9510	28834.00	15.995	19.050	0.000	44831.1
25.9710	28857.00	16.006	19.050	0.000	44831.1
25.9998	28888.70	16.020	19.050	0.000	44831.1
26.0510	28945.00	16.045	19.050	0.000	44831.1
26.0710	28968.00	16.056	19.050	0.000	44831.1
26.1310	29034.00	16.085	19.050	0.000	44831.1
26.1510	29057.00	16.096	19.050	0.000	44831.1
26.2310	29145.00	16.135	19.050	0.000	44831.1
26.2510	29168.00	16.146	19.050	0.000	44831.1
26.3110	29234.00	16.175	19.050	0.000	44831.1
26.3310	29257.00	16.186	19.050	0.000	44831.1
26.4110	29345.00	16.225	19.050	0.000	44831.1
26.4310	29368.00	16.236	19.050	0.000	44831.1
26.4910	29434.00	16.265	19.050	0.000	44831.1

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7.No3 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.5110	29457.00	16.276	19.050	0.000	44831.1
26.5910	29545.00	16.315	19.050	0.000	44831.1
26.6110	29568.00	16.326	19.050	0.000	44831.1
26.6710	29634.00	16.355	19.050	0.000	44831.1
26.6910	29657.00	16.366	19.050	0.000	44831.1
26.7710	29745.00	16.405	19.050	0.000	44831.1
26.7910	29768.00	16.416	19.050	0.000	44831.1
26.8510	29834.00	16.445	19.050	0.000	44831.1
26.8710	29857.00	16.456	19.050	0.000	44831.1
26.9510	29945.00	16.495	19.050	0.000	44831.1
26.9710	29968.00	16.506	19.050	0.000	44831.1
27.0310	30034.00	16.535	19.050	0.000	44831.1
27.0510	30057.00	16.546	19.050	0.000	44831.1
27.1310	30145.00	16.585	19.050	0.000	44831.1
27.1510	30168.00	16.596	19.050	0.000	44831.1
27.2110	30234.00	16.625	19.050	0.000	44831.1
27.2310	30257.00	16.636	19.050	0.000	44831.1
27.3110	30345.00	16.675	19.050	0.000	44831.1
27.3310	30368.00	16.686	19.050	0.000	44831.1
27.3910	30434.00	16.715	19.050	0.000	44831.1
27.4110	30457.00	16.726	19.050	0.000	44831.1
27.4910	30545.00	16.765	19.050	0.000	44831.1
27.5110	30568.00	16.776	19.050	0.000	44831.1
27.5710	30634.00	16.805	19.050	0.000	44831.1
27.5910	30657.00	16.816	19.050	0.000	44831.1
27.6710	30745.00	16.855	19.050	0.000	44831.1
27.6910	30768.00	16.866	19.050	0.000	44831.1
27.7510	30834.00	16.895	19.050	0.000	44831.1
27.7710	30857.00	16.906	19.050	0.000	44831.1
27.8510	30945.00	16.945	19.050	0.000	44831.1
27.8710	30968.00	16.956	19.050	0.000	44831.1
27.9310	31034.00	16.985	19.050	0.000	44831.1
27.9510	31057.00	16.996	19.050	0.000	44831.1
28.0001	31111.01	17.020	19.050	0.000	44831.1
28.0310	31145.00	17.035	19.050	0.000	44418.6
28.0510	31168.00	17.046	19.050	0.000	44139.6
28.1110	31234.00	17.075	19.050	0.000	43338.9
28.1310	31257.00	17.086	19.050	0.000	43059.9
28.2110	31345.00	17.125	19.050	0.000	41992.4
28.2310	31368.00	17.136	19.050	0.000	41713.3
28.2910	31434.00	17.165	19.050	0.000	40912.7
28.3110	31457.00	17.176	19.050	0.000	40633.6
28.3910	31545.00	17.215	19.050	0.000	39566.1
28.4110	31568.00	17.226	19.050	0.000	39287.1
28.4710	31634.00	17.256	19.050	0.000	38486.4
28.4910	31657.00	17.266	19.050	0.000	38207.4
28.5710	31745.00	17.306	19.050	0.000	37139.8
28.5910	31768.00	17.316	19.050	0.000	36860.8
28.6510	31834.00	17.346	19.050	0.000	36060.1
28.6710	31857.00	17.356	19.050	0.000	35781.1
28.7510	31945.00	17.396	19.050	0.000	34713.5
28.7710	31968.00	17.406	19.050	0.000	34434.5
28.8310	32034.00	17.436	19.050	0.000	33633.8
28.8510	32057.00	17.446	19.050	0.000	33354.8
28.9310	32145.00	17.486	19.050	0.000	32287.2
28.9510	32168.00	17.496	19.050	0.000	32008.2
28.9910	32210.00	17.515	19.050	0.000	31498.7
29.0000	32219.00	17.519	19.050	0.000	31389.5
29.0110	32230.00	17.524	19.050	0.000	29594.9
29.0510	32266.00	17.540	19.050	0.000	23721.5
29.0710	32283.00	17.548	19.050	0.000	20948.0
29.1110	32313.00	17.561	19.050	0.000	16053.6

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7.No3 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
29.1310	32327.00	17.567	19.050	0.000	13769.5
29.1710	32351.00	17.578	19.050	0.000	9853.9
29.2110	32371.00	17.587	19.050	0.000	6590.9
29.2510	32387.00	17.594	19.050	0.000	3980.6
29.2910	32399.00	17.599	19.050	0.000	2022.8
29.3110	32403.00	17.601	19.050	0.000	1370.2
29.3310	32407.00	17.603	19.050	0.000	717.6
29.3510	32409.00	17.604	19.050	0.000	391.3
29.3710	32411.40	17.605	19.050	0.000	0.0
30.0710	32411.40	17.605	19.050	0.000	0.0

8.No3 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	19.050	-16.215	0.0
0.0090	6.00	3.026	19.050	-16.215	61.5
0.0290	16.00	3.035	19.050	-16.215	164.1
0.0490	27.00	3.046	19.050	-16.215	276.9
0.1090	57.00	3.075	19.050	-16.215	584.6
0.1290	68.00	3.085	19.050	-16.215	697.4
0.1890	98.00	3.114	19.050	-16.215	1005.1
0.2090	109.00	3.124	19.050	-16.215	1117.9
0.2290	119.00	3.134	19.050	-16.215	1220.4
0.2490	130.00	3.144	19.050	-16.215	1333.2
0.2890	150.00	3.163	19.050	-16.215	1538.4
0.3090	161.00	3.174	19.050	-16.215	1651.2
0.3290	171.00	3.184	19.050	-16.215	1753.7
0.3490	182.00	3.194	19.050	-16.215	1866.5
0.3690	192.00	3.204	19.050	-16.215	1969.1
0.3890	203.00	3.214	19.050	-16.215	2081.9
0.4090	213.00	3.224	19.050	-16.215	2184.5
0.4290	224.00	3.234	19.050	-16.215	2297.3
0.4490	234.00	3.244	19.050	-16.215	2399.8
0.4690	245.00	3.254	19.050	-16.215	2512.6
0.4890	255.00	3.264	19.050	-16.215	2615.2
0.5290	277.00	3.285	19.050	-16.215	2840.8
0.5490	287.00	3.294	19.050	-16.215	2943.4
0.5690	298.00	3.305	19.050	-16.215	3056.2
0.5890	308.00	3.314	19.050	-16.215	3158.8
0.6290	330.00	3.336	19.050	-16.215	3384.4
0.6490	340.00	3.345	19.050	-16.215	3486.9
0.7090	373.00	3.377	19.050	-16.215	3825.4
0.7290	383.00	3.386	19.050	-16.215	3927.9
0.8090	427.00	3.428	19.050	-16.215	4379.2
0.8290	437.00	3.438	19.050	-16.215	4481.7
0.9966	529.20	3.526	19.050	-16.215	5427.3
1.1890	635.00	3.622	19.050	-16.253	5666.3
1.2090	647.00	3.633	19.050	-16.258	5693.4
1.2890	691.00	3.673	19.050	-16.274	5792.8
1.3090	703.00	3.684	19.050	-16.278	5819.9
1.3690	736.00	3.714	19.050	-16.290	5894.5
1.3890	748.00	3.725	19.050	-16.294	5921.6
1.4290	770.00	3.745	19.050	-16.302	5971.3
1.4490	782.00	3.756	19.050	-16.306	5998.4
1.4890	804.00	3.776	19.050	-16.314	6048.1
1.5090	816.00	3.787	19.050	-16.319	6075.2
1.5290	827.00	3.797	19.050	-16.323	6100.1
1.5490	839.00	3.808	19.050	-16.327	6127.2

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8.No3 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.5890	861.00	3.828	19.050	-16.335	6176.9
1.6090	873.00	3.839	19.050	-16.339	6204.0
1.6290	884.00	3.849	19.050	-16.343	6228.8
1.6490	896.00	3.860	19.050	-16.348	6256.0
1.6690	907.00	3.870	19.050	-16.352	6280.8
1.7090	931.00	3.891	19.050	-16.360	6335.0
1.7290	942.00	3.901	19.050	-16.364	6359.9
1.7490	954.00	3.912	19.050	-16.369	6387.0
1.7690	965.00	3.922	19.050	-16.373	6411.8
1.8090	989.00	3.944	19.050	-16.381	6466.1
1.8290	1000.00	3.954	19.050	-16.385	6490.9
1.8690	1024.00	3.976	19.050	-16.394	6545.1
1.8890	1035.00	3.986	19.050	-16.398	6570.0
1.9290	1059.00	4.008	19.050	-16.407	6624.2
1.9490	1070.00	4.018	19.050	-16.411	6649.0
1.9970	1098.80	4.044	19.050	-16.421	6714.1
2.0290	1118.00	4.061	19.050	-16.428	6760.6
2.0490	1129.00	4.070	19.050	-16.431	6787.2
2.4490	1369.00	4.278	19.050	-16.515	7367.8
2.4690	1382.00	4.290	19.050	-16.519	7399.3
2.5490	1430.00	4.331	19.050	-16.536	7515.4
2.5690	1443.00	4.343	19.050	-16.541	7546.9
2.6090	1467.00	4.363	19.050	-16.549	7604.9
2.6290	1480.00	4.375	19.050	-16.554	7636.4
2.6690	1504.00	4.395	19.050	-16.562	7694.5
2.6890	1517.00	4.407	19.050	-16.566	7725.9
2.7290	1541.00	4.428	19.050	-16.575	7784.0
2.7490	1554.00	4.439	19.050	-16.579	7815.4
2.7690	1566.00	4.449	19.050	-16.583	7844.5
2.7890	1579.00	4.461	19.050	-16.588	7875.9
2.8290	1603.00	4.481	19.050	-16.596	7934.0
2.8490	1616.00	4.493	19.050	-16.601	7965.4
2.8690	1628.00	4.503	19.050	-16.605	7994.5
2.8890	1641.00	4.514	19.050	-16.609	8025.9
2.9090	1653.00	4.525	19.050	-16.614	8054.9
2.9490	1679.00	4.547	19.050	-16.623	8117.8
2.9690	1691.00	4.558	19.050	-16.627	8146.9
2.9890	1704.00	4.569	19.050	-16.631	8178.3
3.0090	1716.00	4.579	19.050	-16.635	8208.5
3.0490	1742.00	4.601	19.050	-16.644	8275.6
3.0690	1754.00	4.610	19.050	-16.648	8306.5
3.1090	1780.00	4.632	19.050	-16.656	8373.6
3.1290	1792.00	4.642	19.050	-16.660	8404.6
3.1690	1818.00	4.663	19.050	-16.669	8471.6
3.1890	1830.00	4.673	19.050	-16.673	8502.6
3.2690	1882.00	4.716	19.050	-16.690	8636.7
3.2890	1894.00	4.726	19.050	-16.694	8667.6
3.6890	2154.00	4.941	19.050	-16.780	9338.3
3.7090	2168.00	4.953	19.050	-16.784	9374.4
3.7890	2220.00	4.996	19.050	-16.801	9508.5
3.8090	2234.00	5.008	19.050	-16.806	9544.6
3.8490	2260.00	5.029	19.050	-16.814	9611.7
3.8690	2274.00	5.041	19.050	-16.819	9647.8
3.9090	2300.00	5.062	19.050	-16.828	9714.8
3.9290	2314.00	5.074	19.050	-16.832	9750.9
3.9690	2340.00	5.095	19.050	-16.841	9818.0
3.9890	2354.00	5.107	19.050	-16.845	9854.1
4.0090	2367.00	5.117	19.050	-16.850	9888.9
4.0290	2381.00	5.128	19.050	-16.854	9927.3
4.0690	2407.00	5.149	19.050	-16.862	9998.5
4.0890	2421.00	5.160	19.050	-16.867	10036.8
4.1090	2434.00	5.170	19.050	-16.871	10072.5

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8.No3 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.1290	2448.00	5.181	19.050	-16.875	10110.8
4.1490	2461.00	5.192	19.050	-16.879	10146.4
4.1890	2489.00	5.214	19.050	-16.888	10223.1
4.2090	2502.00	5.224	19.050	-16.892	10258.7
4.2290	2516.00	5.235	19.050	-16.897	10297.1
4.2490	2529.00	5.246	19.050	-16.901	10332.7
4.2890	2557.00	5.268	19.050	-16.910	10409.4
4.3090	2570.00	5.278	19.050	-16.914	10445.0
4.3490	2598.00	5.300	19.050	-16.923	10521.7
4.3690	2611.00	5.311	19.050	-16.927	10557.3
4.4090	2639.00	5.333	19.050	-16.936	10634.0
4.4290	2652.00	5.343	19.050	-16.940	10669.6
4.5090	2708.00	5.387	19.050	-16.958	10823.1
4.5290	2721.00	5.398	19.050	-16.962	10858.7
4.9290	3001.00	5.619	19.050	-17.051	11625.7
4.9490	3016.00	5.631	19.050	-17.055	11666.8
4.9971	3049.70	5.658	19.050	-17.066	11759.1
5.0290	3072.00	5.675	19.050	-17.073	11805.7
5.0490	3087.00	5.686	19.050	-17.077	11837.0
5.0890	3115.00	5.707	19.050	-17.086	11895.5
5.1090	3130.00	5.719	19.050	-17.090	11926.9
5.1490	3158.00	5.740	19.050	-17.098	11985.4
5.1690	3173.00	5.751	19.050	-17.103	12016.7
5.2090	3201.00	5.773	19.050	-17.111	12075.2
5.2290	3216.00	5.784	19.050	-17.116	12106.5
5.2490	3230.00	5.795	19.050	-17.120	12135.8
5.2690	3245.00	5.806	19.050	-17.124	12167.1
5.3090	3273.00	5.827	19.050	-17.133	12225.6
5.3290	3288.00	5.839	19.050	-17.137	12256.9
5.3490	3302.00	5.849	19.050	-17.141	12286.2
5.3690	3317.00	5.861	19.050	-17.146	12317.5
5.3890	3331.00	5.871	19.050	-17.150	12346.8
5.4290	3361.00	5.894	19.050	-17.159	12409.4
5.4490	3375.00	5.905	19.050	-17.163	12438.7
5.4690	3390.00	5.916	19.050	-17.168	12470.0
5.4890	3404.00	5.927	19.050	-17.172	12499.3
5.5290	3434.00	5.949	19.050	-17.181	12561.9
5.5490	3448.00	5.960	19.050	-17.185	12591.2
5.5690	3463.00	5.971	19.050	-17.189	12622.5
5.9964	3779.30	6.211	19.050	-17.284	13283.3
6.9970	4519.70	6.753	19.050	-17.450	13283.3
7.9975	5260.10	7.283	19.050	-17.570	13283.3
8.3690	5535.00	7.477	19.050	-17.603	13283.3
8.4690	5610.00	7.530	19.050	-17.613	13283.3
8.9966	6000.40	7.806	19.050	-17.660	13283.3
9.9971	6740.80	8.324	19.050	-17.730	13283.3
10.9976	7481.20	8.838	19.050	-17.787	13283.3
11.0690	7534.00	8.875	19.050	-17.790	13283.3
11.1690	7609.00	8.926	19.050	-17.795	13283.3
11.9967	8221.50	9.350	19.050	-17.833	13283.3
12.9972	8961.90	9.859	19.050	-17.871	13283.3
13.8690	9607.00	10.302	19.050	-17.900	13283.3
13.9690	9682.00	10.354	19.050	-17.903	13283.3
13.9964	9702.30	10.368	19.050	-17.904	13283.3
14.9968	10442.60	10.875	19.050	-17.932	13283.3
15.9974	11183.00	11.381	19.050	-17.957	13283.3
16.5690	11606.00	11.670	19.050	-17.969	13283.3
16.6690	11681.00	11.721	19.050	-17.971	13283.3
16.9966	11923.40	11.886	19.050	-17.978	13283.3
17.9970	12663.70	12.390	19.050	-17.997	13283.3
19.3690	13679.00	13.082	19.050	-18.019	13283.3
19.4690	13754.00	13.133	19.050	-18.020	13283.3

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8.No3 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
19.9966	14144.40	13.399	19.050	-18.028	13283.3
20.9971	14884.80	13.903	19.050	-18.042	13283.3
21.9976	15625.20	14.406	19.050	-18.054	13283.3
22.0690	15678.00	14.442	19.050	-18.055	13283.3
22.1690	15753.00	14.493	19.050	-18.056	13283.3
22.9967	16365.50	14.908	19.050	-18.065	13283.3
24.5690	17529.00	15.698	19.050	-18.081	13283.3
24.6490	17589.00	15.739	19.050	-18.082	13283.3
24.6690	17603.00	15.748	19.050	-18.082	13283.3
24.7490	17663.00	15.789	19.050	-18.083	13283.3
24.7690	17677.00	15.798	19.050	-18.083	13283.3
24.8690	17752.00	15.849	19.050	-18.084	13283.3
24.8890	17766.00	15.859	19.050	-18.084	13283.3
24.9690	17826.00	15.899	19.050	-18.085	13283.3
24.9890	17840.00	15.909	19.050	-18.085	13283.3
25.0690	17900.00	15.949	19.050	-18.086	13283.3
25.0890	17914.00	15.959	19.050	-18.086	13283.3
25.1690	17974.00	16.000	19.050	-18.086	13283.3
25.1890	17988.00	16.009	19.050	-18.087	13283.3
25.2690	18048.00	16.050	19.050	-18.087	13283.3
25.2890	18062.00	16.060	19.050	-18.087	13283.3
25.3690	18122.00	16.100	19.050	-18.088	13283.3
25.3890	18136.00	16.110	19.050	-18.088	13283.3
25.4890	18211.00	16.161	19.050	-18.089	13283.3
25.5090	18225.00	16.170	19.050	-18.089	13283.3
25.5890	18285.00	16.211	19.050	-18.090	13283.3
25.6090	18299.00	16.221	19.050	-18.090	13283.3
25.6890	18359.00	16.261	19.050	-18.091	13283.3
25.7090	18373.00	16.271	19.050	-18.091	13283.3
25.7890	18433.00	16.312	19.050	-18.091	13283.3
25.8090	18447.00	16.321	19.050	-18.091	13283.3
25.8890	18507.00	16.362	19.050	-18.092	13283.3
25.9090	18521.00	16.371	19.050	-18.092	13283.3
25.9965	18586.60	16.416	19.050	-18.093	13283.3
26.0090	18596.00	16.422	19.050	-18.093	13283.3
26.0290	18610.00	16.432	19.050	-18.093	13283.3
26.1090	18670.00	16.473	19.050	-18.094	13283.3
26.1290	18684.00	16.482	19.050	-18.094	13283.3
26.2090	18744.00	16.523	19.050	-18.095	13283.3
26.2290	18758.00	16.532	19.050	-18.095	13283.3
26.3090	18818.00	16.573	19.050	-18.096	13283.3
26.3290	18832.00	16.582	19.050	-18.096	13283.3
26.4090	18892.00	16.623	19.050	-18.096	13283.3
26.4290	18906.00	16.633	19.050	-18.096	13283.3
26.5290	18981.00	16.683	19.050	-18.097	13283.3
26.5490	18995.00	16.693	19.050	-18.097	13283.3
26.6290	19055.00	16.734	19.050	-18.098	13283.3
26.6490	19069.00	16.743	19.050	-18.098	13283.3
26.7290	19129.00	16.784	19.050	-18.099	13283.3
26.7490	19143.00	16.793	19.050	-18.099	13283.3
26.8290	19203.00	16.834	19.050	-18.100	13283.3
26.8490	19217.00	16.843	19.050	-18.100	13283.3
26.9290	19277.00	16.884	19.050	-18.100	13283.3
26.9490	19291.00	16.894	19.050	-18.101	13283.3
27.0490	19366.00	16.944	19.050	-18.101	13283.3
27.0690	19380.00	16.954	19.050	-18.102	13283.3
27.1490	19440.00	16.994	19.050	-18.102	13283.3
27.1690	19454.00	17.004	19.050	-18.102	13283.3
27.2490	19514.00	17.045	19.050	-18.103	13283.3
27.2690	19528.00	17.054	19.050	-18.103	13283.3
27.3490	19588.00	17.095	19.050	-18.104	13283.3
27.3690	19602.00	17.104	19.050	-18.104	13283.3

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8.No3 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
27.4490	19662.00	17.145	19.050	-18.105	13283.3
27.4690	19676.00	17.154	19.050	-18.105	13283.3
27.5490	19736.00	17.195	19.050	-18.105	13283.3
27.5690	19750.00	17.204	19.050	-18.106	13283.3
27.6690	19825.00	17.255	19.050	-18.106	13283.3
27.6890	19839.00	17.264	19.050	-18.107	13283.3
27.7690	19899.00	17.305	19.050	-18.107	13283.3
27.7890	19913.00	17.315	19.050	-18.107	13283.3
27.8690	19973.00	17.355	19.050	-18.108	13283.3
27.8890	19987.00	17.365	19.050	-18.108	13283.3
27.9690	20047.00	17.405	19.050	-18.109	13283.3
27.9890	20061.00	17.415	19.050	-18.109	13283.3
28.0690	20121.00	17.455	19.050	-18.107	11821.6
28.0890	20135.00	17.465	19.050	-18.106	11439.8
28.1890	20210.00	17.516	19.050	-18.103	9394.6
28.2090	20224.00	17.525	19.050	-18.102	9012.8
28.2890	20284.00	17.566	19.050	-18.099	7376.6
28.3090	20298.00	17.576	19.050	-18.099	6994.8
28.3690	20343.00	17.606	19.050	-18.097	5767.6
28.4090	20371.00	17.625	19.050	-18.095	5004.1
28.4690	20410.00	17.652	19.050	-18.094	3940.5
28.4890	20421.00	17.659	19.050	-18.093	3640.5
28.5090	20433.00	17.667	19.050	-18.092	3313.3
28.5290	20444.00	17.675	19.050	-18.092	3013.3
28.5690	20464.00	17.689	19.050	-18.091	2467.9
28.6090	20482.00	17.701	19.050	-18.090	1977.0
28.6490	20498.00	17.712	19.050	-18.090	1540.7
28.6890	20512.00	17.721	19.050	-18.089	1158.9
28.7490	20530.00	17.733	19.050	-18.088	668.1
28.7690	20534.00	17.736	19.050	-18.088	559.0
28.7890	20539.00	17.739	19.050	-18.088	422.6
28.8090	20542.00	17.742	19.050	-18.088	340.8
28.8290	20546.00	17.744	19.050	-18.087	231.7
28.8490	20548.00	17.746	19.050	-18.087	177.2
28.8690	20551.00	17.748	19.050	-18.087	95.4
28.8890	20552.00	17.748	19.050	-18.087	68.1
28.9290	20554.00	17.750	19.050	-18.087	13.6
28.9490	20554.50	17.750	19.050	-18.087	0.0
29.5690	20554.50	17.750	19.050	-18.087	0.0

9.No3 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	19.050	16.215	0.0
0.0060	5.00	3.025	19.050	16.215	51.3
0.0860	45.00	3.063	19.050	16.215	461.5
0.1060	56.00	3.074	19.050	16.215	574.3
0.1460	76.00	3.093	19.050	16.215	779.4
0.1660	87.00	3.103	19.050	16.215	892.2
0.2060	107.00	3.122	19.050	16.215	1097.4
0.2260	118.00	3.133	19.050	16.215	1210.2
0.2660	138.00	3.152	19.050	16.215	1415.3
0.2860	149.00	3.162	19.050	16.215	1528.1
0.3060	159.00	3.172	19.050	16.215	1630.7
0.3260	170.00	3.183	19.050	16.215	1743.5
0.3460	180.00	3.192	19.050	16.215	1846.0
0.3660	191.00	3.203	19.050	16.215	1958.8
0.3860	201.00	3.212	19.050	16.215	2061.4
0.4060	212.00	3.223	19.050	16.215	2174.2
0.4260	222.00	3.232	19.050	16.215	2276.8
0.4460	233.00	3.243	19.050	16.215	2389.6
0.4660	243.00	3.252	19.050	16.215	2492.1
0.4860	254.00	3.263	19.050	16.215	2604.9
0.5060	264.00	3.272	19.050	16.215	2707.5
0.5460	286.00	3.293	19.050	16.215	2933.1
0.5660	296.00	3.303	19.050	16.215	3035.7
0.5860	307.00	3.314	19.050	16.215	3148.5
0.6060	317.00	3.323	19.050	16.215	3251.1
0.6660	350.00	3.355	19.050	16.215	3589.5
0.6860	360.00	3.364	19.050	16.215	3692.0
0.7460	393.00	3.396	19.050	16.215	4030.5
0.7660	403.00	3.405	19.050	16.215	4133.0
0.8660	458.00	3.458	19.050	16.215	4697.1
0.8860	468.00	3.467	19.050	16.215	4799.7
0.9973	529.20	3.526	19.050	16.215	5427.3
1.1460	611.00	3.600	19.050	16.245	5612.1
1.1660	623.00	3.611	19.050	16.249	5639.2
1.2660	678.00	3.661	19.050	16.269	5763.5
1.2860	690.00	3.672	19.050	16.273	5790.6
1.3460	723.00	3.702	19.050	16.285	5865.1
1.3660	735.00	3.713	19.050	16.289	5892.2
1.4060	757.00	3.733	19.050	16.297	5941.9
1.4260	769.00	3.744	19.050	16.302	5969.0
1.4660	791.00	3.764	19.050	16.310	6018.7
1.4860	803.00	3.775	19.050	16.314	6045.9
1.5260	825.00	3.795	19.050	16.322	6095.6
1.5460	837.00	3.806	19.050	16.326	6122.7
1.5660	848.00	3.816	19.050	16.330	6147.5
1.5860	860.00	3.827	19.050	16.335	6174.6
1.6060	871.00	3.837	19.050	16.339	6199.5
1.6260	883.00	3.848	19.050	16.343	6226.6
1.6460	894.00	3.858	19.050	16.347	6251.4
1.6660	906.00	3.869	19.050	16.351	6278.5
1.6860	917.00	3.879	19.050	16.355	6303.4
1.7060	929.00	3.890	19.050	16.360	6330.5
1.7260	940.00	3.900	19.050	16.364	6355.4
1.7660	964.00	3.921	19.050	16.372	6409.6
1.7860	975.00	3.931	19.050	16.376	6434.4
1.8260	999.00	3.953	19.050	16.385	6488.6
1.8460	1010.00	3.963	19.050	16.389	6513.5
1.8860	1034.00	3.985	19.050	16.398	6567.7
1.9060	1045.00	3.995	19.050	16.402	6592.6
1.9460	1069.00	4.017	19.050	16.410	6646.8
1.9660	1080.00	4.027	19.050	16.414	6671.6
1.9973	1098.80	4.044	19.050	16.421	6714.1
2.0660	1140.00	4.080	19.050	16.435	6813.8

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9.No3 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.0860	1151.00	4.089	19.050	16.439	6840.4
2.4260	1355.00	4.266	19.050	16.510	7334.0
2.4460	1368.00	4.277	19.050	16.515	7365.4
2.5260	1416.00	4.319	19.050	16.531	7481.5
2.5460	1429.00	4.330	19.050	16.536	7513.0
2.6060	1465.00	4.362	19.050	16.548	7600.1
2.6260	1478.00	4.373	19.050	16.553	7631.5
2.6660	1502.00	4.394	19.050	16.561	7689.6
2.6860	1515.00	4.405	19.050	16.566	7721.1
2.7260	1539.00	4.426	19.050	16.574	7779.1
2.7460	1552.00	4.437	19.050	16.579	7810.6
2.7660	1564.00	4.447	19.050	16.583	7839.6
2.7860	1577.00	4.459	19.050	16.587	7871.1
2.8060	1589.00	4.469	19.050	16.591	7900.1
2.8260	1602.00	4.480	19.050	16.596	7931.6
2.8460	1614.00	4.491	19.050	16.600	7960.6
2.8660	1627.00	4.502	19.050	16.605	7992.0
2.8860	1639.00	4.513	19.050	16.609	8021.1
2.9060	1652.00	4.524	19.050	16.613	8052.5
2.9260	1664.00	4.534	19.050	16.617	8081.6
2.9460	1677.00	4.546	19.050	16.622	8113.0
2.9660	1689.00	4.556	19.050	16.626	8142.0
2.9860	1702.00	4.567	19.050	16.631	8173.5
2.9972	1708.70	4.573	19.050	16.633	8189.7
3.0460	1740.00	4.599	19.050	16.643	8270.4
3.0660	1752.00	4.609	19.050	16.647	8301.4
3.1060	1778.00	4.630	19.050	16.656	8368.4
3.1260	1790.00	4.640	19.050	16.660	8399.4
3.1860	1829.00	4.673	19.050	16.673	8500.0
3.2060	1841.00	4.682	19.050	16.677	8530.9
3.2660	1880.00	4.715	19.050	16.689	8631.5
3.2860	1892.00	4.725	19.050	16.693	8662.5
3.6860	2152.00	4.940	19.050	16.779	9333.1
3.7060	2166.00	4.951	19.050	16.783	9369.2
3.7860	2218.00	4.994	19.050	16.801	9503.3
3.8060	2232.00	5.006	19.050	16.805	9539.4
3.8460	2258.00	5.027	19.050	16.814	9606.5
3.8660	2272.00	5.039	19.050	16.818	9642.6
3.9060	2298.00	5.061	19.050	16.827	9709.7
3.9260	2312.00	5.072	19.050	16.832	9745.8
3.9660	2338.00	5.094	19.050	16.840	9812.8
3.9860	2352.00	5.105	19.050	16.845	9849.0
3.9968	2359.00	5.111	19.050	16.847	9867.0
4.0260	2378.00	5.126	19.050	16.853	9919.1
4.0460	2392.00	5.137	19.050	16.857	9957.4
4.0660	2405.00	5.147	19.050	16.862	9993.0
4.0860	2419.00	5.159	19.050	16.866	10031.4
4.1060	2432.00	5.169	19.050	16.870	10067.0
4.1260	2446.00	5.180	19.050	16.875	10105.3
4.1460	2459.00	5.190	19.050	16.879	10140.9
4.1660	2473.00	5.201	19.050	16.883	10179.3
4.1860	2486.00	5.212	19.050	16.887	10214.9
4.2260	2514.00	5.234	19.050	16.896	10291.6
4.2460	2527.00	5.244	19.050	16.900	10327.2
4.2660	2541.00	5.255	19.050	16.905	10365.6
4.2860	2554.00	5.265	19.050	16.909	10401.2
4.3260	2582.00	5.288	19.050	16.918	10477.9
4.3460	2595.00	5.298	19.050	16.922	10513.5
4.4060	2637.00	5.331	19.050	16.935	10628.6
4.4260	2650.00	5.341	19.050	16.939	10664.2
4.5060	2706.00	5.386	19.050	16.957	10817.6
4.5260	2719.00	5.396	19.050	16.961	10853.2

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9.No3 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.9260	2999.00	5.618	19.050	17.050	11620.2
4.9460	3014.00	5.630	19.050	17.055	11661.3
4.9970	3049.70	5.658	19.050	17.066	11759.1
5.0260	3070.00	5.673	19.050	17.072	11801.5
5.0460	3085.00	5.685	19.050	17.077	11832.8
5.1060	3127.00	5.717	19.050	17.089	11920.6
5.1260	3142.00	5.728	19.050	17.094	11951.9
5.1660	3170.00	5.749	19.050	17.102	12010.4
5.1860	3185.00	5.761	19.050	17.106	12041.8
5.2060	3199.00	5.771	19.050	17.111	12071.0
5.2260	3214.00	5.783	19.050	17.115	12102.3
5.2660	3242.00	5.804	19.050	17.123	12160.8
5.2860	3257.00	5.815	19.050	17.128	12192.2
5.3060	3271.00	5.826	19.050	17.132	12221.4
5.3260	3286.00	5.837	19.050	17.137	12252.8
5.3460	3300.00	5.848	19.050	17.141	12282.0
5.3660	3315.00	5.859	19.050	17.145	12313.3
5.3860	3329.00	5.870	19.050	17.149	12342.6
5.4060	3344.00	5.881	19.050	17.154	12373.9
5.4260	3358.00	5.892	19.050	17.158	12403.2
5.4660	3388.00	5.914	19.050	17.167	12465.8
5.4860	3402.00	5.925	19.050	17.171	12495.1
5.5060	3417.00	5.936	19.050	17.176	12526.4
5.5260	3431.00	5.947	19.050	17.180	12555.7
5.5660	3461.00	5.970	19.050	17.189	12618.3
5.6660	3534.00	6.025	19.050	17.211	12770.9
5.9975	3779.30	6.211	19.050	17.284	13283.3
6.2660	3978.00	6.356	19.050	17.329	13283.3
6.3660	4053.00	6.411	19.050	17.345	13283.3
6.9967	4519.70	6.753	19.050	17.450	13283.3
7.9972	5260.10	7.283	19.050	17.570	13283.3
8.9660	5977.00	7.789	19.050	17.657	13283.3
8.9972	6000.40	7.806	19.050	17.660	13283.3
9.0660	6052.00	7.842	19.050	17.665	13283.3
9.9968	6740.80	8.324	19.050	17.730	13283.3
10.9974	7481.20	8.837	19.050	17.787	13283.3
11.6660	7976.00	9.180	19.050	17.818	13283.3
11.7660	8051.00	9.232	19.050	17.822	13283.3
11.9964	8221.50	9.350	19.050	17.833	13283.3
12.9969	8961.90	9.859	19.050	17.871	13283.3
13.9975	9702.30	10.368	19.050	17.904	13283.3
14.4660	10049.00	10.605	19.050	17.917	13283.3
14.5660	10124.00	10.657	19.050	17.920	13283.3
14.9965	10442.60	10.875	19.050	17.932	13283.3
15.9971	11183.00	11.380	19.050	17.957	13283.3
17.1660	12048.00	11.971	19.050	17.981	13283.3
17.2660	12123.00	12.022	19.050	17.983	13283.3
17.9967	12663.70	12.391	19.050	17.997	13283.3
18.9972	13404.10	12.895	19.050	18.013	13283.3
19.9660	14121.00	13.383	19.050	18.028	13283.3
20.0660	14196.00	13.434	19.050	18.029	13283.3
20.9968	14884.80	13.903	19.050	18.042	13283.3
22.6660	16120.00	14.742	19.050	18.061	13283.3
22.7660	16195.00	14.792	19.050	18.062	13283.3
22.9964	16365.50	14.908	19.050	18.065	13283.3
24.5660	17527.00	15.697	19.050	18.081	13283.3
24.6260	17572.00	15.727	19.050	18.081	13283.3
24.6460	17586.00	15.737	19.050	18.081	13283.3
24.7260	17646.00	15.777	19.050	18.082	13283.3
24.7460	17660.00	15.787	19.050	18.082	13283.3
24.8260	17720.00	15.827	19.050	18.083	13283.3
24.8460	17734.00	15.837	19.050	18.083	13283.3

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9.No3 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
24.9460	17809.00	15.888	19.050	18.084	13283.3
24.9660	17823.00	15.897	19.050	18.085	13283.3
24.9971	17846.30	15.913	19.050	18.085	13283.3
25.0460	17883.00	15.938	19.050	18.085	13283.3
25.0660	17897.00	15.947	19.050	18.086	13283.3
25.1460	17957.00	15.988	19.050	18.086	13283.3
25.1660	17971.00	15.998	19.050	18.086	13283.3
25.2460	18031.00	16.038	19.050	18.087	13283.3
25.2660	18045.00	16.048	19.050	18.087	13283.3
25.3460	18105.00	16.089	19.050	18.088	13283.3
25.3660	18119.00	16.098	19.050	18.088	13283.3
25.4660	18194.00	16.149	19.050	18.089	13283.3
25.4860	18208.00	16.159	19.050	18.089	13283.3
25.5660	18268.00	16.200	19.050	18.090	13283.3
25.5860	18282.00	16.209	19.050	18.090	13283.3
25.6660	18342.00	16.250	19.050	18.090	13283.3
25.6860	18356.00	16.259	19.050	18.091	13283.3
25.7660	18416.00	16.300	19.050	18.091	13283.3
25.7860	18430.00	16.310	19.050	18.091	13283.3
25.8660	18490.00	16.350	19.050	18.092	13283.3
25.8860	18504.00	16.360	19.050	18.092	13283.3
25.9660	18564.00	16.401	19.050	18.093	13283.3
25.9860	18578.00	16.410	19.050	18.093	13283.3
26.0860	18653.00	16.461	19.050	18.094	13283.3
26.1060	18667.00	16.471	19.050	18.094	13283.3
26.1860	18727.00	16.511	19.050	18.095	13283.3
26.2060	18741.00	16.521	19.050	18.095	13283.3
26.2860	18801.00	16.561	19.050	18.095	13283.3
26.3060	18815.00	16.571	19.050	18.095	13283.3
26.3860	18875.00	16.612	19.050	18.096	13283.3
26.4060	18889.00	16.621	19.050	18.096	13283.3
26.4860	18949.00	16.662	19.050	18.097	13283.3
26.5060	18963.00	16.671	19.050	18.097	13283.3
26.6060	19038.00	16.722	19.050	18.098	13283.3
26.6260	19052.00	16.732	19.050	18.098	13283.3
26.7060	19112.00	16.772	19.050	18.099	13283.3
26.7260	19126.00	16.782	19.050	18.099	13283.3
26.8060	19186.00	16.822	19.050	18.099	13283.3
26.8260	19200.00	16.832	19.050	18.100	13283.3
26.9060	19260.00	16.873	19.050	18.100	13283.3
26.9260	19274.00	16.882	19.050	18.100	13283.3
26.9967	19327.00	16.918	19.050	18.101	13283.3
27.0060	19334.00	16.923	19.050	18.101	13283.3
27.0260	19348.00	16.932	19.050	18.101	13283.3
27.1260	19423.00	16.983	19.050	18.102	13283.3
27.1460	19437.00	16.992	19.050	18.102	13283.3
27.2260	19497.00	17.033	19.050	18.103	13283.3
27.2460	19511.00	17.043	19.050	18.103	13283.3
27.3260	19571.00	17.083	19.050	18.104	13283.3
27.3460	19585.00	17.093	19.050	18.104	13283.3
27.4260	19645.00	17.133	19.050	18.104	13283.3
27.4460	19659.00	17.143	19.050	18.105	13283.3
27.5260	19719.00	17.183	19.050	18.105	13283.3
27.5460	19733.00	17.193	19.050	18.105	13283.3
27.6460	19808.00	17.243	19.050	18.106	13283.3
27.6660	19822.00	17.253	19.050	18.106	13283.3
27.7460	19882.00	17.294	19.050	18.107	13283.3
27.7660	19896.00	17.303	19.050	18.107	13283.3
27.8460	19956.00	17.344	19.050	18.108	13283.3
27.8660	19970.00	17.353	19.050	18.108	13283.3
27.9460	20030.00	17.394	19.050	18.109	13283.3
27.9660	20044.00	17.403	19.050	18.109	13283.3

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9.No3 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
27.9972	20067.40	17.419	19.050	18.109	13283.3
28.0460	20104.00	17.444	19.050	18.107	12285.2
28.0660	20118.00	17.453	19.050	18.107	11903.4
28.1460	20178.00	17.494	19.050	18.104	10267.2
28.1660	20192.00	17.504	19.050	18.103	9885.4
28.2660	20267.00	17.555	19.050	18.100	7840.2
28.2860	20281.00	17.564	19.050	18.099	7458.4
28.3660	20341.00	17.605	19.050	18.097	5822.2
28.4060	20369.00	17.624	19.050	18.095	5058.6
28.4660	20408.00	17.650	19.050	18.094	3995.1
28.4860	20420.00	17.659	19.050	18.093	3667.8
28.5260	20442.00	17.674	19.050	18.092	3067.9
28.5860	20472.00	17.694	19.050	18.091	2249.8
28.6060	20481.00	17.700	19.050	18.090	2004.3
28.6460	20497.00	17.711	19.050	18.090	1568.0
28.7060	20518.00	17.725	19.050	18.089	995.3
28.7260	20523.00	17.729	19.050	18.088	859.0
28.7460	20529.00	17.733	19.050	18.088	695.3
28.7660	20534.00	17.736	19.050	18.088	559.0
28.8060	20542.00	17.742	19.050	18.088	340.8
28.8460	20548.00	17.746	19.050	18.087	177.2
28.8860	20552.00	17.748	19.050	18.087	68.1
28.9060	20553.00	17.749	19.050	18.087	40.9
28.9260	20554.00	17.750	19.050	18.087	13.6
28.9460	20554.50	17.750	19.050	18.087	0.0
29.5660	20554.50	17.750	19.050	18.087	0.0

10.No4 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-31.750	0.000	0.0
0.0180	20.00	3.029	-31.750	0.000	807.0
0.0580	64.00	3.049	-31.750	0.000	2582.3
0.0780	87.00	3.059	-31.750	0.000	3510.3
0.1380	153.00	3.089	-31.750	0.000	6173.3
0.1580	176.00	3.099	-31.750	0.000	7101.3
0.2380	264.00	3.139	-31.750	0.000	10652.0
0.2580	287.00	3.149	-31.750	0.000	11580.0
0.3180	353.00	3.179	-31.750	0.000	14243.0
0.3380	376.00	3.189	-31.750	0.000	15171.0
0.4180	464.00	3.229	-31.750	0.000	18721.7
0.4380	487.00	3.239	-31.750	0.000	19649.7
0.4980	553.00	3.269	-31.750	0.000	22312.7
0.5180	576.00	3.279	-31.750	0.000	23240.7
0.5980	664.00	3.319	-31.750	0.000	26791.3
0.6180	687.00	3.329	-31.750	0.000	27719.4
0.6780	753.00	3.359	-31.750	0.000	30382.3
0.6980	776.00	3.369	-31.750	0.000	31310.4
0.7780	864.00	3.409	-31.750	0.000	34861.0
0.7980	887.00	3.419	-31.750	0.000	35789.0
0.8580	953.00	3.449	-31.750	0.000	38452.0
0.8780	976.00	3.459	-31.750	0.000	39380.0
0.9580	1064.00	3.499	-31.750	0.000	42930.7
0.9780	1087.00	3.509	-31.750	0.000	43858.7
0.9999	1111.10	3.520	-31.750	0.000	44831.1
1.0380	1153.00	3.539	-31.750	0.000	44831.1
1.0580	1176.00	3.549	-31.750	0.000	44831.1
1.1380	1264.00	3.589	-31.750	0.000	44831.1

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10.No4 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.1580	1287.00	3.599	-31.750	0.000	44831.1
1.2180	1353.00	3.629	-31.750	0.000	44831.1
1.2380	1376.00	3.639	-31.750	0.000	44831.1
1.3180	1464.00	3.679	-31.750	0.000	44831.1
1.3380	1487.00	3.689	-31.750	0.000	44831.1
1.3980	1553.00	3.719	-31.750	0.000	44831.1
1.4180	1576.00	3.729	-31.750	0.000	44831.1
1.4980	1664.00	3.769	-31.750	0.000	44831.1
1.5180	1687.00	3.779	-31.750	0.000	44831.1
1.5780	1753.00	3.809	-31.750	0.000	44831.1
1.5980	1776.00	3.819	-31.750	0.000	44831.1
1.6780	1864.00	3.859	-31.750	0.000	44831.1
1.6980	1887.00	3.869	-31.750	0.000	44831.1
1.7580	1953.00	3.899	-31.750	0.000	44831.1
1.7780	1976.00	3.909	-31.750	0.000	44831.1
1.8580	2064.00	3.949	-31.750	0.000	44831.1
1.8780	2087.00	3.959	-31.750	0.000	44831.1
1.9380	2153.00	3.989	-31.750	0.000	44831.1
1.9580	2176.00	3.999	-31.750	0.000	44831.1
2.0000	2222.20	4.020	-31.750	0.000	44831.1
2.0380	2264.00	4.039	-31.750	0.000	44831.1
2.0580	2287.00	4.049	-31.750	0.000	44831.1
2.1180	2353.00	4.079	-31.750	0.000	44831.1
2.1380	2376.00	4.089	-31.750	0.000	44831.1
2.2180	2464.00	4.129	-31.750	0.000	44831.1
2.2380	2487.00	4.139	-31.750	0.000	44831.1
2.2980	2553.00	4.169	-31.750	0.000	44831.1
2.3180	2576.00	4.179	-31.750	0.000	44831.1
2.3980	2664.00	4.219	-31.750	0.000	44831.1
2.4180	2687.00	4.229	-31.750	0.000	44831.1
2.4780	2753.00	4.259	-31.750	0.000	44831.1
2.4980	2776.00	4.269	-31.750	0.000	44831.1
2.5780	2864.00	4.309	-31.750	0.000	44831.1
2.5980	2887.00	4.319	-31.750	0.000	44831.1
2.6580	2953.00	4.349	-31.750	0.000	44831.1
2.6780	2976.00	4.359	-31.750	0.000	44831.1
2.7580	3064.00	4.399	-31.750	0.000	44831.1
2.7780	3087.00	4.409	-31.750	0.000	44831.1
2.8380	3153.00	4.439	-31.750	0.000	44831.1
2.8580	3176.00	4.449	-31.750	0.000	44831.1
2.9380	3264.00	4.489	-31.750	0.000	44831.1
2.9580	3287.00	4.499	-31.750	0.000	44831.1
3.0180	3353.00	4.529	-31.750	0.000	44831.1
3.0380	3376.00	4.539	-31.750	0.000	44831.1
3.1180	3464.00	4.579	-31.750	0.000	44831.1
3.1380	3487.00	4.589	-31.750	0.000	44831.1
3.1980	3553.00	4.619	-31.750	0.000	44831.1
3.2180	3576.00	4.629	-31.750	0.000	44831.1
3.2980	3664.00	4.669	-31.750	0.000	44831.1
3.3180	3687.00	4.679	-31.750	0.000	44831.1
3.3780	3753.00	4.709	-31.750	0.000	44831.1
3.3980	3776.00	4.719	-31.750	0.000	44831.1
3.4780	3864.00	4.759	-31.750	0.000	44831.1
3.4980	3887.00	4.769	-31.750	0.000	44831.1
3.5580	3953.00	4.799	-31.750	0.000	44831.1
3.5780	3976.00	4.809	-31.750	0.000	44831.1
3.6580	4064.00	4.849	-31.750	0.000	44831.1
3.6780	4087.00	4.859	-31.750	0.000	44831.1
3.7380	4153.00	4.889	-31.750	0.000	44831.1
3.7580	4176.00	4.899	-31.750	0.000	44831.1
3.8380	4264.00	4.939	-31.750	0.000	44831.1
3.8580	4287.00	4.949	-31.750	0.000	44831.1

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10.No4 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.9180	4353.00	4.979	-31.750	0.000	44831.1
3.9380	4376.00	4.989	-31.750	0.000	44831.1
4.0180	4464.00	5.029	-31.750	0.000	44831.1
4.0380	4487.00	5.039	-31.750	0.000	44831.1
4.0980	4553.00	5.069	-31.750	0.000	44831.1
4.1180	4576.00	5.079	-31.750	0.000	44831.1
4.1980	4664.00	5.119	-31.750	0.000	44831.1
4.2180	4687.00	5.129	-31.750	0.000	44831.1
4.2780	4753.00	5.159	-31.750	0.000	44831.1
4.2980	4776.00	5.169	-31.750	0.000	44831.1
4.3780	4864.00	5.209	-31.750	0.000	44831.1
4.3980	4887.00	5.219	-31.750	0.000	44831.1
4.4580	4953.00	5.249	-31.750	0.000	44831.1
4.4780	4976.00	5.259	-31.750	0.000	44831.1
4.5580	5064.00	5.299	-31.750	0.000	44831.1
4.5780	5087.00	5.309	-31.750	0.000	44831.1
4.6380	5153.00	5.339	-31.750	0.000	44831.1
4.6580	5176.00	5.349	-31.750	0.000	44831.1
4.7380	5264.00	5.389	-31.750	0.000	44831.1
4.7580	5287.00	5.399	-31.750	0.000	44831.1
4.8180	5353.00	5.429	-31.750	0.000	44831.1
4.8380	5376.00	5.439	-31.750	0.000	44831.1
4.9180	5464.00	5.479	-31.750	0.000	44831.1
4.9380	5487.00	5.489	-31.750	0.000	44831.1
4.9980	5553.00	5.519	-31.750	0.000	44831.1
5.0180	5576.00	5.529	-31.750	0.000	44831.1
5.0980	5664.00	5.569	-31.750	0.000	44831.1
5.1180	5687.00	5.579	-31.750	0.000	44831.1
5.1780	5753.00	5.609	-31.750	0.000	44831.1
5.1980	5776.00	5.619	-31.750	0.000	44831.1
5.2780	5864.00	5.659	-31.750	0.000	44831.1
5.2980	5887.00	5.669	-31.750	0.000	44831.1
5.3580	5953.00	5.699	-31.750	0.000	44831.1
5.3780	5976.00	5.709	-31.750	0.000	44831.1
5.4580	6064.00	5.749	-31.750	0.000	44831.1
5.4780	6087.00	5.759	-31.750	0.000	44831.1
5.5380	6153.00	5.789	-31.750	0.000	44831.1
5.5580	6176.00	5.799	-31.750	0.000	44831.1
5.6380	6264.00	5.839	-31.750	0.000	44831.1
5.6580	6287.00	5.849	-31.750	0.000	44831.1
5.7180	6353.00	5.879	-31.750	0.000	44831.1
5.7380	6376.00	5.889	-31.750	0.000	44831.1
5.8180	6464.00	5.929	-31.750	0.000	44831.1
5.8380	6487.00	5.939	-31.750	0.000	44831.1
5.8980	6553.00	5.969	-31.750	0.000	44831.1
5.9180	6576.00	5.979	-31.750	0.000	44831.1
5.9980	6664.00	6.019	-31.750	0.000	44831.1
6.0180	6687.00	6.029	-31.750	0.000	44831.1
6.0780	6753.00	6.059	-31.750	0.000	44831.1
6.1780	6864.00	6.109	-31.750	0.000	44831.1
6.2780	6976.00	6.159	-31.750	0.000	44831.1
7.0780	7864.00	6.559	-31.750	0.000	44831.1
7.1780	7976.00	6.609	-31.750	0.000	44831.1
7.9780	8864.00	7.009	-31.750	0.000	44831.1
8.0780	8976.00	7.059	-31.750	0.000	44831.1
8.8780	9864.00	7.459	-31.750	0.000	44831.1
8.9780	9976.00	7.509	-31.750	0.000	44831.1
9.7780	10864.00	7.909	-31.750	0.000	44831.1
9.8780	10976.00	7.959	-31.750	0.000	44831.1
10.7780	11975.00	8.409	-31.750	0.000	44831.1
10.8780	12087.00	8.459	-31.750	0.000	44831.1
11.6780	12975.00	8.859	-31.750	0.000	44831.1

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10.No4 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
11.7780	13087.00	8.909	-31.750	0.000	44831.1
12.5780	13975.00	9.309	-31.750	0.000	44831.1
12.6780	14087.00	9.359	-31.750	0.000	44831.1
13.4780	14975.00	9.759	-31.750	0.000	44831.1
13.5780	15087.00	9.809	-31.750	0.000	44831.1
14.3780	15975.00	10.209	-31.750	0.000	44831.1
14.4780	16087.00	10.259	-31.750	0.000	44831.1
15.2780	16975.00	10.659	-31.750	0.000	44831.1
15.3780	17087.00	10.709	-31.750	0.000	44831.1
16.1780	17975.00	11.109	-31.750	0.000	44831.1
16.2780	18087.00	11.159	-31.750	0.000	44831.1
17.0780	18975.00	11.559	-31.750	0.000	44831.1
17.1780	19087.00	11.609	-31.750	0.000	44831.1
17.9780	19975.00	12.009	-31.750	0.000	44831.1
18.0780	20087.00	12.059	-31.750	0.000	44831.1
18.8780	20975.00	12.459	-31.750	0.000	44831.1
18.9780	21087.00	12.509	-31.750	0.000	44831.1
19.7780	21975.00	12.909	-31.750	0.000	44831.1
19.8780	22087.00	12.959	-31.750	0.000	44831.1
20.6780	22975.00	13.359	-31.750	0.000	44831.1
20.7780	23087.00	13.409	-31.750	0.000	44831.1
21.5780	23975.00	13.809	-31.750	0.000	44831.1
21.6780	24087.00	13.859	-31.750	0.000	44831.1
22.4780	24975.00	14.259	-31.750	0.000	44831.1
22.5780	25087.00	14.309	-31.750	0.000	44831.1
23.3780	25975.00	14.709	-31.750	0.000	44831.1
23.4780	26087.00	14.759	-31.750	0.000	44831.1
24.2780	26975.00	15.159	-31.750	0.000	44831.1
24.3780	27087.00	15.209	-31.750	0.000	44831.1
25.0780	27864.00	15.559	-31.750	0.000	44831.1
25.0980	27887.00	15.569	-31.750	0.000	44831.1
25.1780	27975.00	15.609	-31.750	0.000	44831.1
25.1980	27998.00	15.619	-31.750	0.000	44831.1
25.2580	28064.00	15.649	-31.750	0.000	44831.1
25.2780	28087.00	15.659	-31.750	0.000	44831.1
25.3580	28175.00	15.699	-31.750	0.000	44831.1
25.3780	28198.00	15.709	-31.750	0.000	44831.1
25.4380	28264.00	15.739	-31.750	0.000	44831.1
25.4580	28287.00	15.749	-31.750	0.000	44831.1
25.5380	28375.00	15.789	-31.750	0.000	44831.1
25.5580	28398.00	15.799	-31.750	0.000	44831.1
25.6180	28464.00	15.829	-31.750	0.000	44831.1
25.6380	28487.00	15.839	-31.750	0.000	44831.1
25.7180	28575.00	15.879	-31.750	0.000	44831.1
25.7380	28598.00	15.889	-31.750	0.000	44831.1
25.7980	28664.00	15.919	-31.750	0.000	44831.1
25.8180	28687.00	15.929	-31.750	0.000	44831.1
25.8980	28775.00	15.969	-31.750	0.000	44831.1
25.9180	28798.00	15.979	-31.750	0.000	44831.1
25.9780	28864.00	16.009	-31.750	0.000	44831.1
25.9980	28887.00	16.019	-31.750	0.000	44831.1
26.0780	28975.00	16.059	-31.750	0.000	44831.1
26.0980	28998.00	16.069	-31.750	0.000	44831.1
26.1580	29064.00	16.099	-31.750	0.000	44831.1
26.1780	29087.00	16.109	-31.750	0.000	44831.1
26.2580	29175.00	16.149	-31.750	0.000	44831.1
26.2780	29198.00	16.159	-31.750	0.000	44831.1
26.3380	29264.00	16.189	-31.750	0.000	44831.1
26.3580	29287.00	16.199	-31.750	0.000	44831.1
26.4380	29375.00	16.239	-31.750	0.000	44831.1
26.4580	29398.00	16.249	-31.750	0.000	44831.1
26.5180	29464.00	16.279	-31.750	0.000	44831.1

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10.No4 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.5380	29487.00	16.289	-31.750	0.000	44831.1
26.6180	29575.00	16.329	-31.750	0.000	44831.1
26.6380	29598.00	16.339	-31.750	0.000	44831.1
26.6980	29664.00	16.369	-31.750	0.000	44831.1
26.7180	29687.00	16.379	-31.750	0.000	44831.1
26.7980	29775.00	16.419	-31.750	0.000	44831.1
26.8180	29798.00	16.429	-31.750	0.000	44831.1
26.8780	29864.00	16.459	-31.750	0.000	44831.1
26.8980	29887.00	16.469	-31.750	0.000	44831.1
26.9780	29975.00	16.509	-31.750	0.000	44831.1
26.9980	29998.00	16.519	-31.750	0.000	44831.1
27.0580	30064.00	16.549	-31.750	0.000	44831.1
27.0780	30087.00	16.559	-31.750	0.000	44831.1
27.1580	30175.00	16.599	-31.750	0.000	44831.1
27.1780	30198.00	16.609	-31.750	0.000	44831.1
27.2380	30264.00	16.639	-31.750	0.000	44831.1
27.2580	30287.00	16.649	-31.750	0.000	44831.1
27.3380	30375.00	16.689	-31.750	0.000	44831.1
27.3580	30398.00	16.699	-31.750	0.000	44831.1
27.4180	30464.00	16.729	-31.750	0.000	44831.1
27.4380	30487.00	16.739	-31.750	0.000	44831.1
27.5180	30575.00	16.779	-31.750	0.000	44831.1
27.5380	30598.00	16.789	-31.750	0.000	44831.1
27.5980	30664.00	16.819	-31.750	0.000	44831.1
27.6180	30687.00	16.829	-31.750	0.000	44831.1
27.6980	30775.00	16.869	-31.750	0.000	44831.1
27.7180	30798.00	16.879	-31.750	0.000	44831.1
27.7780	30864.00	16.909	-31.750	0.000	44831.1
27.7980	30887.00	16.919	-31.750	0.000	44831.1
27.8780	30975.00	16.959	-31.750	0.000	44831.1
27.8980	30998.00	16.969	-31.750	0.000	44831.1
27.9580	31064.00	16.999	-31.750	0.000	44831.1
27.9780	31087.00	17.009	-31.750	0.000	44831.1
27.9998	31111.00	17.020	-31.750	0.000	44831.1
28.0580	31175.00	17.049	-31.750	0.000	44054.7
28.0780	31198.00	17.059	-31.750	0.000	43775.7
28.1380	31264.00	17.089	-31.750	0.000	42975.0
28.1580	31287.00	17.099	-31.750	0.000	42696.0
28.2380	31375.00	17.139	-31.750	0.000	41628.4
28.2580	31398.00	17.149	-31.750	0.000	41349.4
28.3180	31464.00	17.179	-31.750	0.000	40548.7
28.3380	31487.00	17.189	-31.750	0.000	40269.7
28.4180	31575.00	17.229	-31.750	0.000	39202.1
28.4380	31598.00	17.239	-31.750	0.000	38923.1
28.4980	31664.00	17.269	-31.750	0.000	38122.4
28.5180	31687.00	17.279	-31.750	0.000	37843.4
28.5980	31775.00	17.319	-31.750	0.000	36775.9
28.6180	31798.00	17.329	-31.750	0.000	36496.8
28.6780	31864.00	17.359	-31.750	0.000	35696.2
28.6980	31887.00	17.369	-31.750	0.000	35417.1
28.7780	31975.00	17.409	-31.750	0.000	34349.6
28.7980	31998.00	17.419	-31.750	0.000	34070.5
28.8580	32064.00	17.449	-31.750	0.000	33269.9
28.8780	32087.00	17.460	-31.750	0.000	32990.9
28.9780	32197.00	17.509	-31.750	0.000	31656.4
28.9980	32217.00	17.518	-31.750	0.000	31413.8
29.0380	32255.00	17.535	-31.750	0.000	25516.2
29.0580	32272.00	17.543	-31.750	0.000	22742.6
29.0980	32304.00	17.557	-31.750	0.000	17521.9
29.1180	32318.00	17.563	-31.750	0.000	15237.8
29.1380	32331.00	17.569	-31.750	0.000	13116.9
29.1780	32355.00	17.580	-31.750	0.000	9201.3

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10.No4 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
29.1980	32365.00	17.584	-31.750	0.000	7569.8
29.2180	32374.00	17.588	-31.750	0.000	6101.5
29.2380	32382.00	17.592	-31.750	0.000	4796.3
29.2580	32389.00	17.595	-31.750	0.000	3654.3
29.2780	32396.00	17.598	-31.750	0.000	2512.2
29.2980	32401.00	17.600	-31.750	0.000	1696.5
29.3180	32405.00	17.602	-31.750	0.000	1043.9
29.3380	32408.00	17.603	-31.750	0.000	554.5
29.3580	32410.00	17.604	-31.750	0.000	228.2
29.3780	32411.40	17.605	-31.750	0.000	0.0
30.0780	32411.40	17.605	-31.750	0.000	0.0

11.No4 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-31.750	-16.215	0.0
0.0080	6.00	3.026	-31.750	-16.215	61.5
0.0880	46.00	3.064	-31.750	-16.215	471.8
0.1080	57.00	3.075	-31.750	-16.215	584.6
0.1480	77.00	3.094	-31.750	-16.215	789.7
0.1680	88.00	3.104	-31.750	-16.215	902.5
0.2080	108.00	3.123	-31.750	-16.215	1107.6
0.2280	119.00	3.134	-31.750	-16.215	1220.4
0.2680	139.00	3.153	-31.750	-16.215	1425.5
0.2880	150.00	3.163	-31.750	-16.215	1538.4
0.3080	160.00	3.173	-31.750	-16.215	1640.9
0.3280	171.00	3.184	-31.750	-16.215	1753.7
0.3480	181.00	3.193	-31.750	-16.215	1856.3
0.3680	192.00	3.204	-31.750	-16.215	1969.1
0.3880	202.00	3.213	-31.750	-16.215	2071.7
0.4080	213.00	3.224	-31.750	-16.215	2184.5
0.4280	223.00	3.233	-31.750	-16.215	2287.0
0.4480	234.00	3.244	-31.750	-16.215	2399.8
0.4680	244.00	3.253	-31.750	-16.215	2502.4
0.4880	255.00	3.264	-31.750	-16.215	2615.2
0.5080	265.00	3.273	-31.750	-16.215	2717.8
0.5480	287.00	3.294	-31.750	-16.215	2943.4
0.5680	297.00	3.304	-31.750	-16.215	3045.9
0.6080	319.00	3.325	-31.750	-16.215	3271.6
0.6280	329.00	3.335	-31.750	-16.215	3374.1
0.6680	351.00	3.356	-31.750	-16.215	3599.7
0.6880	361.00	3.365	-31.750	-16.215	3702.3
0.7480	394.00	3.397	-31.750	-16.215	4040.7
0.7680	404.00	3.406	-31.750	-16.215	4143.3
0.8880	470.00	3.469	-31.750	-16.215	4820.2
0.9080	480.00	3.479	-31.750	-16.215	4922.7
0.9975	529.20	3.526	-31.750	-16.215	5427.3
1.1080	590.00	3.581	-31.750	-16.237	5564.7
1.1280	602.00	3.592	-31.750	-16.241	5591.8
1.2480	668.00	3.652	-31.750	-16.265	5740.9
1.2680	680.00	3.663	-31.750	-16.270	5768.0
1.3280	713.00	3.693	-31.750	-16.281	5842.5
1.3480	725.00	3.704	-31.750	-16.286	5869.6
1.4080	758.00	3.734	-31.750	-16.298	5944.2
1.4280	770.00	3.745	-31.750	-16.302	5971.3
1.4680	792.00	3.765	-31.750	-16.310	6021.0
1.4880	804.00	3.776	-31.750	-16.314	6048.1
1.5080	815.00	3.786	-31.750	-16.318	6073.0

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11.No4 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.5280	827.00	3.797	-31.750	-16.323	6100.1
1.5680	849.00	3.817	-31.750	-16.331	6149.8
1.5880	861.00	3.828	-31.750	-16.335	6176.9
1.6080	872.00	3.838	-31.750	-16.339	6201.7
1.6280	884.00	3.849	-31.750	-16.343	6228.8
1.6480	895.00	3.859	-31.750	-16.347	6253.7
1.6680	907.00	3.870	-31.750	-16.352	6280.8
1.6880	918.00	3.880	-31.750	-16.356	6305.7
1.7280	942.00	3.901	-31.750	-16.364	6359.9
1.7480	953.00	3.911	-31.750	-16.368	6384.7
1.7680	965.00	3.922	-31.750	-16.373	6411.8
1.7880	976.00	3.932	-31.750	-16.377	6436.7
1.8280	1000.00	3.954	-31.750	-16.385	6490.9
1.8480	1011.00	3.964	-31.750	-16.389	6515.8
1.8880	1035.00	3.986	-31.750	-16.398	6570.0
1.9080	1046.00	3.996	-31.750	-16.402	6594.8
1.9680	1082.00	4.029	-31.750	-16.415	6676.2
1.9880	1093.00	4.039	-31.750	-16.419	6701.0
1.9977	1098.80	4.044	-31.750	-16.421	6714.1
2.0880	1153.00	4.091	-31.750	-16.440	6845.2
2.1080	1164.00	4.101	-31.750	-16.444	6871.9
2.3880	1332.00	4.246	-31.750	-16.502	7278.3
2.4080	1345.00	4.258	-31.750	-16.507	7309.8
2.5080	1405.00	4.310	-31.750	-16.527	7454.9
2.5280	1418.00	4.321	-31.750	-16.532	7486.4
2.5880	1454.00	4.352	-31.750	-16.544	7573.5
2.6080	1467.00	4.363	-31.750	-16.549	7604.9
2.6480	1491.00	4.384	-31.750	-16.557	7663.0
2.6680	1504.00	4.395	-31.750	-16.562	7694.5
2.7080	1528.00	4.416	-31.750	-16.570	7752.5
2.7280	1541.00	4.428	-31.750	-16.575	7784.0
2.7680	1565.00	4.448	-31.750	-16.583	7842.0
2.7880	1578.00	4.460	-31.750	-16.588	7873.5
2.8080	1590.00	4.470	-31.750	-16.592	7902.5
2.8280	1603.00	4.481	-31.750	-16.596	7934.0
2.8480	1615.00	4.492	-31.750	-16.600	7963.0
2.8680	1628.00	4.503	-31.750	-16.605	7994.5
2.8880	1640.00	4.513	-31.750	-16.609	8023.5
2.9080	1653.00	4.525	-31.750	-16.614	8054.9
2.9280	1665.00	4.535	-31.750	-16.618	8084.0
2.9480	1678.00	4.546	-31.750	-16.622	8115.4
2.9680	1690.00	4.557	-31.750	-16.626	8144.5
2.9968	1708.70	4.573	-31.750	-16.633	8189.7
3.0080	1716.00	4.579	-31.750	-16.635	8208.5
3.0280	1728.00	4.589	-31.750	-16.639	8239.5
3.0680	1754.00	4.610	-31.750	-16.648	8306.6
3.0880	1766.00	4.620	-31.750	-16.652	8337.5
3.1280	1792.00	4.642	-31.750	-16.660	8404.6
3.1480	1804.00	4.652	-31.750	-16.664	8435.5
3.2080	1843.00	4.684	-31.750	-16.677	8536.1
3.2280	1855.00	4.694	-31.750	-16.681	8567.1
3.3080	1907.00	4.737	-31.750	-16.698	8701.2
3.3280	1919.00	4.747	-31.750	-16.702	8732.2
3.6480	2127.00	4.919	-31.750	-16.771	9268.7
3.6680	2141.00	4.931	-31.750	-16.775	9304.8
3.7480	2193.00	4.974	-31.750	-16.792	9438.9
3.7680	2207.00	4.985	-31.750	-16.797	9475.0
3.8280	2246.00	5.018	-31.750	-16.810	9575.6
3.8480	2260.00	5.029	-31.750	-16.814	9611.7
3.8880	2286.00	5.051	-31.750	-16.823	9678.8
3.9080	2300.00	5.062	-31.750	-16.828	9714.9
3.9480	2326.00	5.084	-31.750	-16.836	9782.0

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11.No4 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.9680	2340.00	5.095	-31.750	-16.841	9818.1
3.9972	2359.00	5.111	-31.750	-16.847	9867.1
4.0080	2366.00	5.117	-31.750	-16.849	9886.3
4.0280	2380.00	5.128	-31.750	-16.854	9924.6
4.0480	2393.00	5.138	-31.750	-16.858	9960.2
4.0680	2407.00	5.149	-31.750	-16.862	9998.6
4.0880	2420.00	5.159	-31.750	-16.866	10034.2
4.1080	2434.00	5.170	-31.750	-16.871	10072.5
4.1280	2447.00	5.181	-31.750	-16.875	10108.2
4.1480	2461.00	5.192	-31.750	-16.879	10146.5
4.1680	2474.00	5.202	-31.750	-16.883	10182.1
4.1880	2488.00	5.213	-31.750	-16.888	10220.5
4.2080	2501.00	5.223	-31.750	-16.892	10256.1
4.2480	2529.00	5.246	-31.750	-16.901	10332.8
4.2680	2542.00	5.256	-31.750	-16.905	10368.4
4.3080	2570.00	5.278	-31.750	-16.914	10445.1
4.3280	2583.00	5.288	-31.750	-16.918	10480.7
4.3680	2611.00	5.311	-31.750	-16.927	10557.4
4.3880	2624.00	5.321	-31.750	-16.931	10593.0
4.4480	2666.00	5.354	-31.750	-16.944	10708.1
4.4680	2679.00	5.364	-31.750	-16.948	10743.7
4.5480	2735.00	5.409	-31.750	-16.966	10897.1
4.5680	2748.00	5.419	-31.750	-16.970	10932.7
4.8880	2972.00	5.596	-31.750	-17.041	11546.3
4.9080	2987.00	5.608	-31.750	-17.046	11587.4
4.9880	3043.00	5.653	-31.750	-17.064	11740.8
5.0080	3058.00	5.664	-31.750	-17.068	11776.4
5.0680	3100.00	5.696	-31.750	-17.081	11864.2
5.0880	3115.00	5.707	-31.750	-17.086	11895.5
5.1280	3143.00	5.729	-31.750	-17.094	11954.0
5.1480	3158.00	5.740	-31.750	-17.098	11985.4
5.1880	3186.00	5.761	-31.750	-17.107	12043.8
5.2080	3201.00	5.773	-31.750	-17.111	12075.2
5.2480	3229.00	5.794	-31.750	-17.120	12133.7
5.2680	3244.00	5.805	-31.750	-17.124	12165.0
5.2880	3258.00	5.816	-31.750	-17.128	12194.3
5.3080	3273.00	5.827	-31.750	-17.133	12225.6
5.3280	3287.00	5.838	-31.750	-17.137	12254.8
5.3480	3302.00	5.849	-31.750	-17.141	12286.2
5.3680	3316.00	5.860	-31.750	-17.146	12315.4
5.3880	3331.00	5.871	-31.750	-17.150	12346.8
5.4080	3345.00	5.882	-31.750	-17.154	12376.0
5.4280	3360.00	5.893	-31.750	-17.159	12407.3
5.4480	3374.00	5.904	-31.750	-17.163	12436.6
5.4880	3404.00	5.927	-31.750	-17.172	12499.3
5.5080	3418.00	5.937	-31.750	-17.176	12528.5
5.5480	3448.00	5.960	-31.750	-17.185	12591.2
5.5680	3462.00	5.971	-31.750	-17.189	12620.4
5.9968	3779.30	6.211	-31.750	-17.284	13283.3
6.9973	4519.70	6.753	-31.750	-17.450	13283.3
7.6680	5016.00	7.108	-31.750	-17.530	13283.3
7.7680	5091.00	7.162	-31.750	-17.543	13283.3
7.9965	5260.10	7.283	-31.750	-17.570	13283.3
8.9969	6000.40	7.806	-31.750	-17.660	13283.3
9.9975	6740.80	8.324	-31.750	-17.730	13283.3
10.3680	7015.00	8.514	-31.750	-17.751	13283.3
10.4680	7090.00	8.566	-31.750	-17.757	13283.3
10.9966	7481.20	8.838	-31.750	-17.787	13283.3
11.9971	8221.50	9.350	-31.750	-17.833	13283.3
12.9976	8961.90	9.859	-31.750	-17.871	13283.3
13.1680	9088.00	9.946	-31.750	-17.877	13283.3
13.2680	9163.00	9.997	-31.750	-17.880	13283.3

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11.No4 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
13.9968	9702.30	10.368	-31.750	-17.904	13283.3
14.9972	10442.60	10.875	-31.750	-17.932	13283.3
15.8680	11087.00	11.315	-31.750	-17.954	13283.3
15.9680	11162.00	11.367	-31.750	-17.956	13283.3
15.9964	11183.00	11.381	-31.750	-17.957	13283.3
16.9969	11923.40	11.886	-31.750	-17.978	13283.3
17.9973	12663.70	12.391	-31.750	-17.997	13283.3
18.5680	13086.00	12.678	-31.750	-18.006	13283.3
18.6680	13161.00	12.730	-31.750	-18.008	13283.3
18.9965	13404.10	12.895	-31.750	-18.013	13283.3
20.9975	14884.80	13.903	-31.750	-18.042	13283.3
21.3680	15159.00	14.089	-31.750	-18.046	13283.3
21.4680	15234.00	14.140	-31.750	-18.048	13283.3
21.9966	15625.20	14.406	-31.750	-18.054	13283.3
22.9971	16365.50	14.908	-31.750	-18.065	13283.3
24.0680	17158.00	15.446	-31.750	-18.076	13283.3
24.1680	17233.00	15.497	-31.750	-18.077	13283.3
24.5680	17529.00	15.698	-31.750	-18.081	13283.3
24.5880	17543.00	15.707	-31.750	-18.081	13283.3
24.6880	17618.00	15.758	-31.750	-18.082	13283.3
24.7080	17632.00	15.768	-31.750	-18.082	13283.3
24.7880	17692.00	15.808	-31.750	-18.083	13283.3
24.8080	17706.00	15.818	-31.750	-18.083	13283.3
24.8880	17766.00	15.859	-31.750	-18.084	13283.3
24.9080	17780.00	15.868	-31.750	-18.084	13283.3
24.9880	17840.00	15.909	-31.750	-18.085	13283.3
24.9970	17846.30	15.913	-31.750	-18.085	13283.3
25.0080	17854.00	15.918	-31.750	-18.085	13283.3
25.0880	17914.00	15.959	-31.750	-18.086	13283.3
25.1080	17928.00	15.969	-31.750	-18.086	13283.3
25.1880	17988.00	16.009	-31.750	-18.087	13283.3
25.2080	18002.00	16.019	-31.750	-18.087	13283.3
25.3080	18077.00	16.070	-31.750	-18.087	13283.3
25.3280	18091.00	16.079	-31.750	-18.088	13283.3
25.4080	18151.00	16.120	-31.750	-18.088	13283.3
25.4280	18165.00	16.130	-31.750	-18.088	13283.3
25.5080	18225.00	16.170	-31.750	-18.089	13283.3
25.5280	18239.00	16.180	-31.750	-18.089	13283.3
25.6080	18299.00	16.221	-31.750	-18.090	13283.3
25.6280	18313.00	16.230	-31.750	-18.090	13283.3
25.7080	18373.00	16.271	-31.750	-18.091	13283.3
25.7280	18387.00	16.280	-31.750	-18.091	13283.3
25.8280	18462.00	16.331	-31.750	-18.092	13283.3
25.8480	18476.00	16.341	-31.750	-18.092	13283.3
25.9280	18536.00	16.382	-31.750	-18.092	13283.3
25.9480	18550.00	16.391	-31.750	-18.093	13283.3
25.9968	18586.60	16.416	-31.750	-18.093	13283.3
26.0280	18610.00	16.432	-31.750	-18.093	13283.3
26.0480	18624.00	16.441	-31.750	-18.093	13283.3
26.1280	18684.00	16.482	-31.750	-18.094	13283.3
26.1480	18698.00	16.492	-31.750	-18.094	13283.3
26.2280	18758.00	16.532	-31.750	-18.095	13283.3
26.2480	18772.00	16.542	-31.750	-18.095	13283.3
26.3480	18847.00	16.593	-31.750	-18.096	13283.3
26.3680	18861.00	16.602	-31.750	-18.096	13283.3
26.4480	18921.00	16.643	-31.750	-18.097	13283.3
26.4680	18935.00	16.652	-31.750	-18.097	13283.3
26.5480	18995.00	16.693	-31.750	-18.097	13283.3
26.5680	19009.00	16.702	-31.750	-18.098	13283.3
26.6480	19069.00	16.743	-31.750	-18.098	13283.3
26.6680	19083.00	16.753	-31.750	-18.098	13283.3
26.7480	19143.00	16.793	-31.750	-18.099	13283.3

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11.No4 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.7680	19157.00	16.803	-31.750	-18.099	13283.3
26.8680	19232.00	16.854	-31.750	-18.100	13283.3
26.8880	19246.00	16.863	-31.750	-18.100	13283.3
26.9680	19306.00	16.904	-31.750	-18.101	13283.3
26.9880	19320.00	16.913	-31.750	-18.101	13283.3
27.0680	19380.00	16.954	-31.750	-18.102	13283.3
27.0880	19394.00	16.963	-31.750	-18.102	13283.3
27.1680	19454.00	17.004	-31.750	-18.102	13283.3
27.1880	19468.00	17.013	-31.750	-18.103	13283.3
27.2680	19528.00	17.054	-31.750	-18.103	13283.3
27.2880	19542.00	17.063	-31.750	-18.103	13283.3
27.3680	19602.00	17.104	-31.750	-18.104	13283.3
27.3880	19616.00	17.114	-31.750	-18.104	13283.3
27.4880	19691.00	17.164	-31.750	-18.105	13283.3
27.5080	19705.00	17.174	-31.750	-18.105	13283.3
27.5880	19765.00	17.214	-31.750	-18.106	13283.3
27.6080	19779.00	17.224	-31.750	-18.106	13283.3
27.6880	19839.00	17.264	-31.750	-18.107	13283.3
27.7080	19853.00	17.274	-31.750	-18.107	13283.3
27.7880	19913.00	17.315	-31.750	-18.107	13283.3
27.8080	19927.00	17.324	-31.750	-18.107	13283.3
27.8880	19987.00	17.365	-31.750	-18.108	13283.3
27.9080	20001.00	17.374	-31.750	-18.108	13283.3
27.9965	20067.40	17.419	-31.750	-18.109	13283.3
28.0080	20076.00	17.425	-31.750	-18.109	13048.8
28.0280	20090.00	17.434	-31.750	-18.108	12667.0
28.1080	20150.00	17.475	-31.750	-18.105	11030.8
28.1280	20164.00	17.485	-31.750	-18.105	10649.0
28.2080	20224.00	17.525	-31.750	-18.102	9012.8
28.2280	20238.00	17.535	-31.750	-18.101	8631.0
28.3080	20298.00	17.576	-31.750	-18.099	6994.8
28.3280	20312.00	17.585	-31.750	-18.098	6613.0
28.3680	20342.00	17.606	-31.750	-18.097	5794.9
28.4280	20384.00	17.634	-31.750	-18.095	4649.5
28.4480	20397.00	17.643	-31.750	-18.094	4295.0
28.4880	20421.00	17.659	-31.750	-18.093	3640.5
28.5280	20443.00	17.674	-31.750	-18.092	3040.6
28.5880	20473.00	17.695	-31.750	-18.091	2222.5
28.6080	20482.00	17.701	-31.750	-18.090	1977.0
28.6480	20498.00	17.712	-31.750	-18.090	1540.7
28.6880	20512.00	17.721	-31.750	-18.089	1158.9
28.7280	20524.00	17.729	-31.750	-18.088	831.7
28.7680	20534.00	17.736	-31.750	-18.088	559.0
28.8080	20542.00	17.742	-31.750	-18.088	340.8
28.8680	20551.00	17.748	-31.750	-18.087	95.4
28.8880	20552.00	17.748	-31.750	-18.087	68.1
28.9280	20554.00	17.750	-31.750	-18.087	13.6
28.9480	20554.50	17.750	-31.750	-18.087	0.0
29.5680	20554.50	17.750	-31.750	-18.087	0.0

12.No4 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-31.750	16.215	0.0
0.0050	4.00	3.024	-31.750	16.215	41.0
0.0450	24.00	3.043	-31.750	16.215	246.1
0.0650	35.00	3.053	-31.750	16.215	359.0
0.1250	65.00	3.082	-31.750	16.215	666.6
0.1450	76.00	3.093	-31.750	16.215	779.4
0.1850	96.00	3.112	-31.750	16.215	984.5
0.2050	107.00	3.122	-31.750	16.215	1097.4
0.2450	127.00	3.141	-31.750	16.215	1302.5
0.2650	138.00	3.152	-31.750	16.215	1415.3
0.2850	148.00	3.162	-31.750	16.215	1517.8
0.3050	159.00	3.172	-31.750	16.215	1630.7
0.3250	169.00	3.182	-31.750	16.215	1733.2
0.3450	180.00	3.192	-31.750	16.215	1846.0
0.3650	190.00	3.202	-31.750	16.215	1948.6
0.3850	201.00	3.212	-31.750	16.215	2061.4
0.4050	211.00	3.222	-31.750	16.215	2164.0
0.4250	222.00	3.232	-31.750	16.215	2276.8
0.4450	232.00	3.242	-31.750	16.215	2379.3
0.4650	243.00	3.252	-31.750	16.215	2492.1
0.4850	253.00	3.262	-31.750	16.215	2594.7
0.5050	264.00	3.272	-31.750	16.215	2707.5
0.5250	274.00	3.282	-31.750	16.215	2810.1
0.5650	296.00	3.303	-31.750	16.215	3035.7
0.5850	306.00	3.313	-31.750	16.215	3138.2
0.6250	328.00	3.334	-31.750	16.215	3363.9
0.6450	338.00	3.343	-31.750	16.215	3466.4
0.6850	360.00	3.364	-31.750	16.215	3692.0
0.7050	370.00	3.374	-31.750	16.215	3794.6
0.7850	414.00	3.416	-31.750	16.215	4245.9
0.8050	424.00	3.425	-31.750	16.215	4348.4
0.9963	529.20	3.526	-31.750	16.215	5427.3
1.2250	655.00	3.640	-31.750	16.260	5711.5
1.2450	667.00	3.651	-31.750	16.265	5738.6
1.3050	700.00	3.681	-31.750	16.277	5813.2
1.3250	712.00	3.692	-31.750	16.281	5840.3
1.3850	745.00	3.722	-31.750	16.293	5914.8
1.4050	757.00	3.733	-31.750	16.297	5941.9
1.4450	779.00	3.753	-31.750	16.305	5991.6
1.4650	791.00	3.764	-31.750	16.310	6018.7
1.5050	813.00	3.784	-31.750	16.318	6068.4
1.5250	825.00	3.795	-31.750	16.322	6095.6
1.5450	836.00	3.805	-31.750	16.326	6120.4
1.5650	848.00	3.816	-31.750	16.330	6147.5
1.5850	859.00	3.826	-31.750	16.334	6172.4
1.6050	871.00	3.837	-31.750	16.339	6199.5
1.6250	882.00	3.847	-31.750	16.343	6224.3
1.6450	894.00	3.858	-31.750	16.347	6251.4
1.6650	905.00	3.868	-31.750	16.351	6276.3
1.6850	917.00	3.879	-31.750	16.355	6303.4
1.7050	928.00	3.889	-31.750	16.359	6328.2
1.7250	940.00	3.900	-31.750	16.364	6355.4
1.7450	951.00	3.910	-31.750	16.368	6380.2
1.7850	975.00	3.931	-31.750	16.376	6434.4
1.8050	986.00	3.941	-31.750	16.380	6459.3
1.8450	1010.00	3.963	-31.750	16.389	6513.5
1.8650	1021.00	3.973	-31.750	16.393	6538.3
1.9050	1045.00	3.995	-31.750	16.402	6592.6
1.9250	1056.00	4.005	-31.750	16.406	6617.4
1.9850	1092.00	4.038	-31.750	16.419	6698.7
1.9974	1098.80	4.044	-31.750	16.421	6714.1
2.1250	1175.00	4.110	-31.750	16.447	6898.5
2.1450	1186.00	4.120	-31.750	16.451	6925.1

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12.No4 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.3450	1306.00	4.224	-31.750	16.493	7215.4
2.3650	1319.00	4.235	-31.750	16.498	7246.9
2.4850	1391.00	4.297	-31.750	16.523	7421.1
2.5050	1404.00	4.309	-31.750	16.527	7452.5
2.5650	1440.00	4.340	-31.750	16.540	7539.6
2.5850	1453.00	4.351	-31.750	16.544	7571.1
2.6450	1489.00	4.382	-31.750	16.557	7658.2
2.6650	1502.00	4.394	-31.750	16.561	7689.6
2.7050	1526.00	4.415	-31.750	16.569	7747.7
2.7250	1539.00	4.426	-31.750	16.574	7779.1
2.7450	1551.00	4.436	-31.750	16.578	7808.2
2.7650	1564.00	4.447	-31.750	16.583	7839.6
2.8050	1588.00	4.468	-31.750	16.591	7897.7
2.8250	1601.00	4.480	-31.750	16.596	7929.1
2.8450	1613.00	4.490	-31.750	16.600	7958.2
2.8650	1626.00	4.501	-31.750	16.604	7989.6
2.8850	1638.00	4.512	-31.750	16.608	8018.7
2.9050	1651.00	4.523	-31.750	16.613	8050.1
2.9250	1663.00	4.533	-31.750	16.617	8079.1
2.9650	1689.00	4.556	-31.750	16.626	8142.0
2.9850	1701.00	4.566	-31.750	16.630	8171.1
2.9968	1708.70	4.573	-31.750	16.633	8189.7
3.0250	1726.00	4.587	-31.750	16.639	8234.3
3.0650	1752.00	4.609	-31.750	16.647	8301.4
3.0850	1764.00	4.619	-31.750	16.651	8332.3
3.1250	1790.00	4.640	-31.750	16.660	8399.4
3.1450	1802.00	4.650	-31.750	16.664	8430.4
3.2050	1841.00	4.682	-31.750	16.677	8531.0
3.2250	1853.00	4.692	-31.750	16.680	8561.9
3.3250	1918.00	4.746	-31.750	16.702	8729.6
3.3450	1930.00	4.756	-31.750	16.706	8760.5
3.6250	2112.00	4.907	-31.750	16.766	9230.0
3.6450	2126.00	4.918	-31.750	16.770	9266.1
3.7450	2191.00	4.972	-31.750	16.792	9433.8
3.7650	2205.00	4.984	-31.750	16.796	9469.9
3.8250	2244.00	5.016	-31.750	16.809	9570.5
3.8450	2258.00	5.027	-31.750	16.814	9606.6
3.8850	2284.00	5.049	-31.750	16.822	9673.6
3.9050	2298.00	5.061	-31.750	16.827	9709.8
3.9450	2324.00	5.082	-31.750	16.835	9776.8
3.9650	2338.00	5.094	-31.750	16.840	9812.9
3.9973	2359.00	5.111	-31.750	16.847	9867.1
4.0250	2378.00	5.126	-31.750	16.853	9919.2
4.0450	2391.00	5.136	-31.750	16.857	9954.8
4.0650	2405.00	5.147	-31.750	16.862	9993.1
4.0850	2418.00	5.158	-31.750	16.866	10028.7
4.1050	2432.00	5.169	-31.750	16.870	10067.1
4.1250	2445.00	5.179	-31.750	16.874	10102.7
4.1450	2459.00	5.190	-31.750	16.879	10141.0
4.1650	2472.00	5.200	-31.750	16.883	10176.6
4.1850	2486.00	5.212	-31.750	16.887	10215.0
4.2050	2499.00	5.222	-31.750	16.891	10250.6
4.2450	2527.00	5.244	-31.750	16.900	10327.3
4.2650	2540.00	5.254	-31.750	16.904	10362.9
4.2850	2554.00	5.265	-31.750	16.909	10401.3
4.3050	2567.00	5.276	-31.750	16.913	10436.9
4.3650	2609.00	5.309	-31.750	16.926	10551.9
4.3850	2622.00	5.319	-31.750	16.930	10587.5
4.4250	2650.00	5.341	-31.750	16.939	10664.2
4.4450	2663.00	5.352	-31.750	16.943	10699.8
4.5450	2733.00	5.407	-31.750	16.966	10891.6
4.5650	2746.00	5.417	-31.750	16.970	10927.2

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12.No4 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.9050	2984.00	5.606	-31.750	17.045	11579.1
4.9250	2999.00	5.618	-31.750	17.050	11620.2
4.9974	3049.70	5.658	-31.750	17.066	11759.1
5.0250	3070.00	5.673	-31.750	17.072	11801.5
5.0850	3112.00	5.705	-31.750	17.085	11889.3
5.1050	3127.00	5.717	-31.750	17.089	11920.6
5.1450	3155.00	5.738	-31.750	17.097	11979.1
5.1650	3170.00	5.749	-31.750	17.102	12010.4
5.2050	3198.00	5.770	-31.750	17.110	12068.9
5.2250	3213.00	5.782	-31.750	17.115	12100.3
5.2450	3227.00	5.792	-31.750	17.119	12129.5
5.2650	3242.00	5.804	-31.750	17.123	12160.8
5.2850	3256.00	5.814	-31.750	17.128	12190.1
5.3050	3271.00	5.826	-31.750	17.132	12221.4
5.3250	3285.00	5.836	-31.750	17.136	12250.7
5.3450	3300.00	5.848	-31.750	17.141	12282.0
5.3650	3314.00	5.858	-31.750	17.145	12311.3
5.3850	3329.00	5.870	-31.750	17.149	12342.6
5.4050	3343.00	5.880	-31.750	17.154	12371.8
5.4250	3358.00	5.892	-31.750	17.158	12403.2
5.4450	3372.00	5.902	-31.750	17.162	12432.4
5.4650	3387.00	5.914	-31.750	17.167	12463.8
5.4850	3401.00	5.924	-31.750	17.171	12493.0
5.5250	3431.00	5.947	-31.750	17.180	12555.7
5.5450	3445.00	5.958	-31.750	17.184	12584.9
5.5650	3460.00	5.969	-31.750	17.189	12616.3
5.9965	3779.30	6.211	-31.750	17.284	13283.3
6.9970	4519.70	6.753	-31.750	17.450	13283.3
7.9976	5260.10	7.283	-31.750	17.570	13283.3
8.2650	5458.00	7.423	-31.750	17.594	13283.3
8.3650	5533.00	7.476	-31.750	17.603	13283.3
8.9966	6000.40	7.806	-31.750	17.660	13283.3
9.9972	6740.80	8.324	-31.750	17.730	13283.3
10.9650	7457.00	8.821	-31.750	17.785	13283.3
10.9973	7481.20	8.838	-31.750	17.787	13283.3
11.0650	7532.00	8.873	-31.750	17.790	13283.3
11.9968	8221.50	9.350	-31.750	17.833	13283.3
12.9973	8961.90	9.859	-31.750	17.871	13283.3
13.7650	9530.00	10.250	-31.750	17.896	13283.3
13.8650	9605.00	10.301	-31.750	17.900	13283.3
13.9965	9702.30	10.368	-31.750	17.904	13283.3
14.9969	10442.60	10.874	-31.750	17.932	13283.3
15.9974	11183.00	11.380	-31.750	17.957	13283.3
16.4650	11529.00	11.617	-31.750	17.967	13283.3
16.5650	11604.00	11.668	-31.750	17.969	13283.3
16.9966	11923.40	11.886	-31.750	17.978	13283.3
17.9970	12663.70	12.390	-31.750	17.997	13283.3
19.1650	13528.00	12.979	-31.750	18.016	13283.3
19.2650	13603.00	13.030	-31.750	18.017	13283.3
19.9968	14144.50	13.399	-31.750	18.028	13283.3
20.9972	14884.80	13.903	-31.750	18.042	13283.3
21.9650	15601.00	14.390	-31.750	18.054	13283.3
21.9973	15625.20	14.406	-31.750	18.054	13283.3
22.0650	15676.00	14.440	-31.750	18.055	13283.3
22.9968	16365.50	14.908	-31.750	18.065	13283.3
24.5650	17526.00	15.696	-31.750	18.081	13283.3
24.6450	17586.00	15.737	-31.750	18.081	13283.3
24.6650	17600.00	15.746	-31.750	18.082	13283.3
24.7650	17675.00	15.797	-31.750	18.083	13283.3
24.7850	17689.00	15.806	-31.750	18.083	13283.3
24.8650	17749.00	15.847	-31.750	18.084	13283.3
24.8850	17763.00	15.857	-31.750	18.084	13283.3

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12.No4 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
24.9650	17823.00	15.897	-31.750	18.085	13283.3
24.9850	17837.00	15.907	-31.750	18.085	13283.3
24.9974	17846.30	15.913	-31.750	18.085	13283.3
25.0650	17897.00	15.947	-31.750	18.086	13283.3
25.0850	17911.00	15.957	-31.750	18.086	13283.3
25.1650	17971.00	15.998	-31.750	18.086	13283.3
25.1850	17985.00	16.007	-31.750	18.086	13283.3
25.2850	18060.00	16.058	-31.750	18.087	13283.3
25.3050	18074.00	16.068	-31.750	18.087	13283.3
25.3850	18134.00	16.108	-31.750	18.088	13283.3
25.4050	18148.00	16.118	-31.750	18.088	13283.3
25.4850	18208.00	16.159	-31.750	18.089	13283.3
25.5050	18222.00	16.168	-31.750	18.089	13283.3
25.5850	18282.00	16.209	-31.750	18.090	13283.3
25.6050	18296.00	16.219	-31.750	18.090	13283.3
25.6850	18356.00	16.259	-31.750	18.091	13283.3
25.7050	18370.00	16.269	-31.750	18.091	13283.3
25.7850	18430.00	16.310	-31.750	18.091	13283.3
25.8050	18444.00	16.319	-31.750	18.091	13283.3
25.9050	18519.00	16.370	-31.750	18.092	13283.3
25.9250	18533.00	16.380	-31.750	18.092	13283.3
25.9965	18586.60	16.416	-31.750	18.093	13283.3
26.0250	18607.00	16.430	-31.750	18.093	13283.3
26.1050	18667.00	16.471	-31.750	18.094	13283.3
26.1250	18681.00	16.480	-31.750	18.094	13283.3
26.2050	18741.00	16.521	-31.750	18.095	13283.3
26.2250	18755.00	16.530	-31.750	18.095	13283.3
26.3050	18815.00	16.571	-31.750	18.095	13283.3
26.3250	18829.00	16.580	-31.750	18.096	13283.3
26.4250	18904.00	16.631	-31.750	18.096	13283.3
26.4450	18918.00	16.641	-31.750	18.097	13283.3
26.5250	18978.00	16.681	-31.750	18.097	13283.3
26.5450	18992.00	16.691	-31.750	18.097	13283.3
26.6250	19052.00	16.732	-31.750	18.098	13283.3
26.6450	19066.00	16.741	-31.750	18.098	13283.3
26.7250	19126.00	16.782	-31.750	18.099	13283.3
26.7450	19140.00	16.791	-31.750	18.099	13283.3
26.8250	19200.00	16.832	-31.750	18.100	13283.3
26.8450	19214.00	16.841	-31.750	18.100	13283.3
26.9450	19289.00	16.892	-31.750	18.101	13283.3
26.9650	19303.00	16.902	-31.750	18.101	13283.3
27.0450	19363.00	16.942	-31.750	18.101	13283.3
27.0650	19377.00	16.952	-31.750	18.102	13283.3
27.1450	19437.00	16.992	-31.750	18.102	13283.3
27.1650	19451.00	17.002	-31.750	18.102	13283.3
27.2450	19511.00	17.043	-31.750	18.103	13283.3
27.2650	19525.00	17.052	-31.750	18.103	13283.3
27.3450	19585.00	17.093	-31.750	18.104	13283.3
27.3650	19599.00	17.102	-31.750	18.104	13283.3
27.4450	19659.00	17.143	-31.750	18.105	13283.3
27.4650	19673.00	17.152	-31.750	18.105	13283.3
27.5650	19748.00	17.203	-31.750	18.106	13283.3
27.5850	19762.00	17.212	-31.750	18.106	13283.3
27.6650	19822.00	17.253	-31.750	18.106	13283.3
27.6850	19836.00	17.262	-31.750	18.106	13283.3
27.7650	19896.00	17.303	-31.750	18.107	13283.3
27.7850	19910.00	17.312	-31.750	18.107	13283.3
27.8650	19970.00	17.353	-31.750	18.108	13283.3
27.8850	19984.00	17.363	-31.750	18.108	13283.3
27.9650	20044.00	17.403	-31.750	18.109	13283.3
27.9850	20058.00	17.413	-31.750	18.109	13283.3
27.9975	20067.40	17.419	-31.750	18.109	13283.3

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12.No4 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
28.0850	20133.00	17.464	-31.750	18.106	11494.4
28.1050	20147.00	17.473	-31.750	18.105	11112.6
28.1850	20207.00	17.514	-31.750	18.103	9476.4
28.2050	20221.00	17.523	-31.750	18.102	9094.6
28.2850	20281.00	17.564	-31.750	18.099	7458.4
28.3050	20295.00	17.574	-31.750	18.099	7076.6
28.3650	20340.00	17.604	-31.750	18.097	5849.4
28.4250	20382.00	17.633	-31.750	18.095	4704.1
28.4450	20395.00	17.642	-31.750	18.094	4349.6
28.5050	20431.00	17.666	-31.750	18.093	3367.8
28.5250	20442.00	17.674	-31.750	18.092	3067.9
28.5650	20462.00	17.687	-31.750	18.091	2522.5
28.6250	20489.00	17.705	-31.750	18.090	1786.2
28.6450	20497.00	17.711	-31.750	18.090	1568.0
28.6850	20511.00	17.720	-31.750	18.089	1186.2
28.7450	20529.00	17.733	-31.750	18.088	695.3
28.7650	20533.00	17.735	-31.750	18.088	586.3
28.7850	20538.00	17.739	-31.750	18.088	449.9
28.8050	20542.00	17.742	-31.750	18.088	340.8
28.8450	20548.00	17.746	-31.750	18.087	177.2
28.8850	20552.00	17.748	-31.750	18.087	68.1
28.9050	20553.00	17.749	-31.750	18.087	40.9
28.9250	20554.00	17.750	-31.750	18.087	13.6
28.9450	20554.50	17.750	-31.750	18.087	0.0
29.5650	20554.50	17.750	-31.750	18.087	0.0

13.No5 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-79.505	0.000	0.0
0.0100	10.00	3.025	-79.505	0.000	386.9
0.0300	29.00	3.035	-79.505	0.000	1122.1
0.0500	49.00	3.045	-79.505	0.000	1895.9
0.0700	68.00	3.055	-79.505	0.000	2631.0
0.0900	88.00	3.065	-79.505	0.000	3404.8
0.1100	107.00	3.075	-79.505	0.000	4140.0
0.1300	127.00	3.085	-79.505	0.000	4913.8
0.1500	146.00	3.095	-79.505	0.000	5648.9
0.2100	205.00	3.125	-79.505	0.000	7931.7
0.2300	224.00	3.135	-79.505	0.000	8666.9
0.2500	244.00	3.145	-79.505	0.000	9440.7
0.2700	263.00	3.155	-79.505	0.000	10175.8
0.2900	283.00	3.165	-79.505	0.000	10949.6
0.3100	302.00	3.175	-79.505	0.000	11684.8
0.3300	322.00	3.185	-79.505	0.000	12458.6
0.3500	341.00	3.195	-79.505	0.000	13193.7
0.3700	361.00	3.205	-79.505	0.000	13967.6
0.3900	380.00	3.215	-79.505	0.000	14702.7
0.4100	400.00	3.225	-79.505	0.000	15476.5
0.5100	497.00	3.275	-79.505	0.000	19229.6
0.5300	517.00	3.285	-79.505	0.000	20003.4
0.5500	536.00	3.295	-79.505	0.000	20738.5
0.6500	634.00	3.345	-79.505	0.000	24530.3
0.6700	653.00	3.355	-79.505	0.000	25265.4
0.6900	673.00	3.365	-79.505	0.000	26039.2
0.7300	711.00	3.385	-79.505	0.000	27509.5
0.7500	731.00	3.395	-79.505	0.000	28283.3
0.7700	750.00	3.405	-79.505	0.000	29018.5

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13.No5 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.7900	770.00	3.415	-79.505	0.000	29792.3
0.8100	789.00	3.425	-79.505	0.000	30527.4
0.8300	809.00	3.435	-79.505	0.000	31301.3
0.8500	828.00	3.445	-79.505	0.000	32036.4
0.9500	926.00	3.495	-79.505	0.000	35828.1
0.9700	945.00	3.505	-79.505	0.000	36563.3
1.0002	974.70	3.520	-79.505	0.000	37712.4
1.0300	1004.00	3.535	-79.505	0.000	37712.4
1.0900	1062.00	3.565	-79.505	0.000	37712.4
1.1100	1082.00	3.575	-79.505	0.000	37712.4
1.1300	1101.00	3.585	-79.505	0.000	37712.4
1.1500	1121.00	3.595	-79.505	0.000	37712.4
1.2100	1179.00	3.625	-79.505	0.000	37712.4
1.3100	1277.00	3.675	-79.505	0.000	37712.4
1.3300	1296.00	3.685	-79.505	0.000	37712.4
1.4300	1394.00	3.735	-79.505	0.000	37712.4
1.4500	1413.00	3.745	-79.505	0.000	37712.4
1.4700	1433.00	3.755	-79.505	0.000	37712.4
1.4900	1452.00	3.765	-79.505	0.000	37712.4
1.5100	1472.00	3.775	-79.505	0.000	37712.4
1.5700	1530.00	3.805	-79.505	0.000	37712.4
1.6700	1628.00	3.855	-79.505	0.000	37712.4
1.6900	1647.00	3.865	-79.505	0.000	37712.4
1.7100	1667.00	3.875	-79.505	0.000	37712.4
1.7300	1686.00	3.885	-79.505	0.000	37712.4
1.7500	1706.00	3.895	-79.505	0.000	37712.4
1.7700	1725.00	3.905	-79.505	0.000	37712.4
1.7900	1745.00	3.915	-79.505	0.000	37712.4
1.8100	1764.00	3.925	-79.505	0.000	37712.4
1.8700	1823.00	3.955	-79.505	0.000	37712.4
1.9700	1920.00	4.005	-79.505	0.000	37712.4
1.9900	1940.00	4.015	-79.505	0.000	37712.4
1.9998	1949.30	4.020	-79.505	0.000	37712.4
2.0100	1959.00	4.025	-79.505	0.000	37712.4
2.1100	2057.00	4.075	-79.505	0.000	37712.4
2.1300	2076.00	4.085	-79.505	0.000	37712.4
2.1500	2096.00	4.095	-79.505	0.000	37712.4
2.1900	2134.00	4.115	-79.505	0.000	37712.4
2.2100	2154.00	4.125	-79.505	0.000	37712.4
2.2300	2173.00	4.135	-79.505	0.000	37712.4
2.2500	2193.00	4.145	-79.505	0.000	37712.4
2.2700	2212.00	4.155	-79.505	0.000	37712.4
2.3700	2310.00	4.205	-79.505	0.000	37712.4
2.3900	2329.00	4.215	-79.505	0.000	37712.4
2.4100	2349.00	4.225	-79.505	0.000	37712.4
2.4300	2368.00	4.235	-79.505	0.000	37712.4
2.5300	2466.00	4.285	-79.505	0.000	37712.4
2.5500	2485.00	4.295	-79.505	0.000	37712.4
2.5700	2505.00	4.305	-79.505	0.000	37712.4
2.6300	2563.00	4.335	-79.505	0.000	37712.4
2.6500	2583.00	4.345	-79.505	0.000	37712.4
2.6700	2602.00	4.355	-79.505	0.000	37712.4
2.6900	2622.00	4.365	-79.505	0.000	37712.4
2.7100	2641.00	4.375	-79.505	0.000	37712.4
2.7300	2661.00	4.385	-79.505	0.000	37712.4
2.7500	2680.00	4.395	-79.505	0.000	37712.4
2.7700	2700.00	4.405	-79.505	0.000	37712.4
2.7900	2719.00	4.415	-79.505	0.000	37712.4
2.8100	2739.00	4.425	-79.505	0.000	37712.4
2.9100	2836.00	4.475	-79.505	0.000	37712.4
2.9300	2856.00	4.485	-79.505	0.000	37712.4
2.9500	2875.00	4.495	-79.505	0.000	37712.4

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13.No5 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.9700	2895.00	4.505	-79.505	0.000	37712.4
2.9900	2914.00	4.515	-79.505	0.000	37712.4
3.0900	3012.00	4.565	-79.505	0.000	37712.4
3.1500	3070.00	4.595	-79.505	0.000	37712.4
3.1700	3090.00	4.605	-79.505	0.000	37712.4
3.1900	3109.00	4.615	-79.505	0.000	37712.4
3.2100	3129.00	4.625	-79.505	0.000	37712.4
3.2300	3148.00	4.635	-79.505	0.000	37712.4
3.2500	3168.00	4.645	-79.505	0.000	37712.4
3.2700	3187.00	4.655	-79.505	0.000	37712.4
3.3700	3285.00	4.705	-79.505	0.000	37712.4
3.3900	3304.00	4.715	-79.505	0.000	37712.4
3.4100	3324.00	4.725	-79.505	0.000	37712.4
3.4300	3343.00	4.735	-79.505	0.000	37712.4
3.4500	3363.00	4.745	-79.505	0.000	37712.4
3.4700	3382.00	4.755	-79.505	0.000	37712.4
3.4900	3402.00	4.765	-79.505	0.000	37712.4
3.5100	3421.00	4.775	-79.505	0.000	37712.4
3.6100	3519.00	4.825	-79.505	0.000	37712.4
3.6500	3557.00	4.845	-79.505	0.000	37712.4
3.6700	3577.00	4.855	-79.505	0.000	37712.4
3.6900	3596.00	4.865	-79.505	0.000	37712.4
3.7100	3616.00	4.875	-79.505	0.000	37712.4
3.7300	3635.00	4.885	-79.505	0.000	37712.4
3.7500	3655.00	4.895	-79.505	0.000	37712.4
3.7700	3674.00	4.905	-79.505	0.000	37712.4
3.7900	3694.00	4.915	-79.505	0.000	37712.4
3.8100	3713.00	4.925	-79.505	0.000	37712.4
3.8300	3733.00	4.935	-79.505	0.000	37712.4
3.8900	3791.00	4.965	-79.505	0.000	37712.4
3.9900	3889.00	5.015	-79.505	0.000	37712.4
4.0100	3908.00	5.025	-79.505	0.000	37712.4
4.0300	3928.00	5.035	-79.505	0.000	37712.4
4.0500	3947.00	5.045	-79.505	0.000	37712.4
4.0700	3967.00	5.055	-79.505	0.000	37712.4
4.0900	3986.00	5.065	-79.505	0.000	37712.4
4.1100	4006.00	5.075	-79.505	0.000	37712.4
4.1300	4025.00	5.085	-79.505	0.000	37712.4
4.1500	4045.00	5.095	-79.505	0.000	37712.4
4.1700	4064.00	5.105	-79.505	0.000	37712.4
4.1900	4084.00	5.115	-79.505	0.000	37712.4
4.2100	4103.00	5.125	-79.505	0.000	37712.4
4.2300	4123.00	5.135	-79.505	0.000	37712.4
4.2500	4142.00	5.145	-79.505	0.000	37712.4
4.2700	4162.00	5.155	-79.505	0.000	37712.4
4.3700	4259.00	5.205	-79.505	0.000	37712.4
4.3900	4279.00	5.215	-79.505	0.000	37712.4
4.4100	4298.00	5.225	-79.505	0.000	37712.4
4.4300	4318.00	5.235	-79.505	0.000	37712.4
4.5300	4415.00	5.285	-79.505	0.000	37712.4
4.5500	4435.00	5.295	-79.505	0.000	37712.4
4.5700	4454.00	5.305	-79.505	0.000	37712.4
4.5900	4474.00	5.315	-79.505	0.000	37712.4
4.6100	4493.00	5.325	-79.505	0.000	37712.4
4.6300	4513.00	5.335	-79.505	0.000	37712.4
4.6500	4532.00	5.345	-79.505	0.000	37712.4
4.6700	4552.00	5.355	-79.505	0.000	37712.4
4.6900	4571.00	5.365	-79.505	0.000	37712.4
4.7100	4591.00	5.375	-79.505	0.000	37712.4
4.7300	4610.00	5.385	-79.505	0.000	37712.4
4.7500	4630.00	5.395	-79.505	0.000	37712.4
4.7700	4649.00	5.405	-79.505	0.000	37712.4

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13.No5 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.7900	4669.00	5.415	-79.505	0.000	37712.4
4.8100	4688.00	5.425	-79.505	0.000	37712.4
4.9100	4786.00	5.475	-79.505	0.000	37712.4
4.9300	4805.00	5.485	-79.505	0.000	37712.4
4.9500	4825.00	5.495	-79.505	0.000	37712.4
4.9998	4873.30	5.520	-79.505	0.000	37712.4
5.0500	4922.00	5.545	-79.507	0.000	37785.2
5.0700	4942.00	5.555	-79.508	0.000	37815.1
5.1100	4980.00	5.575	-79.510	0.000	37871.9
5.1300	5000.00	5.585	-79.511	0.000	37901.8
5.1500	5019.00	5.595	-79.512	0.000	37930.2
5.1700	5039.00	5.605	-79.512	0.000	37960.1
5.1900	5058.00	5.615	-79.513	0.000	37988.5
5.2100	5078.00	5.625	-79.514	0.000	38018.4
5.2300	5097.00	5.635	-79.515	0.000	38046.8
5.2500	5117.00	5.645	-79.516	0.000	38076.7
5.2700	5136.00	5.655	-79.517	0.000	38105.1
5.2900	5156.00	5.665	-79.518	0.000	38134.9
5.3100	5175.00	5.675	-79.518	0.000	38163.3
5.3300	5195.00	5.685	-79.519	0.000	38193.2
5.3500	5214.00	5.695	-79.520	0.000	38221.6
5.4500	5312.00	5.745	-79.525	0.000	38368.1
5.4700	5331.00	5.755	-79.525	0.000	38396.5
5.4900	5351.00	5.765	-79.526	0.000	38426.4
5.5100	5370.00	5.775	-79.527	0.000	38454.8
5.5300	5390.00	5.785	-79.528	0.000	38484.7
5.5500	5409.00	5.795	-79.529	0.000	38513.1
5.5700	5429.00	5.805	-79.530	0.000	38543.0
5.5900	5448.00	5.815	-79.531	0.000	38571.4
5.6100	5468.00	5.825	-79.532	0.000	38601.3
5.7100	5565.00	5.875	-79.536	0.000	38746.3
5.7500	5605.00	5.895	-79.538	0.000	38806.1
5.7700	5624.00	5.905	-79.539	0.000	38834.5
5.8300	5684.00	5.936	-79.541	0.000	38924.1
5.8500	5703.00	5.945	-79.542	0.000	38952.5
5.9100	5764.00	5.977	-79.545	0.000	39043.7
5.9997	5858.20	6.025	-79.549	0.000	39184.5
6.1700	6037.00	6.115	-79.599	0.000	39222.0
6.2700	6143.00	6.169	-79.628	0.000	39244.3
6.3700	6248.00	6.222	-79.657	0.000	39266.3
6.4700	6354.00	6.276	-79.686	0.000	39288.6
6.5700	6459.00	6.329	-79.715	0.000	39310.6
6.9996	6912.70	6.558	-79.841	0.000	39405.9
7.0700	6987.00	6.595	-79.856	0.000	39405.9
7.2700	7197.00	6.700	-79.899	0.000	39405.9
7.3700	7303.00	6.752	-79.921	0.000	39405.9
7.4700	7408.00	6.805	-79.942	0.000	39405.9
7.5700	7514.00	6.857	-79.964	0.000	39405.9
7.6700	7619.00	6.910	-79.985	0.000	39405.9
7.7700	7725.00	6.962	-80.007	0.000	39405.9
7.8700	7830.00	7.015	-80.028	0.000	39405.9
7.9700	7936.00	7.067	-80.050	0.000	39405.9
7.9999	7967.50	7.083	-80.056	0.000	39405.9
8.2700	8252.00	7.223	-80.101	0.000	39405.9
8.3700	8358.00	7.275	-80.117	0.000	39405.9
8.4700	8463.00	7.327	-80.134	0.000	39405.9
8.5700	8569.00	7.379	-80.151	0.000	39405.9
8.6700	8674.00	7.431	-80.167	0.000	39405.9
8.7700	8780.00	7.483	-80.184	0.000	39405.9
8.8700	8885.00	7.534	-80.200	0.000	39405.9
8.9999	9022.30	7.602	-80.222	0.000	39405.9
9.1700	9202.00	7.690	-80.244	0.000	39405.9

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13.No5 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
9.2700	9307.00	7.741	-80.257	0.000	39405.9
9.3700	9413.00	7.792	-80.270	0.000	39405.9
9.4700	9518.00	7.844	-80.283	0.000	39405.9
9.7700	9835.00	7.998	-80.322	0.000	39405.9
9.9700	10045.00	8.100	-80.348	0.000	39405.9
10.0003	10077.10	8.116	-80.352	0.000	39405.9
10.0700	10151.00	8.152	-80.359	0.000	39405.9
10.1700	10256.00	8.203	-80.370	0.000	39405.9
10.2700	10362.00	8.254	-80.381	0.000	39405.9
10.3700	10467.00	8.305	-80.391	0.000	39405.9
10.6700	10784.00	8.459	-80.423	0.000	39405.9
10.7700	10889.00	8.510	-80.434	0.000	39405.9
10.8700	10995.00	8.562	-80.444	0.000	39405.9
10.9700	11100.00	8.612	-80.455	0.000	39405.9
11.0002	11132.00	8.628	-80.458	0.000	39405.9
11.0700	11206.00	8.664	-80.464	0.000	39405.9
11.1700	11311.00	8.715	-80.473	0.000	39405.9
11.2700	11417.00	8.766	-80.482	0.000	39405.9
11.3700	11522.00	8.817	-80.491	0.000	39405.9
11.6700	11839.00	8.970	-80.517	0.000	39405.9
11.7700	11944.00	9.021	-80.526	0.000	39405.9
11.8700	12050.00	9.072	-80.535	0.000	39405.9
11.9700	12155.00	9.123	-80.543	0.000	39405.9
12.0000	12186.80	9.138	-80.546	0.000	39405.9
12.0700	12261.00	9.174	-80.551	0.000	39405.9
12.1700	12366.00	9.224	-80.558	0.000	39405.9
12.6700	12894.00	9.479	-80.595	0.000	39405.9
12.8700	13104.00	9.581	-80.609	0.000	39405.9
12.9700	13210.00	9.632	-80.617	0.000	39405.9
13.0000	13241.60	9.647	-80.619	0.000	39405.9
13.2700	13526.00	9.784	-80.636	0.000	39405.9
13.3700	13632.00	9.835	-80.642	0.000	39405.9
13.4700	13737.00	9.885	-80.649	0.000	39405.9
13.5700	13843.00	9.936	-80.655	0.000	39405.9
13.6700	13948.00	9.987	-80.661	0.000	39405.9
13.9999	14296.40	10.154	-80.682	0.000	39405.9
14.1700	14476.00	10.240	-80.691	0.000	39405.9
14.2700	14581.00	10.291	-80.697	0.000	39405.9
14.3700	14687.00	10.341	-80.702	0.000	39405.9
14.4700	14792.00	10.392	-80.707	0.000	39405.9
14.5700	14898.00	10.443	-80.713	0.000	39405.9
14.6700	15003.00	10.493	-80.718	0.000	39405.9
14.7700	15109.00	10.544	-80.724	0.000	39405.9
14.9996	15351.20	10.660	-80.736	0.000	39405.9
15.1700	15531.00	10.746	-80.744	0.000	39405.9
15.2700	15636.00	10.796	-80.749	0.000	39405.9
15.3700	15742.00	10.847	-80.753	0.000	39405.9
15.5700	15952.00	10.948	-80.763	0.000	39405.9
15.6700	16058.00	10.998	-80.767	0.000	39405.9
15.7700	16163.00	11.049	-80.772	0.000	39405.9
15.8700	16269.00	11.099	-80.777	0.000	39405.9
15.9700	16374.00	11.150	-80.782	0.000	39405.9
16.0003	16406.10	11.165	-80.783	0.000	39405.9
16.0700	16480.00	11.200	-80.786	0.000	39405.9
16.3700	16796.00	11.352	-80.799	0.000	39405.9
16.4700	16902.00	11.402	-80.803	0.000	39405.9
16.7700	17218.00	11.554	-80.815	0.000	39405.9
16.8700	17324.00	11.604	-80.820	0.000	39405.9
17.0000	17460.90	11.670	-80.825	0.000	39405.9
17.1700	17640.00	11.756	-80.831	0.000	39405.9
17.2700	17746.00	11.806	-80.835	0.000	39405.9
17.3700	17851.00	11.856	-80.838	0.000	39405.9

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13.No5 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
17.4700	17957.00	11.907	-80.842	0.000	39405.9
17.5700	18062.00	11.957	-80.846	0.000	39405.9
17.6700	18168.00	12.008	-80.849	0.000	39405.9
17.7700	18273.00	12.058	-80.853	0.000	39405.9
17.9998	18515.70	12.174	-80.861	0.000	39405.9
18.2700	18801.00	12.310	-80.870	0.000	39405.9
18.4700	19011.00	12.411	-80.876	0.000	39405.9
18.5700	19117.00	12.461	-80.880	0.000	39405.9
18.6700	19222.00	12.511	-80.883	0.000	39405.9
18.9700	19539.00	12.663	-80.893	0.000	39405.9
19.0000	19570.50	12.678	-80.894	0.000	39405.9
19.0700	19644.00	12.713	-80.896	0.000	39405.9
19.1700	19750.00	12.764	-80.899	0.000	39405.9
19.2700	19855.00	12.814	-80.902	0.000	39405.9
19.5700	20172.00	12.965	-80.911	0.000	39405.9
19.8700	20488.00	13.115	-80.920	0.000	39405.9
19.9700	20594.00	13.166	-80.923	0.000	39405.9
19.9999	20625.40	13.181	-80.924	0.000	39405.9
20.0700	20699.00	13.216	-80.926	0.000	39405.9
20.1700	20805.00	13.267	-80.928	0.000	39405.9
20.2700	20910.00	13.317	-80.931	0.000	39405.9
20.5700	21227.00	13.468	-80.939	0.000	39405.9
20.8700	21543.00	13.619	-80.947	0.000	39405.9
20.9700	21649.00	13.669	-80.949	0.000	39405.9
20.9997	21680.20	13.684	-80.950	0.000	39405.9
21.1700	21859.00	13.769	-80.954	0.000	39405.9
21.2700	21965.00	13.820	-80.956	0.000	39405.9
21.3700	22070.00	13.870	-80.959	0.000	39405.9
21.4700	22176.00	13.920	-80.961	0.000	39405.9
21.7700	22492.00	14.071	-80.968	0.000	39405.9
21.8700	22598.00	14.122	-80.971	0.000	39405.9
22.0001	22735.00	14.187	-80.974	0.000	39405.9
22.1700	22914.00	14.272	-80.978	0.000	39405.9
22.2700	23020.00	14.323	-80.980	0.000	39405.9
22.3700	23125.00	14.373	-80.982	0.000	39405.9
22.4700	23231.00	14.424	-80.984	0.000	39405.9
22.5700	23336.00	14.474	-80.987	0.000	39405.9
22.6700	23442.00	14.524	-80.989	0.000	39405.9
22.7700	23547.00	14.574	-80.991	0.000	39405.9
22.8700	23653.00	14.625	-80.993	0.000	39405.9
22.9999	23789.80	14.690	-80.996	0.000	39405.9
23.1700	23969.00	14.775	-80.999	0.000	39405.9
23.2700	24075.00	14.826	-81.001	0.000	39405.9
23.3700	24180.00	14.876	-81.003	0.000	39405.9
23.4700	24286.00	14.926	-81.005	0.000	39405.9
23.5700	24391.00	14.976	-81.007	0.000	39405.9
23.8700	24708.00	15.127	-81.013	0.000	39405.9
24.0001	24844.60	15.192	-81.016	0.000	39405.9
24.0700	24918.00	15.227	-81.017	0.000	39405.9
24.1700	25024.00	15.277	-81.019	0.000	39405.9
24.2700	25129.00	15.327	-81.021	0.000	39405.9
24.5700	25446.00	15.478	-81.027	0.000	39405.9
24.8700	25762.00	15.629	-81.033	0.000	39405.9
24.9700	25868.00	15.679	-81.034	0.000	39405.9
25.0000	25899.50	15.694	-81.035	0.000	39405.9
25.1100	26015.00	15.749	-81.037	0.000	39405.9
25.1300	26037.00	15.759	-81.037	0.000	39405.9
25.3100	26226.00	15.849	-81.040	0.000	39405.9
25.3300	26248.00	15.860	-81.041	0.000	39405.9
25.5100	26437.00	15.950	-81.044	0.000	39405.9
25.5300	26459.00	15.960	-81.044	0.000	39405.9
25.7300	26669.00	16.060	-81.047	0.000	39405.9

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13.No5 C.O.T. (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
25.7500	26691.00	16.071	-81.048	0.000	39405.9
25.9300	26880.00	16.161	-81.051	0.000	39405.9
25.9500	26902.00	16.171	-81.051	0.000	39405.9
25.9998	26954.30	16.196	-81.052	0.000	39405.9
26.1300	27091.00	16.261	-81.054	0.000	39405.9
26.1500	27113.00	16.272	-81.054	0.000	39405.9
26.3500	27323.00	16.371	-81.057	0.000	39405.9
26.3700	27345.00	16.382	-81.058	0.000	39405.9
26.5500	27534.00	16.472	-81.060	0.000	39405.9
26.5700	27556.00	16.482	-81.061	0.000	39405.9
26.7700	27766.00	16.582	-81.064	0.000	39405.9
26.7900	27788.00	16.593	-81.064	0.000	39405.9
26.9700	27977.00	16.683	-81.067	0.000	39405.9
26.9900	27999.00	16.693	-81.067	0.000	39405.9
26.9996	28009.10	16.698	-81.067	0.000	39405.9
27.1700	28188.00	16.783	-81.070	0.000	39405.9
27.1900	28210.00	16.793	-81.070	0.000	39405.9
27.3900	28420.00	16.893	-81.073	0.000	39405.9
27.4100	28442.00	16.904	-81.073	0.000	39405.9
27.5900	28631.00	16.993	-81.076	0.000	39405.9
27.6100	28653.00	17.004	-81.076	0.000	39405.9
27.7900	28842.00	17.094	-81.079	0.000	39405.9
27.8100	28864.00	17.104	-81.079	0.000	39405.9
28.0004	29063.90	17.199	-81.082	0.000	39405.9
28.0100	29074.00	17.204	-81.082	0.000	39309.8
28.0300	29096.00	17.214	-81.082	0.000	39100.5
28.2100	29285.00	17.304	-81.085	0.000	37302.6
28.2300	29307.00	17.315	-81.085	0.000	37093.3
28.4300	29517.00	17.415	-81.088	0.000	35095.5
28.4500	29539.00	17.425	-81.088	0.000	34886.2
28.6300	29728.00	17.515	-81.091	0.000	33088.3
28.6500	29750.00	17.526	-81.091	0.000	32879.0
28.8300	29939.00	17.616	-81.094	0.000	31081.0
28.8500	29961.00	17.626	-81.094	0.000	30871.7
28.9700	30087.00	17.686	-81.096	0.000	29673.0
28.9900	30107.00	17.695	-81.096	0.000	29482.8
29.0000	30116.50	17.700	-81.096	0.000	29392.4
29.0100	30126.00	17.705	-81.096	0.000	27935.0
29.0500	30162.00	17.722	-81.098	0.000	22412.4
29.0700	30179.00	17.730	-81.099	0.000	19804.5
29.1100	30209.00	17.744	-81.100	0.000	15202.3
29.1300	30223.00	17.751	-81.101	0.000	13054.6
29.1700	30247.00	17.762	-81.102	0.000	9372.8
29.1900	30258.00	17.767	-81.103	0.000	7685.3
29.2300	30276.00	17.776	-81.103	0.000	4924.0
29.2700	30290.00	17.782	-81.104	0.000	2776.3
29.3100	30300.00	17.787	-81.105	0.000	1242.2
29.3300	30304.00	17.789	-81.105	0.000	628.6
29.3700	30308.10	17.791	-81.105	0.000	0.0
30.0700	30308.10	17.791	-81.105	0.000	0.0

14.No5 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-71.484	-14.986	0.0
0.0090	2.00	3.024	-71.484	-14.986	15.9
0.0890	22.00	3.064	-71.484	-14.986	175.0
0.1090	26.00	3.072	-71.484	-14.986	206.8
0.5890	146.00	3.312	-71.484	-14.986	1161.2
0.6090	152.00	3.324	-71.484	-14.986	1208.9
0.6890	172.00	3.364	-71.484	-14.986	1368.0
0.7090	178.00	3.376	-71.484	-14.986	1415.7
0.7890	198.00	3.416	-71.484	-14.986	1574.7
0.8090	204.00	3.428	-71.484	-14.986	1622.5
0.8490	214.00	3.448	-71.484	-14.986	1702.0
0.8690	220.00	3.460	-71.484	-14.986	1749.7
0.9290	235.00	3.490	-71.484	-14.986	1869.0
0.9490	241.00	3.502	-71.484	-14.986	1916.7
0.9690	246.00	3.512	-71.484	-14.986	1956.5
0.9890	252.00	3.524	-71.484	-14.986	2004.2
0.9990	254.50	3.529	-71.484	-14.986	2024.1
1.0290	262.00	3.543	-71.489	-14.991	2038.4
1.0490	268.00	3.554	-71.493	-14.995	2049.9
1.0890	278.00	3.573	-71.499	-15.002	2069.0
1.1090	284.00	3.584	-71.503	-15.006	2080.4
1.1290	289.00	3.593	-71.506	-15.009	2090.0
1.1490	295.00	3.604	-71.510	-15.013	2101.4
1.1690	300.00	3.614	-71.513	-15.016	2111.0
1.1890	306.00	3.625	-71.517	-15.020	2122.4
1.2090	311.00	3.634	-71.520	-15.024	2131.9
1.2290	317.00	3.645	-71.524	-15.028	2143.4
1.2490	322.00	3.655	-71.527	-15.031	2152.9
1.2690	328.00	3.666	-71.531	-15.035	2164.4
1.2890	333.00	3.675	-71.534	-15.038	2173.9
1.3090	339.00	3.686	-71.538	-15.042	2185.4
1.3290	344.00	3.696	-71.541	-15.046	2194.9
1.3490	350.00	3.707	-71.545	-15.050	2206.4
1.3690	355.00	3.716	-71.548	-15.053	2215.9
1.4090	367.00	3.738	-71.556	-15.061	2238.8
1.4290	372.00	3.748	-71.559	-15.064	2248.4
1.4690	384.00	3.770	-71.567	-15.072	2271.3
1.4890	389.00	3.779	-71.570	-15.075	2280.8
1.5090	395.00	3.790	-71.574	-15.079	2292.3
1.5290	400.00	3.800	-71.577	-15.083	2301.8
1.5890	418.00	3.833	-71.589	-15.095	2336.2
1.6090	423.00	3.843	-71.592	-15.098	2345.7
1.6490	435.00	3.865	-71.600	-15.106	2368.6
1.6690	440.00	3.874	-71.603	-15.109	2378.2
1.7490	464.00	3.919	-71.618	-15.125	2424.0
1.7690	469.00	3.928	-71.621	-15.129	2433.5
1.8690	499.00	3.984	-71.641	-15.149	2490.8
1.8890	504.00	3.993	-71.644	-15.152	2500.3
1.9997	537.20	4.055	-71.665	-15.174	2563.7
2.3490	642.00	4.237	-71.720	-15.240	2777.4
2.3690	649.00	4.249	-71.724	-15.244	2791.7
2.4690	679.00	4.301	-71.739	-15.263	2852.8
2.4890	686.00	4.313	-71.743	-15.268	2867.1
2.5490	704.00	4.345	-71.752	-15.279	2903.8
2.5690	711.00	4.357	-71.756	-15.284	2918.1
2.6290	729.00	4.388	-71.766	-15.295	2954.8
2.6490	736.00	4.400	-71.769	-15.299	2969.0
2.6890	748.00	4.421	-71.776	-15.307	2993.5
2.7090	755.00	4.433	-71.779	-15.311	3007.8
2.7490	767.00	4.454	-71.785	-15.319	3032.2
2.7690	774.00	4.466	-71.789	-15.323	3046.5
2.7890	780.00	4.477	-71.792	-15.327	3058.8
2.8090	787.00	4.489	-71.796	-15.331	3073.0

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14.No5 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.8490	799.00	4.510	-71.802	-15.339	3097.5
2.8690	806.00	4.522	-71.806	-15.343	3111.8
2.8890	812.00	4.532	-71.809	-15.347	3124.0
2.9090	819.00	4.544	-71.813	-15.352	3138.3
2.9290	825.00	4.555	-71.816	-15.355	3150.5
2.9490	832.00	4.567	-71.820	-15.360	3164.8
2.9690	838.00	4.577	-71.823	-15.364	3177.0
2.9890	845.00	4.590	-71.826	-15.368	3191.3
2.9993	848.10	4.595	-71.828	-15.370	3197.6
3.0090	851.00	4.600	-71.829	-15.372	3203.9
3.0290	858.00	4.611	-71.832	-15.376	3219.1
3.0490	864.00	4.621	-71.835	-15.380	3232.2
3.0690	871.00	4.632	-71.838	-15.384	3247.4
3.0890	877.00	4.642	-71.841	-15.387	3260.4
3.1090	884.00	4.653	-71.844	-15.391	3275.6
3.1290	890.00	4.663	-71.846	-15.395	3288.7
3.1490	897.00	4.675	-71.849	-15.399	3303.9
3.1690	903.00	4.684	-71.852	-15.403	3316.9
3.2090	917.00	4.707	-71.858	-15.411	3347.3
3.2290	923.00	4.717	-71.861	-15.415	3360.4
3.2690	937.00	4.740	-71.867	-15.423	3390.8
3.2890	943.00	4.749	-71.869	-15.427	3403.9
3.3290	957.00	4.772	-71.876	-15.435	3434.3
3.3490	963.00	4.782	-71.878	-15.439	3447.3
3.3890	977.00	4.805	-71.884	-15.447	3477.7
3.4090	983.00	4.815	-71.887	-15.451	3490.8
3.4690	1004.00	4.849	-71.896	-15.463	3536.4
3.4890	1010.00	4.858	-71.899	-15.467	3549.5
3.5690	1038.00	4.904	-71.911	-15.484	3610.3
3.5890	1044.00	4.914	-71.913	-15.487	3623.4
3.7290	1093.00	4.994	-71.935	-15.517	3729.9
3.7490	1099.00	5.003	-71.937	-15.520	3742.9
4.0013	1187.30	5.147	-71.976	-15.573	3934.8
4.0290	1198.00	5.163	-71.980	-15.579	3959.6
4.1690	1247.00	5.238	-71.998	-15.607	4072.9
4.1890	1255.00	5.251	-72.001	-15.611	4091.4
4.2690	1283.00	5.293	-72.011	-15.627	4156.1
4.2890	1291.00	5.306	-72.014	-15.632	4174.6
4.3490	1312.00	5.338	-72.021	-15.644	4223.2
4.3690	1320.00	5.350	-72.024	-15.648	4241.7
4.4290	1341.00	5.382	-72.032	-15.660	4290.3
4.4490	1349.00	5.394	-72.035	-15.665	4308.8
4.4890	1363.00	5.416	-72.040	-15.672	4341.2
4.5090	1371.00	5.428	-72.043	-15.677	4359.7
4.5490	1385.00	5.449	-72.048	-15.685	4392.0
4.5690	1393.00	5.462	-72.051	-15.689	4410.5
4.5890	1400.00	5.472	-72.054	-15.693	4426.7
4.6090	1408.00	5.485	-72.056	-15.698	4445.2
4.6490	1422.00	5.506	-72.062	-15.706	4477.6
4.6690	1430.00	5.518	-72.065	-15.710	4496.1
4.6890	1437.00	5.529	-72.067	-15.714	4512.3
4.7090	1445.00	5.541	-72.070	-15.719	4530.8
4.7290	1452.00	5.552	-72.073	-15.723	4547.0
4.7490	1460.00	5.564	-72.075	-15.727	4565.5
4.7690	1467.00	5.575	-72.078	-15.731	4581.7
4.7890	1475.00	5.587	-72.081	-15.736	4600.2
4.8090	1482.00	5.598	-72.083	-15.740	4616.4
4.8290	1490.00	5.610	-72.086	-15.744	4634.9
4.8490	1497.00	5.621	-72.089	-15.748	4651.1
4.8690	1505.00	5.633	-72.092	-15.753	4669.6
4.8890	1512.00	5.644	-72.094	-15.757	4685.8
4.9290	1528.00	5.668	-72.100	-15.766	4722.8

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14.No5 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.9490	1535.00	5.679	-72.103	-15.770	4738.9
4.9690	1543.00	5.691	-72.106	-15.774	4757.4
4.9890	1550.00	5.702	-72.108	-15.778	4773.6
5.0007	1554.70	5.709	-72.110	-15.781	4784.5
5.0290	1566.00	5.725	-72.114	-15.787	4809.4
5.0490	1573.00	5.735	-72.116	-15.791	4824.8
5.0890	1589.00	5.759	-72.121	-15.799	4860.0
5.1090	1596.00	5.769	-72.123	-15.803	4875.4
5.1690	1620.00	5.803	-72.130	-15.816	4928.3
5.1890	1627.00	5.813	-72.132	-15.820	4943.7
5.2490	1651.00	5.848	-72.140	-15.833	4996.5
5.2690	1658.00	5.858	-72.142	-15.837	5012.0
5.3490	1690.00	5.904	-72.152	-15.854	5082.4
5.3690	1697.00	5.914	-72.154	-15.858	5097.8
5.5090	1753.00	5.995	-72.172	-15.888	5221.1
5.5290	1760.00	6.005	-72.174	-15.892	5236.5
5.7690	1856.00	6.144	-72.204	-15.943	5447.9
5.8690	1897.00	6.203	-72.216	-15.965	5538.2
5.9690	1937.00	6.261	-72.229	-15.987	5626.3
6.0010	1950.10	6.280	-72.233	-15.994	5655.1
6.1690	2019.00	6.374	-72.255	-16.027	5769.4
6.2690	2061.00	6.432	-72.268	-16.047	5839.1
6.3690	2102.00	6.488	-72.281	-16.067	5907.1
6.5690	2186.00	6.603	-72.307	-16.107	6046.4
6.6690	2229.00	6.662	-72.321	-16.128	6117.8
6.7690	2271.00	6.719	-72.334	-16.148	6187.4
6.9997	2370.20	6.852	-72.365	-16.196	6352.0
7.1690	2443.00	6.950	-72.389	-16.227	6443.4
7.6690	2663.00	7.237	-72.461	-16.319	6719.7
7.7690	2708.00	7.296	-72.475	-16.338	6776.3
7.8690	2752.00	7.354	-72.490	-16.357	6831.5
8.0008	2811.30	7.431	-72.509	-16.382	6906.0
8.0690	2842.00	7.469	-72.519	-16.393	6942.5
8.1690	2888.00	7.527	-72.534	-16.410	6997.3
8.2690	2933.00	7.583	-72.549	-16.427	7050.8
8.7690	3163.00	7.871	-72.625	-16.512	7324.5
8.8690	3210.00	7.930	-72.641	-16.529	7380.4
8.9690	3256.00	7.987	-72.656	-16.546	7435.2
9.0007	3270.90	8.005	-72.661	-16.552	7452.9
9.1690	3350.00	8.101	-72.687	-16.578	7529.7
9.2690	3398.00	8.159	-72.703	-16.594	7576.3
9.4690	3492.00	8.273	-72.734	-16.625	7667.5
9.9998	3746.80	8.580	-72.818	-16.709	7914.9
10.0690	3780.00	8.619	-72.829	-16.719	7943.6
10.1690	3829.00	8.676	-72.844	-16.733	7985.9
10.2690	3877.00	8.732	-72.860	-16.747	8027.4
10.9690	4220.00	9.132	-72.970	-16.846	8323.8
11.0006	4235.80	9.150	-72.975	-16.851	8337.4
11.1690	4320.00	9.246	-73.001	-16.873	8400.6
11.2690	4369.00	9.301	-73.016	-16.885	8437.3
11.6690	4569.00	9.528	-73.078	-16.937	8587.3
11.7690	4620.00	9.586	-73.093	-16.950	8625.6
11.9690	4720.00	9.700	-73.124	-16.976	8700.6
12.0004	4736.00	9.718	-73.129	-16.980	8712.6
12.0690	4771.00	9.757	-73.139	-16.988	8731.6
12.1690	4821.00	9.812	-73.154	-16.999	8758.8
12.4690	4974.00	9.981	-73.198	-17.034	8842.1
12.5690	5024.00	10.036	-73.212	-17.045	8869.3
12.9690	5228.00	10.262	-73.271	-17.091	8980.2
13.0003	5244.30	10.280	-73.276	-17.095	8989.1
13.0690	5280.00	10.319	-73.285	-17.102	9005.7
13.3690	5433.00	10.484	-73.326	-17.133	9076.8

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14.No5 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
13.4690	5485.00	10.541	-73.340	-17.143	9100.9
13.5690	5536.00	10.596	-73.353	-17.153	9124.6
13.6690	5588.00	10.652	-73.367	-17.164	9148.8
13.7690	5639.00	10.708	-73.380	-17.174	9172.5
13.8690	5691.00	10.764	-73.394	-17.184	9196.6
13.9690	5742.00	10.819	-73.408	-17.195	9220.3
14.0007	5758.50	10.837	-73.412	-17.198	9228.0
14.2690	5898.00	10.986	-73.445	-17.222	9243.6
14.3690	5949.00	11.040	-73.457	-17.231	9249.3
14.6690	6105.00	11.206	-73.494	-17.258	9266.8
14.7690	6156.00	11.260	-73.507	-17.267	9272.5
14.9996	6275.90	11.388	-73.535	-17.288	9285.9
15.0690	6312.00	11.426	-73.542	-17.293	9286.8
15.1690	6363.00	11.479	-73.553	-17.301	9288.0
15.6690	6623.00	11.752	-73.606	-17.340	9294.3
15.7690	6674.00	11.806	-73.616	-17.347	9295.6
16.0002	6794.20	11.932	-73.641	-17.365	9298.5
16.2690	6934.00	12.077	-73.666	-17.383	9298.5
16.3690	6985.00	12.130	-73.675	-17.389	9298.5
16.8690	7245.00	12.400	-73.721	-17.422	9298.5
16.9690	7296.00	12.453	-73.730	-17.429	9298.5
17.0005	7312.40	12.470	-73.733	-17.431	9298.5
17.3690	7504.00	12.667	-73.762	-17.452	9298.5
17.4690	7555.00	12.719	-73.770	-17.458	9298.5
17.9690	7815.00	12.987	-73.810	-17.487	9298.5
17.9998	7830.70	13.003	-73.812	-17.489	9298.5
18.0690	7866.00	13.039	-73.817	-17.492	9298.5
18.5690	8126.00	13.304	-73.851	-17.517	9298.5
18.6690	8177.00	13.356	-73.858	-17.522	9298.5
18.9996	8348.90	13.531	-73.881	-17.539	9298.5
19.1690	8437.00	13.620	-73.892	-17.547	9298.5
19.2690	8488.00	13.672	-73.898	-17.551	9298.5
19.6690	8696.00	13.883	-73.923	-17.569	9298.5
19.7690	8747.00	13.935	-73.929	-17.574	9298.5
20.0002	8867.20	14.057	-73.943	-17.584	9298.5
20.2690	9007.00	14.198	-73.958	-17.595	9298.5
20.3690	9058.00	14.249	-73.963	-17.598	9298.5
20.8690	9318.00	14.511	-73.990	-17.618	9298.5
20.9690	9369.00	14.562	-73.995	-17.622	9298.5
21.0005	9385.40	14.579	-73.997	-17.623	9298.5
21.4690	9629.00	14.824	-74.020	-17.640	9298.5
21.5690	9680.00	14.875	-74.025	-17.643	9298.5
21.9690	9888.00	15.084	-74.045	-17.658	9298.5
21.9998	9903.70	15.100	-74.046	-17.659	9298.5
22.0690	9939.00	15.135	-74.049	-17.661	9298.5
22.5690	10199.00	15.395	-74.071	-17.677	9298.5
22.6690	10250.00	15.446	-74.075	-17.680	9298.5
22.9998	10422.00	15.618	-74.090	-17.691	9298.5
23.1690	10510.00	15.706	-74.097	-17.696	9298.5
23.2690	10561.00	15.756	-74.101	-17.699	9298.5
23.7690	10821.00	16.015	-74.121	-17.713	9298.5
23.8690	10872.00	16.066	-74.125	-17.715	9298.5
24.0002	10940.20	16.134	-74.130	-17.719	9298.5
24.2690	11080.00	16.273	-74.140	-17.726	9298.5
24.3690	11131.00	16.324	-74.143	-17.729	9298.5
24.6690	11287.00	16.479	-74.154	-17.737	9298.5
24.6890	11297.00	16.489	-74.155	-17.738	9298.5
24.7090	11308.00	16.499	-74.156	-17.738	9298.5
24.7490	11328.00	16.519	-74.157	-17.739	9298.5
24.7690	11339.00	16.530	-74.158	-17.740	9298.5
24.8090	11359.00	16.550	-74.159	-17.741	9298.5
24.8290	11370.00	16.561	-74.160	-17.741	9298.5

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14.No5 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
24.8490	11380.00	16.571	-74.161	-17.742	9298.5
24.8690	11391.00	16.582	-74.161	-17.742	9298.5
24.9090	11411.00	16.602	-74.163	-17.744	9298.5
24.9290	11422.00	16.613	-74.163	-17.744	9298.5
24.9690	11442.00	16.633	-74.165	-17.745	9298.5
24.9890	11453.00	16.644	-74.166	-17.746	9298.5
25.0000	11458.50	16.649	-74.166	-17.746	9298.5
25.0090	11463.00	16.653	-74.166	-17.746	9298.5
25.0290	11474.00	16.664	-74.167	-17.747	9298.5
25.0690	11494.00	16.684	-74.168	-17.748	9298.5
25.0890	11505.00	16.695	-74.169	-17.748	9298.5
25.1290	11525.00	16.715	-74.170	-17.749	9298.5
25.1490	11536.00	16.726	-74.171	-17.750	9298.5
25.1890	11556.00	16.746	-74.172	-17.751	9298.5
25.2090	11567.00	16.757	-74.173	-17.751	9298.5
25.2290	11577.00	16.767	-74.174	-17.751	9298.5
25.2490	11588.00	16.777	-74.174	-17.752	9298.5
25.2890	11608.00	16.797	-74.176	-17.753	9298.5
25.3090	11619.00	16.808	-74.176	-17.753	9298.5
25.3490	11639.00	16.828	-74.177	-17.754	9298.5
25.3690	11650.00	16.839	-74.178	-17.755	9298.5
25.4090	11670.00	16.859	-74.179	-17.756	9298.5
25.4690	11702.00	16.891	-74.182	-17.757	9298.5
25.5090	11722.00	16.910	-74.183	-17.758	9298.5
25.5290	11733.00	16.921	-74.183	-17.759	9298.5
25.5690	11753.00	16.941	-74.185	-17.760	9298.5
25.5890	11764.00	16.952	-74.185	-17.760	9298.5
25.6290	11784.00	16.972	-74.187	-17.761	9298.5
25.6490	11795.00	16.983	-74.187	-17.762	9298.5
25.6690	11805.00	16.993	-74.188	-17.762	9298.5
25.6890	11816.00	17.004	-74.189	-17.763	9298.5
25.7290	11836.00	17.023	-74.190	-17.763	9298.5
25.7490	11847.00	17.034	-74.191	-17.764	9298.5
25.7890	11867.00	17.054	-74.192	-17.765	9298.5
25.8090	11878.00	17.065	-74.193	-17.765	9298.5
25.8490	11898.00	17.085	-74.194	-17.766	9298.5
25.8690	11909.00	17.096	-74.195	-17.767	9298.5
25.8890	11919.00	17.106	-74.195	-17.767	9298.5
25.9090	11930.00	17.117	-74.196	-17.768	9298.5
25.9490	11950.00	17.137	-74.197	-17.769	9298.5
25.9690	11961.00	17.147	-74.198	-17.769	9298.5
26.0004	11976.70	17.163	-74.199	-17.770	9298.5
26.0290	11992.00	17.178	-74.200	-17.771	9298.5
26.0490	12002.00	17.188	-74.200	-17.771	9298.5
26.0690	12013.00	17.199	-74.201	-17.772	9298.5
26.1090	12033.00	17.219	-74.202	-17.772	9298.5
26.1290	12044.00	17.229	-74.203	-17.773	9298.5
26.1690	12064.00	17.249	-74.204	-17.774	9298.5
26.1890	12075.00	17.260	-74.205	-17.774	9298.5
26.2290	12095.00	17.280	-74.206	-17.775	9298.5
26.2890	12127.00	17.311	-74.208	-17.776	9298.5
26.3290	12147.00	17.331	-74.209	-17.777	9298.5
26.3490	12158.00	17.342	-74.209	-17.778	9298.5
26.3890	12178.00	17.362	-74.211	-17.779	9298.5
26.4090	12189.00	17.373	-74.211	-17.779	9298.5
26.4490	12209.00	17.392	-74.212	-17.780	9298.5
26.5090	12241.00	17.424	-74.214	-17.781	9298.5
26.5490	12261.00	17.444	-74.215	-17.782	9298.5
26.5690	12272.00	17.455	-74.216	-17.783	9298.5
26.6090	12292.00	17.474	-74.217	-17.783	9298.5
26.6290	12303.00	17.485	-74.218	-17.784	9298.5
26.6690	12323.00	17.505	-74.219	-17.785	9298.5

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14.No5 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.6890	12334.00	17.516	-74.220	-17.785	9298.5
26.7090	12344.00	17.526	-74.220	-17.786	9298.5
26.7290	12355.00	17.537	-74.221	-17.786	9298.5
26.7690	12375.00	17.556	-74.222	-17.787	9298.5
26.7890	12386.00	17.567	-74.223	-17.787	9298.5
26.8290	12406.00	17.587	-74.224	-17.788	9298.5
26.8490	12417.00	17.598	-74.224	-17.789	9298.5
26.8890	12437.00	17.618	-74.226	-17.790	9298.5
26.9090	12448.00	17.629	-74.226	-17.790	9298.5
26.9290	12458.00	17.638	-74.227	-17.790	9298.5
26.9490	12469.00	17.649	-74.227	-17.791	9298.5
26.9890	12489.00	17.669	-74.229	-17.792	9298.5
26.9999	12495.00	17.675	-74.229	-17.792	9298.5
27.0090	12500.00	17.680	-74.229	-17.792	9298.5
27.0490	12520.00	17.700	-74.230	-17.793	9298.5
27.0690	12531.00	17.711	-74.231	-17.793	9298.5
27.1090	12551.00	17.730	-74.232	-17.794	9298.5
27.1690	12583.00	17.762	-74.234	-17.795	9298.5
27.2090	12603.00	17.782	-74.235	-17.796	9298.5
27.2290	12614.00	17.793	-74.235	-17.797	9298.5
27.2690	12634.00	17.812	-74.237	-17.797	9298.5
27.3290	12666.00	17.844	-74.238	-17.799	9298.5
27.3690	12686.00	17.864	-74.239	-17.799	9298.5
27.3890	12697.00	17.875	-74.240	-17.800	9298.5
27.4290	12717.00	17.894	-74.241	-17.801	9298.5
27.4490	12728.00	17.905	-74.242	-17.801	9298.5
27.4890	12748.00	17.925	-74.243	-17.802	9298.5
27.5490	12780.00	17.957	-74.244	-17.803	9298.5
27.5890	12800.00	17.976	-74.245	-17.804	9298.5
27.6090	12811.00	17.987	-74.246	-17.804	9298.5
27.6490	12831.00	18.007	-74.247	-17.805	9298.5
27.6690	12842.00	18.018	-74.248	-17.805	9298.5
27.7090	12862.00	18.038	-74.249	-17.806	9298.5
27.7290	12873.00	18.048	-74.249	-17.807	9298.5
27.7490	12883.00	18.058	-74.250	-17.807	9298.5
27.7690	12894.00	18.069	-74.251	-17.807	9298.5
27.8090	12914.00	18.089	-74.252	-17.808	9298.5
27.8290	12925.00	18.100	-74.252	-17.809	9298.5
27.8690	12945.00	18.120	-74.253	-17.809	9298.5
27.8890	12956.00	18.130	-74.254	-17.810	9298.5
27.9290	12976.00	18.150	-74.255	-17.811	9298.5
27.9490	12987.00	18.161	-74.256	-17.811	9298.5
27.9690	12997.00	18.171	-74.256	-17.811	9298.5
27.9890	13008.00	18.182	-74.257	-17.812	9298.5
27.9996	13013.30	18.187	-74.257	-17.812	9298.5
28.0290	13028.00	18.202	-74.258	-17.811	8897.7
28.0490	13039.00	18.212	-74.258	-17.811	8597.7
28.0890	13059.00	18.232	-74.259	-17.810	8052.3
28.1090	13070.00	18.243	-74.260	-17.810	7752.4
28.1490	13090.00	18.263	-74.261	-17.809	7207.0
28.2090	13122.00	18.294	-74.262	-17.807	6334.4
28.2490	13142.00	18.314	-74.263	-17.806	5789.0
28.2690	13153.00	18.325	-74.264	-17.806	5489.1
28.3090	13173.00	18.345	-74.265	-17.805	4943.7
28.3290	13184.00	18.356	-74.266	-17.804	4643.8
28.3690	13204.00	18.375	-74.267	-17.804	4098.4
28.3890	13215.00	18.386	-74.267	-17.803	3798.4
28.4090	13224.00	18.395	-74.268	-17.803	3553.0
28.4290	13234.00	18.405	-74.268	-17.802	3280.3
28.4690	13252.00	18.423	-74.269	-17.802	2789.5
28.5290	13276.00	18.447	-74.270	-17.800	2135.1
28.5690	13290.00	18.460	-74.271	-17.800	1753.3

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14.No5 C.O.T. (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
28.5890	13296.00	18.466	-74.271	-17.800	1589.7
28.6090	13303.00	18.473	-74.271	-17.799	1398.8
28.6290	13308.00	18.478	-74.272	-17.799	1262.5
28.6490	13314.00	18.484	-74.272	-17.799	1098.9
28.6890	13324.00	18.494	-74.272	-17.798	826.2
28.7090	13328.00	18.498	-74.273	-17.798	717.1
28.7290	13333.00	18.503	-74.273	-17.798	580.8
28.7490	13336.00	18.506	-74.273	-17.798	499.0
28.7690	13340.00	18.510	-74.273	-17.798	389.9
28.8290	13348.00	18.518	-74.274	-17.797	171.7
28.8490	13350.00	18.520	-74.274	-17.797	117.2
28.8690	13351.00	18.521	-74.274	-17.797	89.9
28.8890	13353.00	18.523	-74.274	-17.797	35.4
28.9090	13354.30	18.524	-74.274	-17.797	0.0
29.6690	13354.30	18.524	-74.274	-17.797	0.0

15.No5 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-71.484	14.986	0.0
0.0050	1.00	3.022	-71.484	14.986	8.0
0.0850	21.00	3.062	-71.484	14.986	167.0
0.1050	25.00	3.070	-71.484	14.986	198.8
0.5850	145.00	3.310	-71.484	14.986	1153.2
0.6050	151.00	3.322	-71.484	14.986	1200.9
0.7050	176.00	3.372	-71.484	14.986	1399.8
0.7250	182.00	3.384	-71.484	14.986	1447.5
0.7850	197.00	3.414	-71.484	14.986	1566.8
0.8050	203.00	3.426	-71.484	14.986	1614.5
0.8650	218.00	3.456	-71.484	14.986	1733.8
0.8850	224.00	3.468	-71.484	14.986	1781.5
0.9250	234.00	3.488	-71.484	14.986	1861.1
0.9450	240.00	3.500	-71.484	14.986	1908.8
0.9850	250.00	3.520	-71.484	14.986	1988.3
1.0000	254.50	3.529	-71.484	14.986	2024.1
1.0250	261.00	3.541	-71.488	14.990	2036.5
1.0450	267.00	3.552	-71.492	14.994	2048.0
1.0850	277.00	3.571	-71.498	15.001	2067.1
1.1050	283.00	3.582	-71.502	15.005	2078.5
1.1250	288.00	3.591	-71.505	15.008	2088.0
1.1450	294.00	3.602	-71.509	15.012	2099.5
1.1650	299.00	3.612	-71.512	15.016	2109.0
1.1850	305.00	3.623	-71.516	15.020	2120.5
1.2050	310.00	3.632	-71.520	15.023	2130.0
1.2250	316.00	3.643	-71.523	15.027	2141.5
1.2450	321.00	3.653	-71.527	15.030	2151.0
1.2650	327.00	3.664	-71.530	15.034	2162.5
1.2850	332.00	3.673	-71.534	15.038	2172.0
1.3050	338.00	3.684	-71.537	15.042	2183.5
1.3250	343.00	3.694	-71.541	15.045	2193.0
1.3450	349.00	3.705	-71.545	15.049	2204.5
1.3650	354.00	3.714	-71.548	15.052	2214.0
1.4050	366.00	3.736	-71.555	15.060	2236.9
1.4250	371.00	3.746	-71.559	15.063	2246.5
1.4450	377.00	3.757	-71.562	15.067	2257.9
1.4650	382.00	3.766	-71.566	15.071	2267.5
1.5050	394.00	3.789	-71.573	15.079	2290.4
1.5250	399.00	3.798	-71.577	15.082	2299.9

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15.No5 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.5650	411.00	3.820	-71.584	15.090	2322.8
1.5850	416.00	3.829	-71.587	15.093	2332.4
1.6450	434.00	3.863	-71.599	15.105	2366.7
1.6650	439.00	3.872	-71.602	15.109	2376.3
1.7250	457.00	3.906	-71.614	15.121	2410.6
1.7450	462.00	3.915	-71.617	15.124	2420.2
1.8250	486.00	3.960	-71.632	15.140	2466.0
1.8450	491.00	3.969	-71.635	15.143	2475.5
1.9990	537.20	4.055	-71.665	15.174	2563.7
2.0650	557.00	4.089	-71.675	15.186	2604.1
2.0850	562.00	4.098	-71.678	15.190	2614.3
2.1450	580.00	4.129	-71.687	15.201	2651.0
2.1650	587.00	4.141	-71.691	15.205	2665.2
2.3650	647.00	4.246	-71.723	15.243	2787.6
2.3850	654.00	4.258	-71.726	15.248	2801.9
2.4850	684.00	4.310	-71.742	15.267	2863.0
2.5050	691.00	4.322	-71.746	15.271	2877.3
2.5650	709.00	4.353	-71.755	15.282	2914.0
2.5850	716.00	4.366	-71.759	15.287	2928.3
2.6450	734.00	4.397	-71.768	15.298	2965.0
2.6650	741.00	4.409	-71.772	15.302	2979.2
2.7050	753.00	4.430	-71.778	15.310	3003.7
2.7250	760.00	4.442	-71.782	15.314	3018.0
2.7650	772.00	4.463	-71.788	15.322	3042.4
2.7850	779.00	4.475	-71.792	15.326	3056.7
2.8050	785.00	4.485	-71.795	15.330	3068.9
2.8250	792.00	4.498	-71.799	15.335	3083.2
2.8650	804.00	4.518	-71.805	15.342	3107.7
2.8850	811.00	4.531	-71.809	15.347	3122.0
2.9050	817.00	4.541	-71.812	15.350	3134.2
2.9250	824.00	4.553	-71.815	15.355	3148.5
2.9450	830.00	4.564	-71.819	15.359	3160.7
2.9650	837.00	4.576	-71.822	15.363	3175.0
2.9850	843.00	4.586	-71.825	15.367	3187.2
2.9996	848.10	4.595	-71.828	15.370	3197.6
3.0250	856.00	4.608	-71.831	15.375	3214.8
3.0450	863.00	4.619	-71.835	15.379	3230.0
3.0650	869.00	4.629	-71.837	15.383	3243.0
3.0850	876.00	4.640	-71.840	15.387	3258.2
3.1050	882.00	4.650	-71.843	15.390	3271.3
3.1450	896.00	4.673	-71.849	15.399	3301.7
3.1650	902.00	4.683	-71.852	15.402	3314.7
3.1850	909.00	4.694	-71.855	15.406	3330.0
3.2050	915.00	4.704	-71.857	15.410	3343.0
3.2450	929.00	4.727	-71.863	15.418	3373.4
3.2650	935.00	4.736	-71.866	15.422	3386.5
3.3050	949.00	4.759	-71.872	15.430	3416.9
3.3250	955.00	4.769	-71.875	15.434	3429.9
3.3650	969.00	4.792	-71.881	15.442	3460.4
3.3850	975.00	4.802	-71.883	15.446	3473.4
3.4450	996.00	4.836	-71.893	15.459	3519.0
3.4650	1002.00	4.845	-71.895	15.462	3532.1
3.5250	1023.00	4.880	-71.904	15.475	3577.7
3.5450	1029.00	4.889	-71.907	15.478	3590.8
3.6450	1064.00	4.946	-71.922	15.499	3666.8
3.6650	1070.00	4.956	-71.925	15.503	3679.9
4.0001	1187.30	5.147	-71.976	15.573	3934.8
4.0850	1217.00	5.192	-71.987	15.590	4003.5
4.1050	1225.00	5.205	-71.990	15.594	4022.0
4.2250	1267.00	5.269	-72.005	15.618	4119.1
4.2450	1275.00	5.281	-72.008	15.623	4137.6
4.3050	1296.00	5.313	-72.016	15.635	4186.2

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15.No5 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.3250	1304.00	5.326	-72.019	15.639	4204.7
4.3850	1325.00	5.358	-72.026	15.651	4253.3
4.4050	1333.00	5.370	-72.029	15.655	4271.8
4.4450	1347.00	5.391	-72.034	15.663	4304.1
4.4650	1355.00	5.404	-72.037	15.668	4322.7
4.5050	1369.00	5.425	-72.042	15.676	4355.0
4.5250	1377.00	5.437	-72.045	15.680	4373.5
4.5650	1391.00	5.459	-72.050	15.688	4405.9
4.5850	1399.00	5.471	-72.053	15.693	4424.4
4.6050	1406.00	5.482	-72.056	15.697	4440.6
4.6250	1414.00	5.494	-72.059	15.701	4459.1
4.6650	1428.00	5.515	-72.064	15.709	4491.5
4.6850	1436.00	5.527	-72.067	15.714	4510.0
4.7050	1443.00	5.538	-72.069	15.718	4526.2
4.7250	1451.00	5.550	-72.072	15.722	4544.7
4.7450	1458.00	5.561	-72.075	15.726	4560.9
4.7650	1466.00	5.573	-72.078	15.731	4579.4
4.7850	1473.00	5.584	-72.080	15.735	4595.6
4.8050	1481.00	5.596	-72.083	15.739	4614.1
4.8250	1488.00	5.607	-72.086	15.743	4630.2
4.8450	1496.00	5.619	-72.089	15.748	4648.7
4.8650	1503.00	5.630	-72.091	15.752	4664.9
4.9050	1519.00	5.654	-72.097	15.761	4701.9
4.9250	1526.00	5.665	-72.100	15.765	4718.1
4.9450	1534.00	5.677	-72.102	15.769	4736.6
4.9650	1541.00	5.688	-72.105	15.773	4752.8
4.9992	1554.70	5.709	-72.110	15.781	4784.5
5.0250	1564.00	5.722	-72.113	15.786	4805.0
5.0650	1580.00	5.746	-72.118	15.795	4840.2
5.0850	1587.00	5.756	-72.120	15.798	4855.6
5.1250	1603.00	5.779	-72.125	15.807	4890.9
5.1450	1610.00	5.789	-72.127	15.811	4906.3
5.1850	1626.00	5.812	-72.132	15.819	4941.5
5.2050	1633.00	5.822	-72.134	15.823	4956.9
5.2850	1665.00	5.868	-72.144	15.840	5027.4
5.3050	1672.00	5.878	-72.146	15.844	5042.8
5.3850	1704.00	5.925	-72.156	15.861	5113.2
5.4050	1711.00	5.935	-72.159	15.865	5128.6
5.8850	1903.00	6.212	-72.218	15.969	5551.4
5.9999	1950.10	6.280	-72.233	15.994	5655.1
6.2850	2067.00	6.440	-72.270	16.050	5849.0
6.6850	2235.00	6.670	-72.323	16.131	6127.7
6.9994	2370.20	6.852	-72.365	16.196	6352.0
7.1850	2450.00	6.959	-72.391	16.230	6452.3
7.6850	2670.00	7.247	-72.463	16.322	6728.6
7.9988	2811.20	7.431	-72.509	16.382	6906.0
8.1850	2895.00	7.536	-72.537	16.413	7005.7
8.2850	2941.00	7.593	-72.552	16.430	7060.4
8.3850	2986.00	7.650	-72.567	16.447	7114.0
8.6850	3124.00	7.822	-72.612	16.498	7278.1
8.7850	3171.00	7.881	-72.628	16.515	7334.1
8.8850	3217.00	7.939	-72.643	16.532	7388.8
8.9997	3270.90	8.004	-72.661	16.552	7452.9
9.3850	3452.00	8.224	-72.721	16.612	7628.7
9.5850	3548.00	8.340	-72.752	16.643	7721.9
9.6850	3595.00	8.397	-72.768	16.659	7767.5
9.8850	3691.00	8.513	-72.800	16.691	7860.7
9.9850	3740.00	8.572	-72.816	16.707	7908.3
9.9992	3746.80	8.580	-72.818	16.709	7914.9
10.1850	3836.00	8.684	-72.847	16.735	7992.0
10.3850	3934.00	8.798	-72.878	16.763	8076.6
10.4850	3982.00	8.854	-72.894	16.777	8118.1

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15.No5 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
10.6850	4080.00	8.968	-72.925	16.806	8202.8
10.7850	4130.00	9.027	-72.941	16.820	8246.0
10.9850	4228.00	9.141	-72.972	16.849	8330.7
11.0006	4235.80	9.150	-72.975	16.851	8337.4
11.1850	4328.00	9.255	-73.003	16.875	8406.6
11.2850	4377.00	9.310	-73.018	16.887	8443.3
11.6850	4577.00	9.537	-73.080	16.939	8593.3
11.7850	4628.00	9.595	-73.096	16.952	8631.6
11.9850	4728.00	9.709	-73.127	16.978	8706.6
12.0007	4736.00	9.718	-73.129	16.980	8712.6
12.1850	4830.00	9.822	-73.156	17.001	8763.7
12.2850	4880.00	9.877	-73.171	17.013	8790.9
12.5850	5033.00	10.046	-73.215	17.047	8874.2
12.6850	5083.00	10.102	-73.229	17.059	8901.4
12.7850	5134.00	10.158	-73.244	17.070	8929.1
12.8850	5186.00	10.216	-73.259	17.082	8957.4
12.9993	5244.30	10.280	-73.276	17.095	8989.1
13.2850	5390.00	10.438	-73.315	17.124	9056.8
13.3850	5442.00	10.494	-73.328	17.135	9081.0
13.5850	5544.00	10.605	-73.355	17.155	9128.3
13.6850	5596.00	10.661	-73.369	17.165	9152.5
13.7850	5647.00	10.716	-73.383	17.176	9176.2
13.9850	5751.00	10.829	-73.410	17.196	9224.5
13.9997	5758.50	10.837	-73.412	17.198	9228.0
14.0850	5802.00	10.883	-73.422	17.206	9232.9
14.3850	5958.00	11.049	-73.459	17.233	9250.3
14.4850	6009.00	11.104	-73.472	17.242	9256.0
14.7850	6165.00	11.270	-73.509	17.269	9273.5
14.8850	6216.00	11.324	-73.521	17.278	9279.2
15.0002	6275.90	11.388	-73.535	17.288	9285.9
15.2850	6424.00	11.543	-73.565	17.310	9289.5
15.3850	6475.00	11.597	-73.576	17.318	9290.7
15.8850	6735.00	11.870	-73.629	17.356	9297.1
15.9850	6786.00	11.923	-73.639	17.364	9298.3
16.0008	6794.20	11.932	-73.641	17.365	9298.5
16.4850	7046.00	12.193	-73.686	17.397	9298.5
16.5850	7097.00	12.246	-73.695	17.404	9298.5
16.9850	7305.00	12.462	-73.732	17.430	9298.5
16.9995	7312.40	12.470	-73.733	17.431	9298.5
17.0850	7356.00	12.515	-73.740	17.436	9298.5
17.5850	7616.00	12.782	-73.779	17.465	9298.5
17.6850	7667.00	12.835	-73.787	17.471	9298.5
17.9998	7830.70	13.003	-73.812	17.489	9298.5
18.1850	7927.00	13.101	-73.825	17.498	9298.5
18.2850	7978.00	13.153	-73.832	17.503	9298.5
18.7850	8238.00	13.418	-73.866	17.528	9298.5
18.8850	8289.00	13.470	-73.873	17.533	9298.5
19.0002	8348.90	13.531	-73.881	17.539	9298.5
19.2850	8497.00	13.681	-73.899	17.552	9298.5
19.3850	8548.00	13.733	-73.905	17.556	9298.5
19.8850	8808.00	13.997	-73.936	17.579	9298.5
19.9850	8859.00	14.049	-73.942	17.583	9298.5
20.0008	8867.20	14.057	-73.943	17.584	9298.5
20.4850	9119.00	14.311	-73.969	17.603	9298.5
20.5850	9170.00	14.362	-73.975	17.607	9298.5
20.9992	9385.40	14.579	-73.997	17.623	9298.5
21.0850	9430.00	14.624	-74.001	17.626	9298.5
21.1850	9481.00	14.675	-74.006	17.630	9298.5
21.5850	9689.00	14.884	-74.026	17.644	9298.5
21.6850	9740.00	14.935	-74.031	17.648	9298.5
21.9998	9903.70	15.100	-74.046	17.659	9298.5
22.1850	10000.00	15.196	-74.054	17.665	9298.5

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15.No5 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
22.2850	10051.00	15.247	-74.059	17.668	9298.5
22.7850	10311.00	15.507	-74.081	17.684	9298.5
22.8850	10362.00	15.558	-74.085	17.687	9298.5
23.0004	10422.00	15.618	-74.090	17.691	9298.5
23.2850	10570.00	15.765	-74.101	17.699	9298.5
23.3850	10621.00	15.816	-74.105	17.702	9298.5
23.8850	10881.00	16.075	-74.125	17.716	9298.5
23.9850	10932.00	16.126	-74.129	17.719	9298.5
24.0008	10940.20	16.134	-74.130	17.719	9298.5
24.4850	11192.00	16.384	-74.147	17.732	9298.5
24.5850	11243.00	16.435	-74.151	17.735	9298.5
24.6850	11295.00	16.487	-74.155	17.737	9298.5
24.7050	11306.00	16.497	-74.155	17.738	9298.5
24.7450	11326.00	16.517	-74.157	17.739	9298.5
24.7650	11337.00	16.528	-74.158	17.740	9298.5
24.8050	11357.00	16.548	-74.159	17.741	9298.5
24.8250	11368.00	16.559	-74.160	17.741	9298.5
24.8450	11378.00	16.569	-74.160	17.742	9298.5
24.8650	11389.00	16.580	-74.161	17.742	9298.5
24.9050	11409.00	16.600	-74.163	17.743	9298.5
24.9250	11420.00	16.611	-74.163	17.744	9298.5
24.9650	11440.00	16.631	-74.165	17.745	9298.5
24.9850	11451.00	16.642	-74.165	17.746	9298.5
25.0000	11458.50	16.649	-74.166	17.746	9298.5
25.0250	11471.00	16.661	-74.167	17.747	9298.5
25.0450	11482.00	16.672	-74.167	17.747	9298.5
25.0650	11492.00	16.682	-74.168	17.748	9298.5
25.0850	11503.00	16.693	-74.169	17.748	9298.5
25.1250	11523.00	16.713	-74.170	17.749	9298.5
25.1450	11534.00	16.724	-74.171	17.749	9298.5
25.1850	11554.00	16.744	-74.172	17.750	9298.5
25.2050	11565.00	16.755	-74.173	17.751	9298.5
25.2450	11585.00	16.774	-74.174	17.752	9298.5
25.2650	11596.00	16.785	-74.175	17.752	9298.5
25.2850	11606.00	16.795	-74.175	17.753	9298.5
25.3050	11617.00	16.806	-74.176	17.753	9298.5
25.3450	11637.00	16.826	-74.177	17.754	9298.5
25.3650	11648.00	16.837	-74.178	17.755	9298.5
25.4050	11668.00	16.857	-74.179	17.756	9298.5
25.4250	11679.00	16.868	-74.180	17.756	9298.5
25.4650	11699.00	16.888	-74.181	17.757	9298.5
25.4850	11710.00	16.898	-74.182	17.758	9298.5
25.5050	11720.00	16.908	-74.183	17.758	9298.5
25.5250	11731.00	16.919	-74.183	17.759	9298.5
25.5650	11751.00	16.939	-74.185	17.760	9298.5
25.5850	11762.00	16.950	-74.185	17.760	9298.5
25.6250	11782.00	16.970	-74.187	17.761	9298.5
25.6450	11793.00	16.981	-74.187	17.761	9298.5
25.6850	11813.00	17.001	-74.189	17.762	9298.5
25.7050	11824.00	17.012	-74.189	17.763	9298.5
25.7250	11834.00	17.021	-74.190	17.763	9298.5
25.7450	11845.00	17.032	-74.191	17.764	9298.5
25.7850	11865.00	17.052	-74.192	17.765	9298.5
25.8050	11876.00	17.063	-74.193	17.765	9298.5
25.8450	11896.00	17.083	-74.194	17.766	9298.5
25.8650	11907.00	17.094	-74.195	17.767	9298.5
25.8850	11917.00	17.104	-74.195	17.767	9298.5
25.9050	11928.00	17.115	-74.196	17.768	9298.5
25.9450	11948.00	17.135	-74.197	17.769	9298.5
25.9650	11959.00	17.145	-74.198	17.769	9298.5
26.0004	11976.70	17.163	-74.199	17.770	9298.5
26.0250	11990.00	17.176	-74.200	17.771	9298.5

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15.No5 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.0650	12010.00	17.196	-74.201	17.771	9298.5
26.0850	12021.00	17.207	-74.202	17.772	9298.5
26.1050	12031.00	17.217	-74.202	17.772	9298.5
26.1250	12042.00	17.228	-74.203	17.773	9298.5
26.1650	12062.00	17.247	-74.204	17.774	9298.5
26.1850	12073.00	17.258	-74.205	17.774	9298.5
26.2250	12093.00	17.278	-74.206	17.775	9298.5
26.2450	12104.00	17.289	-74.206	17.775	9298.5
26.2850	12124.00	17.309	-74.208	17.776	9298.5
26.3050	12135.00	17.319	-74.208	17.777	9298.5
26.3250	12145.00	17.329	-74.209	17.777	9298.5
26.3450	12156.00	17.340	-74.209	17.778	9298.5
26.3850	12176.00	17.360	-74.211	17.778	9298.5
26.4050	12187.00	17.371	-74.211	17.779	9298.5
26.4450	12207.00	17.391	-74.212	17.780	9298.5
26.4650	12218.00	17.401	-74.213	17.780	9298.5
26.5050	12238.00	17.421	-74.214	17.781	9298.5
26.5250	12249.00	17.432	-74.215	17.782	9298.5
26.5450	12259.00	17.442	-74.215	17.782	9298.5
26.5650	12270.00	17.453	-74.216	17.782	9298.5
26.6050	12290.00	17.472	-74.217	17.783	9298.5
26.6250	12301.00	17.483	-74.218	17.784	9298.5
26.6650	12321.00	17.503	-74.219	17.785	9298.5
26.6850	12332.00	17.514	-74.220	17.785	9298.5
26.7250	12352.00	17.534	-74.221	17.786	9298.5
26.7450	12363.00	17.545	-74.221	17.786	9298.5
26.7650	12373.00	17.554	-74.222	17.787	9298.5
26.7850	12384.00	17.565	-74.223	17.787	9298.5
26.8250	12404.00	17.585	-74.224	17.788	9298.5
26.8450	12415.00	17.596	-74.224	17.789	9298.5
26.8850	12435.00	17.616	-74.226	17.789	9298.5
26.9050	12446.00	17.627	-74.226	17.790	9298.5
26.9450	12466.00	17.646	-74.227	17.791	9298.5
26.9650	12477.00	17.657	-74.228	17.791	9298.5
26.9850	12487.00	17.667	-74.229	17.792	9298.5
26.9995	12495.00	17.675	-74.229	17.792	9298.5
27.0450	12518.00	17.698	-74.230	17.793	9298.5
27.0650	12529.00	17.709	-74.231	17.793	9298.5
27.1050	12549.00	17.728	-74.232	17.794	9298.5
27.1250	12560.00	17.739	-74.233	17.795	9298.5
27.1450	12570.00	17.749	-74.233	17.795	9298.5
27.1650	12581.00	17.760	-74.234	17.795	9298.5
27.2050	12601.00	17.780	-74.235	17.796	9298.5
27.2250	12612.00	17.791	-74.235	17.797	9298.5
27.2650	12632.00	17.810	-74.236	17.797	9298.5
27.2850	12643.00	17.821	-74.237	17.798	9298.5
27.3250	12663.00	17.841	-74.238	17.798	9298.5
27.3450	12674.00	17.852	-74.239	17.799	9298.5
27.3650	12684.00	17.862	-74.239	17.799	9298.5
27.3850	12695.00	17.873	-74.240	17.800	9298.5
27.4250	12715.00	17.892	-74.241	17.800	9298.5
27.4450	12726.00	17.903	-74.241	17.801	9298.5
27.4850	12746.00	17.923	-74.243	17.802	9298.5
27.5050	12757.00	17.934	-74.243	17.802	9298.5
27.5450	12777.00	17.954	-74.244	17.803	9298.5
27.5650	12788.00	17.964	-74.245	17.803	9298.5
27.5850	12798.00	17.974	-74.245	17.804	9298.5
27.6050	12809.00	17.985	-74.246	17.804	9298.5
27.6450	12829.00	18.005	-74.247	17.805	9298.5
27.6650	12840.00	18.016	-74.248	17.805	9298.5
27.7050	12860.00	18.036	-74.249	17.806	9298.5
27.7250	12871.00	18.046	-74.249	17.807	9298.5

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15.No5 C.O.T. (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
27.7650	12891.00	18.066	-74.250	17.807	9298.5
27.7850	12902.00	18.077	-74.251	17.808	9298.5
27.8050	12912.00	18.087	-74.252	17.808	9298.5
27.8250	12923.00	18.098	-74.252	17.809	9298.5
27.8650	12943.00	18.118	-74.253	17.809	9298.5
27.8850	12954.00	18.128	-74.254	17.810	9298.5
27.9250	12974.00	18.148	-74.255	17.810	9298.5
27.9450	12985.00	18.159	-74.255	17.811	9298.5
27.9850	13005.00	18.179	-74.257	17.812	9298.5
28.0001	13013.30	18.187	-74.257	17.812	9298.5
28.0250	13026.00	18.200	-74.258	17.811	8952.2
28.0450	13037.00	18.210	-74.258	17.811	8652.2
28.0850	13057.00	18.230	-74.259	17.810	8106.9
28.1050	13068.00	18.241	-74.260	17.810	7806.9
28.1450	13088.00	18.261	-74.261	17.809	7261.5
28.1650	13099.00	18.272	-74.261	17.808	6961.6
28.2050	13120.00	18.292	-74.262	17.807	6389.0
28.2450	13140.00	18.312	-74.263	17.806	5843.6
28.2650	13151.00	18.323	-74.264	17.806	5543.6
28.3050	13171.00	18.343	-74.265	17.805	4998.3
28.3250	13182.00	18.354	-74.265	17.805	4698.3
28.3650	13202.00	18.373	-74.266	17.804	4152.9
28.3850	13213.00	18.384	-74.267	17.803	3853.0
28.4050	13222.00	18.393	-74.267	17.803	3607.6
28.4250	13232.00	18.403	-74.268	17.802	3334.9
28.4650	13250.00	18.421	-74.269	17.802	2844.0
28.5250	13274.00	18.445	-74.270	17.801	2189.6
28.5850	13295.00	18.465	-74.271	17.800	1617.0
28.6450	13313.00	18.483	-74.272	17.799	1126.1
28.7050	13328.00	18.498	-74.273	17.798	717.1
28.7450	13336.00	18.506	-74.273	17.798	499.0
28.8050	13345.00	18.515	-74.274	17.797	253.5
28.8650	13351.00	18.521	-74.274	17.797	89.9
28.9250	13354.30	18.524	-74.274	17.797	0.0
29.6850	13354.30	18.524	-74.274	17.797	0.0

16.Slop Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-97.759	-11.181	0.0
0.0160	0.40	3.027	-97.759	-11.181	0.6
0.0960	2.40	3.063	-97.759	-11.181	3.8
0.1160	3.00	3.074	-97.759	-11.181	4.8
0.1760	4.50	3.101	-97.759	-11.181	7.2
0.1960	5.10	3.112	-97.759	-11.181	8.1
0.2360	6.10	3.130	-97.759	-11.181	9.7
0.2560	6.70	3.140	-97.759	-11.181	10.7
0.2760	7.20	3.149	-97.759	-11.181	11.5
0.2960	7.80	3.160	-97.759	-11.181	12.4
0.3160	8.30	3.169	-97.759	-11.181	13.2
0.3360	8.90	3.180	-97.759	-11.181	14.2
0.3560	9.40	3.189	-97.759	-11.181	15.0
0.3760	10.00	3.200	-97.759	-11.181	16.0
0.3960	10.50	3.209	-97.759	-11.181	16.7
0.4360	11.70	3.230	-97.759	-11.181	18.7
0.4560	12.20	3.239	-97.759	-11.181	19.5
0.5560	15.20	3.293	-97.759	-11.181	24.2
0.5760	15.70	3.302	-97.759	-11.181	25.0

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16.Slop Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.6560	18.10	3.345	-97.759	-11.181	28.9
0.6760	18.80	3.358	-97.759	-11.181	30.0
0.7760	21.80	3.412	-97.759	-11.181	34.8
0.7960	22.50	3.424	-97.759	-11.181	35.9
0.8360	23.70	3.446	-97.759	-11.181	37.8
0.8560	24.40	3.459	-97.759	-11.181	38.9
0.8760	25.00	3.469	-97.759	-11.181	39.9
0.8960	25.70	3.482	-97.759	-11.181	41.0
0.9160	26.30	3.493	-97.759	-11.181	41.9
0.9360	27.00	3.505	-97.759	-11.181	43.1
0.9560	27.60	3.516	-97.759	-11.181	44.0
0.9760	28.30	3.529	-97.759	-11.181	45.1
0.9960	28.90	3.539	-97.759	-11.181	46.1
1.0160	29.60	3.551	-97.759	-11.184	46.8
1.0360	30.20	3.560	-97.759	-11.188	47.3
1.0960	32.30	3.591	-97.759	-11.200	49.1
1.1160	32.90	3.600	-97.759	-11.204	49.6
1.3560	41.30	3.726	-97.760	-11.254	56.7
1.3760	42.10	3.739	-97.760	-11.259	57.4
1.4360	44.20	3.770	-97.761	-11.271	59.2
1.4560	45.00	3.782	-97.761	-11.276	59.9
1.4960	46.40	3.803	-97.761	-11.285	61.0
1.5160	47.20	3.815	-97.761	-11.289	61.7
1.5360	47.90	3.826	-97.761	-11.293	62.3
1.5560	48.70	3.838	-97.761	-11.298	63.0
1.5760	49.40	3.848	-97.761	-11.302	63.6
1.6160	51.00	3.872	-97.761	-11.312	64.9
1.6360	51.70	3.883	-97.761	-11.316	65.5
1.6760	53.30	3.907	-97.762	-11.326	66.9
1.6960	54.00	3.918	-97.762	-11.330	67.5
1.7560	56.40	3.954	-97.762	-11.344	69.5
1.7760	57.10	3.964	-97.762	-11.349	70.1
1.8960	61.90	4.036	-97.763	-11.377	74.2
1.9360	63.50	4.060	-97.763	-11.387	75.5
1.9560	64.40	4.074	-97.763	-11.392	76.3
2.0010	66.20	4.101	-97.763	-11.403	77.8
2.0360	67.60	4.119	-97.763	-11.410	79.2
2.0560	68.50	4.131	-97.763	-11.415	80.1
2.0960	70.10	4.151	-97.763	-11.423	81.7
2.1160	71.00	4.163	-97.763	-11.428	82.5
2.1360	71.80	4.173	-97.763	-11.432	83.3
2.1560	72.70	4.185	-97.763	-11.436	84.2
2.1760	73.50	4.195	-97.763	-11.440	85.0
2.1960	74.40	4.207	-97.764	-11.445	85.9
2.2160	75.20	4.217	-97.764	-11.449	86.7
2.2560	77.00	4.240	-97.764	-11.458	88.5
2.2760	77.80	4.251	-97.764	-11.462	89.3
2.3160	79.60	4.274	-97.764	-11.472	91.0
2.3360	80.40	4.284	-97.764	-11.476	91.8
2.6160	93.00	4.447	-97.765	-11.540	104.2
2.6360	94.00	4.460	-97.765	-11.545	105.2
2.6960	96.70	4.495	-97.765	-11.559	107.9
2.7160	97.70	4.507	-97.765	-11.564	108.9
2.7360	98.60	4.519	-97.765	-11.569	109.8
2.7560	99.60	4.532	-97.765	-11.574	110.8
2.7760	100.50	4.544	-97.765	-11.579	111.6
2.7960	101.50	4.557	-97.765	-11.584	112.6
2.8160	102.40	4.568	-97.765	-11.588	113.5
2.8360	103.40	4.581	-97.765	-11.594	114.5
2.8560	104.30	4.593	-97.766	-11.598	115.4
2.8960	106.30	4.618	-97.766	-11.608	117.4
2.9160	107.20	4.630	-97.766	-11.613	118.3

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16.Slop Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.9560	109.20	4.656	-97.766	-11.623	120.2
2.9760	110.10	4.668	-97.766	-11.628	121.1
3.0000	111.30	4.683	-97.766	-11.634	122.3
3.2160	122.10	4.804	-97.766	-11.682	134.5
3.2360	123.20	4.817	-97.766	-11.687	135.8
3.2960	126.20	4.850	-97.767	-11.700	139.2
3.3160	127.30	4.863	-97.767	-11.705	140.4
3.3560	129.30	4.885	-97.767	-11.714	142.7
3.3760	130.40	4.898	-97.767	-11.719	144.0
3.3960	131.40	4.909	-97.767	-11.724	145.1
3.4160	132.50	4.921	-97.767	-11.728	146.3
3.4360	133.50	4.933	-97.767	-11.733	147.5
3.4760	135.70	4.957	-97.767	-11.743	150.0
3.4960	136.70	4.969	-97.767	-11.747	151.1
3.5360	138.90	4.993	-97.767	-11.757	153.6
3.5560	139.90	5.004	-97.767	-11.761	154.7
3.6160	143.20	5.042	-97.767	-11.776	158.5
3.6360	144.20	5.053	-97.767	-11.781	159.6
3.8160	154.10	5.164	-97.768	-11.825	170.8
3.8360	155.30	5.178	-97.768	-11.830	172.2
3.8960	158.60	5.215	-97.768	-11.845	175.9
3.9160	159.80	5.228	-97.768	-11.850	177.3
3.9560	162.00	5.253	-97.768	-11.860	179.8
3.9760	163.20	5.266	-97.768	-11.865	181.1
3.9960	164.30	5.279	-97.768	-11.870	182.4
4.0160	165.50	5.291	-97.768	-11.875	183.9
4.0360	166.60	5.302	-97.768	-11.879	185.3
4.0560	167.80	5.314	-97.768	-11.884	186.8
4.0760	168.90	5.325	-97.768	-11.888	188.2
4.0960	170.10	5.337	-97.768	-11.893	189.8
4.1160	171.20	5.348	-97.768	-11.898	191.2
4.1560	173.60	5.372	-97.768	-11.907	194.2
4.1760	174.70	5.383	-97.768	-11.911	195.7
4.2760	180.70	5.442	-97.769	-11.935	203.3
4.2960	181.80	5.453	-97.769	-11.940	204.7
4.3760	186.60	5.501	-97.769	-11.959	210.9
4.3960	187.90	5.514	-97.769	-11.964	212.5
4.4960	193.90	5.574	-97.769	-11.988	220.2
4.5160	195.20	5.587	-97.769	-11.993	221.9
4.5560	197.60	5.611	-97.769	-12.002	224.9
4.5760	198.90	5.624	-97.769	-12.007	226.6
4.6160	201.30	5.648	-97.769	-12.017	229.7
4.6360	202.60	5.661	-97.769	-12.022	231.3
4.6560	203.80	5.673	-97.769	-12.027	232.9
4.6760	205.10	5.686	-97.769	-12.032	234.5
4.6960	206.30	5.698	-97.769	-12.037	236.1
4.7360	208.90	5.724	-97.769	-12.047	239.4
4.7560	210.10	5.736	-97.769	-12.052	240.9
4.7960	212.70	5.761	-97.770	-12.062	244.3
4.8160	213.90	5.773	-97.770	-12.067	245.8
4.9991	225.80	5.892	-97.770	-12.114	261.0
5.0960	232.10	5.948	-97.779	-12.134	288.3
5.1160	233.50	5.960	-97.780	-12.139	294.4
5.1760	237.40	5.995	-97.786	-12.151	311.4
5.1960	238.80	6.007	-97.788	-12.156	317.4
5.2160	240.10	6.019	-97.789	-12.160	323.1
5.2360	241.50	6.031	-97.791	-12.164	329.1
5.2560	242.80	6.043	-97.793	-12.169	334.8
5.2760	244.20	6.055	-97.795	-12.173	340.9
5.2960	245.50	6.067	-97.797	-12.177	346.5
5.3160	246.90	6.079	-97.799	-12.182	352.6
5.3360	248.20	6.091	-97.800	-12.186	358.2

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16.Slop Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
5.3760	251.00	6.116	-97.804	-12.195	370.4
5.3960	252.30	6.127	-97.806	-12.199	376.0
5.4360	255.10	6.152	-97.810	-12.208	388.2
5.4560	256.40	6.164	-97.811	-12.212	393.8
5.6960	273.20	6.313	-97.834	-12.266	466.7
5.7160	274.70	6.326	-97.836	-12.271	473.2
5.7360	276.10	6.338	-97.838	-12.276	479.3
5.7960	280.60	6.378	-97.844	-12.290	498.8
5.8160	282.20	6.393	-97.846	-12.295	505.8
5.8360	283.90	6.408	-97.849	-12.301	513.2
5.8560	285.70	6.424	-97.851	-12.306	521.0
5.9560	294.90	6.505	-97.864	-12.336	560.9
5.9995	299.60	6.547	-97.870	-12.351	581.3
6.0560	305.70	6.591	-97.906	-12.360	592.6
6.1560	316.70	6.670	-97.970	-12.376	613.0
6.3560	339.30	6.832	-98.103	-12.408	654.8
6.4560	350.80	6.915	-98.170	-12.425	676.1
6.5560	362.40	6.998	-98.238	-12.442	697.6
6.6560	374.10	7.083	-98.306	-12.459	719.3
6.7560	385.90	7.167	-98.375	-12.476	741.1
6.8560	397.80	7.253	-98.445	-12.493	763.2
6.9560	409.90	7.340	-98.516	-12.510	785.6
6.9994	415.20	7.378	-98.547	-12.518	795.4
7.0560	422.10	7.418	-98.569	-12.529	807.8
7.1560	434.40	7.489	-98.609	-12.547	829.8
7.2560	446.80	7.561	-98.649	-12.566	852.1
7.4560	472.00	7.707	-98.731	-12.605	897.2
7.5560	484.80	7.781	-98.772	-12.624	920.2
7.6560	497.70	7.856	-98.814	-12.644	943.3
7.8560	523.90	8.008	-98.899	-12.684	990.3
7.9560	537.20	8.085	-98.942	-12.704	1014.1
8.0000	543.10	8.119	-98.961	-12.713	1024.7
8.0560	550.60	8.156	-98.976	-12.724	1039.3
8.1560	564.10	8.224	-99.003	-12.745	1065.5
8.2560	577.70	8.292	-99.030	-12.765	1092.0
8.3560	591.50	8.360	-99.057	-12.786	1118.8
8.4560	605.40	8.430	-99.084	-12.807	1145.8
8.5560	619.40	8.500	-99.112	-12.829	1173.1
8.6560	633.50	8.570	-99.140	-12.850	1200.5
8.7560	647.70	8.641	-99.168	-12.872	1228.1
8.8560	662.10	8.713	-99.197	-12.893	1256.1
8.9560	676.60	8.785	-99.225	-12.915	1284.3
8.9998	683.00	8.817	-99.238	-12.925	1296.7
9.0560	691.20	8.853	-99.249	-12.937	1313.9
9.1560	705.90	8.919	-99.267	-12.958	1344.7
9.2560	720.70	8.984	-99.286	-12.980	1375.7
9.3560	735.70	9.051	-99.306	-13.002	1407.1
9.4560	750.80	9.118	-99.325	-13.024	1438.7
9.5560	766.00	9.186	-99.344	-13.046	1470.6
9.6560	781.30	9.254	-99.364	-13.068	1502.6
9.8560	812.30	9.391	-99.404	-13.113	1567.6
9.9560	828.00	9.461	-99.424	-13.136	1600.4
10.0003	835.00	9.492	-99.433	-13.146	1615.1
10.0560	843.80	9.528	-99.441	-13.158	1634.9
10.2560	875.80	9.657	-99.469	-13.203	1706.9
10.3560	892.00	9.722	-99.483	-13.226	1743.3
10.4560	908.30	9.788	-99.498	-13.248	1780.0
10.5560	924.70	9.855	-99.512	-13.271	1816.9
10.6560	941.20	9.921	-99.527	-13.294	1854.0
10.7560	957.90	9.989	-99.542	-13.318	1891.6
10.8560	974.70	10.057	-99.557	-13.341	1929.3
10.9560	991.60	10.125	-99.571	-13.365	1967.4

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16.Slop Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
10.9995	999.00	10.155	-99.578	-13.375	1984.0
11.0560	1008.60	10.191	-99.584	-13.388	2007.1
11.1560	1025.70	10.254	-99.595	-13.411	2048.1
11.2560	1043.00	10.319	-99.605	-13.434	2089.6
11.3560	1060.40	10.383	-99.616	-13.457	2131.4
11.4560	1077.90	10.448	-99.627	-13.480	2173.4
11.5560	1095.50	10.514	-99.638	-13.504	2215.7
11.6560	1113.20	10.580	-99.649	-13.527	2258.2
11.7560	1131.10	10.646	-99.660	-13.551	2301.1
11.8560	1149.10	10.713	-99.672	-13.575	2344.3
11.9560	1167.20	10.780	-99.683	-13.599	2387.8
12.0000	1175.20	10.810	-99.688	-13.610	2407.0
12.0560	1185.40	10.845	-99.693	-13.623	2433.1
12.1560	1203.70	10.909	-99.701	-13.646	2479.8
12.2560	1222.20	10.973	-99.709	-13.669	2527.1
12.3560	1240.80	11.037	-99.718	-13.693	2574.7
12.4560	1259.50	11.102	-99.727	-13.717	2622.5
12.5560	1278.30	11.167	-99.735	-13.740	2670.5
12.6560	1297.30	11.232	-99.744	-13.764	2719.1
12.7560	1316.40	11.298	-99.753	-13.789	2767.9
12.8560	1335.60	11.365	-99.761	-13.813	2817.0
12.9560	1354.90	11.432	-99.770	-13.837	2866.3
12.9998	1363.40	11.461	-99.774	-13.848	2888.0
13.0560	1374.30	11.496	-99.778	-13.861	2917.5
13.2560	1413.50	11.623	-99.792	-13.908	3023.8
13.3560	1433.30	11.687	-99.798	-13.932	3077.5
13.5560	1473.30	11.817	-99.812	-13.980	3185.9
13.7560	1513.70	11.948	-99.827	-14.029	3295.4
13.8560	1534.10	12.014	-99.834	-14.053	3350.7
13.9997	1563.70	12.110	-99.844	-14.089	3430.9
14.0560	1575.30	12.145	-99.847	-14.102	3464.1
14.2560	1616.90	12.272	-99.858	-14.150	3583.3
14.4560	1659.10	12.401	-99.869	-14.199	3704.3
14.5560	1680.30	12.465	-99.875	-14.223	3765.0
14.6560	1701.70	12.530	-99.880	-14.248	3826.3
14.7560	1723.20	12.596	-99.886	-14.273	3887.9
14.8560	1744.80	12.662	-99.892	-14.298	3949.8
14.9560	1766.50	12.728	-99.897	-14.323	4012.0
14.9998	1776.10	12.757	-99.900	-14.334	4039.5
15.1560	1810.30	12.856	-99.907	-14.371	4128.7
15.2560	1832.40	12.919	-99.912	-14.395	4186.3
15.3560	1854.60	12.984	-99.917	-14.419	4244.2
15.5560	1899.40	13.113	-99.926	-14.468	4361.1
15.7560	1944.60	13.243	-99.936	-14.517	4478.9
15.9560	1990.20	13.375	-99.946	-14.567	4597.9
15.9999	2000.30	13.404	-99.948	-14.578	4624.2
16.1560	2036.20	13.502	-99.955	-14.614	4681.5
16.2560	2059.30	13.566	-99.960	-14.637	4718.3
16.3560	2082.50	13.629	-99.964	-14.660	4755.3
16.5560	2129.10	13.757	-99.973	-14.707	4829.6
16.8560	2199.60	13.950	-99.987	-14.777	4942.1
16.9560	2223.20	14.015	-99.992	-14.801	4979.7
16.9999	2233.60	14.043	-99.994	-14.811	4996.3
17.2560	2294.30	14.202	-100.006	-14.864	5039.4
17.3560	2318.10	14.264	-100.011	-14.884	5056.3
17.4560	2342.00	14.327	-100.015	-14.905	5073.3
17.5560	2365.80	14.389	-100.020	-14.926	5090.1
17.6560	2389.70	14.452	-100.025	-14.946	5107.1
17.7560	2413.70	14.515	-100.029	-14.967	5124.1
17.8560	2437.60	14.578	-100.034	-14.988	5141.1
17.9560	2461.60	14.640	-100.039	-15.009	5158.2
17.9999	2472.10	14.668	-100.041	-15.018	5165.6

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16.Slop Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
18.0560	2485.50	14.702	-100.043	-15.028	5166.2
19.0002	2712.10	15.274	-100.083	-15.194	5176.6
19.1560	2749.50	15.366	-100.088	-15.217	5176.6
19.2560	2773.60	15.425	-100.092	-15.232	5176.6
19.9998	2952.10	15.863	-100.118	-15.342	5176.6
20.9998	3192.10	16.439	-100.148	-15.467	5176.6
21.9998	3432.10	17.004	-100.173	-15.574	5176.6
23.0002	3672.20	17.561	-100.196	-15.668	5176.6
24.0002	3912.20	18.110	-100.215	-15.750	5176.6
25.0002	4152.20	18.654	-100.232	-15.823	5176.6
26.0002	4392.20	19.193	-100.248	-15.887	5176.6
26.6160	4540.00	19.522	-100.257	-15.923	5176.6
26.6360	4544.90	19.533	-100.257	-15.924	5176.6
26.6560	4549.60	19.544	-100.257	-15.925	5176.6
26.6760	4554.50	19.555	-100.257	-15.926	5176.6
26.9998	4632.20	19.728	-100.262	-15.945	5176.6
27.9998	4872.20	20.260	-100.274	-15.998	5176.6
28.3760	4962.50	20.459	-100.281	-15.994	2429.1
28.4160	4971.90	20.480	-100.282	-15.994	2143.1
28.4360	4976.50	20.490	-100.283	-15.994	2003.1
28.4560	4980.90	20.500	-100.283	-15.994	1869.3
28.4760	4985.10	20.509	-100.283	-15.993	1741.5
28.4960	4989.20	20.518	-100.284	-15.993	1616.7
28.5160	4993.10	20.527	-100.284	-15.993	1498.0
28.5360	4996.90	20.535	-100.284	-15.993	1382.4
28.5560	5000.50	20.543	-100.285	-15.993	1272.9
28.5760	5004.00	20.551	-100.285	-15.993	1166.4
28.5960	5007.40	20.558	-100.285	-15.992	1063.0
28.6360	5013.60	20.572	-100.286	-15.992	874.3
28.6760	5019.20	20.584	-100.286	-15.992	703.9
28.6960	5021.70	20.590	-100.286	-15.992	627.8
28.7160	5024.10	20.595	-100.287	-15.992	554.8
28.7360	5026.40	20.600	-100.287	-15.992	484.9
28.7560	5028.50	20.605	-100.287	-15.992	421.0
28.7760	5030.50	20.609	-100.287	-15.991	360.1
28.7960	5032.30	20.613	-100.287	-15.991	305.3
28.8160	5034.00	20.617	-100.287	-15.991	253.6
28.8360	5035.50	20.620	-100.287	-15.991	208.0
28.8560	5036.80	20.623	-100.288	-15.991	168.4
28.8760	5038.00	20.626	-100.288	-15.991	131.9
28.8960	5039.10	20.628	-100.288	-15.991	98.4
28.9160	5040.00	20.630	-100.288	-15.991	71.0
28.9360	5040.70	20.632	-100.288	-15.991	49.7
28.9560	5041.30	20.633	-100.288	-15.991	31.5
28.9760	5041.80	20.634	-100.288	-15.991	16.3
28.9960	5042.10	20.635	-100.288	-15.991	7.2
29.0060	5042.20	20.635	-100.288	-15.991	4.1
29.0160	5042.30	20.635	-100.288	-15.991	3.1
29.0560	5042.50	20.636	-100.288	-15.991	1.0
29.0760	5042.60	20.636	-100.288	-15.991	0.0
29.8560	5042.60	20.636	-100.288	-15.991	0.0

17.Slop Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.020	-97.759	11.181	0.0
0.0080	0.20	3.024	-97.759	11.181	0.3
0.1080	2.70	3.069	-97.759	11.181	4.3
0.1280	3.30	3.079	-97.759	11.181	5.3
0.1880	4.80	3.106	-97.759	11.181	7.7
0.2080	5.40	3.117	-97.759	11.181	8.6
0.2280	5.90	3.126	-97.759	11.181	9.4
0.2480	6.50	3.137	-97.759	11.181	10.4
0.2880	7.50	3.155	-97.759	11.181	12.0
0.3080	8.10	3.166	-97.759	11.181	12.9
0.3280	8.60	3.175	-97.759	11.181	13.7
0.3680	9.80	3.196	-97.759	11.181	15.6
0.3880	10.30	3.205	-97.759	11.181	16.4
0.4080	10.90	3.216	-97.759	11.181	17.4
0.4280	11.40	3.225	-97.759	11.181	18.2
0.5080	13.80	3.268	-97.759	11.181	22.0
0.5280	14.30	3.277	-97.759	11.181	22.8
0.6880	19.10	3.363	-97.759	11.181	30.5
0.7080	19.70	3.374	-97.759	11.181	31.4
0.7280	20.40	3.387	-97.759	11.181	32.5
0.8080	22.80	3.430	-97.759	11.181	36.4
0.8280	23.50	3.442	-97.759	11.181	37.5
0.8480	24.10	3.453	-97.759	11.181	38.4
0.8680	24.80	3.466	-97.759	11.181	39.5
0.9080	26.00	3.487	-97.759	11.181	41.5
0.9280	26.70	3.500	-97.759	11.181	42.6
0.9480	27.30	3.511	-97.759	11.181	43.5
0.9880	28.70	3.536	-97.759	11.181	45.8
1.0013	29.10	3.543	-97.759	11.181	46.4
1.0280	30.00	3.557	-97.759	11.186	47.2
1.0480	30.60	3.566	-97.759	11.190	47.7
1.1280	33.40	3.608	-97.759	11.207	50.0
1.1480	34.00	3.617	-97.760	11.210	50.6
1.3280	40.30	3.711	-97.760	11.248	55.9
1.3480	41.10	3.723	-97.760	11.253	56.6
1.4280	43.90	3.766	-97.761	11.270	58.9
1.4480	44.70	3.778	-97.761	11.274	59.6
1.4680	45.40	3.788	-97.761	11.279	60.2
1.4880	46.20	3.800	-97.761	11.283	60.9
1.5280	47.60	3.821	-97.761	11.292	62.1
1.5480	48.40	3.833	-97.761	11.296	62.7
1.5680	49.10	3.844	-97.761	11.301	63.3
1.6080	50.70	3.868	-97.761	11.310	64.7
1.6280	51.40	3.878	-97.761	11.314	65.3
1.6480	52.20	3.890	-97.761	11.319	66.0
1.6680	52.90	3.901	-97.762	11.323	66.5
1.7280	55.30	3.937	-97.762	11.338	68.6
1.7480	56.00	3.948	-97.762	11.342	69.2
1.9680	64.80	4.080	-97.763	11.395	76.6
1.9880	65.70	4.093	-97.763	11.400	77.4
2.0005	66.20	4.101	-97.763	11.403	77.8
2.0480	68.10	4.126	-97.763	11.413	79.7
2.0680	69.00	4.137	-97.763	11.417	80.6
2.1080	70.60	4.158	-97.763	11.426	82.1
2.1280	71.50	4.169	-97.763	11.430	83.0
2.1480	72.30	4.180	-97.763	11.434	83.8
2.1680	73.20	4.191	-97.763	11.439	84.7
2.1880	74.00	4.202	-97.764	11.443	85.5
2.2080	74.90	4.213	-97.764	11.448	86.4
2.2280	75.70	4.224	-97.764	11.452	87.2
2.2680	77.50	4.247	-97.764	11.461	89.0
2.2880	78.30	4.257	-97.764	11.465	89.7
2.3480	81.00	4.292	-97.764	11.479	92.4

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17.Slop Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.3680	81.80	4.302	-97.764	11.483	93.2
2.5880	91.70	4.430	-97.765	11.534	103.0
2.6080	92.70	4.443	-97.765	11.539	104.0
2.6680	95.40	4.478	-97.765	11.553	106.6
2.6880	96.40	4.491	-97.765	11.558	107.6
2.7280	98.20	4.514	-97.765	11.567	109.4
2.7480	99.20	4.527	-97.765	11.572	110.4
2.7680	100.10	4.538	-97.765	11.577	111.3
2.7880	101.10	4.551	-97.765	11.582	112.2
2.8080	102.00	4.563	-97.765	11.586	113.1
2.8280	103.00	4.576	-97.765	11.591	114.1
2.8480	103.90	4.588	-97.766	11.596	115.0
2.8880	105.90	4.613	-97.766	11.606	117.0
2.9080	106.80	4.625	-97.766	11.611	117.9
2.9680	109.80	4.664	-97.766	11.626	120.8
2.9880	110.70	4.675	-97.766	11.631	121.7
3.0000	111.30	4.683	-97.766	11.634	122.3
3.2080	121.70	4.800	-97.766	11.680	134.1
3.2280	122.80	4.812	-97.766	11.685	135.3
3.2880	125.80	4.846	-97.767	11.699	138.7
3.3080	126.90	4.858	-97.767	11.703	140.0
3.3480	128.90	4.881	-97.767	11.712	142.3
3.3680	130.00	4.893	-97.767	11.717	143.5
3.3880	131.00	4.904	-97.767	11.722	144.6
3.4080	132.10	4.917	-97.767	11.727	145.9
3.4280	133.10	4.928	-97.767	11.731	147.0
3.4480	134.20	4.940	-97.767	11.736	148.3
3.4680	135.20	4.952	-97.767	11.740	149.4
3.5080	137.40	4.976	-97.767	11.750	151.9
3.5280	138.40	4.988	-97.767	11.755	153.0
3.5680	140.60	5.012	-97.767	11.765	155.5
3.5880	141.60	5.024	-97.767	11.769	156.6
3.8480	155.90	5.184	-97.768	11.833	172.9
3.8680	157.10	5.198	-97.768	11.838	174.2
3.9280	160.40	5.235	-97.768	11.853	178.0
3.9480	161.60	5.248	-97.768	11.858	179.3
3.9680	162.70	5.261	-97.768	11.863	180.6
3.9880	163.90	5.274	-97.768	11.868	181.9
3.9989	164.50	5.281	-97.768	11.871	182.6
4.0080	165.00	5.286	-97.768	11.873	183.2
4.0280	166.20	5.298	-97.768	11.878	184.8
4.0480	167.30	5.309	-97.768	11.882	186.2
4.0680	168.50	5.321	-97.768	11.887	187.7
4.0880	169.60	5.332	-97.768	11.891	189.1
4.1080	170.80	5.344	-97.768	11.896	190.7
4.1280	171.90	5.355	-97.768	11.900	192.1
4.1880	175.50	5.391	-97.768	11.915	196.7
4.2080	176.60	5.402	-97.768	11.919	198.1
4.4880	193.40	5.569	-97.769	11.986	219.6
4.5080	194.70	5.582	-97.769	11.991	221.2
4.5480	197.10	5.606	-97.769	12.000	224.3
4.5680	198.40	5.619	-97.769	12.005	226.0
4.6080	200.80	5.643	-97.769	12.015	229.0
4.6280	202.10	5.656	-97.769	12.020	230.7
4.6480	203.30	5.668	-97.769	12.025	232.2
4.6680	204.60	5.681	-97.769	12.030	233.9
4.6880	205.80	5.693	-97.769	12.035	235.4
4.7280	208.40	5.719	-97.769	12.045	238.8
4.7480	209.60	5.731	-97.769	12.050	240.3
4.7880	212.20	5.756	-97.770	12.060	243.6
4.8080	213.40	5.768	-97.770	12.065	245.1
4.9080	219.90	5.833	-97.770	12.091	253.5

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17.Slop Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.9280	221.10	5.845	-97.770	12.095	255.0
4.9880	225.00	5.884	-97.770	12.111	260.0
4.9994	225.80	5.892	-97.770	12.114	261.0
5.1080	232.90	5.955	-97.780	12.137	291.8
5.1280	234.30	5.967	-97.782	12.141	297.9
5.1880	238.20	6.002	-97.787	12.154	314.8
5.2080	239.60	6.014	-97.789	12.158	320.9
5.2280	240.90	6.026	-97.790	12.162	326.5
5.2480	242.30	6.038	-97.792	12.167	332.6
5.2680	243.60	6.050	-97.794	12.171	338.3
5.2880	245.00	6.062	-97.796	12.176	344.3
5.3080	246.30	6.074	-97.798	12.180	350.0
5.3280	247.70	6.086	-97.800	12.184	356.1
5.3480	249.00	6.098	-97.801	12.189	361.7
5.3880	251.80	6.123	-97.805	12.197	373.8
5.4080	253.10	6.134	-97.807	12.202	379.5
5.4880	258.70	6.184	-97.815	12.220	403.8
5.5080	260.00	6.196	-97.816	12.224	409.4
5.6480	269.80	6.283	-97.830	12.255	452.0
5.6680	271.30	6.296	-97.832	12.260	458.5
5.7280	275.50	6.333	-97.837	12.274	476.7
5.8080	281.50	6.386	-97.845	12.293	502.7
5.8280	283.20	6.401	-97.848	12.298	510.1
5.8480	285.00	6.417	-97.850	12.304	517.9
5.9480	294.10	6.498	-97.863	12.333	557.4
5.9994	299.60	6.547	-97.870	12.351	581.3
6.0480	304.80	6.584	-97.900	12.359	590.9
6.1480	315.90	6.664	-97.965	12.375	611.5
6.2480	327.10	6.745	-98.031	12.391	632.2
6.3480	338.40	6.826	-98.097	12.407	653.2
6.4480	349.80	6.908	-98.164	12.424	674.3
6.5480	361.40	6.991	-98.232	12.440	695.8
6.6480	373.10	7.075	-98.300	12.457	717.4
6.7480	384.90	7.160	-98.370	12.474	739.3
6.9480	408.90	7.333	-98.510	12.509	783.7
6.9996	415.20	7.378	-98.547	12.518	795.4
7.0480	421.10	7.412	-98.566	12.527	806.0
7.1480	433.40	7.483	-98.606	12.546	828.0
7.2480	445.80	7.555	-98.646	12.565	850.3
7.3480	458.30	7.628	-98.687	12.584	872.7
7.4480	471.00	7.701	-98.728	12.603	895.4
7.5480	483.80	7.775	-98.769	12.623	918.4
7.6480	496.70	7.850	-98.811	12.642	941.5
7.7480	509.70	7.925	-98.853	12.662	964.8
7.9480	536.10	8.078	-98.938	12.702	1012.2
8.0002	543.10	8.119	-98.961	12.713	1024.7
8.0480	549.50	8.151	-98.974	12.723	1037.1
8.1480	563.00	8.218	-99.000	12.743	1063.4
8.2480	576.60	8.286	-99.027	12.764	1089.8
8.4480	604.20	8.424	-99.082	12.806	1143.5
8.5480	618.20	8.494	-99.110	12.827	1170.7
8.6480	632.30	8.564	-99.138	12.848	1198.1
8.8480	660.90	8.707	-99.194	12.892	1253.7
8.9480	675.40	8.779	-99.223	12.913	1281.9
9.0001	683.00	8.817	-99.238	12.925	1296.7
9.0480	690.00	8.848	-99.247	12.935	1311.4
9.1480	704.70	8.913	-99.266	12.957	1342.2
9.2480	719.50	8.979	-99.285	12.978	1373.2
9.3480	734.50	9.046	-99.304	13.000	1404.6
9.4480	749.60	9.113	-99.323	13.022	1436.2
9.5480	764.80	9.180	-99.343	13.044	1468.1
9.6480	780.10	9.248	-99.363	13.066	1500.1

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17.Slop Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
9.7480	795.50	9.317	-99.382	13.089	1532.4
9.8480	811.10	9.386	-99.402	13.111	1565.0
9.9480	826.80	9.456	-99.422	13.134	1597.9
9.9999	835.00	9.492	-99.433	13.146	1615.1
10.0480	842.60	9.523	-99.440	13.157	1632.2
10.1480	858.50	9.587	-99.454	13.179	1668.0
10.2480	874.50	9.652	-99.468	13.201	1704.0
10.3480	890.70	9.717	-99.482	13.224	1740.4
10.4480	907.00	9.783	-99.497	13.247	1777.1
10.5480	923.40	9.849	-99.511	13.269	1814.0
10.6480	939.90	9.916	-99.526	13.292	1851.1
10.7480	956.50	9.983	-99.540	13.316	1888.4
10.8480	973.30	10.051	-99.555	13.339	1926.2
10.9480	990.20	10.119	-99.570	13.363	1964.2
10.9998	999.00	10.155	-99.578	13.375	1984.0
11.0480	1007.20	10.185	-99.583	13.386	2003.7
11.1480	1024.30	10.249	-99.594	13.409	2044.7
11.2480	1041.60	10.313	-99.605	13.432	2086.3
11.3480	1059.00	10.378	-99.615	13.455	2128.0
11.4480	1076.50	10.443	-99.626	13.478	2170.1
11.5480	1094.10	10.509	-99.637	13.502	2212.3
11.6480	1111.80	10.574	-99.648	13.525	2254.8
11.8480	1147.60	10.707	-99.671	13.573	2340.7
11.9480	1165.70	10.775	-99.682	13.597	2384.2
12.0002	1175.20	10.810	-99.688	13.610	2407.0
12.0480	1183.90	10.840	-99.692	13.621	2429.2
12.2480	1220.70	10.967	-99.709	13.668	2523.3
12.3480	1239.30	11.032	-99.717	13.691	2570.8
12.4480	1258.00	11.096	-99.726	13.715	2618.6
12.5480	1276.80	11.161	-99.734	13.738	2666.7
12.7480	1314.80	11.293	-99.752	13.787	2763.8
12.8480	1334.00	11.359	-99.761	13.811	2812.9
12.9480	1353.30	11.426	-99.769	13.835	2862.2
12.9998	1363.40	11.461	-99.774	13.848	2888.0
13.1480	1392.30	11.555	-99.784	13.883	2966.3
13.2480	1412.00	11.618	-99.791	13.906	3019.7
13.3480	1431.80	11.683	-99.798	13.930	3073.4
13.4480	1451.70	11.747	-99.805	13.954	3127.3
13.5480	1471.70	11.812	-99.812	13.978	3181.5
13.6480	1491.80	11.877	-99.819	14.002	3236.0
13.7480	1512.10	11.943	-99.826	14.027	3291.0
13.8480	1532.50	12.009	-99.833	14.051	3346.3
13.9480	1553.00	12.075	-99.840	14.076	3401.9
13.9999	1563.70	12.110	-99.844	14.089	3430.9
14.0480	1573.60	12.140	-99.847	14.100	3459.3
14.1480	1594.40	12.204	-99.852	14.124	3518.9
14.2480	1615.30	12.267	-99.858	14.149	3578.8
14.3480	1636.30	12.331	-99.863	14.173	3638.9
14.4480	1657.40	12.395	-99.869	14.197	3699.4
14.5480	1678.60	12.460	-99.874	14.222	3760.1
14.6480	1700.00	12.525	-99.880	14.246	3821.5
14.7480	1721.50	12.591	-99.886	14.271	3883.1
14.8480	1743.10	12.656	-99.891	14.296	3944.9
14.9480	1764.80	12.723	-99.897	14.321	4007.1
14.9998	1776.10	12.757	-99.900	14.334	4039.5
15.0480	1786.60	12.787	-99.902	14.345	4066.9
15.1480	1808.60	12.851	-99.907	14.369	4124.3
15.2480	1830.70	12.915	-99.912	14.393	4181.9
15.3480	1852.90	12.979	-99.916	14.418	4239.8
15.4480	1875.20	13.043	-99.921	14.442	4298.0
15.5480	1897.60	13.108	-99.926	14.466	4356.4
15.6480	1920.10	13.173	-99.931	14.491	4415.0

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17.Slop Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
15.7480	1942.80	13.238	-99.936	14.515	4474.2
15.9480	1988.40	13.370	-99.945	14.565	4593.2
16.0000	2000.30	13.404	-99.948	14.578	4624.2
16.0480	2011.30	13.434	-99.950	14.589	4641.7
16.2480	2057.50	13.561	-99.959	14.635	4715.4
16.4480	2103.90	13.688	-99.968	14.681	4789.4
16.6480	2150.70	13.816	-99.978	14.728	4864.1
16.8480	2197.70	13.945	-99.987	14.775	4939.0
16.9480	2221.30	14.009	-99.992	14.799	4976.7
16.9999	2233.60	14.043	-99.994	14.811	4996.3
17.2480	2292.40	14.197	-100.006	14.862	5038.0
17.3480	2316.20	14.259	-100.010	14.883	5054.9
17.4480	2340.10	14.322	-100.015	14.903	5071.9
17.5480	2363.90	14.384	-100.020	14.924	5088.8
17.7480	2411.70	14.510	-100.029	14.966	5122.7
17.8480	2435.70	14.573	-100.034	14.986	5139.8
17.9480	2459.60	14.635	-100.039	15.007	5156.7
18.0001	2472.10	14.668	-100.041	15.018	5165.6
19.0001	2712.10	15.274	-100.083	15.194	5176.6
20.0001	2952.10	15.863	-100.118	15.342	5176.6
20.6480	3107.60	16.236	-100.137	15.423	5176.6
20.7480	3131.70	16.294	-100.140	15.436	5176.6
20.9997	3192.10	16.439	-100.148	15.467	5176.6
21.9997	3432.10	17.004	-100.173	15.574	5176.6
23.0001	3672.20	17.561	-100.196	15.668	5176.6
24.0001	3912.20	18.110	-100.215	15.750	5176.6
25.0001	4152.20	18.654	-100.232	15.823	5176.6
26.0001	4392.20	19.193	-100.248	15.887	5176.6
27.0001	4632.20	19.728	-100.262	15.945	5176.6
28.0001	4872.20	20.260	-100.274	15.998	5176.6
28.1080	4898.10	20.317	-100.276	15.997	4388.6
28.1280	4903.00	20.328	-100.277	15.997	4239.5
28.3680	4960.60	20.455	-100.281	15.994	2486.9
28.3880	4965.30	20.465	-100.282	15.994	2343.9
28.4080	4970.10	20.476	-100.282	15.994	2197.9
28.4280	4974.70	20.486	-100.282	15.994	2057.9
28.4480	4979.10	20.496	-100.283	15.994	1924.0
28.4680	4983.40	20.505	-100.283	15.993	1793.2
28.4880	4987.60	20.515	-100.284	15.993	1665.4
28.5080	4991.60	20.523	-100.284	15.993	1543.7
28.5280	4995.40	20.532	-100.284	15.993	1428.1
28.5480	4999.10	20.540	-100.284	15.993	1315.5
28.5680	5002.60	20.548	-100.285	15.993	1209.0
28.5880	5006.00	20.555	-100.285	15.992	1105.5
28.6080	5009.30	20.562	-100.285	15.992	1005.1
28.6280	5012.40	20.569	-100.286	15.992	910.8
28.6480	5015.30	20.576	-100.286	15.992	822.6
28.6680	5018.10	20.582	-100.286	15.992	737.4
28.6880	5020.70	20.588	-100.286	15.992	658.3
28.7080	5023.20	20.593	-100.286	15.992	582.2
28.7280	5025.50	20.598	-100.287	15.992	512.2
28.7480	5027.70	20.603	-100.287	15.992	445.3
28.7680	5029.70	20.607	-100.287	15.992	384.4
28.7880	5031.60	20.612	-100.287	15.991	326.6
28.8080	5033.30	20.615	-100.287	15.991	274.9
28.8280	5034.90	20.619	-100.287	15.991	226.2
28.8480	5036.30	20.622	-100.288	15.991	183.6
28.8680	5037.60	20.625	-100.288	15.991	144.1
28.8880	5038.70	20.627	-100.288	15.991	110.6
28.9080	5039.70	20.629	-100.288	15.991	80.2
28.9280	5040.50	20.631	-100.288	15.991	55.8
28.9480	5041.10	20.633	-100.288	15.991	37.6

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17.Slop Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
28.9680	5041.60	20.634	-100.288	15.991	22.4
28.9880	5042.00	20.635	-100.288	15.991	10.2
29.0014	5042.20	20.635	-100.288	15.991	4.1
29.0480	5042.50	20.636	-100.288	15.991	1.0
29.0680	5042.60	20.636	-100.288	15.991	0.0
29.8480	5042.60	20.636	-100.288	15.991	0.0

18.No1 HFO Stor Tk(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	9.068	-110.075	-10.523	0.0
0.0580	2.40	9.113	-110.075	-10.523	8.3
0.1580	5.10	9.163	-110.075	-10.523	17.7
0.2580	7.70	9.212	-110.075	-10.523	26.8
0.6580	18.50	9.414	-110.075	-10.523	64.3
0.7580	21.10	9.462	-110.075	-10.523	73.3
0.9691	26.80	9.569	-110.075	-10.523	93.1
1.1580	31.90	9.664	-110.075	-10.523	93.1
1.2580	34.50	9.712	-110.075	-10.523	93.1
1.7580	48.00	9.964	-110.075	-10.523	93.1
1.8580	50.60	10.012	-110.075	-10.523	93.1
1.9691	53.60	10.068	-110.075	-10.523	93.1
2.2580	61.40	10.214	-110.075	-10.523	93.1
2.3580	64.00	10.262	-110.075	-10.523	93.1
2.7580	74.80	10.464	-110.075	-10.523	93.1
2.8580	77.40	10.513	-110.075	-10.523	93.1
2.9691	80.40	10.569	-110.075	-10.523	93.1
3.3580	90.90	10.764	-110.075	-10.523	93.1
3.4580	93.50	10.812	-110.075	-10.523	93.1
3.8580	104.30	11.013	-110.075	-10.523	93.1
3.9580	106.90	11.062	-110.075	-10.523	93.1
3.9728	107.30	11.069	-110.075	-10.523	93.1
4.3580	117.70	11.263	-110.075	-10.523	93.1
4.4580	120.30	11.312	-110.075	-10.523	93.1
4.9580	133.80	11.563	-110.075	-10.523	93.1
4.9695	134.10	11.569	-110.075	-10.523	93.1
5.0580	136.40	11.608	-110.075	-10.553	119.6
5.1580	139.30	11.658	-110.075	-10.591	153.0
5.2580	144.00	11.738	-110.075	-10.653	207.1
5.4580	153.60	11.901	-110.075	-10.778	317.7
5.7580	168.30	12.151	-110.075	-10.971	487.0
5.9680	178.80	12.330	-110.075	-11.108	607.9
6.1580	188.30	12.464	-110.075	-11.207	631.6
6.2580	193.40	12.535	-110.075	-11.260	644.4
6.3580	198.60	12.608	-110.075	-11.314	657.4
6.4580	203.70	12.680	-110.075	-11.367	670.1
6.6580	214.10	12.826	-110.075	-11.475	696.1
6.9580	230.00	13.050	-110.075	-11.641	735.8
6.9691	230.60	13.058	-110.075	-11.647	737.3
7.3580	251.60	13.316	-110.075	-11.813	793.2
7.4580	257.10	13.384	-110.075	-11.856	807.8
7.5580	262.70	13.453	-110.075	-11.900	822.7
7.6580	268.20	13.521	-110.075	-11.944	837.3
7.8580	279.40	13.658	-110.075	-12.032	867.1
7.9685	285.70	13.736	-110.075	-12.082	883.9
8.1580	296.50	13.856	-110.075	-12.152	914.3
8.5580	319.70	14.115	-110.075	-12.301	979.7
8.6580	325.60	14.181	-110.075	-12.339	996.3

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18.No1 HFO Stor Tk(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
8.7580	331.60	14.248	-110.075	-12.378	1013.2
8.8580	337.50	14.313	-110.075	-12.416	1029.8
8.9697	344.20	14.388	-110.075	-12.459	1048.7
9.0580	349.50	14.443	-110.075	-12.488	1064.5
9.3580	367.80	14.631	-110.075	-12.590	1119.0
9.7580	392.60	14.887	-110.075	-12.727	1192.9
9.9580	405.20	15.017	-110.075	-12.797	1230.4
9.9705	406.00	15.025	-110.075	-12.801	1232.8
10.2580	424.40	15.202	-110.075	-12.891	1290.6
10.6580	450.40	15.453	-110.075	-13.017	1372.3
10.7580	457.00	15.517	-110.075	-13.049	1393.0
10.8580	463.70	15.582	-110.075	-13.082	1414.1
10.9580	470.30	15.645	-110.075	-13.114	1434.8
10.9699	471.10	15.653	-110.075	-13.118	1437.3
11.1580	483.70	15.768	-110.075	-13.174	1478.9
11.4580	504.10	15.954	-110.075	-13.264	1546.3
11.5580	511.00	16.017	-110.075	-13.294	1569.1
11.6580	517.80	16.079	-110.075	-13.324	1591.5
11.7580	524.80	16.143	-110.075	-13.355	1614.7
11.8580	531.70	16.206	-110.075	-13.386	1637.4
11.9694	539.50	16.277	-110.075	-13.420	1663.2
12.0580	545.70	16.331	-110.075	-13.444	1669.1
12.9693	610.40	16.892	-110.075	-13.695	1730.8
13.8580	673.50	17.417	-110.075	-13.890	1730.8
13.9580	680.70	17.477	-110.075	-13.913	1730.8
13.9693	681.50	17.484	-110.075	-13.915	1730.8
14.9693	752.50	18.058	-110.075	-14.093	1730.8
15.9707	823.60	18.620	-110.075	-14.241	1730.8
16.2580	844.00	18.779	-110.075	-14.277	1730.8
16.3580	851.20	18.835	-110.075	-14.289	1730.8
16.6580	872.50	19.000	-110.075	-14.326	1730.8
16.9693	894.60	19.172	-110.075	-14.365	1730.8
17.9693	965.60	19.716	-110.075	-14.471	1730.8
18.7580	1021.60	20.140	-110.075	-14.543	1730.8
18.8580	1028.80	20.194	-110.075	-14.553	1730.8
18.9693	1036.70	20.254	-110.075	-14.563	1730.8
19.9693	1107.70	20.787	-110.075	-14.642	1730.8
20.9707	1178.80	21.316	-110.075	-14.712	1730.8
21.2580	1199.20	21.467	-110.075	-14.730	1730.8
21.3580	1206.40	21.520	-110.075	-14.736	1730.8
21.9693	1249.80	21.842	-110.075	-14.774	1730.8
22.3580	1277.40	22.046	-110.075	-14.768	781.4
22.4580	1283.80	22.093	-110.075	-14.767	561.3
22.5580	1289.10	22.133	-110.075	-14.765	379.0
22.6580	1293.40	22.164	-110.075	-14.764	231.1
22.7580	1296.60	22.188	-110.075	-14.764	121.0
22.8580	1298.80	22.204	-110.075	-14.763	45.3
22.9580	1300.00	22.213	-110.075	-14.763	4.0
23.0085	1300.10	22.214	-110.075	-14.763	0.6
23.0580	1300.20	22.215	-110.075	-14.762	0.0
23.2580	1300.20	22.215	-110.075	-14.762	0.0

19.No1 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	9.068	-110.075	10.523	0.0
0.0260	1.22	9.091	-110.075	10.523	4.2
0.3260	9.26	9.241	-110.075	10.523	32.1
0.4260	11.95	9.291	-110.075	10.523	41.5
0.9806	26.81	9.569	-110.075	10.523	93.1
1.1260	30.71	9.642	-110.075	10.523	93.1
1.2260	33.40	9.692	-110.075	10.523	93.1
1.9260	52.16	10.041	-110.075	10.523	93.1
1.9805	53.63	10.068	-110.075	10.523	93.1
2.0260	54.85	10.091	-110.075	10.523	93.1
2.7260	73.61	10.441	-110.075	10.523	93.1
2.8260	76.30	10.492	-110.075	10.523	93.1
3.5260	95.06	10.842	-110.075	10.523	93.1
3.6260	97.75	10.892	-110.075	10.523	93.1
4.2260	113.83	11.192	-110.075	10.523	93.1
4.3260	116.52	11.242	-110.075	10.523	93.1
4.9806	134.06	11.569	-110.075	10.523	93.1
5.0260	135.28	11.592	-110.073	10.554	96.5
5.1260	137.97	11.642	-110.070	10.622	104.1
5.2260	140.54	11.690	-110.066	10.687	111.3
5.3260	143.09	11.738	-110.062	10.752	118.5
5.4260	145.67	11.786	-110.059	10.817	125.8
5.5260	148.28	11.835	-110.055	10.883	133.1
5.6260	150.93	11.884	-110.051	10.950	140.6
5.7260	153.61	11.935	-110.048	11.018	148.1
5.8260	156.33	11.985	-110.044	11.087	155.8
5.9260	159.07	12.037	-110.040	11.157	163.5
5.9805	160.58	12.065	-110.038	11.195	167.8
6.0260	161.85	12.089	-110.035	11.226	170.1
6.1260	164.67	12.142	-110.029	11.296	175.4
6.2260	167.32	12.191	-110.024	11.362	180.3
6.3260	169.78	12.238	-110.018	11.423	184.9
6.4260	172.27	12.284	-110.013	11.484	189.5
6.5260	174.78	12.331	-110.008	11.546	194.2
6.6260	177.32	12.379	-110.002	11.609	198.9
6.7260	179.88	12.427	-109.997	11.672	203.6
6.8260	182.48	12.476	-109.991	11.737	208.5
6.9260	185.09	12.525	-109.985	11.801	213.3
6.9790	186.70	12.555	-109.982	11.841	216.3
7.0260	188.12	12.581	-109.981	11.870	218.9
7.1260	191.26	12.639	-109.979	11.934	224.5
7.2260	194.44	12.697	-109.978	11.999	230.1
7.3260	197.66	12.756	-109.976	12.065	235.9
7.4260	200.90	12.815	-109.974	12.131	241.7
7.5260	204.18	12.875	-109.972	12.199	247.5
7.6260	207.50	12.936	-109.970	12.266	253.4
7.7260	210.84	12.997	-109.968	12.335	259.4
7.8260	214.22	13.059	-109.966	12.404	265.4
7.9260	217.63	13.122	-109.964	12.474	271.5
7.9804	219.51	13.156	-109.963	12.512	274.8
8.0260	221.08	13.183	-109.962	12.538	277.9
8.1260	224.56	13.243	-109.961	12.596	284.6
8.2260	228.07	13.304	-109.960	12.654	291.3
8.3260	231.62	13.365	-109.959	12.713	298.2
8.4260	235.20	13.427	-109.957	12.772	305.1
8.5260	238.81	13.490	-109.956	12.832	312.0
8.6260	242.46	13.553	-109.955	12.892	319.0
8.7260	246.14	13.617	-109.953	12.953	326.1
8.8260	249.85	13.681	-109.952	13.015	333.3
8.9260	253.59	13.745	-109.951	13.077	340.5
8.9805	255.65	13.781	-109.950	13.111	344.4
9.0260	257.37	13.809	-109.950	13.135	348.0
9.1260	261.19	13.871	-109.949	13.187	355.9

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19.No1 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
9.2260	265.03	13.933	-109.948	13.240	363.8
9.3260	268.91	13.996	-109.947	13.293	371.9
9.4260	272.82	14.060	-109.947	13.347	379.9
9.5260	276.77	14.124	-109.946	13.402	388.1
9.6260	280.75	14.189	-109.945	13.456	396.4
9.7260	284.76	14.254	-109.944	13.511	404.7
9.8260	288.81	14.319	-109.943	13.567	413.0
9.9260	292.88	14.386	-109.942	13.623	421.5
9.9804	295.12	14.422	-109.942	13.654	426.1
10.0260	297.00	14.451	-109.942	13.676	430.3
10.1260	301.14	14.514	-109.941	13.724	439.4
10.2260	305.32	14.578	-109.941	13.772	448.7
10.3260	309.53	14.642	-109.940	13.821	458.0
10.4260	313.78	14.707	-109.940	13.871	467.5
10.5260	318.06	14.772	-109.939	13.920	477.0
10.6260	322.37	14.838	-109.939	13.970	486.5
10.7260	326.71	14.904	-109.938	14.021	496.1
10.8260	331.09	14.971	-109.938	14.072	505.8
10.9260	335.51	15.038	-109.937	14.123	515.6
10.9803	337.92	15.075	-109.937	14.151	521.0
11.0260	339.95	15.104	-109.937	14.171	525.8
11.1260	344.43	15.168	-109.937	14.216	536.4
11.2260	348.94	15.233	-109.937	14.261	547.0
11.3260	353.49	15.298	-109.936	14.307	557.8
11.4260	358.06	15.363	-109.936	14.352	568.6
11.5260	362.68	15.429	-109.936	14.398	579.6
11.6260	367.32	15.496	-109.936	14.445	590.5
11.7260	372.00	15.563	-109.936	14.492	601.6
11.8260	376.71	15.630	-109.935	14.539	612.7
11.9260	381.45	15.698	-109.935	14.586	624.0
11.9805	384.06	15.735	-109.935	14.612	630.1
12.0260	386.23	15.764	-109.935	14.629	639.4
12.1260	391.04	15.829	-109.934	14.667	659.9
12.2260	395.89	15.894	-109.934	14.705	680.6
12.3260	400.88	15.962	-109.933	14.745	701.9
12.5260	410.98	16.098	-109.932	14.824	745.1
12.6260	416.04	16.166	-109.931	14.864	766.7
12.8260	426.14	16.302	-109.930	14.943	809.8
12.9260	431.20	16.370	-109.929	14.983	831.4
12.9805	433.95	16.407	-109.929	15.005	843.1
13.0260	436.25	16.436	-109.929	15.019	843.1
13.1260	441.31	16.500	-109.928	15.050	843.1
13.3260	451.41	16.629	-109.927	15.111	843.1
13.4260	456.47	16.693	-109.926	15.142	843.1
13.6260	466.57	16.821	-109.925	15.203	843.1
13.7260	471.63	16.886	-109.925	15.234	843.1
13.9260	481.73	17.014	-109.923	15.295	843.1
13.9805	484.49	17.049	-109.923	15.312	843.1
14.0260	486.79	17.077	-109.923	15.323	843.1
14.1260	491.84	17.139	-109.922	15.348	843.1
14.2260	496.90	17.200	-109.922	15.373	843.1
14.4260	507.00	17.323	-109.921	15.423	843.1
14.5260	512.06	17.385	-109.920	15.448	843.1
14.7260	522.16	17.508	-109.919	15.498	843.1
14.8260	527.22	17.570	-109.919	15.523	843.1
14.9260	532.27	17.631	-109.918	15.547	843.1
14.9806	535.03	17.665	-109.918	15.561	843.1
15.0260	537.32	17.692	-109.918	15.570	843.1
15.1260	542.38	17.752	-109.917	15.591	843.1
15.2260	547.43	17.811	-109.917	15.612	843.1
15.3260	552.49	17.871	-109.917	15.632	843.1
15.5260	562.59	17.990	-109.916	15.673	843.1

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19.No1 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
15.6260	567.65	18.050	-109.915	15.694	843.1
15.8260	577.75	18.169	-109.915	15.735	843.1
15.9260	582.81	18.229	-109.914	15.756	843.1
15.9805	585.56	18.261	-109.914	15.767	843.1
16.1260	592.91	18.345	-109.914	15.792	843.1
16.2260	597.97	18.403	-109.913	15.809	843.1
16.3260	603.02	18.461	-109.913	15.827	843.1
16.4260	608.08	18.519	-109.913	15.844	843.1
16.6260	618.18	18.635	-109.912	15.879	843.1
16.7260	623.24	18.693	-109.912	15.896	843.1
16.9260	633.34	18.809	-109.911	15.931	843.1
16.9805	636.10	18.841	-109.911	15.940	843.1
17.0260	638.40	18.867	-109.911	15.947	843.1
17.2260	648.50	18.981	-109.910	15.976	843.1
17.3260	653.56	19.038	-109.910	15.991	843.1
17.4260	658.61	19.094	-109.910	16.006	843.1
17.5260	663.67	19.151	-109.909	16.021	843.1
17.7260	673.77	19.265	-109.909	16.050	843.1
17.8260	678.83	19.322	-109.908	16.065	843.1
17.9805	686.63	19.410	-109.908	16.088	843.1
18.0260	688.93	19.435	-109.908	16.094	843.1
18.1260	693.99	19.491	-109.908	16.107	843.1
18.3260	704.09	19.603	-109.907	16.132	843.1
18.4260	709.15	19.659	-109.907	16.145	843.1
18.5260	714.20	19.715	-109.907	16.158	843.1
18.6260	719.26	19.771	-109.907	16.171	843.1
18.8260	729.36	19.883	-109.906	16.196	843.1
18.9260	734.42	19.939	-109.906	16.209	843.1
18.9805	737.17	19.969	-109.906	16.216	843.1
19.1260	744.52	20.049	-109.906	16.232	843.1
19.2260	749.58	20.105	-109.906	16.243	843.1
19.4260	759.68	20.215	-109.905	16.265	843.1
19.5260	764.74	20.270	-109.905	16.277	843.1
19.6260	769.79	20.325	-109.905	16.288	843.1
19.7260	774.85	20.381	-109.905	16.299	843.1
19.9260	784.95	20.491	-109.904	16.321	843.1
19.9805	787.71	20.521	-109.904	16.327	843.1
20.0260	790.01	20.546	-109.904	16.331	843.1
20.2260	800.11	20.655	-109.904	16.351	843.1
20.3260	805.17	20.710	-109.903	16.361	843.1
20.5260	815.27	20.819	-109.903	16.380	843.1
20.6260	820.33	20.873	-109.903	16.390	843.1
20.7260	825.38	20.928	-109.903	16.400	843.1
20.8260	830.44	20.983	-109.902	16.410	843.1
20.9805	838.24	21.067	-109.902	16.425	843.1
21.0260	840.54	21.092	-109.902	16.429	843.1
21.1260	845.60	21.146	-109.902	16.438	843.1
21.3260	855.70	21.254	-109.901	16.455	843.1
21.4260	860.76	21.308	-109.901	16.463	843.1
21.6260	870.86	21.416	-109.901	16.481	843.1
21.7260	875.92	21.470	-109.901	16.489	843.1
21.8260	880.97	21.524	-109.900	16.498	843.1
21.9260	886.03	21.578	-109.900	16.506	843.1
21.9804	888.78	21.607	-109.900	16.511	843.1
22.1260	896.13	21.685	-109.899	16.514	646.3
22.2260	901.19	21.739	-109.898	16.517	510.8
22.3260	906.24	21.793	-109.898	16.519	375.6
22.4260	910.99	21.843	-109.897	16.521	248.4
22.5260	914.73	21.883	-109.897	16.523	148.3
22.6260	917.43	21.912	-109.896	16.524	76.0
22.7260	919.07	21.929	-109.896	16.524	32.1
22.8260	919.78	21.937	-109.896	16.525	13.1

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19.No1 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
22.9260	920.16	21.941	-109.896	16.525	2.9
23.0007	920.26	21.942	-109.896	16.525	0.2
23.0260	920.30	21.942	-109.896	16.524	0.0
23.2260	920.30	21.942	-109.896	16.524	0.0

20.No2 HFO Stor Tk(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	11.550	-113.900	-14.623	0.0
0.1000	0.50	11.600	-113.900	-14.623	0.3
0.2000	0.90	11.640	-113.900	-14.623	0.6
0.4000	1.90	11.740	-113.900	-14.623	1.3
0.7000	3.70	11.919	-113.900	-14.623	2.5
0.8000	4.40	11.989	-113.900	-14.623	3.0
0.9625	5.70	12.119	-113.900	-14.623	3.9
1.1000	6.80	12.185	-113.900	-14.669	5.0
1.3000	8.60	12.293	-113.900	-14.744	6.7
1.5000	10.60	12.413	-113.900	-14.828	8.6
1.7000	12.80	12.545	-113.900	-14.920	10.7
1.9000	15.20	12.689	-113.900	-15.020	13.0
1.9692	16.10	12.743	-113.900	-15.058	13.9
2.0000	16.50	12.759	-113.914	-15.066	15.4
2.3000	20.10	12.905	-114.037	-15.140	29.0
2.4000	21.40	12.958	-114.081	-15.167	33.9
2.6000	23.80	13.055	-114.163	-15.216	43.0
2.7000	25.80	13.136	-114.231	-15.257	50.6
2.8000	29.40	13.283	-114.354	-15.332	64.2
2.9000	33.10	13.433	-114.481	-15.408	78.2
2.9658	35.60	13.534	-114.566	-15.459	87.6
3.0000	36.90	13.558	-114.603	-15.468	89.5
3.1000	40.90	13.634	-114.715	-15.497	95.4
3.2000	45.00	13.711	-114.830	-15.527	101.5
3.3000	49.30	13.792	-114.951	-15.558	107.8
3.4000	53.70	13.874	-115.075	-15.590	114.3
3.5000	58.30	13.961	-115.204	-15.623	121.1
3.6000	63.10	14.051	-115.339	-15.658	128.2
3.7000	68.10	14.145	-115.479	-15.694	135.6
3.8000	73.30	14.243	-115.625	-15.732	143.2
3.9000	78.60	14.342	-115.774	-15.770	151.0
3.9661	82.30	14.412	-115.878	-15.797	156.5
4.0000	84.20	14.433	-115.909	-15.803	159.6
4.1000	89.90	14.497	-116.003	-15.820	168.9
4.2000	95.90	14.563	-116.101	-15.838	178.6
4.3000	102.10	14.632	-116.203	-15.857	188.7
4.4000	108.60	14.705	-116.309	-15.876	199.3
4.5000	115.30	14.779	-116.419	-15.896	210.2
4.6000	122.20	14.856	-116.532	-15.917	221.5
4.7000	129.40	14.936	-116.650	-15.939	233.2
4.8000	136.80	15.018	-116.772	-15.961	245.2
4.9000	144.50	15.104	-116.898	-15.984	257.8
4.9662	149.80	15.163	-116.985	-16.000	266.4
5.0000	152.50	15.184	-117.017	-16.006	270.9
5.1000	160.70	15.249	-117.112	-16.023	284.4
5.2000	169.10	15.315	-117.211	-16.041	298.2
5.3000	177.90	15.384	-117.314	-16.060	312.8
5.4000	186.90	15.454	-117.419	-16.079	327.6
5.5000	196.10	15.527	-117.526	-16.098	342.8
5.6000	205.70	15.602	-117.639	-16.119	358.6

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20.No2 HFO Stor Tk(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
5.7000	215.50	15.679	-117.753	-16.139	374.8
5.8000	225.60	15.759	-117.871	-16.161	391.4
5.9000	236.00	15.840	-117.993	-16.183	408.6
5.9670	243.10	15.896	-118.076	-16.198	420.3
6.0000	246.60	15.917	-118.106	-16.204	426.3
6.1000	257.60	15.983	-118.202	-16.221	445.0
6.2000	268.80	16.049	-118.300	-16.239	464.1
6.3000	280.30	16.118	-118.400	-16.258	483.6
6.4000	292.10	16.189	-118.503	-16.277	503.7
6.5000	304.20	16.261	-118.608	-16.296	524.3
6.6000	316.60	16.335	-118.717	-16.316	545.4
6.7000	329.20	16.410	-118.826	-16.336	566.9
6.8000	342.20	16.488	-118.940	-16.357	589.0
6.9000	355.50	16.567	-119.056	-16.379	611.7
6.9667	364.50	16.621	-119.134	-16.393	627.0
7.0000	369.00	16.642	-119.164	-16.399	635.2
7.1000	382.90	16.708	-119.258	-16.416	660.3
7.2000	397.10	16.775	-119.353	-16.434	686.1
7.3000	411.60	16.844	-119.450	-16.452	712.3
7.4000	426.40	16.914	-119.550	-16.470	739.2
7.5000	441.40	16.985	-119.651	-16.489	766.3
7.6000	456.80	17.058	-119.754	-16.508	794.2
7.7000	472.50	17.132	-119.859	-16.528	822.7
7.8000	488.50	17.208	-119.967	-16.548	851.7
7.9000	504.80	17.285	-120.076	-16.568	881.2
7.9669	515.90	17.338	-120.151	-16.582	901.3
8.0000	521.40	17.360	-120.179	-16.588	911.1
8.1000	538.30	17.426	-120.264	-16.605	941.3
8.2000	555.40	17.493	-120.350	-16.623	971.9
8.3000	572.90	17.561	-120.438	-16.641	1003.1
8.4000	590.60	17.631	-120.527	-16.659	1034.8
8.5000	608.60	17.701	-120.617	-16.677	1066.9
8.6000	626.80	17.772	-120.709	-16.696	1099.4
8.7000	645.30	17.845	-120.802	-16.715	1132.5
8.8000	664.10	17.918	-120.896	-16.734	1166.1
8.9000	683.10	17.993	-120.992	-16.754	1200.0
8.9667	695.90	18.043	-121.056	-16.767	1222.9
9.0000	702.30	18.064	-121.079	-16.773	1237.7
9.1000	721.80	18.130	-121.148	-16.793	1283.0
9.2000	741.50	18.195	-121.218	-16.812	1328.6
9.3000	761.40	18.262	-121.289	-16.832	1374.8
9.4000	781.60	18.329	-121.360	-16.851	1421.6
9.5000	802.00	18.398	-121.433	-16.872	1468.9
9.6000	822.70	18.467	-121.507	-16.892	1516.9
9.7000	843.60	18.537	-121.581	-16.913	1565.4
9.8000	865.30	18.609	-121.658	-16.934	1615.7
9.9671	903.90	18.738	-121.795	-16.972	1705.2
10.0000	911.50	18.760	-121.815	-16.978	1705.2
10.1000	934.50	18.827	-121.876	-16.998	1705.2
10.2000	957.60	18.895	-121.938	-17.017	1705.2
10.3000	980.60	18.962	-121.999	-17.036	1705.2
10.5000	1026.80	19.097	-122.121	-17.075	1705.2
10.6000	1049.80	19.164	-122.182	-17.094	1705.2
10.7000	1072.90	19.232	-122.244	-17.113	1705.2
10.8000	1095.90	19.299	-122.305	-17.133	1705.2
10.9671	1134.50	19.412	-122.407	-17.165	1705.2
11.0000	1142.10	19.432	-122.420	-17.169	1705.2
11.1000	1165.10	19.493	-122.461	-17.182	1705.2
11.3000	1211.30	19.616	-122.542	-17.207	1705.2
11.4000	1234.30	19.678	-122.583	-17.220	1705.2
11.5000	1257.40	19.739	-122.623	-17.233	1705.2
11.6000	1280.40	19.800	-122.664	-17.245	1705.2

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20.No2 HFO Stor Tk(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
11.8000	1326.60	19.923	-122.745	-17.271	1705.2
11.9000	1349.60	19.985	-122.786	-17.283	1705.2
11.9671	1365.10	20.026	-122.813	-17.292	1705.2
12.0000	1372.70	20.045	-122.822	-17.295	1705.2
12.1000	1395.70	20.103	-122.851	-17.304	1705.2
12.3000	1441.90	20.220	-122.909	-17.322	1705.2
12.4000	1464.90	20.278	-122.938	-17.331	1705.2
12.5000	1488.00	20.336	-122.966	-17.340	1705.2
12.6000	1511.00	20.394	-122.995	-17.350	1705.2
12.8000	1557.20	20.511	-123.053	-17.368	1705.2
12.9000	1580.20	20.569	-123.082	-17.377	1705.2
12.9671	1595.70	20.608	-123.101	-17.383	1705.2
13.1000	1626.40	20.683	-123.130	-17.392	1705.2
13.2000	1649.40	20.739	-123.151	-17.399	1705.2
13.3000	1672.50	20.795	-123.173	-17.405	1705.2
13.4000	1695.50	20.851	-123.194	-17.412	1705.2
13.6000	1741.70	20.963	-123.237	-17.425	1705.2
13.7000	1764.70	21.019	-123.259	-17.432	1705.2
13.8000	1787.80	21.075	-123.280	-17.439	1705.2
13.9000	1810.80	21.131	-123.302	-17.445	1705.2
13.9671	1826.30	21.169	-123.316	-17.450	1705.2
14.1000	1857.00	21.242	-123.338	-17.457	1705.2
14.2000	1880.00	21.296	-123.355	-17.462	1705.2
14.3000	1903.10	21.351	-123.372	-17.468	1705.2
14.4000	1926.10	21.406	-123.389	-17.473	1705.2
14.6000	1972.30	21.515	-123.422	-17.484	1705.2
14.7000	1995.30	21.570	-123.439	-17.489	1705.2
14.8000	2018.40	21.625	-123.456	-17.494	1705.2
14.9000	2041.40	21.679	-123.473	-17.499	1705.2
14.9671	2056.90	21.716	-123.484	-17.503	1705.2
15.1000	2087.60	21.788	-123.502	-17.509	1705.2
15.2000	2110.60	21.841	-123.515	-17.513	1705.2
15.3000	2133.70	21.895	-123.528	-17.517	1705.2
15.4000	2156.80	21.949	-123.542	-17.521	1705.2
15.5000	2179.80	22.003	-123.555	-17.525	1705.2
15.6000	2202.90	22.057	-123.568	-17.530	1705.2
15.7000	2225.90	22.110	-123.581	-17.534	1705.2
15.9000	2272.10	22.218	-123.608	-17.542	1705.2
15.9670	2287.50	22.254	-123.617	-17.545	1705.2
16.0000	2295.10	22.271	-123.621	-17.546	1705.2
16.1000	2318.20	22.325	-123.632	-17.550	1705.2
16.2000	2341.20	22.378	-123.642	-17.553	1705.2
16.4000	2387.40	22.484	-123.664	-17.560	1705.2
16.5000	2410.40	22.537	-123.675	-17.563	1705.2
16.6000	2433.50	22.590	-123.686	-17.567	1705.2
16.7000	2456.50	22.643	-123.697	-17.570	1705.2
16.9000	2502.70	22.750	-123.719	-17.577	1705.2
16.9670	2518.10	22.785	-123.726	-17.579	1705.2
17.0000	2525.70	22.802	-123.729	-17.580	1705.2
17.2000	2571.90	22.907	-123.747	-17.586	1705.2
17.3000	2594.90	22.960	-123.756	-17.589	1705.2
17.4000	2618.00	23.012	-123.765	-17.592	1705.2
17.5000	2641.00	23.065	-123.774	-17.594	1705.2
17.7000	2687.20	23.170	-123.793	-17.600	1705.2
17.8000	2710.20	23.222	-123.802	-17.603	1705.2
17.9000	2733.30	23.275	-123.811	-17.606	1705.2
17.9670	2748.70	23.310	-123.817	-17.608	1705.2
18.0000	2756.30	23.327	-123.820	-17.609	1703.7
18.2000	2802.50	23.432	-123.835	-17.614	1694.9
18.3000	2825.50	23.484	-123.843	-17.616	1690.4
18.4000	2848.60	23.536	-123.851	-17.618	1686.0
18.5000	2871.60	23.588	-123.859	-17.621	1681.6

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20.No2 HFO Stor Tk(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
18.7000	2917.80	23.692	-123.874	-17.626	1672.7
18.8000	2940.70	23.744	-123.882	-17.628	1668.3
18.9000	2963.50	23.796	-123.890	-17.630	1663.9
18.9670	2978.70	23.830	-123.895	-17.632	1661.0
19.0000	2986.20	23.847	-123.897	-17.633	1636.9
19.1000	3009.00	23.898	-123.905	-17.635	1563.6
19.2000	3031.70	23.949	-123.913	-17.637	1490.7
19.4000	3077.30	24.052	-123.928	-17.642	1344.1
19.5000	3100.00	24.103	-123.935	-17.644	1271.2
19.6000	3122.80	24.155	-123.943	-17.646	1197.9
19.7000	3145.50	24.206	-123.950	-17.648	1124.9
19.8000	3168.30	24.257	-123.958	-17.650	1051.7
19.9000	3190.90	24.308	-123.965	-17.653	979.0
19.9691	3205.00	24.340	-123.970	-17.654	933.7
20.0000	3211.30	24.354	-123.977	-17.651	763.7
20.1000	3227.10	24.390	-123.993	-17.644	337.3
20.2000	3236.80	24.412	-124.003	-17.640	75.5
20.3000	3239.60	24.418	-124.006	-17.639	0.0
20.6000	3239.60	24.418	-124.006	-17.639	0.0

21.No2 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	15.950	-125.746	14.801	0.0
0.0070	0.40	15.968	-125.746	14.801	0.7
0.1070	1.40	16.014	-125.746	14.801	2.6
0.2070	2.50	16.065	-125.746	14.801	4.6
0.3070	3.70	16.120	-125.746	14.801	6.8
0.4070	5.00	16.180	-125.746	14.801	9.2
0.4670	5.90	16.221	-125.746	14.801	10.8
0.5070	6.50	16.241	-125.771	14.812	11.8
0.6070	8.10	16.293	-125.838	14.843	14.3
0.7070	9.90	16.351	-125.914	14.877	17.2
0.8070	11.90	16.416	-125.998	14.915	20.4
0.9070	14.00	16.485	-126.086	14.955	23.7
0.9661	15.30	16.527	-126.141	14.980	25.8
1.0070	16.20	16.548	-126.166	14.993	27.5
1.1070	18.70	16.608	-126.237	15.029	32.2
1.2070	21.30	16.670	-126.310	15.066	37.0
1.3070	24.10	16.737	-126.389	15.107	42.2
1.4070	27.00	16.806	-126.471	15.149	47.7
1.4664	28.90	16.851	-126.525	15.176	51.2
1.5070	30.20	16.875	-126.555	15.189	53.4
1.6070	33.60	16.937	-126.633	15.223	59.2
1.7070	37.20	17.002	-126.715	15.259	65.3
1.8070	41.00	17.071	-126.802	15.297	71.7
1.9070	44.90	17.142	-126.891	15.336	78.3
1.9641	47.30	17.186	-126.946	15.360	82.4
2.0070	49.10	17.212	-126.979	15.373	85.2
2.1070	53.50	17.276	-127.061	15.404	92.1
2.2070	58.10	17.342	-127.146	15.436	99.4
2.3070	62.80	17.410	-127.234	15.469	106.7
2.4070	67.80	17.483	-127.326	15.504	114.6
2.4647	70.80	17.526	-127.382	15.525	119.3
2.5070	73.00	17.552	-127.417	15.536	122.6
2.6070	78.50	17.617	-127.505	15.563	130.8
2.7070	84.10	17.683	-127.594	15.591	139.2
2.8070	90.00	17.753	-127.688	15.621	148.1

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21.No2 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.9070	96.10	17.825	-127.785	15.651	157.2
2.9641	99.70	17.865	-127.842	15.669	162.6
3.0070	102.40	17.895	-127.878	15.679	166.4
3.1070	108.90	17.960	-127.965	15.703	175.5
3.2070	115.60	18.027	-128.055	15.728	185.0
3.3070	122.50	18.096	-128.147	15.753	194.7
3.4070	129.70	18.168	-128.244	15.780	204.8
3.4638	133.90	18.210	-128.300	15.795	210.7
3.5070	137.10	18.238	-128.336	15.804	215.1
3.6070	144.60	18.302	-128.421	15.825	225.4
3.7070	152.40	18.369	-128.510	15.847	236.1
3.8070	160.40	18.438	-128.601	15.869	247.1
3.9070	168.60	18.509	-128.694	15.892	258.3
3.9648	173.40	18.550	-128.748	15.905	264.9
4.0070	176.90	18.577	-128.779	15.913	269.5
4.1070	185.50	18.642	-128.856	15.933	280.7
4.2070	194.20	18.708	-128.933	15.954	292.0
4.3070	203.10	18.776	-129.012	15.975	303.7
4.4070	212.10	18.845	-129.092	15.996	315.4
4.4646	217.40	18.885	-129.139	16.008	322.3
4.5070	221.30	18.912	-129.165	16.016	327.4
4.6070	230.70	18.976	-129.227	16.037	339.8
4.7070	240.20	19.041	-129.289	16.057	352.3
4.8070	249.80	19.107	-129.352	16.078	365.0
4.9070	259.60	19.174	-129.417	16.099	377.9
4.9650	265.40	19.214	-129.455	16.111	385.5
5.0070	269.60	19.240	-129.447	16.124	472.0
5.1070	279.70	19.302	-129.426	16.157	679.9
5.2070	290.00	19.366	-129.406	16.189	892.0
5.3070	300.40	19.430	-129.385	16.222	1106.1
5.4070	316.20	19.527	-129.354	16.273	1431.4
5.4648	329.50	19.609	-129.327	16.315	1705.2
5.5070	339.20	19.655	-129.228	16.350	1705.2
5.7070	385.40	19.872	-128.759	16.516	1705.2
5.8070	408.40	19.980	-128.526	16.599	1705.2
5.9070	431.50	20.088	-128.291	16.682	1705.2
5.9653	444.90	20.151	-128.155	16.730	1705.2
6.0070	454.50	20.186	-128.098	16.750	1705.2
6.2070	500.70	20.355	-127.822	16.849	1705.2
6.3070	523.70	20.439	-127.684	16.897	1705.2
6.4070	546.80	20.524	-127.546	16.947	1705.2
6.4653	560.20	20.573	-127.466	16.975	1705.2
6.5070	569.80	20.603	-127.428	16.988	1705.2
6.7070	616.00	20.749	-127.246	17.053	1705.2
6.8070	639.00	20.821	-127.156	17.085	1705.2
6.9070	662.10	20.894	-127.065	17.117	1705.2
6.9653	675.50	20.936	-127.012	17.136	1705.2
7.0070	685.10	20.963	-126.985	17.145	1705.2
7.2070	731.30	21.096	-126.857	17.191	1705.2
7.3070	754.30	21.162	-126.793	17.214	1705.2
7.4070	777.40	21.228	-126.728	17.237	1705.2
7.4653	790.80	21.266	-126.691	17.250	1705.2
7.5070	800.40	21.292	-126.671	17.257	1705.2
7.7070	846.60	21.416	-126.575	17.291	1705.2
7.8070	869.60	21.478	-126.527	17.308	1705.2
7.9650	906.10	21.576	-126.451	17.335	1705.2
8.0070	915.80	21.601	-126.435	17.341	1705.2
8.1070	938.80	21.660	-126.399	17.354	1705.2
8.2070	961.90	21.719	-126.361	17.367	1705.2
8.3070	984.90	21.778	-126.325	17.380	1705.2
8.4070	1008.00	21.838	-126.287	17.393	1705.2
8.4650	1021.40	21.872	-126.266	17.401	1705.2

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21.No2 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
8.5070	1031.10	21.896	-126.254	17.405	1705.2
8.6070	1054.10	21.953	-126.224	17.416	1705.2
8.7070	1077.20	22.011	-126.194	17.427	1705.2
8.8070	1100.20	22.068	-126.165	17.437	1705.2
8.9650	1136.70	22.159	-126.118	17.454	1705.2
9.0070	1146.40	22.183	-126.108	17.458	1705.2
9.1070	1169.40	22.238	-126.084	17.466	1705.2
9.2070	1192.50	22.295	-126.059	17.475	1705.2
9.3070	1215.50	22.350	-126.035	17.483	1705.2
9.4650	1252.00	22.439	-125.997	17.497	1705.2
9.5070	1261.70	22.462	-125.989	17.500	1705.2
9.6070	1284.70	22.517	-125.969	17.507	1705.2
9.7070	1307.80	22.572	-125.949	17.514	1705.2
9.8070	1330.80	22.627	-125.929	17.521	1705.2
9.9650	1367.30	22.714	-125.897	17.532	1705.2
10.0070	1377.00	22.737	-125.890	17.535	1705.2
10.1070	1400.00	22.791	-125.873	17.541	1705.2
10.2070	1423.10	22.845	-125.856	17.547	1705.2
10.3070	1446.10	22.899	-125.839	17.553	1705.2
10.4650	1482.60	22.985	-125.812	17.562	1705.2
10.5070	1492.30	23.008	-125.806	17.564	1705.2
10.6070	1515.30	23.061	-125.791	17.569	1705.2
10.7070	1538.40	23.115	-125.777	17.575	1705.2
10.8070	1561.40	23.168	-125.762	17.580	1705.2
10.9650	1597.90	23.253	-125.739	17.588	1705.2
11.0070	1607.60	23.275	-125.734	17.590	1705.2
11.1070	1630.60	23.328	-125.721	17.594	1705.2
11.3070	1676.80	23.435	-125.697	17.603	1705.2
11.4070	1699.80	23.488	-125.684	17.607	1705.2
11.4650	1713.20	23.519	-125.677	17.610	1705.2
11.5070	1722.90	23.541	-125.672	17.612	1705.2
11.6070	1745.90	23.594	-125.661	17.616	1705.2
11.8070	1792.10	23.699	-125.639	17.624	1705.2
11.9070	1815.10	23.751	-125.628	17.628	1705.2
11.9650	1828.50	23.782	-125.622	17.630	1705.2
12.0070	1838.20	23.804	-125.618	17.631	1705.2
12.1070	1861.20	23.856	-125.608	17.635	1705.2
12.3070	1907.40	23.961	-125.589	17.642	1705.2
12.4070	1930.40	24.014	-125.580	17.645	1705.2
12.4650	1943.80	24.044	-125.574	17.647	1705.2
12.5070	1953.50	24.066	-125.570	17.648	1705.2
12.6070	1976.50	24.118	-125.562	17.651	1705.2
12.8070	2022.70	24.223	-125.545	17.657	1705.2
12.9070	2045.70	24.275	-125.536	17.660	1705.2
12.9650	2059.10	24.305	-125.531	17.662	1705.2
13.0070	2068.80	24.327	-125.528	17.663	1705.2
13.1070	2091.80	24.379	-125.520	17.666	1705.2
13.3070	2138.00	24.483	-125.504	17.672	1705.2
13.4070	2161.00	24.535	-125.497	17.674	1705.2
13.4650	2174.40	24.565	-125.492	17.676	1705.2
13.5070	2184.10	24.587	-125.489	17.677	1705.2
13.6070	2207.10	24.638	-125.482	17.679	1705.2
13.8070	2253.30	24.742	-125.469	17.684	1705.2
13.9070	2276.30	24.793	-125.462	17.687	1705.2
13.9650	2289.70	24.823	-125.458	17.688	1705.2
14.0070	2299.40	24.845	-125.455	17.689	1701.5
14.1070	2322.40	24.896	-125.449	17.691	1692.6
14.3070	2368.60	24.999	-125.437	17.696	1674.8
14.4070	2391.50	25.051	-125.431	17.698	1666.0
14.4649	2404.70	25.080	-125.428	17.699	1660.9
14.5070	2414.30	25.101	-125.426	17.700	1660.9
14.6070	2437.00	25.152	-125.421	17.703	1660.9

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21.No2 HFO Stor Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
14.7070	2459.80	25.203	-125.416	17.705	1660.9
14.8070	2482.50	25.254	-125.412	17.708	1660.9
14.9070	2505.30	25.305	-125.407	17.710	1660.9
14.9651	2518.50	25.334	-125.404	17.712	1660.9
15.0070	2528.00	25.355	-125.402	17.713	1657.1
15.1070	2550.80	25.406	-125.398	17.715	1647.8
15.2070	2573.50	25.457	-125.394	17.717	1638.7
15.3070	2596.30	25.508	-125.390	17.720	1629.4
15.4070	2619.00	25.559	-125.385	17.722	1620.2
15.4654	2632.20	25.588	-125.383	17.723	1614.9
15.5070	2641.60	25.609	-125.387	17.720	1344.3
15.6070	2661.70	25.654	-125.397	17.712	765.7
15.7070	2677.00	25.688	-125.404	17.707	325.2
15.8070	2686.10	25.708	-125.408	17.704	63.3
15.9070	2688.30	25.713	-125.409	17.703	0.0
16.2070	2688.30	25.713	-125.409	17.703	0.0

22.No1 HFO Sett.Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	14.250	-113.900	16.234	0.0
0.0860	2.08	14.312	-113.900	16.234	18.8
0.1860	3.77	14.363	-113.900	16.234	34.1
0.2110	4.20	14.376	-113.900	16.234	38.0
0.2860	5.49	14.414	-113.900	16.249	39.3
0.3860	7.24	14.464	-113.900	16.269	41.2
0.4610	8.57	14.503	-113.900	16.284	42.5
0.4860	9.01	14.516	-113.900	16.289	43.0
0.5860	10.81	14.567	-113.900	16.310	45.0
0.6860	12.64	14.619	-113.900	16.331	47.0
0.7109	13.10	14.632	-113.900	16.336	47.5
0.7860	14.49	14.670	-113.900	16.351	49.1
0.8860	16.37	14.722	-113.900	16.372	51.2
0.9609	17.80	14.762	-113.900	16.388	52.8
0.9860	18.28	14.775	-113.900	16.393	53.4
1.0860	20.21	14.827	-113.900	16.414	55.7
1.1860	22.17	14.881	-113.900	16.435	58.0
1.2110	22.67	14.894	-113.900	16.440	58.5
1.2860	24.16	14.933	-113.900	16.456	60.4
1.3860	26.17	14.987	-113.900	16.477	62.8
1.4610	27.70	15.027	-113.900	16.493	64.6
1.4860	28.21	15.040	-113.900	16.498	65.3
1.5860	30.28	15.094	-113.900	16.519	67.9
1.6860	32.37	15.147	-113.900	16.541	70.5
1.7110	32.90	15.161	-113.900	16.546	71.2
1.7860	34.49	15.201	-113.900	16.562	73.2
1.8860	36.64	15.255	-113.900	16.584	76.0
1.9609	38.27	15.296	-113.900	16.600	78.1
1.9860	38.81	15.309	-113.900	16.605	78.8
2.0860	41.01	15.364	-113.900	16.627	81.8
2.1860	43.24	15.419	-113.900	16.649	84.8
2.2108	43.80	15.433	-113.900	16.654	85.5
2.2860	45.49	15.474	-113.900	16.670	87.8
2.3860	47.77	15.529	-113.900	16.692	91.0
2.4610	49.50	15.570	-113.900	16.709	93.3
2.4860	50.07	15.584	-113.900	16.714	94.1
2.5860	52.41	15.639	-113.900	16.736	97.4
2.6860	54.77	15.694	-113.900	16.758	100.8

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22.No1 HFO Sett.Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.7108	55.36	15.708	-113.900	16.764	101.6
2.7860	57.15	15.750	-113.900	16.780	104.2
2.8860	59.57	15.806	-113.900	16.802	107.7
2.9607	61.39	15.848	-113.900	16.819	110.4
2.9860	62.01	15.862	-113.900	16.825	111.3
3.0860	64.47	15.918	-113.900	16.847	115.0
3.1860	66.96	15.974	-113.900	16.869	118.7
3.2110	67.59	15.988	-113.900	16.875	119.7
3.2860	69.48	16.030	-113.900	16.892	122.6
3.3860	72.03	16.086	-113.900	16.914	126.5
3.4609	73.95	16.129	-113.900	16.931	129.4
3.4860	74.60	16.143	-113.900	16.937	130.4
3.5860	77.20	16.199	-113.900	16.959	134.5
3.6860	79.83	16.256	-113.900	16.981	138.7
3.7108	80.49	16.270	-113.900	16.987	139.7
3.7860	82.48	16.313	-113.900	17.004	142.9
3.8860	85.16	16.370	-113.900	17.027	147.3
3.9610	87.19	16.413	-113.900	17.044	150.5
3.9860	87.86	16.427	-113.900	17.050	151.7
4.0860	90.60	16.484	-113.900	17.072	156.2
4.1860	93.36	16.542	-113.900	17.095	160.8
4.2108	94.05	16.556	-113.900	17.101	161.9
4.2860	96.14	16.599	-113.900	17.118	165.4
4.3860	98.95	16.656	-113.900	17.141	170.2
4.4610	101.08	16.700	-113.900	17.158	173.8
4.4860	101.79	16.714	-113.900	17.164	175.0
4.5860	104.66	16.772	-113.900	17.187	180.0
4.6860	107.55	16.830	-113.900	17.210	185.0
4.7109	108.28	16.844	-113.900	17.216	186.3
4.7860	110.47	16.888	-113.900	17.233	190.2
4.8860	113.41	16.946	-113.900	17.256	195.4
4.9609	115.64	16.990	-113.900	17.273	199.4
4.9860	116.39	17.005	-113.900	17.279	200.7
5.0860	119.39	17.063	-113.900	17.302	206.2
5.1860	122.41	17.121	-113.900	17.325	211.7
5.2110	123.17	17.136	-113.900	17.331	213.1
5.2860	125.46	17.179	-113.900	17.349	217.3
5.3860	128.54	17.238	-113.900	17.372	223.0
5.4609	130.87	17.282	-113.900	17.390	227.3
5.4860	131.65	17.297	-113.900	17.396	228.8
5.5860	134.78	17.355	-113.900	17.419	234.8
5.6860	137.94	17.414	-113.900	17.442	240.8
5.7109	138.73	17.429	-113.900	17.448	242.3
5.7860	141.12	17.473	-113.900	17.466	246.9
5.8860	144.33	17.532	-113.900	17.489	253.1
5.9610	146.76	17.577	-113.900	17.507	257.8
5.9860	147.57	17.592	-113.900	17.513	259.4
6.0860	150.84	17.651	-113.900	17.536	265.9
6.1860	154.13	17.710	-113.900	17.560	272.4
6.2109	154.96	17.725	-113.900	17.566	274.0
6.2860	157.45	17.769	-113.900	17.584	279.0
6.3860	160.79	17.828	-113.900	17.607	285.8
6.4609	163.32	17.873	-113.900	17.625	290.9
6.4860	164.17	17.888	-113.900	17.631	292.6
6.5860	167.56	17.947	-113.900	17.654	299.6
6.6860	170.99	18.007	-113.900	17.678	306.6
6.7109	171.85	18.022	-113.900	17.684	308.4
6.7860	174.44	18.067	-113.900	17.702	313.8
6.8860	177.92	18.127	-113.900	17.725	321.1
6.9610	180.55	18.172	-113.900	17.743	326.6
6.9860	181.42	18.187	-113.900	17.749	246.2
7.0860	184.10	18.232	-113.900	17.767	0.0

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22.No1 HFO Sett.Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
17.8860	184.10	18.232	-113.900	17.767	0.0

23.No2 HFO Sett.Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	14.250	-117.259	16.077	0.0
0.0520	1.40	14.295	-117.259	16.077	11.2
0.1520	2.97	14.345	-117.259	16.077	23.8
0.2117	3.93	14.376	-117.259	16.077	31.6
0.2520	4.58	14.396	-117.259	16.085	32.2
0.3520	6.21	14.447	-117.260	16.105	33.8
0.4520	7.86	14.498	-117.260	16.126	35.4
0.4621	8.03	14.503	-117.260	16.128	35.6
0.5520	9.54	14.549	-117.260	16.146	37.2
0.6520	11.25	14.601	-117.261	16.167	38.9
0.7119	12.29	14.633	-117.261	16.179	40.0
0.7520	12.99	14.653	-117.261	16.187	40.8
0.8520	14.75	14.705	-117.261	16.208	42.6
0.9520	16.54	14.758	-117.261	16.229	44.6
0.9621	16.72	14.763	-117.261	16.231	44.8
1.0520	18.36	14.810	-117.261	16.250	46.6
1.1520	20.20	14.863	-117.262	16.270	48.6
1.2119	21.32	14.895	-117.262	16.283	49.9
1.2520	22.07	14.916	-117.262	16.291	50.7
1.3520	23.97	14.970	-117.263	16.312	52.9
1.4520	25.89	15.024	-117.263	16.334	55.1
1.4620	26.09	15.029	-117.263	16.336	55.4
1.5520	27.84	15.077	-117.263	16.355	57.4
1.6520	29.82	15.131	-117.264	16.377	59.8
1.7117	31.02	15.163	-117.264	16.390	61.2
1.7520	31.82	15.184	-117.264	16.399	62.2
1.8520	33.85	15.239	-117.264	16.420	64.7
1.9520	35.90	15.293	-117.264	16.442	67.2
1.9621	36.11	15.299	-117.264	16.444	67.5
2.0520	37.99	15.348	-117.264	16.463	69.9
2.1520	40.10	15.403	-117.265	16.485	72.6
2.2119	41.38	15.436	-117.265	16.498	74.2
2.2520	42.23	15.458	-117.265	16.507	75.3
2.3520	44.39	15.513	-117.266	16.529	78.2
2.4520	46.58	15.568	-117.266	16.551	81.0
2.4621	46.80	15.574	-117.266	16.553	81.3
2.5520	48.80	15.624	-117.266	16.573	84.0
2.6520	51.04	15.679	-117.266	16.595	87.0
2.7119	52.40	15.713	-117.266	16.608	88.9
2.7520	53.31	15.735	-117.266	16.617	90.2
2.8520	55.61	15.791	-117.267	16.639	93.4
2.9520	57.93	15.847	-117.267	16.662	96.6
2.9619	58.16	15.853	-117.267	16.664	96.9
3.0520	60.28	15.903	-117.267	16.684	99.9
3.1520	62.65	15.960	-117.267	16.706	103.3
3.2118	64.09	15.994	-117.267	16.720	105.4
3.2520	65.06	16.017	-117.267	16.729	106.8
3.3520	67.48	16.073	-117.268	16.751	110.4
3.4520	69.94	16.130	-117.268	16.774	114.0
3.4620	70.19	16.136	-117.268	16.776	114.4
3.5520	72.42	16.187	-117.268	16.796	117.7
3.6520	74.93	16.244	-117.268	16.819	121.5
3.7118	76.45	16.278	-117.268	16.833	123.8

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23.No2 HFO Sett.Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.7520	77.47	16.301	-117.268	16.842	125.4
3.8520	80.03	16.358	-117.269	16.865	129.4
3.9520	82.62	16.415	-117.269	16.888	133.4
3.9619	82.88	16.421	-117.269	16.890	133.8
4.0520	85.23	16.472	-117.269	16.910	137.6
4.1520	87.87	16.530	-117.269	16.933	141.8
4.2121	89.47	16.565	-117.269	16.947	144.3
4.2520	90.54	16.588	-117.269	16.956	146.1
4.3520	93.24	16.646	-117.270	16.979	150.5
4.4520	95.96	16.704	-117.270	17.002	154.9
4.4620	96.24	16.710	-117.270	17.004	155.4
4.5520	98.71	16.762	-117.270	17.025	159.5
4.6520	101.48	16.821	-117.270	17.048	164.1
4.7119	103.16	16.856	-117.270	17.062	166.9
4.7520	104.29	16.879	-117.270	17.071	168.9
4.8520	107.11	16.937	-117.271	17.094	173.7
4.9520	109.97	16.996	-117.271	17.118	178.6
4.9620	110.26	17.002	-117.271	17.120	179.1
5.0520	112.85	17.054	-117.271	17.141	183.6
5.1520	115.76	17.113	-117.271	17.165	188.7
5.2120	117.52	17.148	-117.271	17.179	191.8
5.2520	118.69	17.171	-117.271	17.188	193.9
5.3520	121.66	17.231	-117.272	17.211	199.2
5.4520	124.64	17.290	-117.272	17.235	204.6
5.4622	124.95	17.296	-117.272	17.237	205.1
5.5520	127.66	17.349	-117.272	17.258	210.1
5.6520	130.70	17.407	-117.272	17.282	215.7
5.7120	132.54	17.443	-117.272	17.296	219.1
5.7520	133.77	17.467	-117.272	17.305	221.4
5.8520	136.86	17.526	-117.272	17.329	227.2
5.9520	139.99	17.586	-117.272	17.353	233.0
5.9619	140.30	17.592	-117.272	17.355	233.6
6.0520	143.13	17.645	-117.272	17.376	239.0
6.1520	146.31	17.705	-117.273	17.400	245.1
6.2119	148.23	17.741	-117.273	17.414	248.8
6.2520	149.51	17.765	-117.273	17.423	251.3
6.3520	152.74	17.824	-117.273	17.447	257.6
6.4520	155.99	17.884	-117.273	17.471	263.9
6.4621	156.32	17.890	-117.273	17.473	264.6
6.5520	159.27	17.944	-117.273	17.494	270.5
6.6520	162.58	18.004	-117.274	17.518	277.0
6.7119	164.58	18.040	-117.274	17.533	281.0
6.7520	165.92	18.064	-117.274	17.543	283.8
6.8520	169.28	18.124	-117.274	17.566	290.6
6.9520	172.67	18.184	-117.274	17.591	297.5
6.9619	173.01	18.190	-117.274	17.593	298.2
7.0520	176.08	18.244	-117.274	17.615	30.4
7.1520	176.43	18.250	-117.274	17.617	0.0
18.3520	176.43	18.250	-117.274	17.617	0.0

24.HFO Service Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	14.250	-120.429	14.331	0.0
0.0780	0.42	14.310	-120.429	14.331	0.5
0.1780	0.84	14.370	-120.429	14.331	0.9
0.2003	0.95	14.385	-120.429	14.331	1.1
0.2780	1.32	14.424	-120.464	14.358	1.4
0.3780	1.88	14.483	-120.517	14.398	1.8
0.4505	2.34	14.532	-120.561	14.431	2.2
0.4780	2.52	14.547	-120.570	14.442	2.3
0.5780	3.22	14.605	-120.604	14.485	3.0
0.6780	4.00	14.670	-120.642	14.533	3.7
0.7009	4.20	14.686	-120.652	14.545	3.9
0.7780	4.85	14.731	-120.670	14.580	4.6
0.8780	5.77	14.793	-120.696	14.628	5.6
0.9516	6.50	14.843	-120.717	14.667	6.4
0.9780	6.76	14.858	-120.722	14.679	6.7
1.0780	7.83	14.920	-120.741	14.729	8.0
1.1780	8.97	14.986	-120.762	14.782	9.4
1.2016	9.26	15.002	-120.767	14.795	9.8
1.2780	10.18	15.048	-120.778	14.833	11.1
1.3780	11.47	15.113	-120.794	14.885	13.0
1.4512	12.47	15.163	-120.806	14.926	14.4
1.4780	12.83	15.179	-120.809	14.939	15.0
1.5780	14.26	15.243	-120.821	14.992	17.3
1.6780	15.76	15.310	-120.834	15.046	19.7
1.7016	16.13	15.325	-120.837	15.060	20.3
1.7780	17.33	15.374	-120.845	15.100	22.4
1.8780	18.98	15.439	-120.855	15.154	25.4
1.9516	20.25	15.488	-120.863	15.196	27.7
1.9780	20.70	15.505	-120.865	15.210	28.5
2.0780	22.49	15.569	-120.874	15.263	31.6
2.1780	24.35	15.636	-120.883	15.318	34.9
2.2018	24.81	15.652	-120.885	15.332	35.7
2.2780	26.27	15.700	-120.892	15.370	37.9
2.3780	28.25	15.765	-120.900	15.422	40.9
2.4519	29.76	15.814	-120.907	15.461	43.1
2.4780	30.29	15.830	-120.909	15.473	43.8
2.5780	32.38	15.893	-120.917	15.521	46.7
2.6780	34.52	15.958	-120.925	15.570	49.6
2.7019	35.04	15.974	-120.927	15.582	50.3
2.7780	36.70	16.021	-120.933	15.615	52.0
2.8780	38.92	16.084	-120.940	15.659	54.2
2.9520	40.59	16.132	-120.946	15.692	55.9
2.9780	41.18	16.148	-120.948	15.702	56.7
3.0780	43.48	16.210	-120.954	15.742	59.7
3.1780	45.80	16.272	-120.960	15.781	62.7
3.2019	46.36	16.287	-120.962	15.791	63.4
3.2780	48.16	16.333	-120.966	15.818	65.5
3.3780	50.55	16.394	-120.970	15.855	68.2
3.4517	52.34	16.440	-120.974	15.882	70.3
3.4780	52.98	16.456	-120.975	15.891	71.1
3.5780	55.43	16.515	-120.979	15.924	74.0
3.6780	57.93	16.576	-120.984	15.959	77.0
3.7018	58.53	16.591	-120.985	15.967	77.7
3.7780	60.45	16.637	-120.988	15.991	80.1
3.8780	63.01	16.697	-120.991	16.023	83.3
3.9519	64.93	16.743	-120.994	16.047	85.6
3.9780	65.60	16.758	-120.995	16.055	86.5
4.0780	68.23	16.818	-120.998	16.086	89.8
4.1780	70.89	16.879	-121.000	16.117	93.2
4.2017	71.53	16.893	-121.001	16.125	94.1
4.2780	73.58	16.938	-121.003	16.147	96.8
4.3780	76.30	16.999	-121.006	16.177	100.4
4.4519	78.34	17.044	-121.008	16.199	103.0

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24.HFO Service Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.4780	79.06	17.060	-121.009	16.206	104.0
4.5780	81.85	17.120	-121.011	16.236	107.8
4.6780	84.68	17.180	-121.013	16.265	111.6
4.7018	85.36	17.195	-121.014	16.272	112.6
4.7780	87.53	17.240	-121.016	16.293	115.6
4.8780	90.43	17.300	-121.018	16.322	119.7
4.9519	92.59	17.344	-121.020	16.343	122.7
4.9780	93.35	17.360	-121.020	16.350	123.8
5.0780	96.31	17.421	-121.021	16.378	128.0
5.1780	99.30	17.481	-121.024	16.406	132.3
5.2019	100.02	17.496	-121.024	16.413	133.4
5.2780	102.32	17.541	-121.025	16.434	136.8
5.3780	105.38	17.602	-121.027	16.461	141.3
5.4520	107.67	17.647	-121.028	16.482	144.7
5.4780	108.47	17.663	-121.028	16.489	145.9
5.5780	111.60	17.723	-121.030	16.516	150.6
5.6780	114.76	17.784	-121.032	16.543	155.4
5.7018	115.52	17.799	-121.032	16.549	156.6
5.7780	117.95	17.845	-121.033	16.570	160.4
5.8780	121.17	17.906	-121.035	16.597	165.4
5.9519	123.58	17.951	-121.036	16.617	169.1
5.9780	124.43	17.967	-121.036	16.624	170.5
6.0780	127.72	18.029	-121.038	16.651	175.9
6.1780	131.04	18.092	-121.039	16.678	181.4
6.1960	131.65	18.103	-121.039	16.683	182.4
6.2780	134.40	18.151	-121.040	16.704	186.8
6.3780	137.79	18.211	-121.041	16.730	192.2
6.4518	140.32	18.255	-121.042	16.750	196.2
6.4780	141.22	18.271	-121.042	16.757	197.7
6.5780	144.67	18.332	-121.043	16.783	203.5
6.6780	148.16	18.393	-121.044	16.809	209.4
6.7020	149.01	18.408	-121.044	16.815	210.8
6.7780	151.69	18.454	-121.045	16.835	215.4
6.8780	155.25	18.515	-121.046	16.861	221.5
6.9518	157.90	18.561	-121.047	16.881	226.1
6.9780	158.84	18.577	-121.047	16.888	167.0
7.0780	161.50	18.622	-121.048	16.907	0.0
17.8780	161.50	18.622	-121.048	16.907	0.0

25.DO Storage Tank(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	14.250	-110.575	11.438	0.0
0.0350	1.45	14.300	-110.575	11.438	5.1
0.1350	2.91	14.349	-110.575	11.438	10.3
0.2350	4.38	14.400	-110.575	11.438	15.5
0.3350	5.84	14.449	-110.575	11.438	20.7
0.4350	7.31	14.500	-110.575	11.438	25.9
0.5350	8.77	14.549	-110.575	11.438	25.9
0.6350	10.24	14.600	-110.575	11.438	25.9
0.7350	11.70	14.649	-110.575	11.438	25.9
0.8350	13.17	14.700	-110.575	11.438	25.9
0.9350	14.63	14.749	-110.575	11.438	25.9
1.0350	15.81	14.793	-110.563	11.438	24.7
1.4358	20.30	14.958	-110.519	11.438	19.8
1.6350	22.53	15.047	-110.515	11.438	22.0
1.7350	23.70	15.093	-110.513	11.438	23.1
1.8350	25.16	15.151	-110.511	11.438	24.5

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25.DO Storage Tank(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.9350	26.63	15.209	-110.508	11.438	25.9
2.0350	28.09	15.265	-110.511	11.438	25.9
2.1350	29.56	15.321	-110.514	11.438	25.9
2.2350	31.02	15.376	-110.516	11.438	25.9
2.3350	32.49	15.432	-110.519	11.438	25.9
2.4350	33.95	15.487	-110.522	11.438	25.9
2.5350	35.42	15.541	-110.524	11.438	25.9
2.6350	36.88	15.595	-110.526	11.438	25.9
2.7350	38.35	15.648	-110.528	11.438	25.9
2.9350	41.27	15.755	-110.532	11.438	25.9
3.0350	42.74	15.808	-110.533	11.438	25.9
3.1350	44.20	15.861	-110.534	11.438	25.9
3.2350	45.67	15.913	-110.536	11.438	25.9
3.3350	47.13	15.966	-110.537	11.438	25.9
3.4350	48.60	16.019	-110.538	11.438	25.9
3.5350	50.06	16.070	-110.539	11.438	25.9
3.6350	51.53	16.122	-110.540	11.438	25.9
3.7350	52.99	16.174	-110.541	11.437	25.9
3.8350	54.46	16.226	-110.542	11.437	25.9
3.9360	55.94	16.278	-110.543	11.437	25.9
4.0350	57.38	16.329	-110.544	11.437	25.9
4.1350	58.85	16.381	-110.545	11.437	25.9
4.2350	60.31	16.432	-110.545	11.437	25.9
4.3350	61.78	16.484	-110.546	11.437	25.9
4.4350	63.24	16.535	-110.547	11.437	25.9
4.5350	64.71	16.587	-110.548	11.437	25.9
4.6350	66.17	16.637	-110.548	11.437	25.9
4.7350	67.64	16.689	-110.549	11.438	25.9
4.8350	69.10	16.739	-110.549	11.438	25.9
4.9350	70.57	16.791	-110.550	11.438	25.9
5.1350	73.49	16.892	-110.551	11.438	25.9
5.2350	74.96	16.944	-110.551	11.438	25.9
5.3350	76.42	16.994	-110.552	11.438	25.9
5.4350	77.89	17.046	-110.552	11.438	25.9
5.5350	79.35	17.096	-110.552	11.438	25.9
5.6350	80.82	17.147	-110.553	11.438	25.9
5.7350	82.28	17.198	-110.553	11.438	25.9
5.8350	83.75	17.249	-110.554	11.438	25.9
5.9350	85.21	17.299	-110.554	11.438	25.9
6.0350	86.68	17.350	-110.554	11.438	25.9
6.1350	88.14	17.401	-110.555	11.438	25.9
6.2350	89.61	17.451	-110.555	11.438	25.9
6.4350	92.53	17.552	-110.556	11.438	25.9
6.5350	94.00	17.603	-110.556	11.438	25.9
6.6350	95.46	17.654	-110.556	11.438	25.9
6.7350	96.93	17.704	-110.557	11.438	25.9
6.8350	98.39	17.755	-110.557	11.438	25.9
6.9350	99.86	17.806	-110.557	11.438	25.9
7.0350	101.32	17.855	-110.557	11.428	32.7
7.4359	109.54	18.133	-110.559	11.369	71.2
7.9360	119.79	18.464	-110.560	11.297	71.2
8.4361	130.04	18.782	-110.561	11.236	71.2
8.9362	140.29	19.090	-110.562	11.183	71.2
9.2350	146.42	19.269	-110.563	11.156	71.2
9.3350	148.48	19.330	-110.563	11.147	71.2
9.4358	150.55	19.390	-110.563	11.138	71.2
9.9359	160.80	19.684	-110.564	11.099	71.2
10.4360	171.05	19.973	-110.565	11.065	71.2
10.9361	181.30	20.257	-110.565	11.034	71.2
11.4362	191.55	20.538	-110.566	11.007	71.2
11.7350	197.68	20.704	-110.566	10.992	71.2
11.8350	199.74	20.759	-110.566	10.987	71.2

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25.DO Storage Tank(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
11.9358	201.81	20.815	-110.566	10.982	71.2
12.4359	212.06	21.090	-110.567	10.960	71.2
12.9360	222.31	21.363	-110.567	10.940	71.2
13.4350	232.54	21.632	-110.567	10.921	71.2
13.9362	242.81	21.902	-110.568	10.904	71.2
14.2350	248.94	22.062	-110.568	10.895	71.2
14.3350	251.00	22.115	-110.568	10.892	71.2
14.9359	263.32	22.435	-110.568	10.875	71.2
15.4360	273.57	22.700	-110.569	10.861	71.2
15.9361	283.82	22.964	-110.569	10.849	71.2
16.7350	300.20	23.383	-110.569	10.831	71.2
16.8350	302.26	23.435	-110.569	10.829	71.2
16.9358	304.33	23.488	-110.569	10.827	71.2
17.4359	314.58	23.749	-110.569	10.817	71.2
17.5350	316.61	23.801	-110.569	10.812	41.8
17.6350	318.35	23.845	-110.569	10.807	16.6
17.7350	319.29	23.869	-110.569	10.805	3.0
17.8350	319.50	23.874	-110.569	10.804	0.0
17.9350	319.50	23.874	-110.569	10.804	0.0

26.DO Service Tank(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	14.250	-110.075	8.235	0.0
0.1000	0.77	14.300	-110.075	8.235	0.9
0.2500	1.92	14.375	-110.075	8.235	2.2
0.4999	3.83	14.500	-110.075	8.235	2.2
1.0000	7.66	14.750	-110.075	8.235	2.2
1.1000	8.31	14.794	-110.058	8.235	2.0
1.2500	9.25	14.857	-110.034	8.235	1.8
1.4999	10.82	14.969	-110.003	8.235	1.8
1.7000	12.08	15.060	-109.984	8.235	1.8
1.7482	12.39	15.083	-109.979	8.235	1.8
1.8000	12.73	15.108	-109.981	8.235	1.9
2.0000	14.26	15.219	-109.989	8.235	2.2
2.2499	16.18	15.357	-109.998	8.235	2.2
2.7500	20.01	15.624	-110.013	8.235	2.2
3.2500	23.84	15.885	-110.023	8.235	2.2
3.5000	25.75	16.014	-110.027	8.235	2.2
3.7500	27.67	16.143	-110.030	8.235	2.2
4.4999	33.41	16.527	-110.038	8.235	2.2
5.0000	37.25	16.781	-110.042	8.235	2.2
5.4999	41.08	17.035	-110.045	8.235	2.2
6.0000	44.91	17.288	-110.047	8.235	2.2
7.0000	52.57	17.792	-110.051	8.235	2.2
7.1000	53.33	17.843	-110.052	8.235	0.0
7.2000	53.33	17.843	-110.052	8.235	0.0
7.3000	53.33	17.843	-110.052	8.235	0.0

27.M/E LO Sump Tk(C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	1.318	-119.850	0.000	0.0
0.0500	0.52	1.364	-119.850	0.000	5.1
0.1591	1.14	1.418	-119.850	0.000	5.6
0.2591	1.71	1.468	-119.850	0.000	5.6
0.3000	1.94	1.488	-119.850	0.000	20.4
0.3500	2.23	1.514	-119.850	0.000	38.5
0.4000	4.03	1.585	-121.327	0.000	41.8
0.4590	6.55	1.681	-123.453	0.000	41.8
0.5590	10.82	1.755	-124.212	0.000	41.8
0.6590	15.09	1.815	-124.541	0.000	41.8
0.7590	19.36	1.871	-124.725	0.000	41.8
0.8590	23.63	1.925	-124.842	0.000	41.8
0.9590	27.90	1.977	-124.924	0.000	41.8
1.0590	32.17	2.029	-124.984	0.000	41.8
1.1590	36.44	2.081	-125.030	0.000	41.8
1.2590	40.71	2.132	-125.066	0.000	41.8
1.3590	44.98	2.183	-125.095	0.000	41.8
1.4590	49.25	2.233	-125.120	0.000	41.8
1.5590	53.52	2.284	-125.140	0.000	41.8
1.6000	55.27	2.305	-125.147	0.000	20.8
1.6500	57.00	2.325	-125.154	0.000	0.0
1.7500	57.00	2.325	-125.154	0.000	0.0

28.No1 Cyl.Stor.Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	21.850	-122.825	10.522	0.0
0.1000	0.08	21.900	-122.825	10.522	0.0
0.2503	0.19	21.975	-122.825	10.522	0.1
0.3000	0.23	21.982	-122.793	10.490	0.4
0.4000	0.32	21.998	-122.718	10.418	1.2
0.5000	1.69	22.255	-121.550	9.275	14.0
0.7500	5.13	22.403	-121.360	9.089	14.0
1.0000	8.58	22.532	-121.322	9.052	14.0
1.2501	12.03	22.659	-121.306	9.036	14.0
1.5000	15.48	22.785	-121.298	9.028	14.0
1.7500	18.92	22.910	-121.292	9.022	14.0
2.0001	22.37	23.036	-121.288	9.018	14.0
2.2500	25.82	23.162	-121.285	9.016	14.0
2.5000	29.26	23.287	-121.283	9.013	14.0
2.7500	32.71	23.412	-121.281	9.012	14.0
3.5000	43.05	23.788	-121.278	9.008	14.0
4.0001	49.95	24.038	-121.276	9.007	14.0
4.4000	55.46	24.238	-121.275	9.006	14.0
5.2500	67.19	24.663	-121.274	9.004	14.0
6.0000	77.53	25.038	-121.273	9.004	14.0
6.2500	80.98	25.163	-121.273	9.003	14.0
6.3000	81.67	25.188	-121.273	9.003	9.3
6.4000	83.03	25.238	-121.272	9.003	0.1
6.5000	83.04	25.238	-121.272	9.003	0.0
6.6000	83.04	25.238	-121.272	9.003	0.0

29.No2 Cyl.Stor.Ts(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	21.850	-123.675	10.522	0.0
0.1000	0.08	21.900	-123.675	10.522	0.0
0.2503	0.19	21.975	-123.675	10.522	0.1
0.3000	0.23	21.983	-123.704	10.491	0.5
0.4000	0.32	22.000	-123.769	10.421	1.3
0.5000	1.53	22.250	-124.695	9.424	13.9
0.7500	4.60	22.400	-124.865	9.241	13.9
1.0000	7.66	22.530	-124.899	9.205	13.9
1.2500	10.73	22.657	-124.914	9.189	13.9
1.5000	13.79	22.783	-124.922	9.181	13.9
1.7500	16.85	22.909	-124.927	9.175	13.9
2.0000	19.92	23.035	-124.930	9.171	13.9
2.2500	22.98	23.160	-124.933	9.168	13.9
2.7500	29.11	23.411	-124.937	9.164	13.9
3.7500	41.37	23.911	-124.941	9.160	13.9
4.0000	44.43	24.036	-124.941	9.159	13.9
5.6000	64.04	24.837	-124.944	9.157	13.9
6.2500	72.01	25.162	-124.945	9.156	13.9
6.3000	72.63	25.186	-124.945	9.156	9.4
6.4000	73.84	25.235	-124.945	9.156	0.4
6.5000	73.90	25.237	-124.945	9.156	0.0
6.6000	73.90	25.237	-124.945	9.156	0.0

30.Turb LO Stor.Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	22.250	-119.850	10.522	0.0
0.1000	0.15	22.300	-119.850	10.522	0.1
0.1999	0.31	22.350	-119.850	10.522	0.1
0.4002	0.61	22.450	-119.850	10.522	0.1
1.0001	1.53	22.750	-119.850	10.523	0.1
4.4006	6.74	24.450	-119.850	10.522	0.1
5.3000	8.12	24.900	-119.850	10.522	0.1
5.8000	8.89	25.150	-119.850	10.522	0.1
6.0000	9.19	25.248	-119.850	10.522	0.0
6.1000	9.20	25.250	-119.850	10.522	0.0
6.2000	9.20	25.250	-119.850	10.522	0.0

31.MELO Storage Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	22.250	-130.900	9.150	0.0
0.1000	1.23	22.300	-130.900	9.150	7.0
0.2000	2.45	22.350	-130.900	9.150	13.9
0.4000	4.90	22.450	-130.900	9.150	13.9
0.8000	9.81	22.650	-130.900	9.150	13.9
5.8000	71.09	25.150	-130.900	9.150	13.9
5.9000	72.32	25.200	-130.900	9.150	6.9
6.0000	73.54	25.250	-130.900	9.150	0.0
6.1000	73.54	25.250	-130.900	9.150	0.0
6.2000	73.54	25.250	-130.900	9.150	0.0

32.MELO Settling T(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	22.250	-127.925	9.150	0.0
0.1000	0.92	22.300	-127.925	9.150	5.2
0.2001	1.84	22.350	-127.925	9.150	10.4
0.3999	3.68	22.450	-127.925	9.150	10.4
0.5000	4.60	22.500	-127.925	9.150	10.4
0.7999	7.35	22.650	-127.925	9.150	10.4
5.7999	53.32	25.150	-127.925	9.150	10.4
5.9000	54.24	25.199	-127.925	9.150	5.3
6.0000	55.15	25.247	-127.925	9.150	0.3
6.1000	55.20	25.250	-127.925	9.150	0.0
6.2000	55.20	25.250	-127.925	9.150	0.0

33.GELO Storage Tk(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	22.250	-133.238	8.235	0.0
0.1000	0.23	22.300	-133.238	8.235	0.3
0.2001	0.46	22.350	-133.238	8.235	0.7
0.3998	0.92	22.450	-133.238	8.235	0.7
4.8004	11.03	24.650	-133.238	8.235	0.7
5.4000	12.41	24.950	-133.238	8.235	0.7
5.6000	12.87	25.050	-133.238	8.235	0.7
5.8000	13.33	25.150	-133.237	8.235	0.7
5.9000	13.56	25.199	-133.237	8.235	0.3
6.0000	13.79	25.248	-133.237	8.235	0.0
6.1000	13.80	25.250	-133.237	8.235	0.0
6.2000	13.80	25.250	-133.237	8.235	0.0

34.GELO Settling T(S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	22.250	-133.238	10.065	0.0
0.1000	0.23	22.300	-133.238	10.065	0.3
0.2001	0.46	22.350	-133.238	10.065	0.7
0.3998	0.92	22.450	-133.238	10.065	0.7
4.8004	11.03	24.650	-133.238	10.065	0.7
5.4000	12.41	24.950	-133.238	10.065	0.7
5.8000	13.33	25.150	-133.238	10.065	0.7
5.9000	13.56	25.199	-133.238	10.065	0.3
6.0000	13.79	25.248	-133.238	10.065	0.0
6.1000	13.80	25.250	-133.238	10.065	0.0
6.2000	13.80	25.250	-133.238	10.065	0.0

35.Fore Peak Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	150.093	0.006	0.0
0.1000	5.00	0.049	150.093	0.006	116.9
0.2000	10.40	0.101	150.093	0.006	243.2
0.3000	16.90	0.164	150.093	0.006	395.2
0.4000	24.30	0.236	150.093	0.006	568.3
0.4655	29.80	0.290	150.093	0.006	696.9
0.5000	32.70	0.307	150.126	0.006	739.1
0.6000	42.10	0.361	150.233	0.006	875.9
0.7000	52.10	0.418	150.347	0.005	1021.4
0.8000	62.80	0.480	150.468	0.005	1177.1
0.9000	74.10	0.545	150.597	0.004	1341.5
0.9667	82.10	0.588	150.688	0.004	1457.9
1.0000	86.10	0.609	150.709	0.004	1508.5
1.1000	98.70	0.665	150.773	0.004	1667.8
1.2000	111.80	0.723	150.840	0.004	1833.4
1.3000	125.50	0.785	150.910	0.003	2006.5
1.4000	139.70	0.848	150.983	0.003	2186.1
1.4669	149.60	0.892	151.034	0.003	2311.2
1.5000	154.50	0.910	151.050	0.003	2367.3
1.6000	169.80	0.968	151.102	0.003	2542.5
1.7000	185.50	1.027	151.154	0.003	2722.3
1.8000	201.80	1.088	151.209	0.003	2909.0
1.9000	218.60	1.151	151.265	0.003	3101.4
1.9667	230.00	1.192	151.303	0.003	3231.9
2.0000	235.70	1.213	151.316	0.003	3292.3
2.1000	253.30	1.271	151.356	0.003	3478.8
2.2000	271.40	1.330	151.397	0.003	3670.5
2.3000	289.80	1.391	151.439	0.003	3865.5
2.4000	308.70	1.453	151.482	0.003	4065.7
2.4668	321.60	1.496	151.511	0.003	4202.4
2.5000	328.00	1.515	151.523	0.003	4264.7
2.6000	347.80	1.574	151.560	0.003	4457.3
2.7000	368.00	1.634	151.598	0.003	4653.9
2.8000	388.50	1.695	151.637	0.002	4853.3
2.9000	409.40	1.757	151.676	0.002	5056.7
2.9668	423.70	1.799	151.703	0.002	5195.8
3.0000	430.80	1.818	151.712	0.002	5257.5
3.1000	452.90	1.878	151.740	0.002	5449.5
3.2000	475.20	1.939	151.769	0.002	5643.2
3.3000	497.90	2.000	151.798	0.002	5840.4
3.4000	520.90	2.063	151.827	0.002	6040.2
3.4670	536.50	2.104	151.847	0.002	6175.7
3.5000	544.20	2.124	151.855	0.002	6236.5

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35.Fore Peak Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.6000	567.80	2.184	151.880	0.002	6422.6
3.7000	591.80	2.244	151.905	0.002	6612.0
3.8000	616.00	2.305	151.930	0.002	6802.9
3.9000	640.60	2.366	151.956	0.002	6996.9
3.9669	657.20	2.408	151.973	0.002	7127.9
4.0000	665.40	2.427	151.980	0.002	7186.1
4.1000	690.50	2.486	152.003	0.002	7364.3
4.2000	715.90	2.546	152.025	0.002	7544.6
4.3000	741.60	2.606	152.048	0.001	7727.0
4.4000	767.50	2.667	152.071	0.001	7910.9
4.4668	785.00	2.708	152.087	0.001	8035.1
4.5000	793.70	2.727	152.094	0.001	8091.4
4.6000	820.20	2.786	152.113	0.001	8263.0
4.7000	846.80	2.845	152.134	0.001	8435.1
4.8000	873.80	2.905	152.154	0.001	8609.9
4.9000	900.90	2.965	152.174	0.001	8785.3
4.9668	919.20	3.006	152.188	0.001	8903.8
5.0000	928.30	3.025	152.194	0.001	8957.2
5.1000	955.90	3.084	152.212	0.001	9119.2
5.2000	983.70	3.143	152.230	0.001	9282.3
5.3000	1011.70	3.202	152.249	0.001	9446.6
5.4000	1040.00	3.262	152.267	0.001	9612.6
5.4668	1059.11	3.302	152.280	0.001	9724.7
5.5000	1068.60	3.322	152.286	0.001	9776.0
5.6000	1097.40	3.381	152.304	0.001	9931.7
5.7000	1126.40	3.440	152.322	0.001	10088.4
5.8000	1155.60	3.499	152.340	0.001	10246.2
5.9000	1185.10	3.559	152.359	0.001	10405.6
5.9667	1204.90	3.599	152.371	0.001	10512.6
6.0000	1214.80	3.618	152.377	0.001	10561.3
6.1000	1244.60	3.677	152.394	0.001	10707.9
6.2000	1274.60	3.735	152.411	0.001	10855.5
6.3000	1304.90	3.795	152.428	0.001	11004.6
6.4000	1335.30	3.854	152.445	0.001	11154.1
6.4669	1355.70	3.894	152.457	0.001	11254.5
6.5000	1365.80	3.913	152.462	0.001	11300.5
6.6000	1396.50	3.971	152.477	0.001	11440.3
6.7000	1427.40	4.030	152.492	0.001	11581.0
6.8000	1458.50	4.088	152.507	0.001	11722.6
6.9000	1489.70	4.147	152.522	0.001	11864.7
6.9668	1510.60	4.187	152.532	0.001	11959.9
7.0000	1521.00	4.206	152.536	0.001	12002.7
7.1000	1552.50	4.264	152.550	0.001	12132.4
7.2000	1584.10	4.322	152.564	0.001	12262.5
7.3000	1615.90	4.380	152.577	0.001	12393.4
7.4000	1647.80	4.439	152.591	0.001	12524.7
7.4669	1669.20	4.478	152.600	0.001	12612.8
7.5000	1679.80	4.497	152.604	0.001	12652.8
7.6000	1712.00	4.555	152.616	0.001	12774.5
7.7000	1744.30	4.613	152.627	0.001	12896.5
7.8000	1776.70	4.671	152.639	0.001	13018.9
7.9000	1809.20	4.729	152.651	0.001	13141.7
7.9670	1831.10	4.768	152.659	0.001	13224.4
8.1000	1874.60	4.844	152.673	0.001	13371.0
8.3000	1940.40	4.959	152.694	0.001	13592.8
8.4000	1973.50	5.016	152.705	0.001	13704.4
8.4669	1995.70	5.055	152.712	0.001	13779.2
8.6000	2039.90	5.130	152.724	0.001	13914.1
8.7000	2073.30	5.187	152.734	0.001	14016.0
8.9000	2140.30	5.302	152.753	0.000	14220.5
8.9670	2162.80	5.340	152.759	0.000	14289.2
9.0000	2173.90	5.359	152.762	0.000	14318.8

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35.Fore Peak Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
9.1000	2207.60	5.415	152.770	0.000	14408.6
9.3000	2275.20	5.529	152.786	0.000	14588.7
9.4000	2309.10	5.586	152.794	0.000	14679.0
9.4671	2331.90	5.624	152.800	0.000	14739.8
9.5000	2343.10	5.642	152.802	0.000	14766.3
9.7000	2411.30	5.755	152.817	0.000	14927.8
9.9000	2479.70	5.867	152.831	0.000	15089.8
9.9671	2502.70	5.905	152.836	0.000	15144.3
10.1000	2548.30	5.979	152.844	0.000	15235.7
10.3000	2617.10	6.091	152.857	0.000	15373.6
10.4670	2674.70	6.185	152.867	0.000	15489.1
10.5000	2686.10	6.203	152.869	0.000	15509.0
10.9000	2824.50	6.425	152.890	0.000	15751.1
10.9671	2847.80	6.462	152.894	0.000	15791.8
11.1000	2893.90	6.535	152.900	0.000	15858.7
11.2000	2928.70	6.591	152.904	0.000	15909.1
11.3000	2963.40	6.646	152.909	0.000	15959.4
11.4000	2998.20	6.701	152.913	0.000	16009.9
11.4671	3021.50	6.738	152.916	0.000	16043.7
11.5000	3032.90	6.756	152.917	0.000	16057.5
11.9670	3195.40	7.011	152.934	0.000	16253.5
12.4670	3369.40	7.281	152.947	0.000	16421.8
12.5000	3380.90	7.299	152.948	0.000	16430.0
12.6000	3415.60	7.352	152.950	0.000	16454.7
12.7000	3450.40	7.406	152.952	0.000	16479.4
12.9000	3519.80	7.513	152.956	0.000	16528.8
12.9671	3543.00	7.549	152.957	0.000	16545.3
13.1000	3589.00	7.620	152.958	0.000	16563.4
13.4000	3692.50	7.779	152.961	0.000	16604.0
13.4671	3715.50	7.814	152.962	0.000	16613.0
13.6000	3761.10	7.883	152.961	0.000	16617.3
13.7000	3795.30	7.936	152.961	0.000	16620.4
13.8000	3829.40	7.988	152.960	0.000	16623.6
13.9000	3863.40	8.039	152.959	0.000	16626.8
13.9670	3886.10	8.074	152.959	0.000	16628.9
14.2000	3965.10	8.195	152.956	0.000	16603.7
14.4000	4032.50	8.298	152.954	0.000	16582.2
14.4670	4055.00	8.332	152.953	0.000	16575.0
14.6000	4099.70	8.400	152.950	0.000	16548.5
14.8000	4166.50	8.501	152.946	0.000	16508.8
14.9000	4199.70	8.551	152.944	0.000	16489.1
14.9669	4221.90	8.585	152.943	0.000	16475.9
15.0000	4232.90	8.602	152.942	0.000	16466.5
15.1000	4265.90	8.652	152.939	0.000	16438.4
15.2000	4298.80	8.702	152.936	0.000	16410.4
15.3000	4331.60	8.752	152.934	0.000	16382.5
15.4669	4386.00	8.835	152.929	0.000	16336.2
15.5000	4396.80	8.851	152.928	0.000	16325.1
15.7000	4461.60	8.950	152.920	0.000	16258.7
15.8000	4493.80	8.999	152.916	0.000	16225.7
15.9672	4547.30	9.080	152.910	0.000	16170.8
16.0000	4557.80	9.096	152.908	0.000	16159.2
16.1000	4589.50	9.144	152.904	0.000	16124.3
16.2000	4621.10	9.192	152.899	0.000	16089.5
16.3000	4652.40	9.240	152.894	0.000	16055.1
16.4000	4683.60	9.287	152.889	0.000	16020.7
16.4669	4704.40	9.319	152.886	0.000	15997.8
16.5000	4714.70	9.335	152.884	0.000	14472.0
16.7000	4776.50	9.429	152.873	0.000	5317.6
16.8000	4807.20	9.476	152.868	0.000	770.0
16.9000	4812.40	9.484	152.867	0.000	0.0
17.3000	4812.40	9.484	152.867	0.000	0.0

36.No1 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	116.116	-9.969	0.0
0.0010	23.00	0.013	116.116	-9.969	1140.9
0.1000	103.90	0.059	116.116	-9.969	5153.7
0.2000	188.60	0.108	116.116	-9.969	9355.0
0.3000	276.00	0.158	116.116	-9.969	13690.2
0.4000	365.60	0.209	116.116	-9.969	18134.6
0.5000	457.20	0.261	116.116	-9.969	22678.1
0.6000	550.50	0.314	116.116	-9.969	27306.0
0.7000	645.50	0.369	116.116	-9.969	32018.2
0.8000	741.90	0.424	116.116	-9.969	36799.9
0.9000	839.80	0.479	116.116	-9.969	41655.9
0.9699	909.00	0.519	116.116	-9.969	45088.4
1.0000	938.80	0.534	116.131	-9.985	45359.2
1.1000	1035.40	0.583	116.179	-10.037	46237.2
1.2000	1133.10	0.632	116.228	-10.090	47125.2
1.3000	1231.70	0.682	116.278	-10.143	48021.3
1.4000	1331.20	0.733	116.328	-10.196	48925.7
1.5000	1431.60	0.784	116.378	-10.250	49838.2
1.6000	1532.90	0.835	116.429	-10.305	50758.9
1.7000	1634.90	0.886	116.480	-10.359	51685.9
1.8000	1737.70	0.938	116.532	-10.415	52620.3
1.9000	1841.30	0.991	116.583	-10.470	53561.9
2.0000	1945.60	1.044	116.636	-10.527	54569.0
2.1000	2050.50	1.094	116.668	-10.566	50319.3
2.2000	2156.20	1.144	116.700	-10.605	45754.5
2.3000	2262.40	1.194	116.731	-10.644	41168.1
2.4000	2369.30	1.245	116.763	-10.683	36551.4
2.5000	2476.80	1.296	116.795	-10.722	31908.9
2.6000	2584.90	1.347	116.827	-10.762	27240.4
2.7000	2693.50	1.399	116.860	-10.802	22550.3
2.8000	2802.70	1.451	116.892	-10.842	17834.4
2.9000	2912.40	1.503	116.925	-10.882	13096.8
3.0000	3022.60	1.555	116.958	-10.922	8337.6
3.0764	3070.90	1.578	116.972	-10.940	6251.7
3.1000	3085.80	1.587	116.983	-10.984	6248.9
3.2000	3112.30	1.602	117.002	-11.062	6243.9
3.5000	3192.40	1.648	117.060	-11.298	6228.7
3.6000	3219.30	1.663	117.079	-11.377	6223.6
3.7000	3246.10	1.678	117.098	-11.456	6218.5
3.9000	3299.90	1.709	117.137	-11.614	6208.3
4.0000	3326.70	1.725	117.156	-11.693	6203.2
4.0810	3348.50	1.737	117.172	-11.757	6199.1
4.1000	3353.60	1.741	117.176	-11.771	6192.2
4.4000	3434.00	1.802	117.237	-11.985	6082.6
4.5000	3460.70	1.823	117.258	-12.056	6046.3
4.6000	3487.30	1.843	117.278	-12.127	6010.0
4.7000	3513.80	1.863	117.298	-12.197	5973.9
4.9000	3566.60	1.903	117.338	-12.338	5902.0
5.1000	3619.00	1.943	117.378	-12.477	5830.6
5.1185	3623.80	1.947	117.382	-12.490	5824.1
5.2000	3645.00	1.966	117.399	-12.542	5777.3
5.4000	3696.60	2.013	117.439	-12.667	5663.4
5.5000	3722.20	2.037	117.459	-12.729	5606.9
5.6000	3747.60	2.060	117.479	-12.791	5550.8
5.7000	3772.90	2.083	117.499	-12.853	5495.0
5.8000	3798.00	2.106	117.519	-12.914	5439.6
5.9000	3822.90	2.129	117.539	-12.974	5384.6
6.0000	3847.60	2.151	117.558	-13.034	5330.1
6.1000	3872.20	2.174	117.577	-13.094	5275.8
6.1560	3885.80	2.186	117.588	-13.127	5245.8
6.2000	3896.50	2.197	117.597	-13.151	5215.5
6.3000	3920.70	2.223	117.617	-13.205	5146.9
6.4000	3944.70	2.248	117.637	-13.259	5078.9

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36.No1 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
6.5000	3968.40	2.272	117.656	-13.312	5011.7
6.6000	3991.90	2.297	117.676	-13.365	4945.1
6.7000	4015.20	2.321	117.695	-13.417	4879.0
6.8000	4038.30	2.346	117.714	-13.469	4813.6
6.9000	4061.10	2.369	117.733	-13.520	4748.9
7.0000	4083.70	2.393	117.751	-13.571	4684.9
7.1000	4106.10	2.416	117.770	-13.621	4621.4
7.1932	4126.70	2.438	117.787	-13.667	4563.0
7.3000	4150.10	2.465	117.808	-13.716	4483.5
7.4000	4171.70	2.490	117.827	-13.761	4410.1
7.5000	4193.00	2.515	117.845	-13.805	4337.7
7.6000	4214.10	2.539	117.864	-13.849	4266.1
7.7000	4234.90	2.564	117.882	-13.893	4195.4
7.8000	4255.40	2.587	117.900	-13.935	4125.7
7.9000	4275.60	2.611	117.918	-13.978	4057.1
8.0000	4295.60	2.634	117.936	-14.019	3989.2
8.1000	4315.30	2.657	117.953	-14.060	3922.2
8.2000	4334.60	2.679	117.970	-14.101	3856.7
8.2309	4340.50	2.686	117.975	-14.113	3836.6
8.3000	4353.70	2.703	117.988	-14.139	3798.4
8.4000	4372.50	2.727	118.006	-14.176	3743.9
8.5000	4391.00	2.751	118.024	-14.212	3690.3
8.6000	4409.20	2.774	118.042	-14.248	3637.5
8.7000	4427.00	2.797	118.059	-14.283	3585.9
8.8000	4444.60	2.820	118.076	-14.317	3534.9
8.9000	4461.80	2.842	118.093	-14.351	3485.1
9.0000	4478.60	2.863	118.109	-14.384	3436.4
9.3000	4515.50	2.910	118.145	-14.456	3329.5
9.3621	4523.70	2.921	118.153	-14.472	3305.7
9.4000	4528.70	2.928	118.158	-14.481	3307.2
9.5000	4543.80	2.949	118.173	-14.509	3311.6
9.7000	4574.00	2.991	118.204	-14.563	3320.4
10.0000	4619.60	3.055	118.249	-14.646	3333.8
10.4000	4680.80	3.141	118.311	-14.758	3351.7
10.5299	4700.80	3.169	118.331	-14.794	3357.5
10.8000	4742.40	3.231	118.372	-14.864	3365.4
11.1000	4788.90	3.301	118.418	-14.941	3374.3
11.2000	4806.60	3.328	118.436	-14.971	3377.7
11.5000	4860.90	3.409	118.490	-15.062	3388.0
11.6121	4881.30	3.440	118.510	-15.096	3391.9
12.0000	4951.90	3.553	118.577	-15.205	3400.5
12.1000	4970.20	3.582	118.595	-15.233	3402.7
12.2000	4988.40	3.611	118.612	-15.261	3404.9
12.6000	5061.60	3.727	118.682	-15.375	3413.7
12.6120	5063.80	3.731	118.684	-15.378	3414.0
12.7000	5080.00	3.758	118.699	-15.401	3415.2
12.8000	5098.30	3.789	118.715	-15.428	3416.6
12.9000	5116.70	3.819	118.732	-15.454	3417.9
13.0000	5135.00	3.850	118.749	-15.480	3419.3
13.6120	5247.60	4.038	118.851	-15.642	3427.7
13.7000	5263.80	4.066	118.865	-15.664	3428.5
13.8000	5282.30	4.098	118.881	-15.688	3429.3
14.0000	5319.10	4.162	118.913	-15.738	3431.0
14.1000	5337.60	4.195	118.929	-15.762	3431.9
14.2000	5356.00	4.227	118.944	-15.787	3432.7
14.3000	5374.50	4.259	118.960	-15.812	3433.6
14.4000	5392.90	4.291	118.976	-15.837	3434.4
14.6000	5429.90	4.355	119.008	-15.886	3436.1
14.6120	5432.10	4.359	119.010	-15.889	3436.2
14.7000	5448.30	4.388	119.023	-15.909	3436.5
14.9000	5485.30	4.455	119.053	-15.955	3437.0
15.0000	5503.70	4.488	119.068	-15.978	3437.3

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36.No1 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
15.4000	5577.70	4.622	119.128	-16.070	3438.5
15.5000	5596.10	4.656	119.143	-16.093	3438.8
15.6119	5616.80	4.693	119.160	-16.119	3439.1
15.9000	5670.10	4.792	119.201	-16.181	3439.2
16.0000	5688.50	4.826	119.215	-16.203	3439.2
16.5000	5781.00	4.998	119.285	-16.311	3439.3
16.6000	5799.40	5.033	119.299	-16.332	3439.3
16.6124	5801.70	5.037	119.301	-16.335	3439.3
17.1000	5891.90	5.210	119.365	-16.434	3439.3
17.2000	5910.30	5.245	119.379	-16.454	3439.2
17.6119	5986.50	5.391	119.433	-16.537	3439.2
17.7000	6002.80	5.423	119.444	-16.554	3439.2
17.8000	6021.20	5.459	119.456	-16.573	3439.2
18.3000	6113.70	5.641	119.518	-16.668	3439.3
18.4000	6132.10	5.677	119.531	-16.687	3439.3
18.6119	6171.30	5.754	119.557	-16.727	3439.3
18.9000	6224.60	5.861	119.590	-16.779	3439.3
19.0000	6243.00	5.898	119.602	-16.796	3439.3
19.5000	6335.50	6.083	119.660	-16.886	3439.3
19.6000	6353.90	6.120	119.672	-16.904	3439.3
19.6119	6356.10	6.124	119.673	-16.906	3439.3
20.0000	6427.90	6.271	119.716	-16.972	3439.2
20.1000	6446.30	6.308	119.727	-16.988	3439.2
20.6000	6538.80	6.498	119.783	-17.073	3439.0
20.6120	6541.00	6.502	119.784	-17.075	3439.0
20.7000	6557.20	6.536	119.793	-17.089	3439.0
21.2000	6649.70	6.728	119.845	-17.169	3438.9
21.3000	6668.10	6.767	119.856	-17.185	3438.9
21.6119	6725.80	6.887	119.888	-17.235	3438.8
21.7000	6742.10	6.921	119.897	-17.248	3438.8
21.8000	6760.50	6.960	119.906	-17.263	3438.8
22.3000	6853.00	7.156	119.955	-17.339	3438.9
22.4000	6871.40	7.195	119.965	-17.354	3438.9
22.6119	6910.60	7.278	119.986	-17.386	3438.9
22.9000	6963.90	7.392	120.013	-17.427	3440.3
23.0000	6982.30	7.432	120.022	-17.441	3440.8
23.6124	7095.60	7.675	120.080	-17.529	3443.8
23.7000	7111.80	7.710	120.088	-17.541	3444.8
23.8000	7130.40	7.751	120.097	-17.555	3445.9
24.0000	7167.40	7.831	120.115	-17.582	3448.1
24.1000	7186.00	7.871	120.124	-17.596	3449.2
24.2000	7204.50	7.912	120.133	-17.609	3450.3
24.6118	7281.10	8.078	120.171	-17.666	3454.9
24.8000	7316.10	8.155	120.188	-17.690	3458.3
24.9000	7334.80	8.196	120.197	-17.703	3460.2
25.0000	7353.40	8.237	120.205	-17.716	3462.0
25.3000	7409.50	8.360	120.232	-17.755	3467.5
25.4000	7428.30	8.402	120.241	-17.768	3469.4
25.5000	7447.00	8.443	120.250	-17.781	3471.2
25.6122	7468.10	8.489	120.260	-17.796	3473.3
25.8000	7503.40	8.567	120.277	-17.819	3478.4
26.1000	7560.10	8.693	120.304	-17.857	3486.5
26.2000	7579.10	8.736	120.313	-17.869	3489.2
26.3000	7598.00	8.778	120.322	-17.882	3491.9
26.4000	7617.00	8.820	120.332	-17.894	3494.6
26.6120	7657.50	8.910	120.351	-17.921	3500.4
26.7000	7674.30	8.948	120.359	-17.931	3503.3
26.8000	7693.50	8.991	120.369	-17.943	3506.7
26.9000	7712.60	9.033	120.378	-17.955	3510.0
27.3000	7789.80	9.206	120.415	-18.003	3523.4
27.4000	7809.20	9.250	120.425	-18.015	3526.7
27.6118	7850.50	9.342	120.445	-18.041	3533.9

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36.No1 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
27.7000	7867.70	9.381	120.454	-18.051	3537.3
27.8000	7887.30	9.425	120.463	-18.063	3541.1
27.9000	7907.00	9.470	120.473	-18.074	3544.9
28.0000	7926.60	9.514	120.483	-18.086	3548.8
28.3000	7986.00	9.648	120.513	-18.121	3560.3
28.4000	8005.90	9.693	120.523	-18.133	3564.2
28.6120	8048.30	9.789	120.544	-18.158	3572.5
28.7000	8065.90	9.829	120.553	-18.168	3576.3
28.8000	8086.10	9.875	120.564	-18.179	3580.6
28.9000	8106.20	9.920	120.574	-18.191	3584.9
29.1000	8146.80	10.012	120.595	-18.214	3593.6
29.3000	8187.60	10.105	120.616	-18.237	3602.4
29.5000	8228.60	10.198	120.637	-18.260	3611.2
29.6000	8249.20	10.244	120.648	-18.272	3615.6
29.6121	8251.70	10.250	120.649	-18.273	3616.1
29.7000	8269.90	10.291	120.659	-18.283	3620.3
29.9000	8311.50	10.386	120.681	-18.305	3629.8
30.1000	8353.30	10.481	120.703	-18.327	3639.4
30.2000	8374.30	10.529	120.714	-18.338	3644.3
30.3000	8395.40	10.577	120.725	-18.350	3649.1
30.5000	8437.80	10.674	120.747	-18.372	3658.8
30.6117	8461.60	10.728	120.760	-18.385	3664.3
30.7000	8480.40	10.771	120.770	-18.395	3669.0
30.9000	8523.40	10.869	120.793	-18.417	3679.9
31.1000	8566.60	10.967	120.817	-18.439	3690.7
31.3000	8610.20	11.066	120.840	-18.461	3701.7
31.4000	8632.10	11.116	120.852	-18.472	3707.2
31.6000	8676.10	11.216	120.876	-18.495	3718.3
31.6122	8678.80	11.222	120.877	-18.496	3719.0
31.8000	8720.50	11.317	120.920	-18.510	2318.1
31.9000	8742.60	11.368	120.943	-18.517	1575.6
32.0000	8760.50	11.409	120.962	-18.523	974.3
32.1000	8773.00	11.437	120.975	-18.527	554.3
32.2000	8781.70	11.457	120.984	-18.530	262.0
32.2500	8789.50	11.475	120.992	-18.533	0.0

37.No1 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	116.116	9.969	0.0
0.0010	30.90	0.018	116.116	9.969	1532.7
0.1000	112.40	0.064	116.116	9.969	5575.3
0.2000	197.60	0.113	116.116	9.969	9801.4
0.3000	285.40	0.163	116.116	9.969	14156.5
0.4000	375.40	0.214	116.116	9.969	18620.7
0.5000	467.40	0.267	116.116	9.969	23184.1
0.6000	561.10	0.320	116.116	9.969	27831.8
0.7000	656.40	0.375	116.116	9.969	32558.9
0.8000	753.30	0.430	116.116	9.969	37365.3
0.9000	851.40	0.486	116.116	9.969	42231.3
0.9581	909.00	0.519	116.116	9.969	45088.4
1.0000	950.60	0.540	116.137	9.991	45466.5
1.1000	1047.70	0.589	116.186	10.044	46349.0
1.2000	1145.90	0.639	116.235	10.096	47241.5
1.3000	1245.00	0.689	116.284	10.150	48142.2
1.4000	1345.10	0.740	116.335	10.204	49052.0
1.5000	1446.00	0.791	116.385	10.258	49969.1
1.6000	1547.80	0.842	116.436	10.313	50894.3

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37.No1 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.7000	1650.40	0.894	116.488	10.368	51826.8
1.8000	1753.70	0.947	116.540	10.423	52765.7
1.9000	1857.80	0.999	116.592	10.479	53711.8
1.9900	1952.10	1.047	116.639	10.530	54568.9
2.0000	1962.60	1.052	116.642	10.534	54115.4
2.1000	2068.10	1.102	116.674	10.573	49559.2
2.2000	2174.30	1.152	116.705	10.611	44972.8
2.3000	2281.10	1.203	116.737	10.651	40360.5
2.4000	2388.50	1.254	116.769	10.690	35722.3
2.5000	2496.60	1.305	116.801	10.730	31053.8
2.6000	2605.20	1.357	116.833	10.769	26363.7
2.7000	2714.30	1.409	116.866	10.809	21652.1
2.8000	2824.10	1.461	116.899	10.850	16910.2
2.9000	2934.30	1.513	116.931	10.890	12151.0
3.0000	3045.10	1.566	116.964	10.931	7365.9
3.0558	3070.90	1.578	116.972	10.940	6251.7
3.1000	3091.30	1.590	116.987	11.000	6247.8
3.3000	3144.70	1.620	117.025	11.157	6237.7
3.4000	3171.50	1.636	117.044	11.236	6232.6
3.5000	3198.40	1.651	117.064	11.315	6227.5
3.6000	3225.40	1.666	117.083	11.395	6222.4
3.7000	3252.30	1.682	117.103	11.474	6217.3
4.0000	3333.30	1.728	117.161	11.712	6202.0
4.0565	3348.50	1.737	117.172	11.757	6199.1
4.1000	3360.20	1.746	117.181	11.788	6183.2
4.2000	3387.20	1.767	117.202	11.860	6146.4
4.3000	3414.10	1.787	117.222	11.932	6109.7
4.5000	3467.70	1.828	117.263	12.074	6036.7
4.6000	3494.40	1.848	117.283	12.145	6000.4
4.7000	3521.00	1.869	117.304	12.216	5964.1
4.9000	3574.00	1.909	117.344	12.357	5891.9
5.0000	3600.30	1.929	117.364	12.427	5856.1
5.0897	3623.80	1.947	117.382	12.490	5824.1
5.1000	3626.50	1.949	117.384	12.497	5818.1
5.3000	3678.50	1.997	117.425	12.623	5703.4
5.4000	3704.30	2.020	117.445	12.686	5646.4
5.5000	3729.90	2.044	117.465	12.748	5589.9
5.6000	3755.40	2.067	117.485	12.810	5533.6
5.7000	3780.70	2.090	117.505	12.871	5477.8
5.8000	3805.90	2.113	117.525	12.933	5422.2
5.9000	3830.80	2.136	117.545	12.993	5367.2
6.0000	3855.60	2.158	117.564	13.054	5312.5
6.1000	3880.20	2.181	117.584	13.113	5258.2
6.1230	3885.80	2.186	117.588	13.127	5245.8
6.2000	3904.60	2.206	117.604	13.169	5192.5
6.3000	3928.80	2.231	117.624	13.223	5123.9
6.4000	3952.80	2.256	117.643	13.277	5055.9
6.5000	3976.50	2.281	117.663	13.330	4988.7
6.6000	4000.10	2.306	117.682	13.383	4921.8
6.7000	4023.40	2.330	117.702	13.435	4855.8
6.8000	4046.50	2.354	117.721	13.487	4790.3
6.9000	4069.30	2.378	117.740	13.538	4725.7
7.0000	4091.90	2.402	117.758	13.589	4661.6
7.1000	4114.30	2.425	117.777	13.639	4598.2
7.1561	4126.70	2.438	117.787	13.667	4563.0
7.2000	4136.40	2.449	117.796	13.687	4530.0
7.3000	4158.20	2.475	117.815	13.733	4456.0
7.4000	4179.80	2.500	117.834	13.778	4382.6
7.5000	4201.10	2.524	117.852	13.822	4310.2
7.6000	4222.20	2.549	117.871	13.866	4238.5
7.7000	4243.00	2.573	117.889	13.910	4167.9
7.8000	4263.50	2.597	117.907	13.952	4098.2

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37.No1 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
7.9000	4283.70	2.620	117.925	13.995	4029.6
8.0000	4303.60	2.643	117.943	14.036	3962.0
8.1000	4323.20	2.666	117.960	14.077	3895.4
8.1892	4340.50	2.686	117.975	14.113	3836.6
8.2000	4342.60	2.689	117.977	14.117	3830.5
8.3000	4361.60	2.713	117.995	14.154	3775.5
8.4000	4380.30	2.737	118.014	14.191	3721.3
8.5000	4399.30	2.761	118.032	14.228	3666.2
8.6000	4418.10	2.786	118.050	14.265	3611.7
8.7000	4436.50	2.809	118.068	14.301	3558.4
8.8000	4454.50	2.832	118.086	14.336	3506.2
8.9000	4472.20	2.855	118.103	14.371	3454.9
9.0000	4489.70	2.877	118.120	14.405	3404.2
9.1000	4507.10	2.900	118.137	14.439	3353.8
9.1949	4523.70	2.921	118.153	14.472	3305.7
9.3000	4540.00	2.944	118.169	14.502	3310.5
9.4000	4553.50	2.963	118.183	14.526	3314.4
9.7000	4594.30	3.020	118.224	14.600	3326.4
10.1000	4649.10	3.097	118.279	14.700	3342.4
10.4746	4700.80	3.169	118.331	14.794	3357.5
10.6000	4718.10	3.195	118.348	14.823	3360.8
10.7000	4732.00	3.216	118.362	14.846	3363.5
10.8000	4745.80	3.237	118.376	14.869	3366.1
10.9000	4759.70	3.257	118.389	14.893	3368.7
11.0000	4776.60	3.283	118.406	14.921	3372.0
11.3000	4830.90	3.364	118.460	15.012	3382.3
11.5769	4881.30	3.440	118.510	15.096	3391.9
11.8000	4921.90	3.505	118.549	15.159	3396.8
12.0000	4958.50	3.563	118.584	15.215	3401.3
12.1000	4976.70	3.592	118.601	15.243	3403.5
12.2000	4995.10	3.621	118.618	15.272	3405.7
12.4000	5031.70	3.680	118.653	15.328	3410.1
12.5000	5050.10	3.709	118.671	15.357	3412.3
12.5749	5063.80	3.731	118.684	15.378	3414.0
12.6000	5068.40	3.739	118.688	15.385	3414.3
13.2000	5178.80	3.923	118.788	15.543	3422.6
13.3000	5197.30	3.954	118.805	15.570	3424.0
13.4000	5215.70	3.985	118.822	15.596	3425.3
13.5000	5234.20	4.016	118.839	15.623	3426.7
13.5728	5247.60	4.038	118.851	15.642	3427.7
13.6000	5252.60	4.047	118.855	15.649	3427.9
13.7000	5271.10	4.079	118.871	15.673	3428.8
13.8000	5289.50	4.111	118.887	15.698	3429.6
14.3000	5382.00	4.272	118.967	15.822	3433.9
14.4000	5400.40	4.304	118.983	15.847	3434.7
14.5000	5418.90	4.336	118.999	15.871	3435.6
14.5710	5432.10	4.359	119.010	15.889	3436.2
14.6000	5437.50	4.369	119.014	15.896	3436.3
15.3000	5567.00	4.603	119.120	16.057	3438.3
15.4000	5585.60	4.637	119.135	16.080	3438.6
15.5686	5616.80	4.693	119.160	16.119	3439.1
15.8000	5659.60	4.773	119.193	16.169	3439.2
15.9000	5678.20	4.807	119.207	16.191	3439.2
16.3000	5752.20	4.945	119.263	16.277	3439.3
16.4000	5770.80	4.980	119.277	16.299	3439.3
16.5670	5801.70	5.037	119.301	16.335	3439.3
16.8000	5844.80	5.120	119.332	16.382	3439.3
16.9000	5863.40	5.155	119.345	16.402	3439.3
17.3000	5937.40	5.297	119.398	16.483	3439.2
17.4000	5956.00	5.333	119.411	16.504	3439.2
17.5649	5986.50	5.391	119.433	16.537	3439.2
17.8000	6030.00	5.476	119.462	16.582	3439.2

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37.No1 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
17.9000	6048.60	5.513	119.475	16.601	3439.2
18.2000	6104.10	5.622	119.512	16.658	3439.3
18.3000	6122.70	5.659	119.524	16.677	3439.3
18.5627	6171.30	5.754	119.557	16.727	3439.3
18.7000	6196.70	5.805	119.573	16.752	3439.3
18.8000	6215.30	5.842	119.585	16.770	3439.3
19.2000	6289.30	5.990	119.631	16.841	3439.3
19.3000	6307.90	6.027	119.643	16.859	3439.3
19.5605	6356.10	6.124	119.673	16.906	3439.3
19.7000	6381.90	6.177	119.688	16.930	3439.3
19.8000	6400.50	6.215	119.700	16.947	3439.2
20.2000	6474.50	6.366	119.744	17.014	3439.1
20.3000	6493.10	6.404	119.755	17.031	3439.1
20.5589	6541.00	6.502	119.784	17.075	3439.0
20.6000	6548.60	6.518	119.788	17.082	3439.0
20.7000	6567.20	6.557	119.799	17.098	3439.0
21.1000	6641.20	6.711	119.840	17.162	3438.9
21.2000	6659.80	6.749	119.851	17.178	3438.9
21.5568	6725.80	6.887	119.888	17.235	3438.8
21.7000	6752.30	6.943	119.902	17.257	3438.8
21.8000	6770.90	6.982	119.912	17.272	3438.8
22.2000	6844.90	7.139	119.951	17.332	3438.9
22.3000	6863.50	7.178	119.961	17.348	3438.9
22.5546	6910.60	7.278	119.986	17.386	3438.9
22.7000	6937.50	7.336	120.000	17.407	3439.6
22.8000	6956.10	7.376	120.009	17.421	3440.1
23.1000	7011.60	7.495	120.037	17.464	3441.6
23.2000	7030.20	7.535	120.047	17.478	3442.1
23.3000	7048.70	7.574	120.056	17.493	3442.6
23.4000	7067.30	7.614	120.066	17.507	3443.1
23.5530	7095.60	7.675	120.080	17.529	3443.8
23.6000	7104.30	7.694	120.084	17.535	3444.3
23.8000	7141.50	7.775	120.103	17.563	3446.6
23.9000	7160.00	7.815	120.112	17.577	3447.7
24.3000	7234.40	7.977	120.148	17.632	3452.1
24.4000	7253.10	8.017	120.157	17.645	3453.2
24.5505	7281.10	8.078	120.171	17.666	3454.9
24.6000	7290.30	8.098	120.175	17.672	3455.8
25.1000	7383.80	8.304	120.220	17.737	3465.0
25.2000	7402.60	8.345	120.229	17.750	3466.9
25.3000	7421.30	8.386	120.238	17.763	3468.7
25.5000	7458.90	8.469	120.256	17.790	3472.4
25.5487	7468.10	8.489	120.260	17.796	3473.3
25.6000	7477.80	8.511	120.265	17.802	3474.7
25.7000	7496.60	8.552	120.274	17.815	3477.4
25.9000	7534.40	8.636	120.292	17.840	3482.8
26.0000	7553.40	8.679	120.301	17.852	3485.5
26.1000	7572.30	8.721	120.310	17.865	3488.2
26.2000	7591.40	8.763	120.319	17.877	3490.9
26.3000	7610.40	8.805	120.328	17.890	3493.7
26.5466	7657.50	8.910	120.351	17.921	3500.4
26.6000	7667.70	8.933	120.356	17.927	3502.2
26.8000	7706.10	9.019	120.375	17.951	3508.8
27.1000	7764.00	9.148	120.403	17.987	3518.9
27.3000	7802.80	9.235	120.422	18.011	3525.6
27.5000	7841.80	9.323	120.441	18.036	3532.4
27.5444	7850.50	9.342	120.445	18.041	3533.9
27.7000	7881.00	9.411	120.460	18.059	3539.9
27.9000	7920.40	9.500	120.480	18.082	3547.5
28.2000	7979.80	9.634	120.510	18.117	3559.1
28.3000	7999.80	9.679	120.520	18.129	3563.0
28.4000	8019.70	9.724	120.530	18.141	3566.9

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37.No1 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
28.5423	8048.30	9.789	120.544	18.158	3572.5
28.7000	8080.00	9.861	120.560	18.176	3579.3
28.8000	8100.20	9.907	120.571	18.187	3583.6
29.0000	8140.80	9.999	120.592	18.210	3592.3
29.2000	8181.60	10.091	120.613	18.233	3601.1
29.3000	8202.20	10.138	120.623	18.245	3605.5
29.4000	8222.70	10.184	120.634	18.257	3609.9
29.5401	8251.70	10.250	120.649	18.273	3616.1
29.7000	8284.80	10.325	120.667	18.291	3623.7
29.8000	8305.70	10.373	120.678	18.302	3628.5
29.9000	8326.60	10.421	120.689	18.313	3633.3
30.1000	8368.60	10.516	120.711	18.335	3642.9
30.2000	8389.70	10.564	120.722	18.347	3647.8
30.4000	8432.10	10.661	120.744	18.369	3657.5
30.5000	8453.40	10.709	120.756	18.381	3662.4
30.5383	8461.60	10.728	120.760	18.385	3664.3
30.6000	8474.80	10.758	120.767	18.392	3667.6
30.8000	8517.80	10.856	120.790	18.414	3678.5
30.9000	8539.40	10.905	120.802	18.425	3683.9
31.0000	8561.10	10.954	120.814	18.436	3689.4
31.2000	8604.70	11.053	120.837	18.458	3700.3
31.5000	8670.70	11.204	120.873	18.492	3717.0
31.5365	8678.80	11.222	120.877	18.496	3719.0
31.7000	8715.10	11.305	120.915	18.508	2499.5
31.8000	8737.40	11.356	120.938	18.516	1750.3
31.9000	8756.90	11.400	120.958	18.522	1095.2
32.0000	8770.40	11.431	120.972	18.527	641.7
32.1000	8780.00	11.453	120.982	18.530	319.2
32.1720	8789.50	11.475	120.992	18.533	0.0

38.No2 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	69.525	-13.737	0.0
0.0010	46.20	0.017	69.525	-13.737	3157.7
0.1000	180.00	0.066	69.525	-13.737	12302.8
0.2000	315.50	0.115	69.525	-13.737	21564.1
0.3000	452.20	0.165	69.525	-13.737	30907.4
0.4000	589.90	0.216	69.525	-13.737	40319.1
0.5000	728.30	0.266	69.525	-13.737	49778.6
0.6000	867.50	0.317	69.525	-13.737	59292.7
0.7000	1007.30	0.369	69.525	-13.737	68847.9
0.8000	1147.60	0.420	69.525	-13.737	78437.3
0.9000	1288.50	0.471	69.525	-13.737	88067.7
0.9650	1380.30	0.505	69.525	-13.737	94342.1
1.0000	1429.80	0.523	69.527	-13.746	94543.8
1.1000	1571.60	0.573	69.533	-13.771	95121.4
1.2000	1713.80	0.623	69.538	-13.796	95700.7
1.3000	1856.30	0.674	69.544	-13.820	96281.2
1.4000	1999.10	0.724	69.550	-13.846	96862.9
1.5000	2142.30	0.775	69.555	-13.871	97446.2
1.6000	2285.70	0.826	69.561	-13.896	98030.4
1.7000	2429.40	0.877	69.567	-13.921	98615.8
1.8000	2573.30	0.928	69.573	-13.946	99202.0
1.9000	2717.40	0.979	69.578	-13.972	99789.0
1.9650	2811.20	1.012	69.582	-13.988	100171.1
2.0000	2861.70	1.030	69.584	-13.993	96753.0
2.1000	3006.20	1.080	69.589	-14.007	86972.6

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38.No2 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.2000	3150.80	1.131	69.594	-14.022	77185.5
2.3000	3295.60	1.181	69.600	-14.036	67384.8
2.4000	3440.50	1.232	69.605	-14.051	57577.3
2.5000	3585.40	1.283	69.610	-14.065	47769.8
2.6000	3730.50	1.334	69.616	-14.079	37948.8
2.7000	3875.70	1.384	69.621	-14.094	28121.0
2.8000	4020.90	1.435	69.626	-14.108	18293.3
2.9000	4166.20	1.486	69.632	-14.123	8458.7
2.9873	4260.70	1.519	69.635	-14.132	2062.5
3.0000	4274.50	1.525	69.635	-14.165	2043.4
3.1000	4313.70	1.541	69.636	-14.258	1989.2
3.2000	4352.60	1.558	69.636	-14.351	1935.4
3.3000	4391.20	1.574	69.637	-14.443	1882.0
3.4000	4429.40	1.591	69.638	-14.534	1829.1
3.5000	4467.20	1.607	69.638	-14.624	1776.9
3.6000	4504.60	1.622	69.639	-14.713	1725.1
3.7000	4541.70	1.638	69.639	-14.802	1673.8
3.8000	4578.40	1.654	69.640	-14.889	1623.0
3.9000	4614.80	1.669	69.641	-14.976	1572.7
3.9652	4638.20	1.679	69.641	-15.032	1540.3
4.0000	4650.70	1.686	69.641	-15.059	1523.7
4.1000	4686.30	1.706	69.643	-15.134	1476.5
4.2000	4721.50	1.726	69.644	-15.209	1429.8
4.3000	4756.30	1.746	69.645	-15.283	1383.6
4.4000	4790.70	1.765	69.646	-15.356	1337.9
4.5000	4824.70	1.784	69.648	-15.429	1292.8
4.6000	4858.40	1.803	69.649	-15.500	1248.1
4.7000	4891.60	1.822	69.650	-15.571	1204.0
4.8000	4924.40	1.841	69.651	-15.640	1160.5
4.9000	4956.90	1.859	69.652	-15.710	1117.3
4.9653	4977.80	1.871	69.653	-15.754	1089.6
5.0000	4988.90	1.879	69.653	-15.776	1076.3
5.1000	5020.60	1.900	69.655	-15.837	1038.4
5.2000	5051.90	1.922	69.656	-15.898	1001.0
5.3000	5082.70	1.943	69.657	-15.958	964.1
5.4000	5113.20	1.964	69.658	-16.017	927.7
5.5000	5143.20	1.985	69.659	-16.075	891.8
5.6000	5172.90	2.005	69.660	-16.133	856.3
5.7000	5202.20	2.025	69.661	-16.190	821.2
5.8000	5231.00	2.045	69.662	-16.246	786.8
5.9000	5259.50	2.064	69.663	-16.301	752.7
5.9651	5277.80	2.077	69.664	-16.337	730.8
6.0000	5287.60	2.085	69.664	-16.355	720.6
6.1000	5315.20	2.107	69.665	-16.405	691.9
6.2000	5342.50	2.129	69.666	-16.455	663.4
6.3000	5369.30	2.150	69.667	-16.503	635.5
6.4000	5395.80	2.171	69.668	-16.552	607.9
6.5000	5421.90	2.192	69.669	-16.599	580.8
6.6000	5447.50	2.212	69.670	-16.646	554.1
6.7000	5472.80	2.232	69.671	-16.692	527.8
6.8000	5497.60	2.252	69.672	-16.737	502.0
6.9000	5522.10	2.272	69.672	-16.781	476.5
6.9651	5537.80	2.284	69.673	-16.810	460.1
7.0000	5546.20	2.292	69.673	-16.825	452.7
7.1000	5569.80	2.313	69.674	-16.866	431.9
7.2000	5593.10	2.334	69.675	-16.906	411.4
7.3000	5616.00	2.355	69.675	-16.946	391.2
7.4000	5638.40	2.375	69.676	-16.985	371.5
7.5000	5660.50	2.395	69.677	-17.023	352.0
7.6000	5682.10	2.415	69.678	-17.061	333.0
7.7000	5703.40	2.434	69.678	-17.098	314.2
7.8000	5724.30	2.453	69.679	-17.134	295.8

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38.No2 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
7.9000	5744.70	2.471	69.680	-17.169	277.8
7.9652	5757.80	2.483	69.680	-17.192	266.3
8.0000	5764.80	2.490	69.680	-17.204	262.3
8.1000	5784.40	2.510	69.681	-17.237	251.2
8.2000	5803.70	2.529	69.681	-17.269	240.3
8.3000	5822.60	2.548	69.682	-17.301	229.5
8.4000	5841.00	2.567	69.682	-17.332	219.1
8.5000	5859.10	2.585	69.683	-17.363	208.8
8.6000	5876.70	2.603	69.683	-17.392	198.8
8.7000	5894.00	2.621	69.684	-17.421	189.0
8.9647	5939.00	2.666	69.685	-17.497	163.5
9.9647	6109.00	2.856	69.689	-17.770	163.5
10.9647	6279.00	3.063	69.694	-18.029	163.5
11.9000	6438.00	3.271	69.698	-18.257	163.5
11.9651	6449.00	3.285	69.698	-18.273	163.5
12.0000	6454.90	3.293	69.698	-18.281	163.5
12.9653	6619.00	3.522	69.702	-18.505	163.5
13.9653	6789.00	3.772	69.706	-18.726	163.5
14.9653	6959.00	4.034	69.709	-18.935	163.5
15.9653	7129.00	4.307	69.712	-19.135	163.5
16.9647	7298.90	4.591	69.716	-19.326	163.5
17.9647	7468.90	4.885	69.719	-19.507	163.5
18.9647	7638.90	5.188	69.722	-19.681	163.5
19.4000	7712.90	5.323	69.723	-19.753	163.5
19.5000	7729.80	5.354	69.723	-19.770	163.5
19.9653	7808.90	5.499	69.724	-19.847	163.5
20.9653	7978.90	5.819	69.727	-20.006	163.5
21.9653	8148.90	6.146	69.730	-20.158	163.5
22.9653	8318.90	6.480	69.732	-20.304	163.5
23.9647	8488.80	6.821	69.734	-20.445	163.5
24.9647	8658.80	7.168	69.737	-20.580	163.5
25.9647	8828.80	7.521	69.739	-20.709	163.5
26.9647	8998.80	7.880	69.741	-20.834	163.5
27.0000	9004.80	7.893	69.741	-20.838	163.5
27.1000	9021.70	7.929	69.741	-20.850	163.5
27.9653	9168.80	8.243	69.743	-20.954	163.5
28.9653	9338.80	8.612	69.745	-21.070	163.5
29.9653	9508.80	8.986	69.747	-21.181	163.5
30.6000	9616.70	9.225	69.748	-21.249	159.7
30.7000	9633.60	9.263	69.748	-21.260	159.2
30.8000	9650.60	9.301	69.748	-21.271	158.6
30.9649	9678.30	9.362	69.748	-21.288	157.6
31.0000	9684.20	9.375	69.748	-21.292	140.0
31.1000	9700.90	9.413	69.747	-21.302	90.3
31.2000	9717.40	9.450	69.747	-21.312	41.1
31.3000	9729.70	9.478	69.746	-21.319	4.5
31.4000	9731.20	9.481	69.746	-21.320	0.0
31.6220	9731.20	9.481	69.746	-21.320	0.0

39.No2 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	69.525	13.737	0.0
0.0010	48.80	0.018	69.525	13.737	3335.4
0.1000	182.70	0.067	69.525	13.737	12487.4
0.2000	318.30	0.116	69.525	13.737	21755.5
0.3000	455.00	0.166	69.525	13.737	31098.8
0.4000	592.60	0.217	69.525	13.737	40503.6
0.5000	731.10	0.267	69.525	13.737	49969.9
0.6000	870.30	0.318	69.525	13.737	59484.1
0.7000	1010.10	0.370	69.525	13.737	69039.3
0.8000	1150.40	0.421	69.525	13.737	78628.7
0.9000	1291.30	0.472	69.525	13.737	88259.0
0.9629	1380.30	0.505	69.525	13.737	94342.1
1.0000	1432.70	0.524	69.527	13.746	94555.6
1.1000	1574.40	0.574	69.533	13.771	95132.8
1.2000	1716.60	0.624	69.538	13.796	95712.1
1.3000	1859.10	0.675	69.544	13.821	96292.6
1.4000	2002.00	0.725	69.550	13.846	96874.7
1.5000	2145.10	0.776	69.555	13.871	97457.6
1.6000	2288.60	0.827	69.561	13.896	98042.2
1.7000	2432.20	0.878	69.567	13.922	98627.2
1.8000	2576.10	0.929	69.573	13.947	99213.4
1.9000	2720.30	0.980	69.578	13.972	99800.8
1.9630	2811.20	1.012	69.582	13.988	100171.1
2.0000	2864.60	1.031	69.584	13.993	96556.7
2.1000	3009.10	1.081	69.589	14.008	86776.3
2.2000	3153.70	1.132	69.595	14.022	76989.2
2.3000	3298.50	1.182	69.600	14.036	67188.5
2.5000	3588.30	1.284	69.610	14.065	47573.5
2.6000	3733.40	1.335	69.616	14.080	37752.5
2.8000	4023.80	1.436	69.626	14.108	18097.0
2.9000	4169.10	1.487	69.632	14.123	8262.4
2.9863	4260.70	1.519	69.635	14.132	2062.5
3.0000	4275.30	1.525	69.635	14.167	2042.3
3.1000	4314.50	1.542	69.636	14.260	1988.1
3.2000	4353.40	1.558	69.636	14.353	1934.3
3.3000	4392.00	1.575	69.637	14.445	1880.9
3.4000	4430.10	1.591	69.638	14.536	1828.2
3.5000	4467.90	1.607	69.638	14.626	1775.9
3.6000	4505.40	1.623	69.639	14.715	1724.0
3.7000	4542.50	1.638	69.639	14.804	1672.7
3.8000	4579.20	1.654	69.640	14.891	1621.9
3.9000	4615.50	1.669	69.641	14.978	1571.7
3.9632	4638.20	1.679	69.641	15.032	1540.3
4.0000	4651.40	1.686	69.641	15.060	1522.8
4.1000	4687.00	1.707	69.643	15.136	1475.5
4.2000	4722.20	1.726	69.644	15.211	1428.8
4.3000	4757.00	1.746	69.645	15.285	1382.6
4.4000	4791.40	1.766	69.646	15.358	1337.0
4.5000	4825.40	1.785	69.648	15.430	1291.9
4.6000	4859.00	1.804	69.649	15.501	1247.3
4.7000	4892.30	1.823	69.650	15.572	1203.1
4.8000	4925.10	1.841	69.651	15.642	1159.5
4.9000	4957.50	1.860	69.652	15.711	1116.5
4.9632	4977.80	1.871	69.653	15.754	1089.6
5.0000	4989.60	1.879	69.653	15.777	1075.5
5.1000	5021.20	1.901	69.655	15.838	1037.7
5.2000	5052.50	1.922	69.656	15.899	1000.3
5.3000	5083.30	1.943	69.657	15.959	963.4
5.4000	5113.80	1.964	69.658	16.018	926.9
5.5000	5143.80	1.985	69.659	16.077	891.1
5.6000	5173.50	2.005	69.660	16.134	855.5
5.7000	5202.70	2.025	69.661	16.191	820.6
5.8000	5231.60	2.045	69.662	16.247	786.1

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39.No2 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
5.9000	5260.10	2.065	69.663	16.303	752.0
5.9632	5277.80	2.077	69.664	16.337	730.8
6.0000	5288.10	2.085	69.664	16.356	720.1
6.1000	5315.80	2.107	69.665	16.406	691.2
6.2000	5343.00	2.129	69.666	16.456	662.9
6.3000	5369.90	2.150	69.667	16.505	634.9
6.4000	5396.30	2.171	69.668	16.553	607.4
6.5000	5422.40	2.192	69.669	16.600	580.3
6.6000	5448.00	2.213	69.670	16.647	553.6
6.7000	5473.30	2.233	69.671	16.693	527.3
6.8000	5498.10	2.252	69.672	16.738	501.4
6.9000	5522.60	2.272	69.672	16.782	475.9
6.9633	5537.80	2.284	69.673	16.810	460.1
7.0000	5546.60	2.292	69.673	16.825	452.4
7.1000	5570.30	2.313	69.674	16.866	431.5
7.2000	5593.60	2.334	69.675	16.907	411.0
7.3000	5616.40	2.355	69.675	16.946	390.9
7.4000	5638.90	2.375	69.676	16.986	371.0
7.5000	5660.90	2.395	69.677	17.024	351.7
7.6000	5682.60	2.415	69.678	17.061	332.5
7.7000	5703.80	2.434	69.678	17.098	313.9
7.8000	5724.70	2.453	69.679	17.135	295.5
7.9000	5745.10	2.472	69.680	17.170	277.5
7.9632	5757.80	2.483	69.680	17.192	266.3
8.0000	5765.20	2.490	69.680	17.204	262.1
8.1000	5784.80	2.510	69.681	17.237	251.0
8.2000	5804.10	2.530	69.681	17.270	240.0
8.3000	5822.90	2.549	69.682	17.302	229.4
8.4000	5841.40	2.567	69.682	17.333	218.9
8.5000	5859.40	2.586	69.683	17.363	208.7
8.6000	5877.10	2.603	69.683	17.393	198.6
8.7000	5894.30	2.621	69.684	17.422	188.9
8.9629	5939.00	2.666	69.685	17.497	163.5
9.9629	6109.00	2.856	69.689	17.770	163.5
10.9629	6279.00	3.063	69.694	18.029	163.5
11.9629	6449.00	3.285	69.698	18.273	163.5
12.9629	6619.00	3.522	69.702	18.505	163.5
13.9629	6789.00	3.772	69.706	18.726	163.5
14.9629	6959.00	4.034	69.709	18.935	163.5
15.0000	6965.30	4.044	69.709	18.942	163.5
15.1000	6982.20	4.071	69.709	18.962	163.5
15.9635	7129.00	4.307	69.712	19.135	163.5
16.9629	7298.90	4.591	69.716	19.326	163.5
17.9629	7468.90	4.885	69.719	19.507	163.5
18.9629	7638.90	5.188	69.722	19.681	163.5
19.9629	7808.90	5.499	69.724	19.847	163.5
20.9629	7978.90	5.819	69.727	20.006	163.5
21.9629	8148.90	6.146	69.730	20.158	163.5
22.4000	8223.20	6.292	69.731	20.222	163.5
22.5000	8240.10	6.325	69.731	20.236	163.5
22.9635	8318.90	6.480	69.732	20.304	163.5
23.9629	8488.80	6.821	69.734	20.445	163.5
24.9629	8658.80	7.168	69.737	20.580	163.5
25.9629	8828.80	7.521	69.739	20.709	163.5
26.9629	8998.80	7.880	69.741	20.834	163.5
27.9629	9168.80	8.243	69.743	20.954	163.5
28.9629	9338.80	8.612	69.745	21.070	163.5
29.9629	9508.80	8.986	69.747	21.181	163.5
30.0000	9515.10	9.000	69.747	21.185	163.3
30.1000	9532.00	9.037	69.747	21.196	162.7
30.2000	9549.10	9.075	69.747	21.206	162.1
30.3000	9566.00	9.113	69.747	21.217	161.5

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39.No2 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
30.7000	9634.00	9.264	69.748	21.260	159.1
30.8000	9650.90	9.301	69.748	21.271	158.6
30.9000	9667.80	9.339	69.748	21.281	158.0
30.9629	9678.30	9.362	69.748	21.288	157.6
31.1000	9701.20	9.414	69.747	21.302	89.4
31.2000	9717.70	9.451	69.747	21.312	40.2
31.3000	9729.80	9.478	69.746	21.319	4.2
31.4000	9731.20	9.481	69.746	21.320	0.0
31.6100	9731.20	9.481	69.746	21.320	0.0

40.No3 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	19.050	-13.986	0.0
0.0010	45.90	0.016	19.050	-13.986	3215.4
0.1000	182.80	0.066	19.050	-13.986	12805.6
0.2000	321.30	0.115	19.050	-13.986	22507.8
0.3000	460.70	0.165	19.050	-13.986	32273.1
0.4000	601.10	0.215	19.050	-13.986	42108.5
0.5000	742.10	0.266	19.050	-13.986	51985.8
0.6000	883.80	0.317	19.050	-13.986	61912.3
0.7000	1026.10	0.368	19.050	-13.986	71880.7
0.8000	1168.80	0.419	19.050	-13.986	81877.2
0.9000	1311.90	0.470	19.050	-13.986	91901.7
0.9659	1406.50	0.504	19.050	-13.986	98528.6
1.0000	1455.50	0.521	19.050	-13.993	98675.8
1.1000	1599.40	0.571	19.050	-14.014	99108.1
1.2000	1743.60	0.622	19.050	-14.035	99541.2
1.3000	1888.00	0.672	19.050	-14.056	99975.0
1.4000	2032.80	0.723	19.050	-14.077	100410.0
1.5000	2177.70	0.773	19.050	-14.098	100845.2
1.6000	2322.90	0.824	19.050	-14.119	101281.4
1.7000	2468.20	0.875	19.050	-14.141	101717.9
1.9000	2759.20	0.977	19.050	-14.183	102592.0
1.9658	2855.00	1.010	19.050	-14.197	102879.8
2.0000	2904.90	1.027	19.050	-14.200	99432.2
2.3000	3342.30	1.178	19.050	-14.231	69211.7
2.5000	3634.10	1.279	19.050	-14.251	49050.9
2.6000	3779.90	1.330	19.050	-14.262	38977.4
2.8000	4071.70	1.431	19.050	-14.282	18816.6
2.9000	4217.50	1.481	19.050	-14.292	8743.1
2.9874	4313.20	1.514	19.050	-14.299	2131.1
3.0000	4327.00	1.520	19.050	-14.331	2110.1
3.1000	4366.60	1.536	19.050	-14.423	2049.9
3.2000	4405.90	1.553	19.050	-14.515	1990.2
3.3000	4444.80	1.569	19.050	-14.605	1931.1
3.4000	4483.30	1.586	19.050	-14.695	1872.5
3.5000	4521.30	1.602	19.050	-14.783	1814.8
3.6000	4559.00	1.617	19.050	-14.871	1757.5
3.7000	4596.30	1.633	19.050	-14.957	1700.8
3.8000	4633.20	1.649	19.050	-15.043	1644.7
3.9000	4669.60	1.664	19.050	-15.128	1589.3
3.9657	4693.30	1.674	19.050	-15.183	1553.3
4.0000	4705.70	1.681	19.050	-15.209	1536.4
4.1000	4741.40	1.701	19.050	-15.283	1487.9
4.2000	4776.70	1.721	19.050	-15.356	1439.9
4.3000	4811.50	1.740	19.050	-15.428	1392.6
4.4000	4846.00	1.759	19.050	-15.500	1345.7

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40.No3 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.5000	4880.10	1.778	19.050	-15.570	1299.3
4.6000	4913.70	1.797	19.050	-15.640	1253.6
4.7000	4947.00	1.816	19.050	-15.709	1208.4
4.8000	4979.90	1.834	19.050	-15.777	1163.6
4.9000	5012.40	1.852	19.050	-15.844	1119.5
4.9656	5033.40	1.864	19.050	-15.888	1090.9
5.0000	5044.40	1.871	19.050	-15.909	1077.7
5.1000	5076.10	1.893	19.050	-15.969	1039.7
5.2000	5107.40	1.914	19.050	-16.028	1002.1
5.3000	5138.20	1.935	19.050	-16.087	965.1
5.4000	5168.70	1.956	19.050	-16.145	928.5
5.5000	5198.80	1.976	19.050	-16.202	892.4
5.6000	5228.40	1.997	19.050	-16.258	856.8
5.7000	5257.70	2.017	19.050	-16.313	821.7
5.8000	5286.60	2.036	19.050	-16.368	787.0
5.9000	5315.00	2.055	19.050	-16.422	752.9
5.9655	5333.40	2.068	19.050	-16.457	730.8
6.0000	5343.10	2.076	19.050	-16.474	720.7
6.1000	5370.80	2.098	19.050	-16.524	691.9
6.2000	5398.00	2.119	19.050	-16.572	663.5
6.3000	5424.90	2.140	19.050	-16.620	635.5
6.4000	5451.40	2.161	19.050	-16.667	607.9
6.5000	5477.40	2.182	19.050	-16.713	580.9
6.6000	5503.10	2.202	19.050	-16.759	554.1
6.7000	5528.40	2.222	19.050	-16.804	527.8
6.8000	5553.20	2.242	19.050	-16.848	502.0
6.9000	5577.70	2.262	19.050	-16.892	476.5
6.9651	5593.40	2.274	19.050	-16.920	460.1
7.0000	5601.80	2.282	19.050	-16.934	452.7
7.1000	5625.40	2.303	19.050	-16.974	431.9
7.2000	5648.70	2.324	19.050	-17.014	411.4
7.3000	5671.60	2.344	19.050	-17.053	391.2
7.4000	5694.00	2.364	19.050	-17.091	371.4
7.5000	5716.10	2.384	19.050	-17.129	352.0
7.6000	5737.70	2.403	19.050	-17.165	332.9
7.7000	5759.00	2.422	19.050	-17.202	314.2
7.8000	5779.90	2.441	19.050	-17.237	295.7
7.9000	5800.30	2.459	19.050	-17.272	277.8
7.9652	5813.40	2.471	19.050	-17.294	266.2
8.0000	5820.40	2.478	19.050	-17.306	262.2
8.1000	5840.10	2.498	19.050	-17.338	251.1
8.2000	5859.30	2.517	19.050	-17.370	240.2
8.3000	5878.20	2.536	19.050	-17.401	229.5
8.4000	5896.60	2.555	19.050	-17.431	219.1
8.5000	5914.70	2.573	19.050	-17.461	208.8
8.6000	5932.40	2.590	19.050	-17.490	198.8
8.7000	5949.60	2.608	19.050	-17.519	189.1
8.9653	5994.70	2.653	19.050	-17.593	163.5
9.9647	6164.60	2.841	19.050	-17.861	163.5
10.3000	6221.60	2.910	19.050	-17.946	163.5
10.4000	6238.70	2.931	19.050	-17.972	163.5
10.5000	6255.60	2.951	19.050	-17.997	163.5
10.6000	6272.70	2.972	19.050	-18.023	163.5
10.9641	6334.60	3.047	19.050	-18.115	163.5
11.9641	6504.60	3.268	19.050	-18.355	163.5
12.9641	6674.60	3.503	19.050	-18.583	163.5
13.9641	6844.60	3.751	19.050	-18.800	163.5
14.9641	7014.60	4.012	19.050	-19.006	163.5
15.9641	7184.60	4.284	19.050	-19.203	163.5
16.9641	7354.60	4.566	19.050	-19.390	163.5
17.9635	7524.50	4.858	19.050	-19.569	163.5
18.9635	7694.50	5.159	19.050	-19.740	163.5

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40.No3 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
19.9635	7864.50	5.469	19.050	-19.904	163.5
20.7000	7989.70	5.703	19.050	-20.019	163.5
20.9635	8034.50	5.787	19.050	-20.060	163.5
21.3000	8091.70	5.897	19.050	-20.111	163.5
21.4000	8108.80	5.929	19.050	-20.126	163.5
21.9629	8204.50	6.113	19.050	-20.211	163.5
22.2000	8244.80	6.192	19.050	-20.245	163.5
22.3000	8261.40	6.224	19.050	-20.259	163.5
22.4000	8276.50	6.254	19.050	-20.272	163.5
22.7000	8321.50	6.342	19.050	-20.310	163.5
22.8000	8336.60	6.372	19.050	-20.323	163.5
23.0527	8374.50	6.446	19.050	-20.355	163.5
23.1000	8381.60	6.460	19.050	-20.361	163.5
23.2000	8396.70	6.490	19.050	-20.373	163.5
23.5000	8441.70	6.580	19.050	-20.410	163.5
23.6000	8456.80	6.610	19.050	-20.422	163.5
23.8000	8486.80	6.670	19.050	-20.446	163.5
23.9000	8501.90	6.700	19.050	-20.458	163.5
24.1840	8544.50	6.785	19.050	-20.493	163.5
24.2000	8546.90	6.790	19.050	-20.495	163.5
24.3000	8562.00	6.821	19.050	-20.507	163.5
24.6000	8607.00	6.912	19.050	-20.542	163.5
24.7000	8622.10	6.943	19.050	-20.554	163.5
25.0000	8667.10	7.034	19.050	-20.589	163.5
25.1000	8682.20	7.065	19.050	-20.601	163.5
25.3000	8712.20	7.126	19.050	-20.624	163.5
25.3146	8714.40	7.130	19.050	-20.626	163.5
25.4000	8727.30	7.157	19.050	-20.636	163.5
25.7000	8772.30	7.250	19.050	-20.670	163.5
25.8000	8787.40	7.281	19.050	-20.681	163.5
26.1000	8832.40	7.374	19.050	-20.715	163.5
26.2000	8847.50	7.406	19.050	-20.726	163.5
26.4460	8884.40	7.482	19.050	-20.754	163.5
26.5000	8892.50	7.499	19.050	-20.760	163.5
26.6000	8907.60	7.531	19.050	-20.771	163.5
26.8000	8937.60	7.594	19.050	-20.792	163.5
26.9000	8952.70	7.625	19.050	-20.803	163.5
27.2000	8997.70	7.720	19.050	-20.836	163.5
27.3000	9012.80	7.752	19.050	-20.847	163.5
27.5773	9054.40	7.839	19.050	-20.877	163.5
27.6000	9057.80	7.846	19.050	-20.879	163.5
27.7000	9072.90	7.878	19.050	-20.890	163.5
28.0000	9117.90	7.974	19.050	-20.921	163.5
28.1000	9133.00	8.006	19.050	-20.932	163.5
28.3000	9163.00	8.070	19.050	-20.953	163.5
28.4000	9178.10	8.102	19.050	-20.964	163.5
28.7000	9223.10	8.198	19.050	-20.995	163.5
28.8000	9238.20	8.231	19.050	-21.005	163.5
29.0000	9268.20	8.296	19.050	-21.025	163.5
29.1000	9283.80	8.330	19.050	-21.036	163.5
29.7506	9394.40	8.569	19.050	-21.110	163.5
30.7506	9564.40	8.941	19.050	-21.220	163.5
31.4000	9674.80	9.186	19.050	-21.289	147.6
31.5000	9691.60	9.223	19.050	-21.299	145.1
31.6000	9708.30	9.260	19.050	-21.310	142.7
31.7000	9724.60	9.296	19.050	-21.320	140.4
31.7503	9732.70	9.314	19.050	-21.325	139.2
31.8000	9740.70	9.332	19.050	-21.330	116.8
31.9000	9756.40	9.366	19.050	-21.339	72.8
32.0000	9771.20	9.399	19.050	-21.347	31.4
32.1000	9781.60	9.422	19.050	-21.354	2.2
32.2000	9782.40	9.424	19.050	-21.354	0.0

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40.No3 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
32.3870	9782.40	9.424	19.050	-21.354	0.0

41.No3 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	19.050	13.986	0.0
0.0010	47.30	0.017	19.050	13.986	3313.5
0.1000	184.80	0.066	19.050	13.986	12945.7
0.2000	323.80	0.116	19.050	13.986	22682.9
0.3000	463.90	0.166	19.050	13.986	32497.3
0.4000	604.80	0.217	19.050	13.986	42367.7
0.5000	746.50	0.267	19.050	13.986	52294.1
0.6000	888.80	0.318	19.050	13.986	62262.5
0.7000	1031.70	0.370	19.050	13.986	72273.0
0.8000	1175.00	0.421	19.050	13.986	82311.5
0.9000	1318.80	0.473	19.050	13.986	92385.0
0.9609	1406.50	0.504	19.050	13.986	98528.6
1.0000	1462.90	0.524	19.050	13.994	98698.0
1.1000	1607.40	0.574	19.050	14.015	99132.1
1.2000	1752.30	0.625	19.050	14.036	99567.4
1.3000	1897.40	0.675	19.050	14.058	100003.2
1.4000	2042.70	0.726	19.050	14.079	100439.7
1.5000	2188.30	0.777	19.050	14.100	100877.1
1.6000	2334.00	0.828	19.050	14.121	101314.8
1.7000	2480.00	0.879	19.050	14.142	101753.3
1.8000	2626.10	0.930	19.050	14.164	102192.2
1.9000	2772.30	0.981	19.050	14.185	102631.4
1.9565	2855.00	1.010	19.050	14.197	102879.8
2.1000	3064.90	1.083	19.050	14.212	88377.6
2.2000	3211.40	1.133	19.050	14.222	78255.7
2.3000	3357.80	1.184	19.050	14.232	68140.8
2.6000	3797.30	1.336	19.050	14.263	37775.2
2.7000	3943.70	1.386	19.050	14.273	27660.3
2.9000	4236.70	1.488	19.050	14.294	7416.6
2.9799	4313.20	1.514	19.050	14.299	2131.1
3.0000	4332.40	1.522	19.050	14.344	2101.9
3.1000	4372.20	1.539	19.050	14.436	2041.4
3.2000	4411.50	1.555	19.050	14.528	1981.7
3.3000	4450.50	1.572	19.050	14.618	1922.4
3.4000	4489.10	1.588	19.050	14.708	1863.7
3.5000	4527.30	1.604	19.050	14.797	1805.6
3.6000	4565.00	1.620	19.050	14.885	1748.3
3.7000	4602.40	1.636	19.050	14.972	1691.5
3.8000	4639.40	1.651	19.050	15.058	1635.2
3.9000	4675.90	1.667	19.050	15.143	1579.8
3.9481	4693.30	1.674	19.050	15.183	1553.3
4.0000	4712.10	1.685	19.050	15.222	1527.7
4.1000	4747.80	1.704	19.050	15.296	1479.2
4.2000	4783.20	1.724	19.050	15.369	1431.1
4.3000	4818.10	1.744	19.050	15.442	1383.6
4.4000	4852.60	1.763	19.050	15.513	1336.7
4.5000	4886.80	1.782	19.050	15.584	1290.2
4.6000	4920.50	1.801	19.050	15.654	1244.4
4.7000	4953.80	1.820	19.050	15.723	1199.1
4.8000	4986.80	1.838	19.050	15.791	1154.3
4.9000	5019.30	1.856	19.050	15.859	1110.1
4.9439	5033.40	1.864	19.050	15.888	1090.9
5.0000	5051.40	1.876	19.050	15.922	1069.3

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41.No3 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
5.1000	5083.10	1.898	19.050	15.982	1031.2
5.2000	5114.40	1.919	19.050	16.042	993.7
5.3000	5145.30	1.940	19.050	16.100	956.6
5.4000	5175.80	1.961	19.050	16.158	920.0
5.5000	5205.90	1.981	19.050	16.215	883.8
5.6000	5235.60	2.001	19.050	16.272	848.2
5.7000	5264.90	2.021	19.050	16.327	813.0
5.8000	5293.80	2.041	19.050	16.382	778.3
5.9000	5322.30	2.060	19.050	16.436	744.1
5.9395	5333.40	2.068	19.050	16.457	730.8
6.0000	5350.40	2.081	19.050	16.487	713.1
6.1000	5378.00	2.103	19.050	16.536	684.4
6.2000	5405.30	2.125	19.050	16.585	655.9
6.3000	5432.20	2.146	19.050	16.633	627.9
6.4000	5458.70	2.167	19.050	16.680	600.3
6.5000	5484.70	2.188	19.050	16.726	573.3
6.6000	5510.40	2.208	19.050	16.772	546.5
6.7000	5535.60	2.228	19.050	16.817	520.3
6.8000	5560.50	2.248	19.050	16.861	494.4
6.9000	5584.90	2.267	19.050	16.905	469.0
6.9353	5593.40	2.274	19.050	16.920	460.1
7.0000	5609.00	2.288	19.050	16.947	446.4
7.1000	5632.60	2.309	19.050	16.987	425.6
7.2000	5655.90	2.330	19.050	17.026	405.0
7.3000	5678.70	2.350	19.050	17.065	384.9
7.4000	5701.10	2.370	19.050	17.103	365.2
7.5000	5723.10	2.390	19.050	17.140	345.8
7.6000	5744.80	2.410	19.050	17.177	326.7
7.7000	5766.00	2.429	19.050	17.213	308.0
7.8000	5786.80	2.447	19.050	17.249	289.6
7.9000	5807.20	2.465	19.050	17.283	271.7
7.9310	5813.40	2.471	19.050	17.294	266.2
8.0000	5827.20	2.485	19.050	17.317	258.4
8.1000	5846.80	2.505	19.050	17.349	247.3
8.2000	5866.00	2.524	19.050	17.381	236.4
8.3000	5884.80	2.543	19.050	17.412	225.8
8.4000	5903.20	2.561	19.050	17.442	215.3
8.5000	5921.20	2.579	19.050	17.472	205.1
8.6000	5938.80	2.597	19.050	17.501	195.2
8.7000	5956.00	2.614	19.050	17.529	185.4
8.8000	5973.10	2.631	19.050	17.557	175.7
8.9000	5990.10	2.648	19.050	17.585	166.1
8.9269	5994.70	2.653	19.050	17.593	163.5
9.2000	6041.40	2.705	19.050	17.667	163.5
9.3000	6058.40	2.723	19.050	17.693	163.5
9.5000	6092.60	2.761	19.050	17.747	163.5
9.6000	6109.60	2.780	19.050	17.774	163.5
9.9000	6160.90	2.837	19.050	17.855	163.5
9.9218	6164.60	2.841	19.050	17.861	163.5
10.0000	6177.90	2.857	19.050	17.881	163.5
10.2000	6212.10	2.899	19.050	17.932	163.5
10.3000	6229.10	2.919	19.050	17.957	163.5
10.6000	6280.40	2.981	19.050	18.034	163.5
10.7000	6297.40	3.002	19.050	18.059	163.5
10.9000	6331.60	3.043	19.050	18.111	163.5
10.9176	6334.60	3.047	19.050	18.115	163.5
11.0000	6348.60	3.065	19.050	18.135	163.5
11.3000	6399.90	3.132	19.050	18.207	163.5
11.4000	6416.90	3.154	19.050	18.231	163.5
11.6000	6451.10	3.198	19.050	18.279	163.5
11.7000	6468.10	3.221	19.050	18.303	163.5
11.9135	6504.60	3.268	19.050	18.355	163.5

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41.No3 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
12.0000	6519.40	3.288	19.050	18.375	163.5
12.1000	6536.40	3.312	19.050	18.398	163.5
12.4000	6587.70	3.383	19.050	18.466	163.5
12.5000	6604.70	3.406	19.050	18.489	163.5
12.7000	6638.90	3.454	19.050	18.535	163.5
12.8000	6655.90	3.477	19.050	18.558	163.5
12.9094	6674.60	3.503	19.050	18.583	163.5
13.1000	6707.20	3.551	19.050	18.625	163.5
13.2000	6724.20	3.575	19.050	18.646	163.5
13.4000	6758.40	3.625	19.050	18.690	163.5
13.5000	6775.40	3.650	19.050	18.712	163.5
13.8000	6826.70	3.725	19.050	18.777	163.5
13.9000	6843.70	3.750	19.050	18.799	163.5
14.2000	6895.00	3.828	19.050	18.861	163.5
14.3000	6912.00	3.854	19.050	18.882	163.5
14.5000	6946.20	3.907	19.050	18.923	163.5
14.6000	6963.20	3.933	19.050	18.944	163.5
14.9000	7014.50	4.012	19.050	19.006	163.5
15.0000	7031.50	4.039	19.050	19.026	163.5
15.2000	7065.70	4.094	19.050	19.065	163.5
15.3000	7082.70	4.121	19.050	19.085	163.5
15.6000	7134.00	4.203	19.050	19.144	163.5
15.7000	7151.00	4.230	19.050	19.164	163.5
15.8965	7184.60	4.284	19.050	19.203	163.5
16.0000	7202.20	4.313	19.050	19.222	163.5
16.3000	7253.50	4.398	19.050	19.279	163.5
16.4000	7270.50	4.426	19.050	19.297	163.5
16.7000	7321.80	4.512	19.050	19.354	163.5
16.8000	7338.80	4.540	19.050	19.373	163.5
16.8924	7354.60	4.566	19.050	19.390	163.5
17.0000	7373.00	4.598	19.050	19.409	163.5
17.1000	7390.00	4.627	19.050	19.427	163.5
17.4000	7441.30	4.715	19.050	19.481	163.5
17.5000	7458.30	4.744	19.050	19.499	163.5
17.7000	7492.50	4.803	19.050	19.535	163.5
17.8000	7509.50	4.832	19.050	19.553	163.5
17.8877	7524.50	4.858	19.050	19.569	163.5
18.1000	7560.80	4.922	19.050	19.606	163.5
18.2000	7577.80	4.952	19.050	19.623	163.5
18.5000	7629.10	5.043	19.050	19.674	163.5
18.6000	7646.10	5.073	19.050	19.691	163.5
18.8000	7680.30	5.134	19.050	19.726	163.5
18.8835	7694.50	5.159	19.050	19.740	163.5
18.9000	7697.30	5.164	19.050	19.743	163.5
19.2000	7748.60	5.258	19.050	19.792	163.5
19.3000	7765.60	5.289	19.050	19.809	163.5
19.5000	7799.80	5.351	19.050	19.842	163.5
19.6000	7816.80	5.382	19.050	19.858	163.5
19.8789	7864.50	5.469	19.050	19.904	163.5
19.9000	7868.10	5.476	19.050	19.907	163.5
20.0000	7885.10	5.508	19.050	19.923	163.5
20.2000	7919.30	5.572	19.050	19.954	163.5
20.3000	7936.30	5.603	19.050	19.970	163.5
20.6000	7987.60	5.699	19.050	20.017	163.5
20.7000	8004.60	5.731	19.050	20.033	163.5
20.8749	8034.50	5.787	19.050	20.060	163.5
21.0000	8055.90	5.828	19.050	20.079	163.5
21.1000	8072.90	5.861	19.050	20.094	163.5
21.3000	8107.10	5.926	19.050	20.124	163.5
21.4000	8124.10	5.959	19.050	20.140	163.5
21.7000	8175.40	6.057	19.050	20.185	163.5
21.8000	8192.40	6.090	19.050	20.200	163.5

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41.No3 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
21.8708	8204.50	6.113	19.050	20.211	163.5
22.0000	8226.60	6.156	19.050	20.230	163.5
22.1000	8243.60	6.190	19.050	20.244	163.5
22.4000	8294.90	6.290	19.050	20.288	163.5
22.5000	8311.90	6.323	19.050	20.302	163.5
22.7000	8346.10	6.390	19.050	20.331	163.5
22.8000	8363.10	6.424	19.050	20.345	163.5
22.8667	8374.50	6.446	19.050	20.355	163.5
23.1000	8414.40	6.526	19.050	20.387	163.5
23.2000	8431.30	6.559	19.050	20.401	163.5
23.4000	8459.90	6.616	19.050	20.424	163.5
23.8000	8517.10	6.730	19.050	20.471	163.5
23.9000	8531.50	6.759	19.050	20.482	163.5
23.9909	8544.50	6.785	19.050	20.493	163.5
25.1000	8703.10	7.107	19.050	20.617	163.5
25.1785	8714.40	7.130	19.050	20.626	163.5
25.2000	8717.50	7.136	19.050	20.628	163.5
26.3671	8884.40	7.482	19.050	20.754	163.5
26.4000	8889.10	7.492	19.050	20.757	163.5
26.5000	8903.50	7.522	19.050	20.768	163.5
27.5552	9054.40	7.839	19.050	20.877	163.5
27.6000	9060.80	7.853	19.050	20.881	163.5
27.7000	9075.20	7.883	19.050	20.892	163.5
28.7434	9224.40	8.201	19.050	20.996	163.5
28.9000	9246.80	8.249	19.050	21.011	163.5
29.0000	9261.70	8.282	19.050	21.021	163.5
29.1000	9278.80	8.319	19.050	21.032	163.5
29.2000	9295.80	8.356	19.050	21.044	163.5
29.4000	9330.00	8.430	19.050	21.067	163.5
29.5000	9347.00	8.466	19.050	21.078	163.5
29.7772	9394.40	8.569	19.050	21.110	163.5
29.8000	9398.30	8.578	19.050	21.113	163.5
29.9000	9415.30	8.615	19.050	21.124	163.5
30.2000	9466.60	8.727	19.050	21.157	163.5
30.3000	9483.60	8.764	19.050	21.168	163.5
30.5000	9517.80	8.839	19.050	21.190	163.5
30.6000	9534.80	8.876	19.050	21.201	163.5
30.7731	9564.40	8.941	19.050	21.220	163.5
30.9000	9586.10	8.989	19.050	21.234	160.4
31.0000	9603.10	9.027	19.050	21.244	157.9
31.2000	9637.30	9.103	19.050	21.265	153.0
31.5000	9688.30	9.216	19.050	21.297	145.6
31.6000	9705.00	9.253	19.050	21.308	143.2
31.7000	9721.60	9.289	19.050	21.318	140.8
31.7685	9732.70	9.314	19.050	21.325	139.2
31.8000	9737.80	9.325	19.050	21.328	124.9
31.9000	9753.60	9.360	19.050	21.337	80.7
32.0000	9768.60	9.393	19.050	21.346	38.7
32.1000	9780.70	9.420	19.050	21.353	4.8
32.2000	9782.40	9.424	19.050	21.354	0.0
32.4060	9782.40	9.424	19.050	21.354	0.0

42.No4 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	-30.706	-13.085	0.0
0.0010	137.10	0.053	-30.706	-13.085	8820.1
0.1000	245.40	0.095	-30.706	-13.085	15787.4
0.2000	355.00	0.138	-30.706	-13.085	22838.4
0.3000	465.60	0.180	-30.706	-13.085	29953.6
0.4000	576.90	0.224	-30.706	-13.085	37113.9
0.5000	689.10	0.267	-30.706	-13.085	44332.1
0.6000	801.80	0.311	-30.706	-13.085	51582.5
0.7000	915.20	0.355	-30.706	-13.085	58877.9
0.8000	1029.20	0.399	-30.706	-13.085	66211.9
0.9000	1143.70	0.443	-30.706	-13.085	73578.1
1.0000	1258.70	0.488	-30.706	-13.085	80976.4
1.0428	1308.10	0.507	-30.706	-13.085	84154.5
1.1000	1374.10	0.531	-30.713	-13.101	84537.0
1.2000	1490.00	0.574	-30.726	-13.129	85208.8
1.3000	1606.30	0.618	-30.739	-13.158	85882.9
1.4000	1722.90	0.661	-30.752	-13.186	86558.7
1.5000	1840.00	0.704	-30.765	-13.214	87237.4
1.6000	1957.40	0.748	-30.778	-13.243	87917.9
1.7000	2075.10	0.791	-30.791	-13.272	88600.1
1.8000	2193.20	0.835	-30.804	-13.300	89284.6
1.9000	2311.50	0.879	-30.817	-13.329	89970.2
2.0000	2430.20	0.923	-30.831	-13.358	90658.2
2.1000	2549.10	0.967	-30.844	-13.387	91347.4
2.2000	2668.30	1.012	-30.857	-13.416	92038.3
2.2147	2685.80	1.018	-30.859	-13.420	92139.7
2.3000	2787.70	1.055	-30.868	-13.436	85620.1
2.4000	2907.40	1.098	-30.879	-13.455	77961.7
2.5000	3027.30	1.142	-30.890	-13.474	70290.5
2.6000	3147.40	1.185	-30.901	-13.493	62606.4
2.7000	3267.70	1.228	-30.913	-13.511	54909.6
2.8000	3388.20	1.272	-30.924	-13.530	47200.0
2.9000	3508.90	1.316	-30.935	-13.549	39477.6
3.0000	3629.70	1.359	-30.946	-13.568	31748.7
3.1000	3750.80	1.403	-30.957	-13.587	24000.7
3.2000	3872.00	1.447	-30.968	-13.606	16246.3
3.3000	3993.30	1.491	-30.979	-13.625	8485.5
3.3962	4098.40	1.529	-30.989	-13.642	1761.2
3.5000	4133.70	1.545	-30.985	-13.732	1722.5
3.6000	4164.70	1.558	-30.981	-13.811	1688.6
3.7000	4195.50	1.572	-30.977	-13.890	1654.9
3.8000	4226.10	1.585	-30.973	-13.968	1621.3
3.9000	4256.50	1.599	-30.969	-14.045	1588.1
4.0000	4286.80	1.612	-30.966	-14.123	1554.9
4.1000	4316.90	1.625	-30.962	-14.199	1521.9
4.2000	4346.60	1.638	-30.958	-14.275	1489.4
4.3000	4376.50	1.652	-30.954	-14.351	1456.6
4.4000	4406.10	1.665	-30.951	-14.427	1424.2
4.5000	4435.40	1.678	-30.947	-14.502	1392.1
4.5584	4452.40	1.685	-30.945	-14.545	1373.5
4.6000	4464.50	1.692	-30.945	-14.573	1360.1
4.7000	4493.40	1.709	-30.945	-14.639	1327.9
4.8000	4522.10	1.726	-30.944	-14.705	1296.1
4.9000	4550.60	1.743	-30.944	-14.770	1264.4
5.0000	4578.80	1.759	-30.944	-14.835	1233.1
5.1000	4606.90	1.776	-30.944	-14.899	1201.8
5.2000	4634.70	1.792	-30.943	-14.963	1170.9
5.3000	4662.30	1.809	-30.943	-15.026	1140.3
5.4000	4689.60	1.825	-30.943	-15.089	1109.9
5.5000	4716.70	1.841	-30.943	-15.151	1079.8
5.6000	4743.60	1.857	-30.942	-15.213	1049.9
5.7000	4770.30	1.872	-30.942	-15.274	1020.3
5.7299	4778.20	1.877	-30.942	-15.292	1011.5

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42.No4 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
5.8000	4796.70	1.890	-30.943	-15.331	991.7
5.9000	4822.80	1.909	-30.945	-15.386	963.8
6.0000	4848.80	1.927	-30.946	-15.440	935.9
6.1000	4874.40	1.945	-30.948	-15.494	908.5
6.2000	4899.80	1.963	-30.949	-15.547	881.3
6.3000	4925.00	1.981	-30.951	-15.600	854.4
6.4000	4949.90	1.999	-30.952	-15.653	827.7
6.5000	4974.50	2.016	-30.953	-15.704	801.4
6.6000	4998.90	2.034	-30.955	-15.756	775.3
6.7000	5023.00	2.051	-30.956	-15.806	749.5
6.8000	5046.90	2.068	-30.958	-15.857	723.9
6.9000	5070.50	2.085	-30.959	-15.906	698.6
7.0000	5093.80	2.104	-30.961	-15.952	675.9
7.1000	5116.90	2.123	-30.963	-15.997	653.5
7.2000	5139.70	2.142	-30.965	-16.042	631.3
7.3000	5162.20	2.160	-30.967	-16.086	609.4
7.4000	5184.50	2.179	-30.969	-16.130	587.7
7.5000	5206.50	2.197	-30.971	-16.173	566.4
7.6000	5228.20	2.215	-30.973	-16.216	545.3
7.7000	5249.70	2.233	-30.975	-16.258	524.4
7.8000	5270.90	2.250	-30.977	-16.300	503.7
7.9000	5291.80	2.268	-30.979	-16.341	483.4
8.0000	5312.40	2.285	-30.981	-16.382	463.4
8.0735	5327.40	2.297	-30.982	-16.411	448.8
8.1000	5332.80	2.302	-30.983	-16.421	444.2
8.2000	5352.80	2.321	-30.985	-16.459	427.2
8.3000	5372.60	2.339	-30.987	-16.496	410.4
8.4000	5392.20	2.358	-30.989	-16.532	393.7
8.5000	5411.40	2.376	-30.991	-16.568	377.4
8.6000	5430.30	2.394	-30.993	-16.604	361.4
8.7000	5449.00	2.411	-30.995	-16.639	345.5
8.8000	5467.40	2.428	-30.997	-16.673	329.8
8.9000	5485.50	2.445	-30.999	-16.707	314.4
9.0000	5503.40	2.462	-31.001	-16.740	299.2
9.1000	5520.90	2.479	-31.003	-16.773	284.4
9.2000	5538.20	2.495	-31.005	-16.806	269.6
9.2453	5545.90	2.502	-31.006	-16.820	263.1
9.3000	5555.20	2.512	-31.007	-16.837	258.0
9.4000	5571.90	2.529	-31.009	-16.867	248.7
9.5000	5588.30	2.546	-31.011	-16.897	239.6
9.6000	5604.40	2.563	-31.013	-16.926	230.7
9.7000	5622.40	2.582	-31.015	-16.958	220.8
9.8000	5640.50	2.601	-31.018	-16.991	210.7
9.9000	5658.30	2.619	-31.020	-17.023	200.9
10.0000	5675.70	2.638	-31.022	-17.055	191.2
10.1000	5692.70	2.655	-31.024	-17.086	181.8
10.2000	5709.60	2.673	-31.026	-17.116	172.5
10.3006	5726.70	2.691	-31.028	-17.147	163.0
11.1000	5862.60	2.848	-31.044	-17.381	163.4
11.2000	5879.50	2.867	-31.046	-17.411	163.5
11.3006	5896.60	2.887	-31.048	-17.440	163.5
12.3006	6066.60	3.100	-31.068	-17.716	163.5
13.3006	6236.60	3.329	-31.087	-17.978	163.5
14.3006	6406.60	3.572	-31.104	-18.226	163.5
15.3006	6576.60	3.829	-31.121	-18.460	163.5
16.3000	6746.50	4.098	-31.137	-18.683	163.5
17.3000	6916.50	4.378	-31.152	-18.895	163.5
18.3000	7086.50	4.669	-31.166	-19.097	163.5
19.3000	7256.50	4.969	-31.180	-19.290	163.5
19.4000	7273.50	5.000	-31.181	-19.308	163.5
19.5000	7290.40	5.031	-31.183	-19.326	163.5
20.3006	7426.50	5.279	-31.193	-19.473	163.5

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42.No4 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
21.3006	7596.50	5.597	-31.205	-19.649	163.5
22.3006	7766.50	5.924	-31.217	-19.816	163.5
23.3006	7936.50	6.257	-31.229	-19.977	163.5
24.3000	8106.40	6.598	-31.240	-20.131	163.5
25.3000	8276.40	6.945	-31.250	-20.278	163.5
26.3000	8446.40	7.298	-31.260	-20.419	163.5
27.3000	8616.40	7.657	-31.270	-20.555	163.5
27.9000	8718.40	7.876	-31.275	-20.634	163.5
28.0000	8735.20	7.912	-31.276	-20.647	163.5
28.1000	8751.90	7.948	-31.277	-20.659	163.5
28.2000	8768.70	7.984	-31.278	-20.672	163.5
28.3060	8786.40	8.022	-31.279	-20.686	163.5
28.6000	8835.50	8.129	-31.282	-20.722	163.5
28.7000	8852.30	8.165	-31.282	-20.735	163.5
28.9000	8885.70	8.238	-31.284	-20.760	163.5
29.1000	8919.10	8.311	-31.286	-20.784	163.5
29.2000	8935.90	8.347	-31.287	-20.797	163.5
29.3228	8956.40	8.392	-31.288	-20.812	163.5
29.4000	8969.30	8.420	-31.289	-20.821	163.5
29.8000	9037.30	8.570	-31.292	-20.870	163.5
29.9000	9054.20	8.607	-31.293	-20.882	163.5
30.3247	9126.40	8.766	-31.297	-20.933	163.5
30.7000	9190.20	8.908	-31.300	-20.977	163.5
30.8000	9207.10	8.946	-31.301	-20.988	163.5
31.3247	9296.30	9.146	-31.305	-21.049	163.5
31.6000	9343.10	9.251	-31.307	-21.080	156.8
31.7000	9360.00	9.289	-31.308	-21.091	154.3
31.9000	9394.00	9.365	-31.310	-21.114	149.4
32.0000	9410.90	9.404	-31.310	-21.125	147.0
32.1000	9427.70	9.442	-31.311	-21.136	144.5
32.2000	9444.30	9.479	-31.312	-21.147	142.1
32.3000	9460.60	9.516	-31.313	-21.158	139.8
32.3256	9464.70	9.525	-31.313	-21.161	139.2
32.4000	9476.60	9.552	-31.313	-21.168	105.9
32.5000	9492.00	9.587	-31.314	-21.177	62.7
32.6000	9506.60	9.620	-31.315	-21.186	21.8
32.7000	9514.30	9.638	-31.315	-21.191	0.3
32.8000	9514.40	9.638	-31.315	-21.191	0.0
32.9760	9514.40	9.638	-31.315	-21.191	0.0

43.No4 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	-30.706	13.085	0.0
0.0010	124.40	0.048	-30.706	13.085	8003.1
0.1000	232.40	0.090	-30.706	13.085	14951.1
0.2000	341.60	0.132	-30.706	13.085	21976.3
0.3000	451.70	0.175	-30.706	13.085	29059.4
0.4000	562.70	0.218	-30.706	13.085	36200.4
0.5000	674.40	0.261	-30.706	13.085	43386.4
0.6000	786.80	0.305	-30.706	13.085	50617.5
0.7000	899.90	0.349	-30.706	13.085	57893.6
0.8000	1013.40	0.393	-30.706	13.085	65195.5
0.9000	1127.60	0.437	-30.706	13.085	72542.3
1.0000	1242.20	0.481	-30.706	13.085	79914.9
1.0573	1308.10	0.507	-30.706	13.085	84154.5
1.1000	1357.20	0.525	-30.711	13.097	84439.1
1.2000	1472.70	0.568	-30.724	13.125	85108.5
1.3000	1588.70	0.611	-30.737	13.153	85780.9
1.4000	1705.00	0.654	-30.750	13.182	86455.0
1.5000	1821.70	0.697	-30.763	13.210	87131.3
1.6000	1938.70	0.741	-30.776	13.238	87809.5
1.7000	2056.10	0.784	-30.789	13.267	88489.9
1.8000	2173.80	0.828	-30.802	13.296	89172.1
1.9000	2291.80	0.872	-30.815	13.324	89856.1
2.0000	2410.00	0.916	-30.828	13.353	90541.2
2.1000	2528.60	0.960	-30.842	13.382	91228.6
2.2000	2647.40	1.004	-30.855	13.411	91917.1
2.2322	2685.80	1.018	-30.859	13.420	92139.7
2.3000	2766.50	1.047	-30.866	13.433	86976.5
2.4000	2885.80	1.090	-30.877	13.451	79343.7
2.5000	3005.40	1.134	-30.888	13.470	71691.6
2.6000	3125.10	1.177	-30.899	13.489	64033.2
2.7000	3245.10	1.220	-30.910	13.508	56355.5
2.8000	3365.30	1.264	-30.922	13.527	48665.1
2.9000	3485.60	1.307	-30.933	13.546	40968.3
3.0000	3606.10	1.351	-30.944	13.565	33258.7
3.1000	3726.80	1.395	-30.955	13.584	25536.3
3.2000	3847.60	1.438	-30.966	13.603	17807.4
3.3000	3968.60	1.482	-30.977	13.622	10065.8
3.4000	4089.80	1.526	-30.988	13.641	2311.4
3.4230	4098.40	1.529	-30.989	13.642	1761.2
3.5000	4127.20	1.542	-30.985	13.715	1729.7
3.6000	4158.10	1.555	-30.982	13.794	1695.8
3.7000	4188.90	1.569	-30.978	13.873	1662.1
3.8000	4219.50	1.582	-30.974	13.951	1628.6
3.9000	4249.90	1.596	-30.970	14.028	1595.3
4.0000	4280.10	1.609	-30.966	14.105	1562.2
4.1000	4310.20	1.622	-30.963	14.182	1529.2
4.2000	4340.10	1.636	-30.959	14.259	1496.5
4.3000	4369.70	1.649	-30.955	14.334	1464.1
4.4000	4399.20	1.662	-30.952	14.409	1431.8
4.5000	4428.50	1.674	-30.948	14.484	1399.7
4.5821	4452.40	1.685	-30.945	14.545	1373.5
4.6000	4457.60	1.688	-30.945	14.557	1367.7
4.7000	4486.50	1.705	-30.945	14.623	1335.6
4.8000	4515.10	1.722	-30.944	14.689	1303.8
4.9000	4543.60	1.739	-30.944	14.754	1272.2
5.0000	4571.80	1.755	-30.944	14.819	1240.8
5.1000	4599.90	1.772	-30.944	14.883	1209.6
5.2000	4627.70	1.788	-30.943	14.947	1178.7
5.3000	4655.20	1.805	-30.943	15.010	1148.2
5.4000	4682.60	1.821	-30.943	15.073	1117.7
5.5000	4709.70	1.837	-30.943	15.135	1087.6
5.6000	4736.60	1.852	-30.942	15.197	1057.7
5.7000	4763.20	1.868	-30.942	15.258	1028.2

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43.No4 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
5.7568	4778.20	1.877	-30.942	15.292	1011.5
5.8000	4789.60	1.885	-30.943	15.316	999.3
5.9000	4815.80	1.904	-30.944	15.371	971.3
6.0000	4841.70	1.922	-30.946	15.425	943.5
6.1000	4867.30	1.940	-30.947	15.479	916.1
6.2000	4892.80	1.958	-30.949	15.533	888.8
6.3000	4917.90	1.976	-30.950	15.586	862.0
6.4000	4942.80	1.994	-30.952	15.638	835.3
6.5000	4967.50	2.012	-30.953	15.690	808.9
6.6000	4991.90	2.029	-30.954	15.741	782.8
6.7000	5016.00	2.046	-30.956	15.792	757.0
6.8000	5039.90	2.063	-30.957	15.842	731.4
6.9000	5063.50	2.080	-30.959	15.891	706.1
6.9316	5070.90	2.085	-30.959	15.907	698.2
7.0000	5086.90	2.098	-30.960	15.938	682.6
7.1000	5110.00	2.117	-30.963	15.984	660.2
7.2000	5132.80	2.136	-30.965	16.029	638.0
7.3000	5155.30	2.155	-30.967	16.073	616.1
7.4000	5177.60	2.173	-30.969	16.117	594.5
7.5000	5199.70	2.191	-30.971	16.160	573.0
7.6000	5221.40	2.209	-30.972	16.203	551.9
7.7000	5242.90	2.227	-30.974	16.245	531.0
7.8000	5264.10	2.245	-30.976	16.287	510.4
7.9000	5285.00	2.262	-30.978	16.328	490.0
8.0000	5305.70	2.279	-30.980	16.368	469.9
8.1000	5326.10	2.296	-30.982	16.408	450.1
8.2000	5346.20	2.315	-30.984	16.446	432.8
8.3000	5366.10	2.333	-30.986	16.483	415.9
8.4000	5385.60	2.352	-30.988	16.520	399.3
8.5000	5404.90	2.370	-30.991	16.556	382.9
8.6000	5423.90	2.388	-30.993	16.592	366.8
8.7000	5442.60	2.405	-30.995	16.627	350.9
8.8000	5461.10	2.422	-30.997	16.661	335.2
8.9000	5479.20	2.439	-30.999	16.695	319.8
9.0000	5497.10	2.456	-31.001	16.729	304.6
9.1000	5514.70	2.473	-31.003	16.762	289.6
9.2000	5532.10	2.489	-31.004	16.794	274.8
9.2812	5545.90	2.502	-31.006	16.820	263.1
9.3000	5549.10	2.505	-31.006	16.826	261.3
9.4000	5565.80	2.523	-31.008	16.856	252.1
9.5000	5582.30	2.540	-31.010	16.886	243.0
9.6000	5598.50	2.557	-31.012	16.915	234.0
9.7000	5615.30	2.575	-31.014	16.946	224.7
9.8000	5633.60	2.594	-31.017	16.979	214.5
9.9000	5651.50	2.612	-31.019	17.011	204.6
10.0000	5669.00	2.631	-31.021	17.043	195.0
10.1000	5686.10	2.649	-31.023	17.074	185.5
10.3000	5720.10	2.684	-31.027	17.135	166.7
10.3391	5726.70	2.691	-31.028	17.147	163.0
10.4000	5737.00	2.703	-31.029	17.165	163.0
11.3388	5896.60	2.887	-31.048	17.440	163.5
12.2000	6043.00	3.070	-31.065	17.678	163.5
12.3000	6059.90	3.092	-31.067	17.705	163.5
12.3394	6066.60	3.100	-31.068	17.716	163.5
13.3394	6236.60	3.329	-31.087	17.978	163.5
14.3394	6406.60	3.572	-31.104	18.226	163.5
15.3394	6576.60	3.829	-31.121	18.460	163.5
16.3388	6746.50	4.098	-31.137	18.683	163.5
17.3388	6916.50	4.378	-31.152	18.895	163.5
18.3388	7086.50	4.669	-31.166	19.097	163.5
18.6000	7130.90	4.747	-31.170	19.147	163.5
18.7000	7147.80	4.777	-31.171	19.167	163.5

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43.No4 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
18.8000	7164.80	4.807	-31.172	19.186	163.5
19.3394	7256.50	4.969	-31.180	19.290	163.5
20.3394	7426.50	5.279	-31.193	19.473	163.5
21.3394	7596.50	5.597	-31.205	19.649	163.5
22.3394	7766.50	5.924	-31.217	19.816	163.5
23.3394	7936.50	6.257	-31.229	19.977	163.5
24.3388	8106.40	6.598	-31.240	20.131	163.5
25.0000	8218.80	6.827	-31.247	20.228	163.5
25.1000	8235.70	6.862	-31.248	20.243	163.5
25.3394	8276.40	6.945	-31.250	20.278	163.5
26.3394	8446.40	7.298	-31.260	20.419	163.5
27.3394	8616.40	7.657	-31.270	20.555	163.5
28.0000	8728.70	7.898	-31.276	20.642	163.5
28.1000	8745.50	7.934	-31.277	20.654	163.5
28.3000	8778.90	8.006	-31.279	20.680	163.5
28.3446	8786.40	8.022	-31.279	20.686	163.5
28.4000	8795.70	8.042	-31.279	20.693	163.5
28.6000	8829.10	8.115	-31.281	20.718	163.5
28.7000	8845.90	8.152	-31.282	20.730	163.5
28.9000	8879.30	8.224	-31.284	20.755	163.5
29.0000	8896.10	8.261	-31.285	20.767	163.5
29.2000	8929.50	8.333	-31.287	20.792	163.5
29.3000	8946.30	8.370	-31.287	20.805	163.5
29.3605	8956.40	8.392	-31.288	20.812	163.5
29.4000	8963.00	8.407	-31.288	20.817	163.5
29.5000	8979.80	8.443	-31.289	20.829	163.5
29.9000	9047.80	8.593	-31.293	20.877	163.5
30.0000	9064.70	8.630	-31.294	20.889	163.5
30.3629	9126.40	8.766	-31.297	20.933	163.5
30.9000	9217.70	8.970	-31.301	20.995	163.5
31.0000	9234.60	9.007	-31.302	21.007	163.5
31.3629	9296.30	9.146	-31.305	21.049	163.5
31.9000	9387.60	9.351	-31.309	21.110	150.3
32.0000	9404.50	9.389	-31.310	21.121	147.9
32.1000	9421.30	9.427	-31.311	21.132	145.5
32.2000	9438.00	9.465	-31.312	21.143	143.1
32.3000	9454.40	9.502	-31.313	21.154	140.7
32.3640	9464.70	9.525	-31.313	21.161	139.2
32.4000	9470.50	9.538	-31.313	21.165	123.0
32.5000	9486.20	9.574	-31.314	21.174	79.0
32.6000	9501.20	9.608	-31.314	21.183	37.0
32.7000	9512.90	9.635	-31.315	21.190	4.2
32.8000	9514.40	9.638	-31.315	21.191	0.0
33.0020	9514.40	9.638	-31.315	21.191	0.0

44.No5 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	-77.248	-8.479	0.0
0.0010	280.40	0.198	-77.248	-8.479	9781.4
0.1000	342.40	0.242	-77.248	-8.479	11944.2
0.2000	405.40	0.287	-77.248	-8.479	14141.9
0.3000	469.30	0.332	-77.248	-8.479	16371.0
0.4000	534.10	0.378	-77.248	-8.479	18631.4
0.5000	599.70	0.424	-77.248	-8.479	20919.8
0.6000	666.10	0.471	-77.248	-8.479	23236.1
0.6987	732.40	0.518	-77.248	-8.479	25548.9
0.8000	801.10	0.561	-77.262	-8.529	26165.3
0.9000	869.60	0.604	-77.276	-8.579	26779.8
1.0000	938.80	0.648	-77.289	-8.629	27400.7
1.1000	1008.50	0.692	-77.303	-8.680	28026.0
1.2000	1078.90	0.736	-77.318	-8.731	28657.6
1.3000	1149.90	0.781	-77.332	-8.783	29294.6
1.4000	1221.40	0.826	-77.346	-8.835	29936.1
1.5000	1293.50	0.871	-77.361	-8.888	30583.0
1.6000	1366.10	0.917	-77.375	-8.940	31234.4
1.7000	1439.20	0.963	-77.390	-8.994	31890.2
1.8000	1512.80	1.009	-77.405	-9.047	32550.5
1.8829	1574.20	1.048	-77.417	-9.092	33101.4
1.9000	1586.90	1.055	-77.419	-9.098	32671.6
2.0000	1661.50	1.099	-77.428	-9.137	30146.7
2.1000	1736.50	1.143	-77.438	-9.175	27608.3
2.2000	1812.00	1.187	-77.448	-9.213	25052.9
2.3000	1888.00	1.232	-77.458	-9.252	22480.7
2.4000	1964.40	1.277	-77.468	-9.291	19894.9
2.5000	2041.20	1.322	-77.478	-9.331	17295.5
2.6000	2118.40	1.367	-77.488	-9.370	14682.7
2.7000	2196.10	1.413	-77.498	-9.410	12052.9
2.8000	2274.20	1.459	-77.508	-9.450	9409.5
2.9000	2352.60	1.505	-77.518	-9.490	6756.0
3.0000	2431.40	1.551	-77.528	-9.530	4089.0
3.0909	2484.50	1.582	-77.535	-9.557	2291.8
3.1000	2489.80	1.586	-77.538	-9.576	2295.4
3.2000	2506.00	1.597	-77.548	-9.635	2306.5
3.3000	2522.30	1.609	-77.558	-9.695	2317.6
3.4000	2538.70	1.621	-77.568	-9.755	2328.8
3.5000	2555.20	1.633	-77.578	-9.815	2340.1
3.6000	2571.80	1.644	-77.589	-9.875	2351.4
3.8000	2605.20	1.668	-77.609	-9.997	2374.2
4.1000	2655.90	1.705	-77.640	-10.182	2408.8
4.2509	2681.70	1.723	-77.656	-10.276	2426.4
4.4000	2707.20	1.748	-77.672	-10.363	2426.6
4.6000	2741.60	1.781	-77.692	-10.481	2426.8
4.8000	2776.20	1.814	-77.714	-10.599	2427.0
5.2000	2845.80	1.881	-77.756	-10.837	2427.4
5.3000	2863.30	1.898	-77.767	-10.897	2427.5
5.4000	2880.70	1.915	-77.777	-10.957	2427.6
5.4354	2886.90	1.921	-77.781	-10.978	2427.6
5.8000	2950.70	1.995	-77.821	-11.182	2398.8
5.9000	2968.10	2.015	-77.832	-11.238	2391.0
6.3000	3038.10	2.096	-77.876	-11.463	2359.4
6.5000	3072.90	2.136	-77.898	-11.574	2343.7
6.6000	3090.40	2.156	-77.909	-11.630	2335.8
6.6195	3093.80	2.160	-77.911	-11.641	2334.3
6.7000	3107.80	2.178	-77.920	-11.683	2323.4
6.8000	3125.10	2.201	-77.932	-11.735	2310.0
6.9000	3142.50	2.224	-77.944	-11.788	2296.5
7.2000	3194.40	2.292	-77.979	-11.944	2256.1
7.4000	3228.80	2.337	-78.002	-12.047	2229.4
7.7000	3280.10	2.405	-78.036	-12.202	2189.6
7.8041	3297.80	2.428	-78.048	-12.255	2175.8

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44.No5 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
8.0000	3331.10	2.476	-78.072	-12.350	2141.8
8.1000	3347.90	2.501	-78.084	-12.397	2124.6
8.2000	3364.80	2.525	-78.097	-12.445	2107.3
8.3000	3381.60	2.550	-78.109	-12.493	2090.2
8.5000	3415.00	2.598	-78.133	-12.588	2056.1
8.7000	3448.20	2.646	-78.157	-12.682	2022.1
8.8000	3464.70	2.670	-78.170	-12.729	2005.3
8.9884	3495.60	2.715	-78.192	-12.817	1973.7
9.0000	3497.50	2.718	-78.194	-12.822	1977.2
9.2000	3530.10	2.769	-78.222	-12.909	2037.6
9.3000	3546.30	2.795	-78.236	-12.953	2067.6
9.4000	3563.40	2.821	-78.251	-12.999	2099.3
9.5000	3582.40	2.851	-78.268	-13.050	2134.4
9.6000	3601.30	2.881	-78.284	-13.100	2169.4
9.7000	3620.10	2.911	-78.301	-13.151	2204.3
9.8000	3638.80	2.940	-78.317	-13.201	2238.9
9.9000	3657.80	2.970	-78.334	-13.252	2274.1
10.0000	3677.20	3.000	-78.351	-13.304	2310.0
10.0468	3686.60	3.015	-78.359	-13.329	2327.4
10.1000	3697.30	3.033	-78.378	-13.354	2360.6
10.3000	3740.10	3.104	-78.455	-13.452	2493.2
10.4000	3761.40	3.139	-78.494	-13.501	2559.2
10.7000	3825.60	3.246	-78.609	-13.649	2758.1
10.8000	3846.90	3.281	-78.648	-13.698	2824.1
11.0467	3899.70	3.369	-78.743	-13.820	2987.7
11.1000	3911.10	3.389	-78.764	-13.845	2986.2
11.2000	3932.40	3.426	-78.804	-13.890	2983.5
12.0000	4103.60	3.722	-79.120	-14.258	2961.5
12.0470	4113.70	3.740	-79.139	-14.280	2960.2
12.2000	4146.60	3.799	-79.200	-14.347	2953.6
12.3000	4168.00	3.837	-79.240	-14.390	2949.3
12.6000	4232.50	3.953	-79.360	-14.520	2936.3
12.7000	4254.10	3.992	-79.401	-14.564	2932.0
12.8000	4275.60	4.030	-79.441	-14.607	2927.6
12.9000	4297.20	4.069	-79.481	-14.651	2923.3
13.0000	4318.70	4.108	-79.521	-14.694	2919.0
13.0472	4328.90	4.126	-79.540	-14.715	2916.9
13.1000	4340.30	4.147	-79.561	-14.737	2914.1
13.3000	4383.50	4.227	-79.641	-14.819	2903.5
13.4000	4405.20	4.267	-79.681	-14.860	2898.1
13.5000	4426.80	4.306	-79.721	-14.901	2892.8
14.0470	4545.50	4.525	-79.941	-15.127	2863.6
14.1000	4557.00	4.547	-79.962	-15.148	2861.1
14.2000	4578.80	4.588	-80.001	-15.187	2856.4
14.3000	4600.50	4.629	-80.040	-15.226	2851.7
14.9000	4731.30	4.875	-80.276	-15.462	2823.4
15.0000	4753.20	4.917	-80.316	-15.502	2818.6
15.0468	4763.40	4.936	-80.334	-15.520	2816.4
15.1000	4775.00	4.958	-80.350	-15.541	2721.6
15.2000	4796.90	5.000	-80.380	-15.582	2542.6
15.3000	4818.70	5.042	-80.411	-15.622	2364.5
15.6000	4878.10	5.156	-80.493	-15.731	1879.0
15.8000	4917.50	5.232	-80.548	-15.804	1557.0
16.0469	4965.90	5.325	-80.615	-15.893	1161.5
16.1000	4976.30	5.346	-80.627	-15.912	1148.1
16.2000	4995.80	5.384	-80.649	-15.948	1123.1
16.3000	5015.40	5.423	-80.672	-15.984	1097.8
16.6000	5073.90	5.538	-80.739	-16.091	1022.6
16.7000	5093.30	5.576	-80.762	-16.127	997.7
16.8000	5112.80	5.615	-80.784	-16.162	972.6
16.9000	5132.10	5.653	-80.806	-16.198	947.8
17.0000	5151.50	5.691	-80.829	-16.233	922.8

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44.No5 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
17.0472	5160.60	5.709	-80.839	-16.250	911.1
17.3000	5209.40	5.807	-80.888	-16.337	855.8
17.6000	5267.00	5.923	-80.947	-16.439	790.4
17.8000	5305.20	6.000	-80.985	-16.507	747.1
18.0468	5352.10	6.095	-81.033	-16.590	693.9
18.1000	5362.20	6.116	-81.042	-16.607	684.1
18.2000	5381.10	6.155	-81.058	-16.640	665.9
18.3000	5399.90	6.194	-81.074	-16.672	647.7
18.4000	5418.80	6.232	-81.091	-16.705	629.4
18.6000	5456.40	6.310	-81.124	-16.769	593.1
19.0000	5531.20	6.464	-81.188	-16.898	520.8
19.0468	5539.90	6.482	-81.196	-16.913	512.4
19.2000	5568.40	6.542	-81.217	-16.961	490.6
19.4000	5605.40	6.619	-81.244	-17.022	462.3
19.7000	5660.60	6.735	-81.284	-17.114	420.1
20.0000	5715.50	6.850	-81.324	-17.206	378.2
20.0473	5724.10	6.868	-81.330	-17.220	371.6
20.1000	5733.70	6.889	-81.336	-17.235	366.4
20.2000	5752.00	6.928	-81.347	-17.265	356.5
20.3000	5770.20	6.967	-81.358	-17.294	346.6
20.4000	5788.30	7.005	-81.369	-17.323	336.9
20.5000	5806.50	7.044	-81.380	-17.353	327.0
20.6000	5824.60	7.083	-81.390	-17.382	317.2
20.7000	5842.80	7.122	-81.401	-17.411	307.3
20.8000	5860.80	7.160	-81.412	-17.440	297.6
21.0000	5897.00	7.238	-81.434	-17.498	278.0
21.0472	5905.50	7.256	-81.439	-17.512	273.4
21.1000	5915.00	7.277	-81.444	-17.527	270.6
21.2000	5933.10	7.316	-81.453	-17.555	265.2
21.3000	5951.10	7.355	-81.462	-17.582	259.8
21.4000	5969.20	7.395	-81.471	-17.610	254.4
21.6000	6005.20	7.473	-81.489	-17.666	243.7
21.7000	6023.30	7.513	-81.498	-17.694	238.3
21.9000	6059.30	7.591	-81.517	-17.749	227.5
22.0000	6077.40	7.631	-81.526	-17.777	222.1
22.0467	6085.80	7.649	-81.530	-17.790	219.6
22.2000	6113.40	7.710	-81.543	-17.830	218.8
22.3000	6131.50	7.750	-81.551	-17.857	218.3
22.4000	6149.50	7.790	-81.560	-17.883	217.7
22.5000	6167.60	7.830	-81.568	-17.910	217.2
22.6000	6185.80	7.870	-81.577	-17.937	216.7
22.7000	6203.90	7.910	-81.585	-17.963	216.2
22.8000	6222.10	7.950	-81.594	-17.990	215.6
23.0470	6267.30	8.050	-81.615	-18.056	214.3
23.2000	6295.30	8.113	-81.629	-18.095	214.9
23.5000	6350.50	8.236	-81.655	-18.172	216.2
23.6000	6369.00	8.278	-81.664	-18.198	216.6
23.7000	6387.40	8.319	-81.673	-18.223	217.0
23.8000	6405.90	8.360	-81.682	-18.249	217.4
23.9000	6424.50	8.402	-81.691	-18.275	217.8
24.0000	6443.00	8.444	-81.700	-18.301	218.2
24.0468	6451.70	8.463	-81.704	-18.313	218.4
24.1000	6461.60	8.485	-81.709	-18.326	218.5
24.2000	6480.10	8.527	-81.718	-18.350	218.7
24.3000	6498.70	8.569	-81.727	-18.375	218.9
24.4000	6517.40	8.612	-81.736	-18.399	219.1
24.6000	6554.60	8.696	-81.754	-18.448	219.5
24.7000	6573.30	8.738	-81.763	-18.472	219.7
24.8000	6591.90	8.780	-81.772	-18.497	219.9
25.0471	6638.10	8.885	-81.795	-18.557	220.4
25.6000	6741.50	9.121	-81.844	-18.686	220.9
25.7000	6760.30	9.164	-81.852	-18.709	221.0

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44.No5 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
25.9000	6797.70	9.250	-81.870	-18.756	221.2
26.0000	6816.50	9.293	-81.879	-18.779	221.3
26.0471	6825.30	9.313	-81.883	-18.790	221.3
26.2000	6853.90	9.379	-81.896	-18.824	221.3
26.3000	6872.70	9.422	-81.904	-18.846	221.4
26.4000	6891.40	9.466	-81.913	-18.868	221.4
26.5000	6910.20	9.509	-81.921	-18.890	221.4
26.6000	6928.90	9.552	-81.930	-18.912	221.4
26.8000	6966.50	9.639	-81.947	-18.956	221.5
26.9000	6985.20	9.682	-81.955	-18.978	221.5
27.0000	7004.00	9.726	-81.964	-19.000	221.5
27.0471	7012.80	9.746	-81.968	-19.010	221.5
27.1000	7022.70	9.769	-81.972	-19.021	221.5
27.2000	7041.50	9.813	-81.980	-19.042	221.5
27.3000	7060.20	9.856	-81.988	-19.063	221.5
27.5000	7097.80	9.944	-82.004	-19.105	221.6
27.6000	7116.50	9.988	-82.012	-19.126	221.6
27.7000	7135.30	10.031	-82.020	-19.147	221.6
27.8000	7153.80	10.074	-82.028	-19.168	221.6
27.9000	7172.20	10.117	-82.036	-19.188	221.6
28.0000	7190.70	10.160	-82.044	-19.209	221.6
28.0527	7200.40	10.183	-82.048	-19.220	221.6
28.2000	7227.50	10.246	-82.059	-19.249	221.6
28.3000	7246.00	10.290	-82.067	-19.268	221.6
28.4000	7264.40	10.333	-82.074	-19.288	221.6
28.5000	7282.90	10.376	-82.082	-19.307	221.6
28.6000	7301.30	10.419	-82.089	-19.326	221.6
28.7000	7319.80	10.462	-82.097	-19.346	221.6
28.8000	7338.20	10.505	-82.105	-19.365	221.6
28.9000	7356.70	10.549	-82.112	-19.385	221.6
29.0000	7375.10	10.592	-82.120	-19.404	221.6
29.0697	7388.00	10.622	-82.125	-19.418	221.6
29.1000	7393.60	10.635	-82.127	-19.424	221.6
29.2000	7412.20	10.679	-82.134	-19.442	221.6
29.3000	7430.90	10.723	-82.141	-19.461	221.6
29.5000	7468.50	10.812	-82.156	-19.499	221.6
29.6000	7487.20	10.856	-82.163	-19.518	221.6
29.7000	7506.00	10.901	-82.170	-19.537	221.5
29.8000	7524.70	10.945	-82.177	-19.556	221.5
30.0000	7562.30	11.034	-82.192	-19.594	221.5
30.0711	7575.60	11.065	-82.197	-19.607	221.5
30.1000	7581.00	11.078	-82.199	-19.612	221.5
30.3000	7618.60	11.167	-82.213	-19.648	221.5
30.4000	7637.30	11.212	-82.220	-19.666	221.5
30.5000	7656.10	11.256	-82.227	-19.684	221.5
30.6000	7674.80	11.301	-82.233	-19.702	221.5
30.8000	7712.40	11.390	-82.247	-19.738	221.5
30.9000	7731.10	11.435	-82.254	-19.756	221.5
31.0000	7749.90	11.479	-82.261	-19.774	221.5
31.0711	7763.20	11.511	-82.266	-19.787	221.5
31.1000	7768.60	11.524	-82.268	-19.792	221.1
31.3000	7806.20	11.614	-82.281	-19.826	218.4
31.4000	7824.90	11.658	-82.288	-19.843	217.0
31.5000	7843.70	11.703	-82.295	-19.860	215.7
31.6000	7862.40	11.748	-82.302	-19.877	214.3
31.7000	7881.20	11.793	-82.308	-19.894	213.0
31.8000	7899.90	11.837	-82.315	-19.911	211.6
31.9000	7918.50	11.882	-82.322	-19.928	210.3
32.0000	7937.00	11.926	-82.328	-19.945	209.0
32.0712	7950.10	11.957	-82.333	-19.957	208.0
32.1000	7955.40	11.970	-82.336	-19.962	189.6
32.2000	7973.70	12.014	-82.345	-19.977	125.9

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44.No5 W.B.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
32.3000	7991.60	12.057	-82.354	-19.992	63.7
32.4000	8006.50	12.093	-82.361	-20.005	11.8
32.5000	8009.90	12.101	-82.363	-20.008	0.0
32.7180	8009.90	12.101	-82.363	-20.008	0.0

45.No5 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	-77.248	8.479	0.0
0.0010	64.00	0.045	-77.248	8.479	2232.6
0.1000	122.10	0.086	-77.248	8.479	4259.3
0.2000	181.90	0.129	-77.248	8.479	6345.4
0.3000	243.20	0.172	-77.248	8.479	8483.7
0.4000	305.70	0.216	-77.248	8.479	10664.0
0.5000	369.40	0.261	-77.248	8.479	12886.1
0.6000	434.00	0.307	-77.248	8.479	15139.6
0.7000	499.70	0.353	-77.248	8.479	17431.4
0.8000	566.20	0.400	-77.248	8.479	19751.2
0.9000	633.60	0.448	-77.248	8.479	22102.4
1.0000	701.70	0.496	-77.248	8.479	24478.0
1.0446	732.40	0.518	-77.248	8.479	25548.9
1.1000	770.60	0.542	-77.256	8.507	25891.6
1.2000	840.20	0.586	-77.270	8.557	26516.1
1.3000	910.40	0.630	-77.284	8.609	27145.9
1.4000	981.40	0.675	-77.298	8.660	27782.9
1.5000	1053.00	0.720	-77.312	8.712	28425.3
1.6000	1125.10	0.765	-77.327	8.765	29072.1
1.7000	1197.90	0.811	-77.341	8.818	29725.3
1.8000	1271.30	0.857	-77.356	8.871	30383.8
1.9000	1345.20	0.904	-77.371	8.925	31046.9
2.0000	1419.60	0.951	-77.386	8.979	31714.4
2.1000	1494.60	0.998	-77.401	9.034	32387.2
2.2000	1570.10	1.045	-77.416	9.089	33101.0
2.3000	1646.10	1.090	-77.426	9.129	30667.9
2.4000	1722.50	1.135	-77.436	9.168	28082.1
2.5000	1799.50	1.180	-77.446	9.207	25476.0
2.6000	1876.90	1.226	-77.456	9.247	22856.4
2.7000	1954.80	1.271	-77.466	9.286	20219.8
2.8000	2033.10	1.317	-77.476	9.326	17569.7
2.9000	2111.90	1.363	-77.487	9.367	14902.7
3.0000	2191.10	1.410	-77.497	9.407	12222.1
3.1000	2270.70	1.457	-77.507	9.448	9528.0
3.2000	2350.70	1.504	-77.518	9.489	6820.3
3.3000	2431.10	1.551	-77.528	9.530	4099.2
3.3905	2484.50	1.582	-77.535	9.557	2291.8
3.4000	2490.10	1.586	-77.538	9.577	2295.6
3.5000	2506.60	1.598	-77.549	9.638	2306.9
3.6000	2523.20	1.610	-77.559	9.698	2318.2
3.8000	2556.80	1.634	-77.579	9.821	2341.2
3.9000	2573.70	1.646	-77.590	9.882	2352.7
4.1000	2607.90	1.670	-77.611	10.007	2376.0
4.3000	2642.30	1.695	-77.632	10.132	2399.5
4.4000	2659.60	1.707	-77.642	10.195	2411.3
4.5000	2677.00	1.720	-77.653	10.259	2423.2
4.5269	2681.70	1.723	-77.656	10.276	2426.4
4.7000	2712.00	1.752	-77.674	10.380	2426.6
5.0000	2764.80	1.803	-77.707	10.560	2426.9
5.3000	2817.90	1.854	-77.739	10.742	2427.2

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45.No5 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
5.6876	2886.90	1.921	-77.781	10.978	2427.6
5.8000	2906.90	1.944	-77.794	11.042	2418.6
5.9000	2924.80	1.965	-77.805	11.099	2410.5
6.0000	2942.60	1.985	-77.816	11.156	2402.5
6.1000	2960.50	2.006	-77.827	11.214	2394.4
6.2000	2978.30	2.027	-77.838	11.271	2386.4
6.3000	2996.20	2.047	-77.850	11.328	2378.3
6.8000	3085.20	2.150	-77.906	11.613	2338.2
6.8486	3093.80	2.160	-77.911	11.641	2334.3
6.9000	3102.90	2.172	-77.917	11.668	2327.2
7.0000	3120.70	2.195	-77.929	11.722	2313.4
7.2000	3156.10	2.242	-77.953	11.829	2285.9
7.5000	3208.90	2.311	-77.988	11.987	2244.9
7.8000	3261.40	2.380	-78.024	12.145	2204.1
8.0000	3296.20	2.426	-78.047	12.250	2177.0
8.0092	3297.80	2.428	-78.048	12.255	2175.8
8.3000	3348.10	2.501	-78.085	12.398	2124.4
8.4000	3365.20	2.526	-78.097	12.447	2106.9
8.5000	3382.40	2.551	-78.110	12.495	2089.4
8.8000	3433.40	2.625	-78.147	12.640	2037.3
8.9000	3450.30	2.649	-78.159	12.688	2020.0
9.1000	3483.90	2.698	-78.183	12.784	1985.7
9.1701	3495.60	2.715	-78.192	12.817	1973.7
9.2000	3500.60	2.723	-78.196	12.830	1983.0
9.4000	3533.80	2.775	-78.225	12.919	2044.4
9.5000	3550.30	2.801	-78.240	12.964	2075.0
9.6000	3568.10	2.829	-78.255	13.011	2108.0
9.8000	3606.30	2.889	-78.289	13.114	2178.7
10.0000	3644.10	2.948	-78.322	13.215	2248.7
10.1000	3663.40	2.979	-78.339	13.267	2284.4
10.2000	3683.10	3.010	-78.356	13.320	2320.9
10.2169	3686.60	3.015	-78.359	13.329	2327.4
10.3000	3703.80	3.044	-78.390	13.369	2380.7
10.7000	3790.20	3.187	-78.546	13.568	2648.4
10.8000	3811.70	3.223	-78.584	13.617	2715.0
11.0000	3854.90	3.295	-78.662	13.717	2848.9
11.1000	3876.40	3.330	-78.701	13.766	2915.5
11.2079	3899.70	3.369	-78.743	13.820	2987.7
11.3000	3919.60	3.403	-78.780	13.863	2985.1
11.4000	3941.10	3.441	-78.820	13.909	2982.4
11.8000	4027.50	3.591	-78.979	14.095	2971.3
11.9000	4049.00	3.628	-79.019	14.141	2968.5
12.0000	4070.60	3.665	-79.059	14.187	2965.7
12.1000	4092.30	3.703	-79.099	14.234	2963.0
12.1991	4113.70	3.740	-79.139	14.280	2960.2
12.3000	4135.60	3.779	-79.180	14.324	2955.8
12.4000	4157.20	3.818	-79.220	14.368	2951.5
12.5000	4178.90	3.857	-79.260	14.412	2947.1
12.9000	4265.70	4.013	-79.422	14.587	2929.6
13.0000	4287.50	4.052	-79.463	14.631	2925.2
13.1000	4309.20	4.091	-79.503	14.675	2920.9
13.1904	4328.90	4.126	-79.540	14.715	2916.9
13.5000	4396.40	4.250	-79.665	14.843	2900.3
13.6000	4418.30	4.291	-79.706	14.885	2894.9
13.7000	4440.10	4.331	-79.746	14.927	2889.5
14.1813	4545.50	4.525	-79.941	15.127	2863.6
14.3000	4571.50	4.574	-79.988	15.174	2858.0
14.4000	4593.50	4.616	-80.028	15.214	2853.2
14.5000	4615.40	4.657	-80.067	15.253	2848.5
15.0000	4725.40	4.864	-80.265	15.451	2824.6
15.1000	4747.50	4.906	-80.305	15.491	2819.8
15.1723	4763.40	4.936	-80.334	15.520	2816.4

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45.No5 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
15.2000	4769.50	4.948	-80.342	15.531	2766.6
15.4000	4813.70	5.033	-80.404	15.613	2405.3
15.5000	4834.10	5.072	-80.432	15.650	2238.6
15.6000	4854.00	5.110	-80.460	15.687	2076.0
15.7000	4874.00	5.148	-80.487	15.724	1912.5
15.9000	4913.80	5.225	-80.543	15.797	1587.3
16.1000	4953.40	5.301	-80.598	15.870	1263.7
16.1635	4965.90	5.325	-80.615	15.893	1161.5
16.3000	4992.80	5.378	-80.646	15.942	1126.9
16.4000	5012.60	5.417	-80.669	15.979	1101.4
16.5000	5032.30	5.456	-80.691	16.015	1076.1
16.6000	5051.90	5.495	-80.714	16.051	1050.9
16.7000	5071.60	5.533	-80.737	16.087	1025.6
17.0000	5130.40	5.649	-80.804	16.195	949.9
17.1549	5160.60	5.709	-80.839	16.250	911.1
17.3000	5188.90	5.766	-80.868	16.300	879.0
17.6000	5247.10	5.883	-80.927	16.404	813.0
17.9000	5305.00	6.000	-80.985	16.506	747.3
18.1000	5343.40	6.077	-81.024	16.575	703.8
18.1455	5352.10	6.095	-81.033	16.590	693.9
18.3000	5381.60	6.156	-81.059	16.641	665.4
18.6000	5438.60	6.273	-81.108	16.739	610.3
18.7000	5457.50	6.312	-81.124	16.771	592.0
18.8000	5476.50	6.351	-81.141	16.804	573.7
18.9000	5495.40	6.390	-81.157	16.836	555.4
19.1367	5539.90	6.482	-81.196	16.913	512.4
19.2000	5551.80	6.507	-81.205	16.933	503.3
19.4000	5589.20	6.585	-81.232	16.995	474.7
19.5000	5607.80	6.624	-81.245	17.026	460.5
19.6000	5626.50	6.663	-81.259	17.057	446.2
19.7000	5645.00	6.702	-81.272	17.088	432.1
19.8000	5663.60	6.741	-81.286	17.119	417.9
19.9000	5682.00	6.780	-81.299	17.150	403.8
20.0000	5700.50	6.819	-81.313	17.181	389.6
20.1283	5724.10	6.868	-81.330	17.220	371.6
20.4000	5774.10	6.975	-81.360	17.300	344.5
20.9000	5865.60	7.171	-81.415	17.448	295.0
21.1192	5905.50	7.256	-81.439	17.512	273.4
22.1099	6085.80	7.649	-81.530	17.790	219.6
22.5000	6156.80	7.806	-81.563	17.894	217.5
22.7000	6193.40	7.887	-81.580	17.948	216.5
23.1000	6267.00	8.049	-81.615	18.056	214.3
23.2000	6285.50	8.091	-81.624	18.081	214.7
23.3000	6304.10	8.132	-81.633	18.107	215.1
23.4000	6322.60	8.174	-81.642	18.133	215.5
23.7000	6378.40	8.299	-81.669	18.211	216.8
23.8000	6397.10	8.341	-81.678	18.237	217.2
23.9000	6415.70	8.382	-81.687	18.263	217.6
24.0000	6434.40	8.424	-81.696	18.289	218.0
24.0920	6451.70	8.463	-81.704	18.313	218.4
24.2000	6471.90	8.509	-81.714	18.339	218.6
24.3000	6490.70	8.551	-81.723	18.364	218.8
24.4000	6509.40	8.594	-81.732	18.389	219.0
24.7000	6565.80	8.721	-81.760	18.462	219.6
24.8000	6584.70	8.764	-81.769	18.487	219.8
24.9000	6603.50	8.807	-81.778	18.512	220.0
25.0000	6622.40	8.849	-81.787	18.536	220.2
25.0835	6638.10	8.885	-81.795	18.557	220.4
25.1000	6641.20	8.892	-81.796	18.561	220.4
25.2000	6660.10	8.935	-81.805	18.584	220.5
25.3000	6678.90	8.978	-81.814	18.608	220.6
26.0746	6825.30	9.313	-81.883	18.790	221.3

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45.No5 W.B.Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
26.5000	6905.70	9.499	-81.919	18.884	221.4
26.6000	6924.70	9.543	-81.928	18.907	221.4
26.9000	6981.40	9.673	-81.954	18.973	221.5
27.0000	7000.40	9.717	-81.962	18.995	221.5
27.0656	7012.80	9.746	-81.968	19.010	221.5
27.2000	7038.20	9.805	-81.979	19.038	221.5
27.3000	7057.20	9.849	-81.987	19.060	221.5
27.6000	7113.90	9.982	-82.011	19.123	221.6
27.7000	7132.90	10.026	-82.019	19.144	221.6
27.8000	7151.60	10.069	-82.027	19.165	221.6
27.9000	7170.20	10.113	-82.035	19.186	221.6
28.0000	7188.90	10.156	-82.043	19.207	221.6
28.0618	7200.40	10.183	-82.048	19.220	221.6
28.2000	7226.10	10.243	-82.059	19.247	221.6
28.3000	7244.80	10.287	-82.066	19.267	221.6
28.5000	7282.00	10.374	-82.081	19.306	221.6
28.6000	7300.70	10.418	-82.089	19.326	221.6
28.8000	7337.90	10.505	-82.104	19.365	221.6
28.9000	7356.60	10.549	-82.112	19.385	221.6
29.0688	7388.00	10.622	-82.125	19.418	221.6
29.1000	7393.80	10.636	-82.127	19.424	221.6
29.2000	7412.50	10.680	-82.134	19.443	221.6
29.3000	7431.50	10.725	-82.142	19.462	221.6
29.6000	7488.20	10.859	-82.163	19.519	221.6
29.7000	7507.20	10.903	-82.171	19.538	221.5
29.9000	7545.00	10.993	-82.185	19.576	221.5
30.0000	7564.00	11.038	-82.193	19.595	221.5
30.0614	7575.60	11.065	-82.197	19.607	221.5
30.3000	7620.70	11.172	-82.214	19.650	221.5
30.4000	7639.70	11.217	-82.221	19.669	221.5
30.6000	7677.50	11.307	-82.234	19.705	221.5
30.7000	7696.50	11.352	-82.241	19.723	221.5
31.0000	7753.20	11.487	-82.262	19.777	221.5
31.0526	7763.20	11.511	-82.266	19.787	221.5
31.1000	7772.20	11.532	-82.269	19.795	220.9
31.3000	7810.00	11.623	-82.283	19.830	218.1
31.4000	7829.00	11.668	-82.290	19.847	216.8
31.8000	7904.60	11.848	-82.317	19.916	211.3
32.0000	7942.00	11.938	-82.330	19.950	208.6
32.0438	7950.10	11.957	-82.333	19.957	208.0
32.1000	7960.50	11.982	-82.338	19.966	171.8
32.2000	7978.90	12.026	-82.347	19.982	107.8
32.3000	7996.80	12.069	-82.356	19.997	45.6
32.4000	8008.70	12.098	-82.362	20.007	4.2
32.5000	8009.90	12.101	-82.363	20.008	0.0
32.6760	8009.90	12.101	-82.363	20.008	0.0

46.Aft Peak Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	9.050	-145.987	0.000	0.0
0.1000	0.20	9.120	-145.987	0.000	0.0
0.3000	0.40	9.191	-145.987	0.000	0.1
0.4000	0.60	9.261	-145.987	0.000	0.1
0.5000	0.70	9.296	-145.987	0.000	0.1
0.6000	0.80	9.337	-145.979	0.000	0.1
0.7000	1.00	9.420	-145.964	0.000	0.2
0.9000	1.20	9.503	-145.948	0.000	0.2
0.9500	1.30	9.545	-145.940	0.000	0.2
1.0000	1.40	9.580	-145.939	0.000	0.2
1.2000	1.60	9.649	-145.939	0.000	0.2
1.3000	1.80	9.719	-145.938	0.000	0.2
1.4000	1.90	9.753	-145.937	0.000	0.2
1.5000	2.10	9.823	-145.936	0.000	0.2
2.0000	3.10	10.150	-145.988	0.000	0.5
2.1000	3.40	10.230	-146.010	0.001	0.4
2.2000	3.60	10.283	-146.025	0.002	0.3
2.4000	4.20	10.443	-146.069	0.004	0.1
2.5000	4.30	10.470	-146.076	0.004	0.1
2.6000	4.40	10.498	-146.097	0.008	0.1
2.7000	4.60	10.553	-146.139	0.015	0.2
2.9000	4.80	10.608	-146.181	0.023	0.2
3.0000	5.00	10.663	-146.223	0.030	0.3
3.3000	5.60	10.818	-146.319	0.047	0.6
3.5000	6.20	10.972	-146.415	0.064	1.0
3.5250	6.30	10.998	-146.431	0.067	1.0
3.8000	7.40	11.230	-146.559	0.088	2.5
4.0000	8.40	11.441	-146.676	0.106	3.8
4.0333	8.60	11.483	-146.699	0.110	4.1
4.1000	9.00	11.541	-146.726	0.112	5.4
4.3000	10.40	11.744	-146.820	0.118	9.8
4.5000	12.20	12.005	-146.941	0.125	15.5
4.5364	12.60	12.063	-146.968	0.127	16.8
4.6000	13.30	12.125	-147.001	0.126	20.1
4.7000	14.60	12.241	-147.062	0.123	26.3
4.8000	16.00	12.366	-147.128	0.121	32.9
4.9000	17.50	12.499	-147.198	0.118	40.0
5.0000	19.20	12.651	-147.278	0.115	48.1
5.0316	19.80	12.704	-147.306	0.114	50.9
5.1000	21.10	12.776	-147.349	0.106	60.2
5.2000	23.10	12.886	-147.416	0.094	74.5
5.3000	24.80	12.979	-147.472	0.084	86.6
5.4000	26.50	13.073	-147.529	0.074	98.7
5.5000	28.50	13.183	-147.595	0.063	113.0
5.5273	29.10	13.216	-147.615	0.059	117.3
5.6000	30.70	13.275	-147.658	0.054	134.5
5.7000	33.20	13.367	-147.726	0.045	161.3
5.8000	36.00	13.470	-147.802	0.036	191.4
5.9000	39.10	13.584	-147.887	0.025	224.7
6.0000	42.50	13.709	-147.979	0.014	261.2
6.0306	43.60	13.749	-148.009	0.010	273.0
6.1000	46.10	13.809	-148.051	0.007	302.9
6.2000	50.10	13.905	-148.119	0.003	350.7
6.3000	54.30	14.006	-148.190	-0.002	400.9
6.4000	58.90	14.116	-148.267	-0.007	455.9
6.5000	63.90	14.236	-148.352	-0.012	515.7
6.5296	65.50	14.274	-148.379	-0.014	534.8
6.6000	69.30	14.334	-148.429	-0.015	584.4
6.7000	75.10	14.426	-148.504	-0.017	660.1
6.8000	81.40	14.525	-148.587	-0.018	742.3
6.9000	88.10	14.631	-148.674	-0.020	829.7
7.0000	95.10	14.742	-148.766	-0.022	921.0
7.0307	97.40	14.778	-148.796	-0.023	951.0

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46.Aft Peak Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
7.1000	102.60	14.835	-148.838	-0.023	1028.9
7.2000	110.30	14.920	-148.901	-0.024	1144.2
7.3000	118.50	15.011	-148.967	-0.024	1267.1
7.4000	127.00	15.104	-149.036	-0.024	1394.4
7.5000	136.30	15.207	-149.112	-0.025	1533.7
7.5303	139.30	15.240	-149.136	-0.025	1578.6
7.6000	146.20	15.296	-149.181	-0.025	1689.9
7.7000	156.60	15.380	-149.249	-0.025	1857.5
7.8000	167.40	15.467	-149.320	-0.025	2031.7
7.9000	178.70	15.558	-149.394	-0.025	2213.9
8.0000	190.40	15.652	-149.471	-0.025	2402.5
8.0309	194.20	15.683	-149.496	-0.025	2463.8
8.1000	202.70	15.736	-149.544	-0.028	2614.9
8.2000	215.20	15.814	-149.614	-0.032	2837.2
8.3000	228.20	15.895	-149.687	-0.037	3068.4
8.4000	241.80	15.980	-149.763	-0.042	3310.2
8.5000	256.00	16.069	-149.842	-0.046	3562.7
8.5301	260.40	16.096	-149.867	-0.048	3640.9
8.6000	270.60	16.147	-149.909	-0.050	3845.9
8.7000	285.80	16.224	-149.970	-0.053	4151.3
8.8000	301.50	16.303	-150.034	-0.056	4466.8
8.9000	317.80	16.385	-150.101	-0.060	4794.3
9.0000	334.70	16.470	-150.169	-0.063	5133.9
9.0305	340.00	16.497	-150.191	-0.064	5240.4
9.1000	352.10	16.547	-150.228	-0.065	5482.1
9.2000	370.20	16.623	-150.285	-0.066	5843.6
9.3000	388.80	16.700	-150.342	-0.068	6215.2
9.4000	408.00	16.780	-150.402	-0.069	6598.7
9.5000	427.70	16.862	-150.463	-0.071	6992.2
9.5302	433.90	16.888	-150.482	-0.071	7116.0
9.6000	448.20	16.938	-150.525	-0.071	7383.9
9.7000	469.40	17.013	-150.588	-0.072	7781.0
9.8000	491.40	17.091	-150.653	-0.072	8193.1
9.9000	514.10	17.171	-150.721	-0.072	8618.3
10.0000	537.50	17.253	-150.791	-0.073	9056.6
10.0306	544.90	17.279	-150.813	-0.073	9195.2
10.1000	561.70	17.329	-150.860	-0.073	9501.2
10.2000	586.60	17.404	-150.929	-0.073	9954.6
10.3000	612.20	17.481	-151.000	-0.073	10420.8
10.4000	638.50	17.560	-151.073	-0.073	10899.8
10.5000	665.50	17.641	-151.148	-0.073	11391.5
10.5307	674.00	17.667	-151.172	-0.073	11546.3
10.6000	693.20	17.717	-151.219	-0.073	11889.4
10.7000	721.70	17.791	-151.289	-0.072	12398.8
10.8000	750.80	17.867	-151.360	-0.072	12918.9
10.9000	780.70	17.945	-151.433	-0.072	13453.2
11.0000	811.20	18.025	-151.508	-0.071	13998.3
11.0308	820.80	18.050	-151.531	-0.071	14169.9
11.1000	842.40	18.099	-151.576	-0.071	14522.1
11.2000	874.30	18.172	-151.642	-0.070	15042.3
11.3000	906.80	18.247	-151.709	-0.070	15572.3
11.4000	939.90	18.323	-151.778	-0.070	16112.1
11.5000	973.60	18.400	-151.848	-0.069	16661.6
11.5308	984.20	18.424	-151.870	-0.069	16834.5
11.6000	1008.00	18.473	-151.911	-0.069	17169.1
11.7000	1042.80	18.544	-151.971	-0.068	17658.3
11.8000	1078.20	18.617	-152.032	-0.067	18155.9
11.9000	1114.10	18.690	-152.095	-0.067	18660.6
12.0000	1150.50	18.765	-152.157	-0.066	19172.3
12.0307	1161.80	18.788	-152.177	-0.066	19331.1
12.1000	1187.30	18.835	-152.213	-0.066	19655.7
12.2000	1224.70	18.905	-152.266	-0.065	20131.7

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46.Aft Peak Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
12.3000	1262.40	18.975	-152.319	-0.065	20611.6
12.4000	1300.60	19.046	-152.373	-0.065	21097.8
12.5000	1339.20	19.118	-152.428	-0.064	21589.1
12.5310	1351.30	19.140	-152.445	-0.064	21743.1
12.6000	1378.20	19.186	-152.476	-0.064	22053.6
12.7000	1417.60	19.254	-152.522	-0.063	22508.3
12.8000	1457.40	19.323	-152.568	-0.062	22967.7
12.9000	1497.60	19.392	-152.615	-0.062	23431.6
13.0000	1538.10	19.461	-152.662	-0.061	23899.1
13.0308	1550.70	19.483	-152.677	-0.061	24044.5
13.1000	1579.00	19.528	-152.704	-0.061	24320.4
13.2000	1620.20	19.594	-152.744	-0.060	24721.9
13.3000	1661.70	19.661	-152.784	-0.060	25126.4
13.4000	1703.50	19.728	-152.825	-0.060	25533.9
13.5310	1758.80	19.816	-152.878	-0.059	26072.9
13.6000	1787.90	19.860	-152.901	-0.059	26305.6
13.7000	1830.30	19.924	-152.934	-0.058	26644.7
13.8000	1873.00	19.989	-152.967	-0.058	26986.1
13.9000	1915.90	20.054	-153.000	-0.058	27329.2
14.0000	1959.00	20.119	-153.034	-0.057	27673.8
14.0309	1972.40	20.139	-153.044	-0.057	27781.0
14.1000	2002.40	20.183	-153.065	-0.057	8576.6
14.2000	2015.80	20.203	-153.074	-0.057	0.0
14.3000	2015.80	20.203	-153.074	-0.057	0.0

47.Distilled W.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	23.150	-148.496	-11.732	0.0
0.1000	4.16	23.200	-148.496	-11.732	141.2
0.2000	8.34	23.250	-148.496	-11.732	283.1
0.3000	12.54	23.300	-148.496	-11.741	286.2
0.4000	16.75	23.351	-148.496	-11.751	289.4
0.5000	20.98	23.401	-148.496	-11.759	292.5
0.6000	25.22	23.451	-148.497	-11.768	295.6
0.7000	29.48	23.501	-148.497	-11.776	298.3
0.8000	33.75	23.552	-148.498	-11.784	300.9
1.0000	42.33	23.653	-148.498	-11.799	306.1
1.1000	46.64	23.703	-148.498	-11.806	308.3
1.2000	50.96	23.754	-148.499	-11.813	310.6
1.3000	55.29	23.804	-148.499	-11.819	312.7
1.4000	59.63	23.855	-148.499	-11.826	314.8
1.5000	63.98	23.906	-148.499	-11.832	316.7
1.5999	68.34	23.956	-148.499	-11.838	318.5
1.7000	72.70	24.007	-148.499	-11.844	320.2
1.8000	77.07	24.058	-148.500	-11.850	321.9
1.9000	81.46	24.109	-148.500	-11.856	323.1
2.0000	85.84	24.159	-148.500	-11.861	324.4
2.1000	90.23	24.209	-148.501	-11.866	325.4
2.2000	94.63	24.260	-148.501	-11.871	326.4
2.3000	99.03	24.311	-148.501	-11.875	327.3
2.4000	103.44	24.362	-148.501	-11.879	328.2
2.5000	107.85	24.413	-148.501	-11.883	328.5
2.6000	112.25	24.463	-148.501	-11.887	328.8
2.7000	116.66	24.513	-148.501	-11.890	329.1
2.7999	121.08	24.564	-148.501	-11.894	329.4
2.8000	121.08	24.564	-148.501	-11.894	329.4
3.0000	129.90	24.665	-148.501	-11.901	329.6

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47.Distilled W.Tk (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.1000	134.31	24.715	-148.501	-11.903	329.6
3.2000	138.73	24.766	-148.502	-11.906	329.6
3.4000	147.55	24.867	-148.502	-11.911	329.6
3.5000	151.97	24.917	-148.502	-11.913	329.6
3.7000	160.79	25.017	-148.502	-11.917	329.6
3.7999	165.21	25.068	-148.502	-11.919	329.6
4.0000	174.03	25.168	-148.502	-11.922	329.6
4.1000	178.45	25.219	-148.502	-11.924	329.6
4.3000	187.27	25.319	-148.502	-11.926	329.6
4.4000	191.69	25.369	-148.502	-11.928	329.6
4.6000	200.51	25.470	-148.502	-11.931	329.6
4.7000	204.93	25.520	-148.502	-11.932	329.6
4.8000	209.34	25.570	-148.502	-11.933	329.6
4.9000	213.75	25.620	-148.502	-11.934	329.6
4.9999	218.17	25.670	-148.502	-11.935	329.6
5.2000	226.99	25.771	-148.503	-11.937	329.6
5.3000	231.40	25.821	-148.503	-11.938	329.6
5.4000	235.82	25.871	-148.503	-11.939	329.6
5.6000	244.64	25.971	-148.503	-11.941	329.6
5.7000	249.06	26.021	-148.504	-11.939	235.3
5.8000	253.15	26.068	-148.504	-11.937	147.9
5.9000	255.70	26.098	-148.505	-11.915	35.3
6.0000	256.50	26.107	-148.505	-11.908	0.0
6.2000	256.50	26.107	-148.505	-11.908	0.0

48.Fresh Water Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	23.150	-148.496	11.732	0.0
0.1000	4.16	23.200	-148.496	11.732	141.2
0.2000	8.34	23.250	-148.496	11.732	283.1
0.3000	12.54	23.300	-148.496	11.741	286.2
0.4000	16.75	23.351	-148.496	11.751	289.4
0.5000	20.98	23.401	-148.496	11.759	292.5
0.6000	25.22	23.451	-148.497	11.768	295.6
0.7000	29.48	23.501	-148.497	11.776	298.3
0.8000	33.75	23.552	-148.498	11.784	300.9
1.0000	42.33	23.653	-148.498	11.799	306.1
1.1000	46.64	23.703	-148.498	11.806	308.3
1.2000	50.96	23.754	-148.499	11.813	310.6
1.3000	55.29	23.804	-148.499	11.819	312.7
1.4000	59.63	23.855	-148.499	11.826	314.8
1.5000	63.98	23.906	-148.499	11.832	316.7
1.5999	68.34	23.956	-148.499	11.838	318.5
1.7000	72.70	24.007	-148.499	11.844	320.2
1.8000	77.07	24.058	-148.500	11.850	321.9
1.9000	81.46	24.109	-148.500	11.856	323.1
2.0000	85.84	24.159	-148.500	11.861	324.4
2.1000	90.23	24.209	-148.501	11.866	325.4
2.2000	94.63	24.260	-148.501	11.871	326.4
2.3000	99.03	24.311	-148.501	11.875	327.3
2.4000	103.44	24.362	-148.501	11.879	328.2
2.5000	107.85	24.413	-148.501	11.883	328.5
2.6000	112.25	24.463	-148.501	11.887	328.8
2.7000	116.66	24.513	-148.501	11.890	329.1
2.7999	121.08	24.564	-148.501	11.894	329.4
2.8000	121.08	24.564	-148.501	11.894	329.4
3.0000	129.90	24.665	-148.501	11.901	329.6

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48.Fresh Water Tk (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
3.1000	134.31	24.715	-148.501	11.903	329.6
3.2000	138.73	24.766	-148.502	11.906	329.6
3.4000	147.55	24.867	-148.502	11.911	329.6
3.5000	151.97	24.917	-148.502	11.913	329.6
3.7000	160.79	25.017	-148.502	11.917	329.6
3.7999	165.21	25.068	-148.502	11.919	329.6
4.0000	174.03	25.168	-148.502	11.922	329.6
4.1000	178.45	25.219	-148.502	11.924	329.6
4.3000	187.27	25.319	-148.502	11.926	329.6
4.4000	191.69	25.369	-148.502	11.928	329.6
4.6000	200.51	25.470	-148.502	11.931	329.6
4.7000	204.93	25.520	-148.502	11.932	329.6
4.8000	209.34	25.570	-148.502	11.933	329.6
4.9000	213.75	25.620	-148.502	11.934	329.6
4.9999	218.17	25.670	-148.502	11.935	329.6
5.2000	226.99	25.771	-148.503	11.937	329.6
5.3000	231.40	25.821	-148.503	11.938	329.6
5.4000	235.82	25.871	-148.503	11.939	329.6
5.6000	244.64	25.971	-148.503	11.941	329.6
5.7000	249.06	26.021	-148.504	11.939	235.3
5.8000	253.15	26.068	-148.504	11.937	147.9
5.9000	255.70	26.098	-148.505	11.915	35.3
6.0000	256.50	26.107	-148.505	11.908	0.0
6.2000	256.50	26.107	-148.505	11.908	0.0

49.Bilge Hold Tank(C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	-139.248	0.000	0.0
0.0500	0.19	0.027	-139.248	0.000	0.2
0.1000	0.40	0.057	-139.248	0.000	0.4
0.1500	0.67	0.096	-139.248	0.000	0.7
0.1770	0.85	0.121	-139.248	0.000	0.9
0.2000	1.00	0.132	-139.275	0.000	1.1
0.2500	1.39	0.159	-139.344	0.000	1.6
0.3000	1.84	0.190	-139.423	0.000	2.2
0.3500	2.35	0.225	-139.514	0.000	2.8
0.3810	2.70	0.246	-139.575	0.000	3.2
0.4000	2.91	0.259	-139.592	0.000	3.5
0.4500	3.51	0.288	-139.638	0.000	4.3
0.5000	4.17	0.319	-139.689	0.000	5.1
0.5500	4.87	0.352	-139.744	0.000	6.1
0.5852	5.39	0.377	-139.784	0.000	6.7
0.6000	5.61	0.385	-139.792	0.000	7.0
0.6500	6.40	0.415	-139.820	0.000	8.0
0.7000	7.22	0.445	-139.850	0.000	9.1
0.7500	8.07	0.477	-139.880	0.000	10.2
0.7887	8.77	0.503	-139.905	0.000	11.1
0.8000	8.97	0.509	-139.909	0.000	11.3
0.8500	9.89	0.538	-139.926	0.000	12.5
0.9000	10.85	0.569	-139.945	0.000	13.8
0.9500	11.84	0.600	-139.963	0.000	15.1
0.9926	12.71	0.627	-139.980	0.000	16.2
1.0500	13.91	0.660	-139.995	0.000	17.7
1.1000	15.00	0.690	-140.008	0.000	19.1
1.1500	16.11	0.721	-140.022	0.000	20.5
1.1964	17.17	0.750	-140.035	0.000	21.9
1.2500	18.43	0.781	-140.047	0.000	23.4

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49.Bilge Hold Tank(C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
1.3000	19.63	0.811	-140.058	0.000	24.9
1.3500	20.85	0.842	-140.069	0.000	26.5
1.3998	22.10	0.873	-140.081	0.000	28.0
1.4500	23.38	0.902	-140.090	0.000	29.5
1.5000	24.69	0.932	-140.100	0.000	31.1
1.5500	26.02	0.963	-140.109	0.000	32.7
1.6000	27.37	0.994	-140.119	0.000	34.3
1.6500	28.75	1.023	-140.128	0.000	35.9
1.7000	30.15	1.053	-140.136	0.000	37.5
1.7500	31.58	1.083	-140.145	0.000	39.2
1.8000	33.02	1.114	-140.154	0.000	40.8
1.8500	34.49	1.143	-140.161	0.000	42.4
1.9000	35.98	1.173	-140.168	0.000	44.1
1.9500	37.49	1.203	-140.176	0.000	45.7
2.0000	39.02	1.233	-140.183	0.000	47.4
2.0107	39.35	1.240	-140.185	0.000	47.8
2.0500	40.57	1.263	-140.190	0.000	49.0
2.1000	42.14	1.292	-140.197	0.000	50.7
2.1500	43.73	1.322	-140.203	0.000	52.3
2.2000	45.33	1.352	-140.210	0.000	54.0
2.2145	45.80	1.361	-140.212	0.000	54.4
2.2500	46.96	1.382	-140.216	0.000	55.6
2.3000	48.60	1.411	-140.222	0.000	57.2
2.3500	50.26	1.441	-140.229	0.000	58.8
2.4000	51.94	1.471	-140.235	0.000	60.4
2.4181	52.56	1.482	-140.237	0.000	61.0
2.4500	53.64	1.501	-140.241	0.000	62.0
2.5000	55.35	1.530	-140.246	0.000	63.6
2.5500	57.08	1.559	-140.252	0.000	65.1
2.6000	58.82	1.589	-140.257	0.000	66.7
2.6217	59.58	1.602	-140.260	0.000	67.4
2.6500	60.58	1.618	-140.263	0.000	68.3
2.7000	62.35	1.648	-140.268	0.000	69.8
2.7500	64.14	1.677	-140.273	0.000	71.3
2.8253	66.87	1.722	-140.281	0.000	73.6
2.8500	67.76	1.736	-140.283	0.000	74.3
2.9000	69.59	1.765	-140.288	0.000	75.7
2.9500	71.43	1.794	-140.293	0.000	77.2
3.0000	73.29	1.824	-140.297	0.000	78.6
3.0289	74.37	1.841	-140.300	0.000	79.5
3.0500	75.16	1.853	-140.300	0.000	79.2
3.1000	77.04	1.882	-140.300	0.000	78.6
3.1500	78.93	1.911	-140.299	0.000	78.0
3.2000	80.68	1.938	-140.299	0.000	77.4
3.2325	81.66	1.953	-140.299	0.000	77.0
3.3000	83.70	1.984	-140.282	0.000	78.4
3.3500	85.22	2.007	-140.269	0.000	79.4
3.4000	86.75	2.031	-140.256	0.000	80.4
3.4362	87.87	2.048	-140.246	0.000	81.2
3.5000	89.83	2.078	-140.231	0.000	82.3
3.5500	91.38	2.102	-140.220	0.000	83.2
3.6000	92.96	2.126	-140.208	0.000	84.2
3.6381	94.17	2.145	-140.199	0.000	84.9
3.7000	96.14	2.175	-140.186	0.000	85.9
3.7500	97.74	2.200	-140.176	0.000	86.7
3.8000	99.35	2.225	-140.166	0.000	87.6
3.8381	100.57	2.244	-140.158	0.000	88.2
3.8500	100.95	2.250	-140.156	0.000	88.4
3.9000	102.57	2.275	-140.147	0.000	89.1
3.9500	104.18	2.300	-140.138	0.000	89.8
4.0000	105.81	2.325	-140.129	0.000	90.6
4.0381	107.04	2.344	-140.122	0.000	91.1

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49.Bilge Hold Tank(C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
4.0500	107.43	2.350	-140.120	0.000	83.9
4.1000	109.06	2.376	-140.112	0.000	53.3
4.1500	110.69	2.401	-140.103	0.000	22.7
4.2000	111.90	2.420	-140.097	0.000	0.0
4.3000	111.90	2.420	-140.097	0.000	0.0

50.B/W Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.150	-144.007	0.000	0.0
0.0500	0.41	3.175	-144.007	0.000	7.8
0.1000	0.83	3.200	-144.007	0.000	8.0
0.1500	1.25	3.225	-144.007	0.000	8.1
0.2000	1.67	3.251	-144.008	0.000	8.3
0.2500	2.09	3.276	-144.008	0.000	8.5
0.3000	2.52	3.301	-144.008	0.000	8.7
0.3500	2.95	3.326	-144.009	0.000	8.8
0.4000	3.38	3.352	-144.009	0.000	9.0
0.4500	3.82	3.377	-144.009	0.000	9.1
0.5000	4.26	3.403	-144.010	0.000	9.3
0.5500	4.70	3.428	-144.010	0.000	9.4
0.6000	5.14	3.454	-144.010	0.000	9.6
0.7000	6.03	3.505	-144.011	0.000	9.8
0.8000	6.93	3.556	-144.011	0.000	10.1
0.8500	7.38	3.582	-144.011	0.000	10.2
0.9000	7.84	3.608	-144.011	0.000	10.3
0.9500	8.29	3.633	-144.012	0.000	10.4
1.0000	8.70	3.659	-144.012	0.000	0.0

51.LO Drain Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.000	-135.150	-0.870	0.0
0.0500	0.22	3.038	-135.150	-0.870	0.6
0.0747	0.29	3.050	-135.150	-0.870	0.8
0.1750	0.58	3.100	-135.150	-0.870	0.8
0.6752	2.04	3.350	-135.150	-0.870	0.8
0.8500	2.55	3.437	-135.150	-0.870	0.8
1.0750	3.21	3.550	-135.150	-0.870	0.8
1.1000	3.28	3.559	-135.150	-0.870	0.5
1.1500	3.40	3.575	-135.150	-0.870	0.0
1.2000	3.40	3.575	-135.150	-0.870	0.0

52.LO Drain Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	3.000	-135.150	0.870	0.0
0.0500	0.22	3.038	-135.150	0.870	0.6
0.0747	0.29	3.050	-135.150	0.870	0.8
0.1750	0.58	3.100	-135.150	0.870	0.8
0.6752	2.04	3.350	-135.150	0.870	0.8
0.8500	2.55	3.437	-135.150	0.870	0.8
1.0750	3.21	3.550	-135.150	0.870	0.8
1.1000	3.28	3.559	-135.150	0.870	0.5
1.1500	3.40	3.575	-135.150	0.870	0.0
1.2000	3.40	3.575	-135.150	0.870	0.0

53.Sep.Bilge Oil T(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	-123.006	-3.340	0.0
0.0500	0.09	0.036	-123.006	-3.340	0.1
0.1000	0.20	0.080	-123.006	-3.340	0.2
0.1467	0.34	0.136	-123.006	-3.340	0.4
0.2000	0.56	0.163	-123.126	-3.373	0.6
0.2500	0.81	0.194	-123.262	-3.410	0.8
0.3000	1.10	0.230	-123.420	-3.453	1.1
0.3462	1.41	0.269	-123.591	-3.499	1.5
0.4000	1.82	0.299	-123.690	-3.526	1.9
0.4500	2.25	0.331	-123.795	-3.554	2.4
0.5000	2.72	0.366	-123.909	-3.585	2.9
0.5462	3.19	0.400	-124.024	-3.616	3.4
0.6000	3.79	0.433	-124.107	-3.640	4.0
0.6500	4.38	0.465	-124.188	-3.664	4.5
0.7000	5.02	0.500	-124.277	-3.689	5.2
0.7460	5.64	0.533	-124.362	-3.714	5.8
0.8000	6.40	0.565	-124.434	-3.735	6.6
0.8500	7.15	0.597	-124.505	-3.755	7.3
0.9000	7.94	0.631	-124.579	-3.776	8.1
0.9462	8.72	0.664	-124.652	-3.797	8.9
1.0000	9.64	0.697	-124.715	-3.815	9.7
1.0500	10.55	0.729	-124.777	-3.833	10.6
1.1000	11.49	0.762	-124.841	-3.852	11.5
1.1466	12.39	0.794	-124.902	-3.870	12.3
1.2000	13.47	0.827	-124.955	-3.887	13.2
1.2500	14.51	0.859	-125.006	-3.904	14.1
1.3000	15.58	0.891	-125.059	-3.921	15.0
1.3467	16.62	0.923	-125.110	-3.937	15.9
1.4000	17.79	0.955	-125.152	-3.952	16.9
1.4500	18.88	0.985	-125.191	-3.967	17.8
1.5000	19.99	1.015	-125.231	-3.981	18.6
1.5500	21.12	1.046	-125.272	-3.996	19.6
1.6000	22.28	1.075	-125.305	-4.010	20.4
1.6500	23.47	1.104	-125.336	-4.024	21.3
1.7000	24.67	1.133	-125.368	-4.037	22.3
1.7500	25.90	1.163	-125.401	-4.052	23.2
1.7724	26.46	1.176	-125.416	-4.058	23.6
1.8000	27.15	1.193	-125.430	-4.065	24.1
1.8500	28.42	1.221	-125.456	-4.077	25.0
1.9000	29.71	1.250	-125.483	-4.090	26.0
1.9500	31.02	1.280	-125.510	-4.103	26.9
1.9865	31.99	1.302	-125.530	-4.112	27.6
2.0000	32.35	1.310	-125.536	-4.115	27.8
2.0500	33.70	1.338	-125.557	-4.127	28.8

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53.Sep.Bilge Oil T(P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.1000	35.07	1.367	-125.579	-4.139	29.7
2.1500	36.46	1.396	-125.601	-4.151	30.6
2.2000	37.87	1.426	-125.624	-4.164	31.6
2.2500	39.29	1.454	-125.642	-4.175	32.5
2.3000	40.73	1.483	-125.661	-4.186	33.4
2.3500	42.19	1.512	-125.680	-4.197	34.3
2.4000	43.66	1.541	-125.699	-4.209	35.3
2.4143	44.09	1.550	-125.704	-4.212	35.6
2.4500	45.15	1.570	-125.715	-4.220	36.2
2.5000	46.66	1.598	-125.731	-4.230	37.1
2.5500	48.18	1.627	-125.747	-4.241	38.1
2.6000	49.71	1.655	-125.763	-4.252	39.0
2.6282	50.59	1.671	-125.772	-4.258	39.5
2.7000	52.83	1.712	-125.791	-4.272	40.9
2.7500	54.41	1.740	-125.805	-4.282	41.8
2.8000	56.01	1.769	-125.819	-4.292	42.7
2.8421	57.37	1.793	-125.831	-4.301	43.5
2.9000	59.24	1.825	-125.844	-4.312	44.5
3.0000	62.52	1.882	-125.868	-4.330	46.4
3.0561	64.39	1.914	-125.881	-4.341	47.4
3.1000	65.86	1.938	-125.890	-4.349	48.2
3.1500	67.55	1.966	-125.901	-4.358	49.1
3.2000	69.25	1.994	-125.911	-4.367	50.0
3.2500	70.96	2.023	-125.922	-4.376	50.9
3.2700	71.65	2.034	-125.926	-4.380	51.2
3.3000	72.68	2.051	-125.931	-4.385	51.7
3.3500	74.41	2.078	-125.940	-4.393	52.6
3.4000	76.16	2.107	-125.950	-4.402	53.5
3.4500	77.91	2.135	-125.959	-4.410	54.3
3.4840	79.11	2.154	-125.965	-4.416	54.9
3.5500	81.45	2.190	-125.975	-4.426	56.0
3.6000	83.24	2.218	-125.983	-4.434	56.9
3.6500	85.05	2.246	-125.991	-4.442	57.7
3.6944	86.77	2.273	-125.999	-4.450	58.6
3.7500	88.93	2.305	-126.007	-4.459	59.5
3.8000	90.88	2.335	-126.015	-4.467	60.4
3.8500	92.85	2.364	-126.022	-4.476	61.3
3.8945	94.61	2.391	-126.029	-4.483	62.1
3.9500	96.81	2.423	-126.036	-4.492	63.1
4.0000	98.81	2.453	-126.043	-4.499	64.0
4.0500	100.82	2.483	-126.050	-4.507	64.9
4.0944	102.62	2.509	-126.056	-4.514	65.7
4.1500	104.86	2.541	-126.063	-4.522	41.4
4.2000	106.90	2.571	-126.069	-4.529	19.4
4.2500	108.70	2.597	-126.074	-4.536	0.0
4.3500	108.70	2.597	-126.074	-4.536	0.0

54.FO Overflow Tk (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.000	-117.822	-0.482	0.0
0.0010	1.26	0.031	-117.822	-0.482	83.3
0.0110	1.49	0.037	-117.822	-0.482	98.5
0.0610	2.62	0.065	-117.822	-0.482	173.2
0.1110	3.83	0.094	-117.822	-0.482	253.2
0.1308	4.34	0.107	-117.822	-0.482	287.1
0.1610	5.12	0.122	-117.835	-0.499	305.1
0.2110	6.49	0.149	-117.857	-0.529	337.0
0.2610	7.91	0.177	-117.880	-0.561	369.9
0.3110	9.39	0.206	-117.905	-0.593	404.3
0.3297	9.96	0.217	-117.914	-0.606	417.6
0.3610	10.92	0.234	-117.922	-0.619	435.9
0.4110	12.50	0.261	-117.936	-0.640	466.2
0.4610	14.13	0.290	-117.950	-0.662	497.4
0.5110	15.80	0.319	-117.965	-0.684	529.3
0.5284	16.40	0.329	-117.970	-0.692	540.8
0.5610	17.52	0.347	-117.976	-0.703	558.9
0.6110	19.27	0.375	-117.986	-0.720	587.2
0.6610	21.07	0.403	-117.996	-0.737	616.3
0.7110	22.90	0.433	-118.006	-0.755	645.9
0.7270	23.49	0.441	-118.009	-0.761	655.5
0.7610	24.76	0.461	-118.014	-0.770	673.0
0.8110	26.66	0.488	-118.021	-0.785	699.3
0.8610	28.59	0.517	-118.029	-0.799	726.1
0.9110	30.55	0.545	-118.037	-0.814	753.3
0.9257	31.14	0.554	-118.039	-0.818	761.4
0.9610	32.54	0.574	-118.043	-0.828	775.1
1.0110	34.55	0.602	-118.050	-0.843	794.7
1.0610	36.59	0.630	-118.056	-0.857	814.6
1.1110	38.65	0.659	-118.062	-0.872	834.6
1.1245	39.21	0.667	-118.064	-0.876	840.1
1.1610	40.74	0.687	-118.068	-0.888	850.2
1.2110	42.84	0.715	-118.073	-0.904	864.1
1.2610	44.96	0.744	-118.079	-0.921	878.1
1.3110	47.10	0.772	-118.085	-0.938	892.2
1.3230	47.62	0.779	-118.086	-0.942	895.6
1.3610	49.25	0.800	-118.090	-0.956	904.0
1.4110	51.42	0.828	-118.094	-0.974	915.1
1.4610	53.60	0.856	-118.099	-0.993	926.3
1.5110	55.80	0.884	-118.104	-1.012	937.5
1.5218	56.28	0.890	-118.105	-1.016	940.0
1.6110	60.24	0.939	-118.113	-1.050	958.3
1.6610	62.48	0.967	-118.117	-1.069	968.7
1.7110	64.74	0.995	-118.121	-1.088	979.1
1.7204	65.17	1.000	-118.122	-1.092	981.1
1.7610	67.01	1.022	-118.125	-1.108	989.0
1.8110	69.29	1.050	-118.129	-1.127	998.7
1.8610	71.58	1.078	-118.133	-1.146	1008.4
1.9110	73.88	1.106	-118.136	-1.166	1018.2
1.9610	76.20	1.134	-118.140	-1.185	1027.4
2.0110	78.53	1.162	-118.143	-1.203	1036.4
2.0610	80.87	1.189	-118.147	-1.222	1045.5
2.1110	83.22	1.217	-118.151	-1.241	1056.0
2.2110	87.96	1.272	-118.157	-1.278	846.7
2.2610	90.34	1.299	-118.160	-1.296	734.0
2.3110	92.74	1.327	-118.163	-1.315	620.2
2.3610	94.66	1.349	-118.167	-1.339	613.7
2.4110	96.54	1.371	-118.172	-1.364	620.4
2.5110	100.32	1.415	-118.182	-1.415	633.9
2.6110	104.14	1.461	-118.190	-1.464	646.6
2.6610	106.06	1.484	-118.194	-1.488	653.0
2.7138	108.11	1.508	-118.199	-1.514	659.8
2.7610	109.94	1.530	-118.203	-1.536	651.5

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54.FO Overflow Tk (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
2.8110	111.89	1.553	-118.206	-1.559	642.6
2.8610	113.85	1.577	-118.210	-1.582	633.8
2.9110	115.82	1.600	-118.214	-1.605	624.8
3.0110	119.20	1.642	-118.227	-1.655	541.9
3.0610	120.90	1.663	-118.234	-1.680	499.6
3.1110	122.48	1.682	-118.240	-1.704	460.3
3.1610	123.87	1.700	-118.250	-1.729	442.6
3.2110	125.27	1.717	-118.259	-1.754	424.9
3.2610	126.68	1.735	-118.269	-1.779	407.1
3.3099	127.93	1.751	-118.278	-1.801	391.3
3.4110	130.50	1.785	-118.299	-1.851	302.3
3.4610	131.78	1.802	-118.309	-1.875	258.0
3.5087	132.80	1.815	-118.317	-1.895	222.6
3.6110	134.87	1.844	-118.339	-1.943	189.7
3.6610	135.89	1.858	-118.350	-1.967	173.5
3.7073	136.77	1.870	-118.359	-1.988	159.5
3.7610	137.76	1.884	-118.370	-2.013	138.1
3.8610	139.62	1.911	-118.392	-2.059	97.9
3.9061	140.35	1.921	-118.400	-2.077	82.1
3.9610	141.24	1.934	-118.411	-2.100	52.3
4.0110	142.05	1.947	-118.421	-2.120	25.1
4.0610	142.80	1.958	-118.430	-2.139	0.0
6.8610	142.80	1.958	-118.430	-2.139	0.0

55.B/W Tank (P)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	2.400	-117.846	-6.209	0.0
0.1000	0.54	2.450	-117.846	-6.209	2.6
0.2000	1.07	2.500	-117.846	-6.209	2.6
0.6000	3.22	2.700	-117.846	-6.209	2.6
0.7000	3.71	2.747	-117.861	-6.207	2.5
0.8000	4.20	2.794	-117.874	-6.205	2.2
0.9000	4.60	2.833	-117.902	-6.199	2.2
1.0000	4.99	2.874	-117.926	-6.194	2.0
1.1000	5.34	2.912	-117.952	-6.189	2.0
1.2000	5.68	2.949	-117.975	-6.183	1.6
1.3000	5.94	2.979	-117.999	-6.175	1.6
1.4000	6.18	3.010	-118.021	-6.167	1.3
1.5000	6.38	3.036	-118.040	-6.160	1.3
1.6000	6.53	3.057	-118.055	-6.156	0.4
1.7000	6.59	3.066	-118.063	-6.154	0.4
1.7500	6.60	3.070	-118.067	-6.153	0.0

56.B/W Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	2.400	-117.846	6.209	0.0
0.1000	0.54	2.450	-117.846	6.209	2.6
0.2000	1.07	2.500	-117.846	6.209	2.6
0.6000	3.22	2.700	-117.846	6.209	2.6
0.7000	3.71	2.747	-117.861	6.207	2.5
0.8000	4.20	2.794	-117.874	6.205	2.2
0.9000	4.60	2.833	-117.902	6.199	2.2
1.0000	4.99	2.874	-117.926	6.194	2.0
1.1000	5.34	2.912	-117.952	6.189	2.0
1.2000	5.68	2.949	-117.975	6.183	1.6
1.3000	5.94	2.979	-117.999	6.175	1.6
1.4000	6.18	3.010	-118.021	6.167	1.3
1.5000	6.38	3.036	-118.040	6.160	1.3
1.6000	6.53	3.057	-118.055	6.156	0.4
1.7000	6.59	3.066	-118.063	6.154	0.4
1.7500	6.60	3.070	-118.067	6.153	0.0

57.MELO Puri.Tank (S)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	13.450	-120.700	10.239	0.0
0.0261	0.05	13.481	-120.700	10.239	0.0
0.0500	0.09	13.493	-120.700	10.292	0.1
0.0752	0.17	13.514	-120.700	10.384	0.3
0.1000	0.25	13.527	-120.700	10.441	0.5
0.1260	0.37	13.545	-120.700	10.518	0.8
0.1500	0.48	13.561	-120.700	10.589	1.2
0.1771	0.64	13.581	-120.700	10.676	1.7
0.2000	0.77	13.594	-120.700	10.720	1.7
0.2279	0.94	13.611	-120.700	10.775	1.7
0.2780	1.25	13.639	-120.700	10.825	1.7
0.3280	1.56	13.666	-120.700	10.855	1.7
0.3781	1.86	13.692	-120.700	10.876	1.7
0.4280	2.17	13.718	-120.700	10.891	1.7
0.4781	2.48	13.744	-120.700	10.902	1.7
0.5000	2.61	13.755	-120.700	10.906	1.7
0.5780	3.09	13.794	-120.700	10.917	1.7
0.6280	3.40	13.820	-120.700	10.923	1.7
0.6779	3.70	13.845	-120.700	10.928	1.7
0.7280	4.01	13.870	-120.700	10.932	1.7
0.7500	4.14	13.882	-120.700	10.933	0.9
0.8000	4.30	13.895	-120.700	10.935	0.0
0.9000	4.30	13.895	-120.700	10.935	0.0

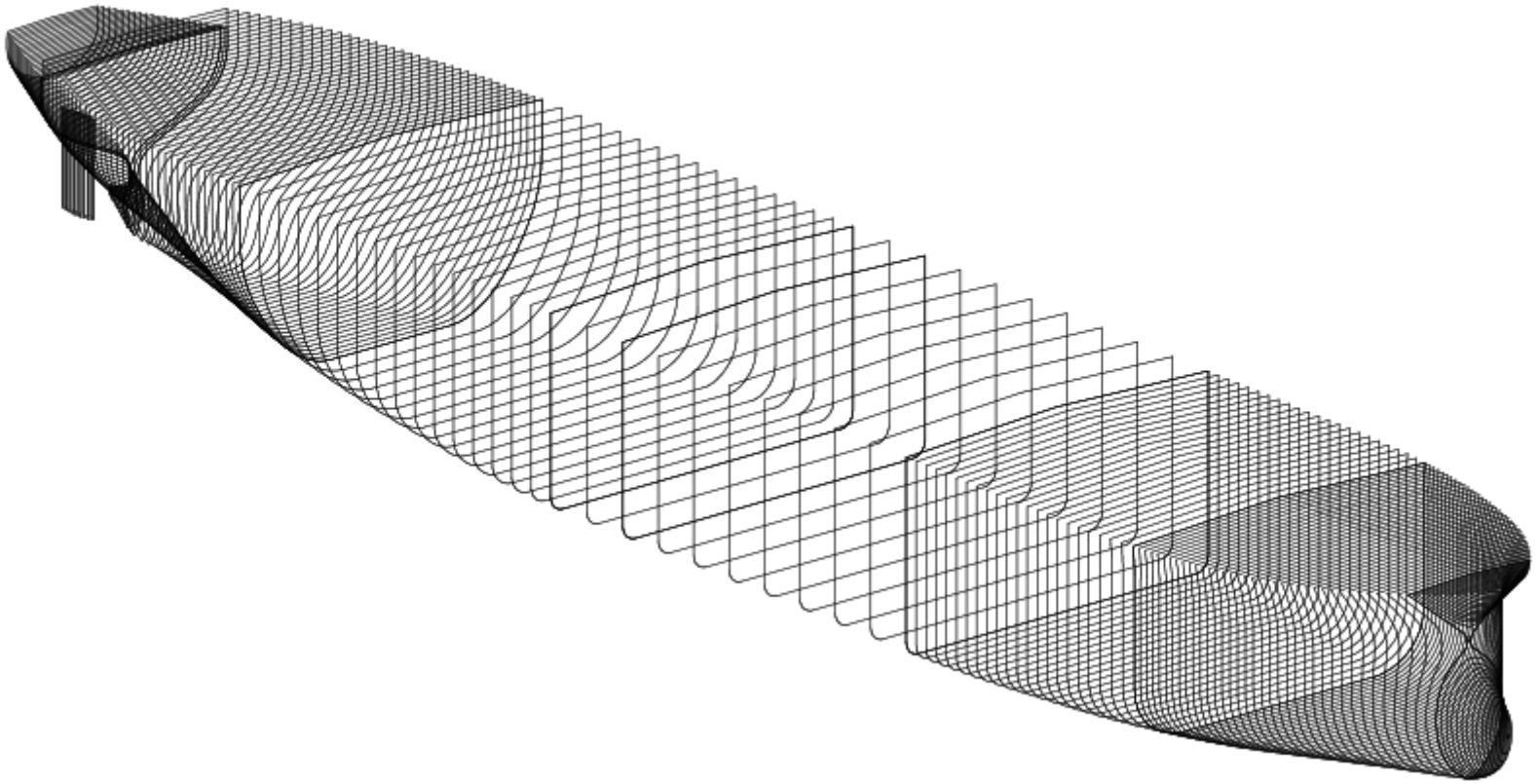
58.FO Puri Slud.Tk(S)

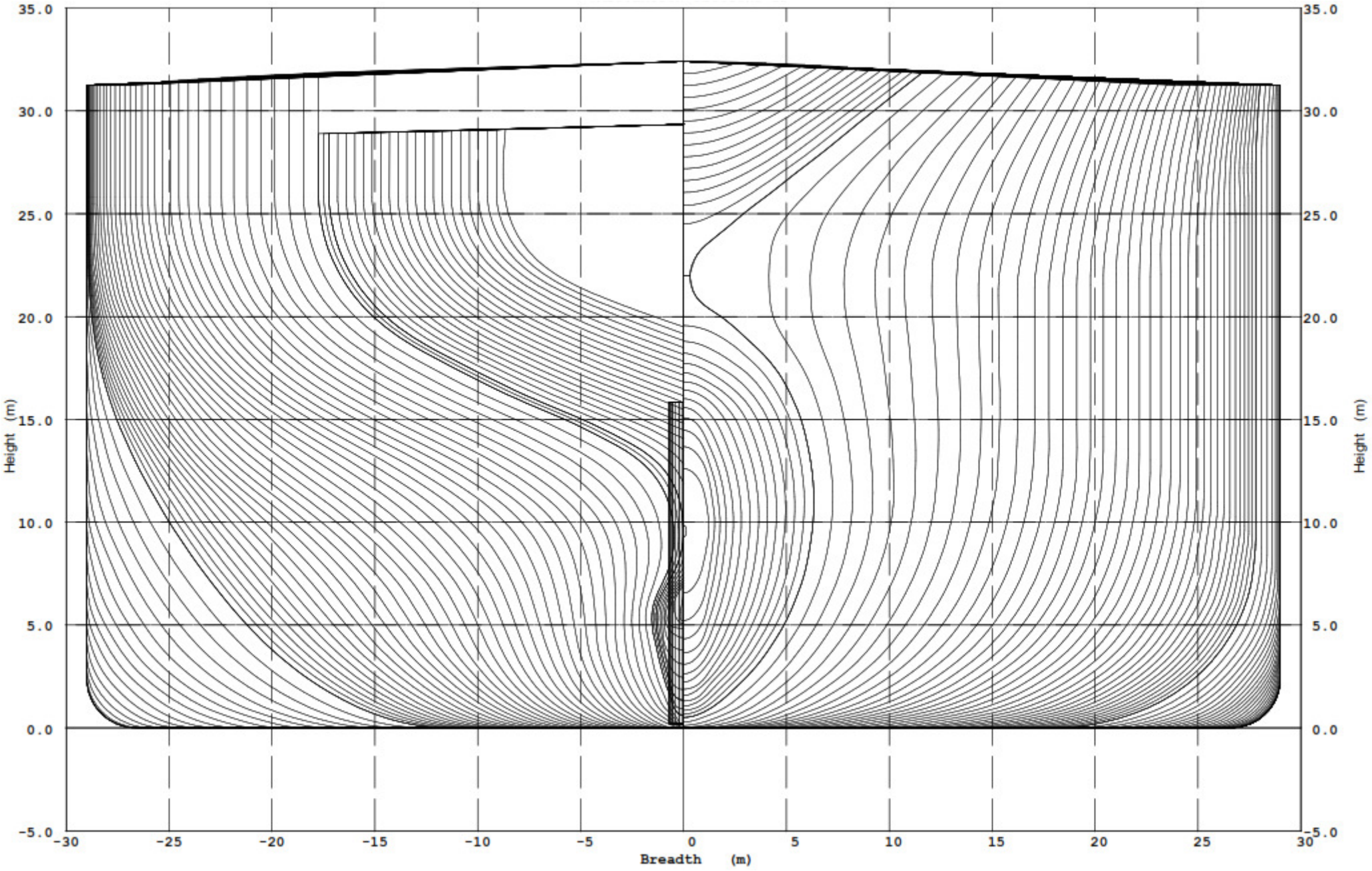
Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	13.450	-117.300	10.239	0.0
0.0247	0.05	13.481	-117.300	10.239	0.0
0.0500	0.10	13.494	-117.300	10.298	0.1
0.0731	0.17	13.514	-117.300	10.384	0.3
0.1000	0.26	13.528	-117.300	10.447	0.5
0.1239	0.37	13.545	-117.300	10.530	0.8
0.1500	0.49	13.562	-117.300	10.595	1.2
0.1752	0.64	13.581	-117.300	10.676	1.7
0.2000	0.79	13.595	-117.300	10.724	1.7
0.2259	0.94	13.611	-117.300	10.775	1.7
0.2500	1.09	13.624	-117.300	10.799	1.7
0.2759	1.25	13.639	-117.300	10.825	1.7
0.3259	1.56	13.666	-117.300	10.855	1.7
0.3760	1.86	13.692	-117.300	10.876	1.7
0.4259	2.17	13.718	-117.300	10.891	1.7
0.4760	2.48	13.744	-117.300	10.902	1.7
0.5759	3.09	13.794	-117.300	10.917	1.7
0.6260	3.40	13.820	-117.300	10.923	1.7
0.7260	4.01	13.870	-117.300	10.932	1.7
0.7500	4.16	13.883	-117.300	10.934	0.9
0.8000	4.30	13.895	-117.300	10.935	0.0
0.9000	4.30	13.895	-117.300	10.935	0.0

59.Cooling W.Tank (C)

Sound (m)	Volume (m3)	VCG (m)	LCG(Amid) (m)	TCG (m)	Inertia (m4)
0.0000	0.00	0.388	-145.710	0.000	0.0
0.5000	0.15	0.732	-145.710	0.000	0.0
1.0000	0.66	1.074	-145.864	0.000	0.1
1.5000	1.79	1.445	-146.106	0.000	0.5
2.0000	3.58	1.799	-146.276	0.000	1.1
2.5000	6.11	2.152	-146.430	0.000	2.0
3.0000	9.46	2.504	-146.578	0.000	3.2
3.5000	13.55	2.849	-146.713	0.000	4.3
4.0000	18.42	3.192	-146.857	0.000	5.4
4.5000	23.78	3.518	-146.976	0.000	6.0
5.0000	29.28	3.822	-147.063	0.000	5.8
5.5000	32.84	4.015	-147.096	0.000	4.4
6.0000	35.37	4.166	-147.108	0.000	2.7
6.5000	38.69	4.380	-147.123	0.000	1.5
7.0000	41.23	4.548	-147.111	0.000	0.7
7.5000	42.66	4.651	-147.093	-0.001	0.2
8.0000	43.44	4.713	-147.081	-0.004	0.1
8.5000	44.01	4.764	-147.071	-0.005	0.1
8.6620	44.20	4.779	-147.068	-0.006	0.0

7.3 Hull Model




35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
-5.0
Height (m)
-30
-25
-20
-15
-10
-5
0
5
10
15
20
25
30
Breadth (m)

7.4 Hydrostatic Data

For Various Trims

HYDROSTATIC QUANTITIES

Dk	Draught extreme	(m)
DispS	Displacement salt water	(MT)
LCB	Longitudinal center of Buoyancy	(m)
LCF	Longitudinal center of flotation	(m)
TPC	Tonnes per cm immersion	(MT/cm)
MCT	Moment to change Trim	(MT-m/cm)
KMT	Transverse metacentre above base	(m)
VCB	Vertical center of Buoyancy	(m)

Note : LCB,LCF are measured from Midships (positive is forward)

Keel Plate Thickness	:	0.025 (m)
Shell Plate Thickness	:	0.021 (m)
Sea Water Density	:	1.025 (MT/m3)

Trim (Positive by Stern) : -2.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	41450.5	30.354	20.222	141.603	2393.822	81.062	1.632
3.100	42870.1	30.016	20.133	141.961	2407.253	78.795	1.683
3.200	44293.1	29.696	20.049	142.306	2420.057	76.664	1.733
3.300	45719.5	29.393	19.968	142.638	2432.475	74.653	1.784
3.400	47149.5	29.107	19.897	142.969	2445.235	72.754	1.835
3.500	48582.4	28.833	19.821	143.282	2457.095	70.959	1.886
3.600	50018.3	28.573	19.750	143.584	2468.592	69.257	1.937
3.700	51457.2	28.324	19.676	143.880	2479.874	67.646	1.988
3.800	52899.0	28.087	19.607	144.165	2490.763	66.116	2.039
3.900	54343.7	27.860	19.539	144.443	2501.376	64.662	2.090
4.000	55791.0	27.643	19.474	144.712	2511.646	63.278	2.141
4.100	57241.0	27.435	19.410	144.975	2521.717	61.960	2.192
4.200	58693.6	27.235	19.347	145.230	2531.524	60.704	2.243
4.300	60149.2	27.044	19.295	145.488	2541.659	59.505	2.294
4.400	61606.9	26.859	19.236	145.734	2551.214	58.360	2.345
4.500	63066.9	26.682	19.180	145.969	2560.346	57.262	2.396
4.600	64529.3	26.511	19.125	146.199	2569.186	56.213	2.448
4.700	65994.0	26.346	19.069	146.424	2577.982	55.206	2.499
4.800	67460.9	26.186	19.016	146.643	2586.502	54.243	2.550
4.900	68929.8	26.033	18.963	146.855	2594.736	53.316	2.601
5.000	70401.0	25.884	18.914	147.061	2602.713	52.427	2.653
5.100	71874.2	25.740	18.860	147.266	2610.785	51.573	2.704
5.200	73349.3	25.601	18.810	147.461	2618.399	50.750	2.755
5.300	74826.3	25.466	18.760	147.654	2625.988	49.959	2.806
5.400	76305.3	25.335	18.711	147.840	2633.366	49.194	2.858
5.500	77786.1	25.208	18.662	148.022	2640.511	48.459	2.909
5.600	79269.4	25.086	18.621	148.211	2648.292	47.750	2.960
5.700	80753.9	24.967	18.576	148.384	2655.026	47.067	3.012
5.800	82240.1	24.850	18.523	148.560	2662.166	46.408	3.063
5.900	83728.1	24.737	18.475	148.729	2668.900	45.771	3.114
6.000	85217.7	24.627	18.425	148.896	2675.637	45.156	3.166
6.100	86708.9	24.519	18.376	149.059	2682.171	44.562	3.217
6.200	88201.8	24.415	18.327	149.217	2688.515	43.987	3.268
6.300	89696.2	24.313	18.282	149.369	2694.506	43.431	3.320
6.400	91192.1	24.213	18.237	149.517	2700.396	42.891	3.371
6.500	92689.5	24.116	18.193	149.663	2706.127	42.369	3.422
6.600	94188.3	24.021	18.149	149.806	2711.687	41.865	3.474
6.700	95688.6	23.928	18.106	149.945	2717.083	41.376	3.525
6.800	97190.2	23.838	18.063	150.080	2722.320	40.902	3.576
6.900	98693.2	23.749	18.020	150.214	2727.488	40.442	3.628
7.000	100197.4	23.663	17.978	150.345	2732.531	39.997	3.679
7.100	101702.9	23.578	17.936	150.473	2737.424	39.565	3.730
7.200	103209.8	23.495	17.894	150.599	2742.195	39.146	3.782
7.300	104717.8	23.414	17.852	150.721	2746.835	38.739	3.833
7.400	106226.8	23.335	17.810	150.843	2751.457	38.345	3.884
7.500	107737.3	23.257	17.768	150.962	2756.021	37.960	3.936
7.600	109249.0	23.180	17.725	151.081	2760.540	37.588	3.987
7.700	110761.9	23.105	17.681	151.198	2764.950	37.227	4.038
7.800	112276.0	23.031	17.637	151.315	2769.326	36.876	4.090
7.900	113791.0	22.959	17.591	151.432	2773.792	36.536	4.141
8.000	115307.4	22.888	17.543	151.550	2778.383	36.205	4.192
8.100	116824.9	22.818	17.492	151.670	2783.092	35.884	4.244
8.200	118343.7	22.749	17.439	151.788	2787.786	35.572	4.295
8.300	119865.3	22.683	17.393	151.915	2793.126	35.268	4.346
8.400	121386.6	22.616	17.338	152.037	2798.187	34.973	4.398
8.500	122909.0	22.550	17.280	152.158	2803.154	34.686	4.449
8.600	124432.7	22.485	17.219	152.280	2808.282	34.407	4.500
8.700	125957.5	22.421	17.158	152.400	2813.306	34.135	4.552
8.800	127483.6	22.357	17.096	152.518	2818.254	33.870	4.603
8.900	129010.6	22.294	17.024	152.628	2822.775	33.611	4.654
9.000	130538.9	22.232	16.958	152.750	2828.047	33.360	4.706
9.100	132068.7	22.170	16.890	152.868	2833.080	33.116	4.757
9.200	133599.4	22.109	16.822	152.988	2838.315	32.878	4.809
9.300	135131.4	22.049	16.753	153.107	2843.518	32.646	4.860
9.400	136664.7	21.989	16.679	153.225	2848.683	32.420	4.911
9.500	138199.0	21.929	16.606	153.348	2854.169	32.200	4.963
9.600	139734.8	21.871	16.529	153.467	2859.439	31.986	5.014
9.700	141271.4	21.812	16.452	153.590	2864.961	31.777	5.066
9.800	142809.4	21.753	16.373	153.713	2870.567	31.573	5.117

Trim (Positive by Stern) : -2.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	144348.8	21.696	16.289	153.834	2876.043	31.375	5.168
10.000	145889.1	21.639	16.207	153.960	2881.883	31.182	5.220
10.100	147431.0	21.582	16.119	154.082	2887.488	30.993	5.271
10.200	148973.5	21.525	16.033	154.208	2893.459	30.809	5.323
10.300	150517.9	21.469	15.945	154.335	2899.496	30.629	5.374
10.400	152063.2	21.412	15.851	154.458	2905.247	30.454	5.425
10.500	153610.0	21.356	15.759	154.588	2911.468	30.283	5.477
10.600	155157.9	21.299	15.660	154.711	2917.289	30.116	5.528
10.700	156707.1	21.243	15.563	154.838	2923.438	29.954	5.580
10.800	158257.6	21.186	15.466	154.968	2929.794	29.795	5.631
10.900	159809.7	21.130	15.366	155.098	2936.198	29.640	5.683
11.000	161362.6	21.074	15.261	155.227	2942.466	29.488	5.734
11.100	162916.8	21.018	15.157	155.356	2948.821	29.341	5.786
11.200	164472.9	20.962	15.050	155.486	2955.292	29.197	5.837
11.300	166029.6	20.906	14.941	155.617	2961.817	29.056	5.889
11.400	167588.2	20.850	14.830	155.750	2968.459	28.919	5.940
11.500	169148.1	20.794	14.717	155.884	2975.272	28.785	5.992
11.600	170709.6	20.738	14.601	156.016	2981.887	28.655	6.043
11.700	172271.9	20.682	14.479	156.148	2988.461	28.528	6.095
11.800	173835.3	20.625	14.365	156.288	2995.756	28.403	6.146
11.900	175400.7	20.569	14.246	156.428	3002.948	28.282	6.198
12.000	176966.9	20.512	14.121	156.567	3010.030	28.165	6.249
12.100	178535.0	20.455	13.999	156.710	3017.451	28.050	6.301
12.200	180104.3	20.398	13.872	156.853	3024.819	27.939	6.353
12.300	181674.9	20.341	13.744	156.997	3032.292	27.830	6.404
12.400	183247.3	20.284	13.614	157.142	3039.769	27.724	6.456
12.500	184820.9	20.226	13.484	157.289	3047.472	27.621	6.507
12.600	186396.1	20.168	13.351	157.438	3055.231	27.520	6.559
12.700	187972.7	20.111	13.216	157.583	3062.801	27.422	6.611
12.800	189551.0	20.052	13.078	157.731	3070.572	27.326	6.662
12.900	191130.5	19.994	12.945	157.883	3078.602	27.233	6.714
13.000	192711.7	19.935	12.808	158.036	3086.645	27.142	6.766
13.100	194294.1	19.877	12.672	158.189	3094.815	27.053	6.818
13.200	195878.2	19.818	12.532	158.340	3102.821	26.967	6.870
13.300	197463.9	19.759	12.392	158.493	3110.984	26.882	6.921
13.400	199051.2	19.699	12.250	158.648	3119.299	26.800	6.973
13.500	200639.9	19.640	12.103	158.799	3127.335	26.720	7.025
13.600	202230.3	19.580	11.959	158.954	3135.657	26.641	7.076
13.700	203822.2	19.519	11.816	159.115	3144.468	26.566	7.128
13.800	205415.7	19.459	11.669	159.272	3152.978	26.491	7.180
13.900	207010.8	19.398	11.522	159.432	3161.751	26.419	7.232
14.000	208607.4	19.337	11.372	159.590	3170.461	26.347	7.283
14.100	210205.8	19.276	11.220	159.749	3179.183	26.279	7.336
14.200	211805.6	19.214	11.064	159.911	3188.093	26.211	7.387
14.300	213407.2	19.152	10.908	160.072	3196.973	26.146	7.439
14.400	215010.4	19.090	10.754	160.238	3206.208	26.082	7.491
14.500	216615.1	19.028	10.593	160.405	3215.515	26.021	7.543
14.600	218221.6	18.965	10.432	160.569	3224.676	25.961	7.595
14.700	219829.7	18.902	10.269	160.736	3233.969	25.902	7.647
14.800	221439.4	18.838	10.106	160.903	3243.338	25.845	7.699
14.900	223050.9	18.774	9.944	161.071	3252.775	25.790	7.751
15.000	224664.2	18.710	9.780	161.240	3262.287	25.736	7.803
15.100	226279.0	18.646	9.613	161.409	3271.772	25.684	7.855
15.200	227895.5	18.581	9.450	161.579	3281.414	25.633	7.908
15.300	229513.7	18.516	9.281	161.750	3291.151	25.583	7.959
15.400	231133.7	18.450	9.115	161.919	3300.710	25.536	8.012
15.500	232755.4	18.385	8.942	162.092	3310.566	25.489	8.063
15.600	234378.7	18.318	8.773	162.263	3320.313	25.444	8.116
15.700	236003.9	18.252	8.605	162.441	3330.624	25.400	8.168
15.800	237630.8	18.185	8.432	162.617	3340.758	25.357	8.220
15.900	239259.5	18.118	8.255	162.787	3350.529	25.314	8.272
16.000	240889.9	18.051	8.085	162.967	3361.042	25.273	8.323
16.100	242522.1	17.983	7.913	163.148	3371.641	25.235	8.376
16.200	244156.1	17.915	7.742	163.325	3382.029	25.196	8.428
16.300	245791.9	17.846	7.560	163.494	3391.825	25.159	8.481
16.400	247429.3	17.777	7.390	163.674	3402.438	25.123	8.533
16.500	249068.3	17.709	7.221	163.855	3413.174	25.088	8.586
16.600	250709.3	17.639	7.051	164.033	3423.714	25.055	8.638
16.700	252352.1	17.570	6.880	164.206	3433.974	25.021	8.691

Trim (Positive by Stern) : -2.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	253996.7	17.500	6.713	164.372	3443.688	24.988	8.743
16.900	255642.9	17.430	6.616	164.474	3447.805	24.956	8.794
17.000	257290.1	17.360	6.451	164.648	3458.249	24.926	8.847
17.100	258939.1	17.290	6.290	164.819	3468.452	24.897	8.900
17.200	260589.8	17.219	6.124	164.991	3478.808	24.868	8.953
17.300	262242.1	17.149	5.954	165.151	3488.240	24.839	9.004
17.400	263896.0	17.078	5.794	165.324	3498.688	24.812	9.057
17.500	265551.8	17.007	5.637	165.497	3509.197	24.787	9.109
17.600	267209.2	16.936	5.478	165.670	3519.600	24.761	9.162
17.700	268868.3	16.865	5.318	165.837	3529.657	24.737	9.215
17.800	270529.0	16.793	5.164	166.000	3539.407	24.714	9.267
17.900	272191.6	16.721	4.989	166.161	3549.067	24.691	9.319
18.000	273855.7	16.649	4.834	166.332	3559.457	24.669	9.372
18.100	275521.5	16.578	4.682	166.505	3570.039	24.649	9.424
18.200	277189.0	16.505	4.525	166.672	3580.155	24.628	9.476
18.300	278858.1	16.433	4.375	166.844	3590.686	24.611	9.531
18.400	280529.0	16.361	4.221	167.009	3600.776	24.591	9.583
18.500	282201.5	16.288	4.068	167.175	3610.887	24.573	9.635
18.600	283875.8	16.216	3.902	167.325	3619.843	24.555	9.687
18.700	285551.6	16.143	3.753	167.492	3630.138	24.539	9.741
18.800	287228.9	16.070	3.609	167.660	3640.609	24.523	9.793
18.900	288908.0	15.997	3.462	167.825	3650.877	24.507	9.846
19.000	290588.7	15.924	3.318	167.987	3660.959	24.491	9.898
19.100	292271.0	15.851	3.175	168.153	3671.354	24.477	9.950
19.200	293955.1	15.778	3.032	168.316	3681.554	24.463	10.004
19.300	295640.8	15.705	2.891	168.478	3691.737	24.449	10.056
19.400	297327.6	15.632	2.752	168.639	3701.905	24.437	10.109
19.500	299016.2	15.558	2.614	168.799	3712.042	24.425	10.162
19.600	300706.6	15.485	2.475	168.960	3722.168	24.414	10.215
19.700	302398.7	15.412	2.340	169.119	3732.307	24.402	10.267
19.800	304092.2	15.339	2.206	169.275	3742.129	24.392	10.321
19.900	305787.3	15.265	2.072	169.431	3752.090	24.381	10.373
20.000	307484.0	15.192	1.941	169.585	3761.914	24.371	10.426
20.100	309182.3	15.119	1.811	169.739	3771.726	24.362	10.478
20.200	310881.9	15.046	1.682	169.892	3781.486	24.355	10.532
20.300	312583.1	14.972	1.555	170.042	3791.169	24.346	10.584
20.400	314285.8	14.899	1.430	170.190	3800.709	24.338	10.638
20.500	315989.9	14.826	1.311	170.333	3809.802	24.330	10.689
20.600	317695.3	14.753	1.183	170.485	3819.729	24.324	10.743
20.700	319402.4	14.681	1.064	170.629	3829.062	24.317	10.796
20.800	321110.8	14.608	0.948	170.770	3838.204	24.311	10.849
20.900	322820.9	14.535	0.834	170.908	3847.161	24.305	10.902
21.000	324532.1	14.462	0.725	171.044	3855.894	24.299	10.954
21.100	326244.7	14.390	0.618	171.176	3864.472	24.294	11.007
21.200	327958.8	14.318	0.515	171.306	3872.907	24.290	11.061
21.300	329673.8	14.245	0.416	171.433	3881.104	24.286	11.114
21.400	331390.3	14.174	0.320	171.557	3889.161	24.282	11.167
21.500	333107.9	14.102	0.227	171.678	3896.969	24.278	11.220
21.600	334826.7	14.030	0.138	171.796	3904.623	24.274	11.272
21.700	336546.8	13.959	0.052	171.911	3912.110	24.271	11.325
21.800	338267.9	13.888	-0.030	172.022	3919.323	24.268	11.378
21.900	339990.2	13.817	-0.108	172.130	3926.385	24.265	11.431
22.000	341713.4	13.747	-0.183	172.234	3933.218	24.263	11.485
22.100	343437.9	13.677	-0.255	172.337	3939.927	24.261	11.538
22.200	345163.1	13.607	-0.325	172.438	3946.525	24.259	11.591
22.300	346889.6	13.537	-0.390	172.535	3952.900	24.256	11.643
22.400	348616.8	13.468	-0.453	172.630	3959.123	24.254	11.695
22.500	350345.0	13.399	-0.513	172.723	3965.199	24.253	11.749
22.600	352074.3	13.331	-0.571	172.815	3971.166	24.253	11.802
22.700	353804.3	13.262	-0.627	172.904	3977.032	24.253	11.855
22.800	355535.3	13.195	-0.679	172.992	3982.749	24.254	11.909
22.900	357266.9	13.127	-0.730	173.078	3988.355	24.254	11.961
23.000	358999.7	13.060	-0.778	173.161	3993.808	24.255	12.014
23.200	362467.4	12.927	-0.866	173.326	4004.537	24.256	12.119
23.400	365938.4	12.796	-0.949	173.481	4014.652	24.262	12.226
23.600	369414.0	12.667	-1.004	173.646	4025.611	24.267	12.331
23.800	372891.3	12.539	-1.062	173.793	4035.312	24.273	12.437
24.000	376371.5	12.413	-1.110	173.930	4044.401	24.280	12.542

Trim (Positive by Stern) : -1.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	40570.4	24.712	19.289	141.698	2399.674	82.702	1.573
3.100	41990.8	24.527	19.231	142.053	2412.620	80.334	1.624
3.200	43415.0	24.352	19.183	142.401	2425.598	78.110	1.676
3.300	44842.3	24.186	19.128	142.736	2438.091	76.014	1.727
3.400	46272.9	24.028	19.076	143.058	2450.014	74.041	1.779
3.500	47706.7	23.878	19.025	143.367	2461.574	72.172	1.831
3.600	49143.6	23.735	18.974	143.671	2473.004	70.408	1.882
3.700	50583.4	23.598	18.924	143.963	2483.944	68.737	1.934
3.800	52026.0	23.467	18.876	144.248	2494.630	67.152	1.985
3.900	53471.9	23.343	18.836	144.531	2505.539	65.647	2.037
4.000	54920.1	23.223	18.790	144.803	2515.906	64.216	2.089
4.100	56371.0	23.108	18.746	145.063	2525.749	62.854	2.140
4.200	57824.5	22.997	18.702	145.319	2535.415	61.558	2.192
4.300	59280.6	22.890	18.657	145.569	2545.005	60.320	2.243
4.400	60739.0	22.788	18.614	145.809	2554.221	59.137	2.295
4.500	62199.6	22.689	18.573	146.043	2563.136	58.007	2.347
4.600	63662.7	22.594	18.531	146.273	2572.018	56.926	2.398
4.700	65128.1	22.501	18.491	146.497	2580.524	55.893	2.450
4.800	66596.2	22.413	18.460	146.723	2589.421	54.901	2.502
4.900	68066.1	22.327	18.421	146.939	2597.837	53.951	2.553
5.000	69538.1	22.244	18.383	147.147	2605.893	53.038	2.605
5.100	71012.1	22.164	18.345	147.351	2613.845	52.161	2.656
5.200	72488.1	22.086	18.307	147.549	2621.603	51.316	2.708
5.300	73966.1	22.010	18.269	147.743	2629.155	50.505	2.760
5.400	75446.0	21.936	18.230	147.935	2636.760	49.725	2.811
5.500	76927.8	21.864	18.188	148.123	2644.287	48.972	2.863
5.600	78411.5	21.794	18.149	148.306	2651.480	48.248	2.915
5.700	79897.0	21.725	18.110	148.484	2658.488	47.549	2.966
5.800	81384.2	21.659	18.072	148.657	2665.282	46.875	3.018
5.900	82873.1	21.594	18.036	148.825	2671.790	46.224	3.070
6.000	84363.6	21.530	17.999	148.990	2678.198	45.595	3.121
6.100	85856.6	21.469	17.972	149.158	2684.947	44.987	3.173
6.200	87350.4	21.409	17.937	149.314	2691.060	44.398	3.224
6.300	88845.8	21.350	17.903	149.468	2697.008	43.830	3.276
6.400	90342.7	21.292	17.869	149.617	2702.731	43.280	3.328
6.500	91841.2	21.236	17.835	149.764	2708.415	42.748	3.379
6.600	93341.0	21.181	17.801	149.907	2713.882	42.232	3.431
6.700	94842.2	21.127	17.766	150.047	2719.230	41.734	3.482
6.800	96344.9	21.074	17.732	150.183	2724.438	41.250	3.534
6.900	97848.9	21.022	17.698	150.318	2729.522	40.781	3.586
7.000	99354.2	20.971	17.664	150.450	2734.543	40.327	3.637
7.100	100860.9	20.921	17.629	150.582	2739.531	39.887	3.689
7.200	102368.9	20.872	17.592	150.711	2744.415	39.460	3.740
7.300	103878.1	20.824	17.557	150.836	2749.230	39.045	3.792
7.400	105388.3	20.777	17.519	150.962	2753.979	38.643	3.843
7.500	106899.9	20.730	17.479	151.089	2758.904	38.254	3.895
7.600	108413.0	20.684	17.436	151.216	2763.874	37.875	3.947
7.700	109927.3	20.639	17.389	151.343	2768.912	37.508	3.998
7.800	111442.8	20.594	17.342	151.470	2773.956	37.152	4.050
7.900	112959.7	20.550	17.291	151.598	2779.207	36.805	4.101
8.000	114477.8	20.506	17.239	151.727	2784.508	36.469	4.153
8.100	115997.3	20.463	17.186	151.855	2789.845	36.142	4.204
8.200	117518.0	20.420	17.129	151.985	2795.307	35.825	4.256
8.300	119039.9	20.377	17.071	152.112	2800.641	35.516	4.307
8.400	120563.2	20.335	17.015	152.239	2806.027	35.215	4.359
8.500	122087.9	20.293	16.956	152.368	2811.607	34.923	4.411
8.600	123613.4	20.251	16.892	152.495	2817.034	34.639	4.462
8.700	125140.6	20.210	16.831	152.621	2822.586	34.361	4.514
8.800	126670.1	20.170	16.775	152.754	2828.575	34.092	4.565
8.900	128200.0	20.129	16.710	152.881	2834.194	33.829	4.617
9.000	129730.9	20.088	16.644	153.010	2839.886	33.574	4.669
9.100	131263.2	20.047	16.576	153.140	2845.770	33.326	4.720
9.200	132796.8	20.007	16.505	153.268	2851.493	33.085	4.772
9.300	134331.6	19.966	16.432	153.397	2857.328	32.849	4.823
9.400	135867.5	19.925	16.350	153.518	2862.600	32.620	4.875
9.500	137404.7	19.884	16.274	153.652	2868.782	32.397	4.927
9.600	138943.5	19.844	16.193	153.781	2874.701	32.180	4.978
9.700	140483.4	19.803	16.114	153.915	2880.949	31.968	5.030
9.800	142025.0	19.763	16.032	154.051	2887.386	31.761	5.081

Trim (Positive by Stern) : -1.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	143567.5	19.722	15.944	154.181	2893.426	31.560	5.133
10.000	145111.6	19.681	15.860	154.319	2900.084	31.364	5.185
10.100	146656.9	19.640	15.770	154.450	2906.387	31.171	5.236
10.200	148203.5	19.599	15.680	154.585	2912.878	30.985	5.288
10.300	149751.2	19.558	15.580	154.716	2919.091	30.802	5.339
10.400	151300.3	19.517	15.489	154.853	2925.830	30.624	5.391
10.500	152851.3	19.475	15.390	154.987	2932.354	30.450	5.443
10.600	154403.3	19.434	15.292	155.125	2939.219	30.281	5.494
10.700	155956.9	19.392	15.190	155.259	2945.792	30.116	5.546
10.800	157511.7	19.350	15.088	155.398	2952.800	29.954	5.598
10.900	159067.9	19.307	14.983	155.535	2959.648	29.797	5.649
11.000	160625.5	19.265	14.878	155.677	2966.805	29.643	5.701
11.100	162184.6	19.222	14.768	155.817	2973.878	29.494	5.753
11.200	163745.2	19.179	14.657	155.956	2980.907	29.348	5.805
11.300	165306.8	19.136	14.544	156.100	2988.282	29.205	5.856
11.400	166870.3	19.092	14.429	156.241	2995.535	29.066	5.908
11.500	168435.0	19.048	14.312	156.387	3003.059	28.931	5.960
11.600	170001.0	19.004	14.195	156.533	3010.651	28.798	6.011
11.700	171568.5	18.959	14.073	156.678	3018.174	28.670	6.063
11.800	173137.8	18.914	13.949	156.827	3025.875	28.545	6.115
11.900	174708.2	18.869	13.824	156.975	3033.606	28.423	6.167
12.000	176280.5	18.823	13.697	157.125	3041.422	28.304	6.219
12.100	177854.1	18.777	13.567	157.275	3049.245	28.188	6.271
12.200	179429.6	18.731	13.432	157.422	3056.841	28.074	6.322
12.300	181006.2	18.684	13.298	157.574	3064.798	27.964	6.374
12.400	182584.3	18.637	13.165	157.728	3073.012	27.857	6.426
12.500	184164.0	18.589	13.032	157.883	3081.186	27.752	6.478
12.600	185745.2	18.541	12.898	158.041	3089.631	27.650	6.530
12.700	187327.9	18.493	12.761	158.195	3097.788	27.550	6.582
12.800	188912.3	18.444	12.622	158.352	3106.166	27.453	6.634
12.900	190498.1	18.395	12.483	158.511	3114.720	27.358	6.686
13.000	192085.5	18.345	12.343	158.668	3123.166	27.265	6.738
13.100	193674.6	18.295	12.200	158.827	3131.728	27.175	6.790
13.200	195265.2	18.245	12.052	158.982	3140.016	27.087	6.842
13.300	196857.5	18.194	11.906	159.141	3148.630	27.002	6.894
13.400	198451.4	18.143	11.762	159.307	3157.779	26.918	6.946
13.500	200046.7	18.091	11.614	159.469	3166.625	26.836	6.998
13.600	201643.5	18.039	11.465	159.634	3175.739	26.756	7.050
13.700	203242.3	17.987	11.315	159.801	3184.985	26.679	7.102
13.800	204842.7	17.934	11.164	159.967	3194.313	26.603	7.154
13.900	206444.9	17.881	11.010	160.135	3203.623	26.529	7.206
14.000	208048.8	17.827	10.847	160.298	3212.641	26.457	7.258
14.100	209654.3	17.773	10.694	160.473	3222.542	26.388	7.311
14.200	211261.4	17.718	10.535	160.642	3232.021	26.319	7.363
14.300	212870.5	17.663	10.375	160.818	3241.990	26.253	7.415
14.400	214481.1	17.608	10.215	160.991	3251.775	26.189	7.467
14.500	216093.5	17.552	10.053	161.163	3261.518	26.126	7.519
14.600	217707.6	17.495	9.884	161.329	3270.764	26.065	7.572
14.700	219323.4	17.439	9.725	161.507	3280.967	26.005	7.624
14.800	220941.1	17.381	9.557	161.683	3290.945	25.947	7.676
14.900	222560.1	17.323	9.392	161.858	3300.912	25.891	7.728
15.000	224181.3	17.265	9.225	162.035	3311.103	25.836	7.781
15.100	225804.2	17.207	9.049	162.203	3320.625	25.783	7.833
15.200	227428.8	17.148	8.884	162.385	3331.199	25.731	7.885
15.300	229055.0	17.088	8.713	162.562	3341.323	25.681	7.938
15.400	230683.3	17.028	8.540	162.744	3351.911	25.632	7.990
15.500	232313.2	16.968	8.367	162.922	3362.264	25.585	8.042
15.600	233945.0	16.907	8.188	163.098	3372.439	25.539	8.095
15.700	235578.6	16.846	8.016	163.282	3383.212	25.494	8.148
15.800	237213.9	16.785	7.842	163.460	3393.600	25.450	8.200
15.900	238851.2	16.722	7.666	163.641	3404.241	25.407	8.252
16.000	240490.1	16.660	7.486	163.813	3414.371	25.366	8.305
16.100	242130.7	16.597	7.316	163.994	3425.077	25.325	8.358
16.200	243773.2	16.534	7.143	164.175	3435.769	25.286	8.410
16.300	245417.5	16.470	6.970	164.350	3446.158	25.247	8.462
16.400	247063.5	16.406	6.868	164.443	3449.502	25.209	8.515
16.500	248710.5	16.342	6.702	164.619	3460.069	25.173	8.567
16.600	250359.2	16.278	6.537	164.793	3470.432	25.137	8.620
16.700	252009.6	16.214	6.368	164.967	3480.833	25.103	8.673

Trim (Positive by Stern) : -1.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	253661.8	16.149	6.195	165.126	3490.215	25.070	8.725
16.900	255315.5	16.084	6.032	165.300	3500.668	25.037	8.778
17.000	256971.0	16.018	5.869	165.469	3510.895	25.006	8.831
17.100	258628.1	15.953	5.706	165.639	3521.124	24.974	8.883
17.200	260287.2	15.887	5.541	165.808	3531.297	24.945	8.936
17.300	261947.7	15.821	5.372	165.965	3540.575	24.916	8.989
17.400	263609.8	15.754	5.212	166.137	3551.043	24.889	9.042
17.500	265273.7	15.687	5.054	166.305	3561.176	24.862	9.095
17.600	266939.2	15.620	4.895	166.474	3571.442	24.836	9.148
17.700	268605.9	15.553	4.733	166.642	3581.638	24.811	9.200
17.800	270274.8	15.486	4.568	166.800	3591.048	24.787	9.253
17.900	271945.3	15.418	4.412	166.971	3601.465	24.765	9.306
18.000	273617.4	15.351	4.255	167.136	3611.558	24.742	9.358
18.100	275291.3	15.282	4.101	167.302	3621.715	24.720	9.411
18.200	276966.8	15.214	3.947	167.468	3631.927	24.698	9.464
18.300	278643.8	15.146	3.793	167.630	3641.810	24.678	9.517
18.400	280322.6	15.077	3.627	167.781	3650.925	24.658	9.569
18.500	282003.0	15.009	3.479	167.944	3660.974	24.639	9.622
18.600	283684.7	14.940	3.332	168.108	3671.252	24.621	9.675
18.700	285368.3	14.871	3.184	168.273	3681.542	24.604	9.729
18.800	287053.5	14.802	3.035	168.430	3691.323	24.586	9.781
18.900	288740.2	14.732	2.890	168.591	3701.394	24.569	9.834
19.000	290428.5	14.663	2.745	168.748	3711.264	24.553	9.887
19.100	292118.4	14.594	2.585	168.886	3719.696	24.538	9.941
19.200	293809.8	14.524	2.448	169.047	3729.930	24.523	9.994
19.300	295502.6	14.454	2.309	169.202	3739.706	24.508	10.046
19.400	297197.3	14.385	2.170	169.358	3749.550	24.494	10.099
19.500	298893.2	14.315	2.035	169.510	3759.212	24.481	10.152
19.600	300590.4	14.245	1.902	169.664	3769.012	24.469	10.205
19.700	302289.3	14.175	1.768	169.816	3778.687	24.456	10.258
19.800	303990.0	14.105	1.638	169.968	3788.356	24.445	10.311
19.900	305692.1	14.035	1.507	170.118	3797.956	24.434	10.364
20.000	307395.5	13.966	1.381	170.263	3807.309	24.423	10.418
20.100	309100.6	13.896	1.254	170.410	3816.741	24.413	10.470
20.200	310807.0	13.826	1.130	170.554	3825.989	24.403	10.523
20.300	312514.9	13.756	1.010	170.695	3835.042	24.394	10.576
20.400	314224.1	13.686	0.892	170.833	3843.917	24.385	10.629
20.500	315934.7	13.617	0.778	170.967	3852.522	24.377	10.683
20.600	317646.5	13.547	0.668	171.098	3860.955	24.370	10.737
20.700	319359.6	13.478	0.559	171.227	3869.227	24.361	10.789
20.800	321074.1	13.409	0.455	171.352	3877.230	24.353	10.841
20.900	322789.8	13.339	0.352	171.473	3885.034	24.346	10.895
21.000	324506.7	13.270	0.254	171.592	3892.656	24.340	10.948
21.100	326224.7	13.201	0.159	171.707	3900.009	24.333	11.001
21.200	327943.8	13.133	0.066	171.820	3907.280	24.327	11.054
21.300	329664.2	13.064	-0.022	171.928	3914.248	24.321	11.107
21.400	331385.3	12.996	-0.107	172.034	3921.076	24.315	11.160
21.500	333107.8	12.928	-0.188	172.135	3927.637	24.310	11.214
21.600	334831.1	12.860	-0.265	172.234	3933.994	24.305	11.267
21.700	336555.7	12.793	-0.340	172.332	3940.315	24.299	11.320
21.800	338280.8	12.726	-0.412	172.427	3946.450	24.296	11.374
21.900	340007.0	12.659	-0.481	172.518	3952.379	24.291	11.426
22.000	341734.0	12.592	-0.546	172.606	3958.110	24.287	11.479
22.100	343461.6	12.526	-0.609	172.693	3963.710	24.284	11.533
22.200	345190.5	12.460	-0.669	172.779	3969.261	24.281	11.586
22.300	346920.3	12.394	-0.728	172.863	3974.654	24.278	11.639
22.400	348650.7	12.329	-0.783	172.945	3979.941	24.277	11.692
22.500	350382.1	12.264	-0.837	173.024	3985.071	24.275	11.745
22.600	352114.2	12.200	-0.887	173.102	3990.064	24.273	11.798
22.700	353847.0	12.135	-0.935	173.179	3995.055	24.272	11.851
22.800	355580.6	12.071	-0.982	173.254	3999.864	24.271	11.903
22.900	357315.1	12.008	-1.026	173.329	4004.624	24.271	11.957
23.000	359050.1	11.945	-1.068	173.402	4009.330	24.271	12.010
23.200	362522.7	11.820	-1.144	173.538	4018.138	24.273	12.117
23.400	365997.8	11.696	-1.212	173.671	4026.682	24.275	12.223
23.600	369475.2	11.574	-1.268	173.792	4034.543	24.278	12.328
23.800	372955.1	11.454	-1.318	173.910	4042.180	24.283	12.435
24.000	376437.2	11.336	-1.358	174.019	4049.334	24.288	12.540

Trim (Positive by Stern) : 0.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	39731.2	18.835	18.349	141.675	2399.557	84.278	1.533
3.100	41151.4	18.817	18.320	142.028	2412.329	81.809	1.585
3.200	42575.3	18.800	18.298	142.381	2425.370	79.498	1.637
3.300	44002.5	18.783	18.271	142.720	2437.788	77.326	1.688
3.400	45432.9	18.766	18.244	143.041	2449.702	75.273	1.740
3.500	46866.6	18.749	18.216	143.360	2461.442	73.347	1.792
3.600	48303.3	18.732	18.189	143.660	2472.567	71.517	1.844
3.700	49743.2	18.716	18.168	143.964	2484.008	69.791	1.896
3.800	51186.0	18.700	18.143	144.254	2494.915	68.155	1.948
3.900	52631.5	18.684	18.116	144.531	2505.314	66.600	1.999
4.000	54079.8	18.668	18.089	144.808	2515.696	65.129	2.051
4.100	55530.8	18.652	18.064	145.071	2525.615	63.724	2.103
4.200	56984.3	18.636	18.037	145.326	2535.169	62.388	2.155
4.300	58440.5	18.621	18.011	145.575	2544.615	61.113	2.207
4.400	59899.3	18.606	17.992	145.825	2554.327	59.896	2.259
4.500	61360.1	18.591	17.967	146.066	2563.498	58.737	2.310
4.600	62823.4	18.576	17.942	146.296	2572.263	57.626	2.362
4.700	64289.1	18.560	17.917	146.522	2580.916	56.564	2.414
4.800	65757.0	18.545	17.889	146.745	2589.484	55.547	2.466
4.900	67227.0	18.530	17.861	146.960	2597.779	54.570	2.518
5.000	68699.3	18.516	17.834	147.176	2606.226	53.637	2.569
5.100	70173.6	18.500	17.807	147.379	2614.066	52.735	2.621
5.200	71650.0	18.486	17.779	147.583	2622.098	51.872	2.673
5.300	73128.6	18.471	17.759	147.787	2630.157	51.043	2.725
5.400	74609.1	18.457	17.734	147.979	2637.568	50.244	2.777
5.500	76091.3	18.442	17.710	148.168	2644.833	49.477	2.828
5.600	77575.5	18.428	17.686	148.350	2651.816	48.736	2.880
5.700	79061.4	18.413	17.661	148.528	2658.634	48.022	2.932
5.800	80549.0	18.399	17.637	148.705	2665.388	47.335	2.984
5.900	82038.3	18.384	17.613	148.873	2671.781	46.670	3.035
6.000	83529.5	18.370	17.589	149.041	2678.228	46.029	3.087
6.100	85022.3	18.356	17.565	149.200	2684.318	45.407	3.139
6.200	86516.5	18.342	17.540	149.358	2690.296	44.808	3.191
6.300	88012.4	18.328	17.516	149.513	2696.179	44.229	3.242
6.400	89509.9	18.314	17.491	149.664	2701.901	43.668	3.294
6.500	91008.7	18.299	17.466	149.813	2707.451	43.126	3.346
6.600	92509.7	18.287	17.448	149.964	2713.387	42.600	3.398
6.700	94011.5	18.273	17.421	150.110	2718.943	42.093	3.449
6.800	95514.9	18.259	17.395	150.252	2724.326	41.600	3.501
6.900	97019.6	18.245	17.366	150.391	2729.632	41.123	3.553
7.000	98525.7	18.231	17.337	150.531	2734.970	40.662	3.604
7.100	100033.2	18.217	17.303	150.669	2740.389	40.214	3.656
7.200	101542.1	18.203	17.267	150.806	2745.891	39.778	3.708
7.300	103052.3	18.189	17.229	150.946	2751.461	39.357	3.760
7.400	104563.7	18.175	17.187	151.084	2757.086	38.949	3.811
7.500	106076.7	18.160	17.145	151.223	2762.747	38.553	3.863
7.600	107591.2	18.145	17.099	151.362	2768.538	38.168	3.915
7.700	109107.0	18.130	17.051	151.501	2774.360	37.795	3.966
7.800	110624.1	18.115	17.001	151.639	2780.118	37.432	4.018
7.900	112142.8	18.099	16.949	151.776	2785.981	37.080	4.070
8.000	113662.7	18.083	16.898	151.914	2791.850	36.739	4.121
8.100	115183.9	18.067	16.841	152.049	2797.612	36.406	4.173
8.200	116706.7	18.050	16.785	152.185	2803.533	36.082	4.225
8.300	118230.5	18.033	16.727	152.319	2809.281	35.768	4.276
8.400	119756.0	18.016	16.668	152.456	2815.337	35.463	4.328
8.500	121282.9	17.999	16.609	152.592	2821.347	35.166	4.380
8.600	122810.7	17.981	16.546	152.723	2827.172	34.875	4.431
8.700	124340.3	17.963	16.482	152.860	2833.329	34.594	4.483
8.800	125870.8	17.944	16.415	152.993	2839.241	34.320	4.535
8.900	127403.2	17.925	16.348	153.132	2845.585	34.054	4.587
9.000	128936.9	17.906	16.281	153.270	2851.910	33.795	4.638
9.100	130471.5	17.886	16.206	153.406	2858.143	33.544	4.690
9.200	132008.2	17.866	16.134	153.547	2864.706	33.298	4.742
9.300	133546.0	17.846	16.059	153.688	2871.311	33.060	4.794
9.400	135085.7	17.826	15.982	153.832	2878.133	32.827	4.845
9.500	136626.2	17.804	15.903	153.974	2884.790	32.601	4.897
9.600	138168.2	17.782	15.820	154.117	2891.598	32.380	4.949
9.700	139711.6	17.760	15.736	154.260	2898.473	32.165	5.000
9.800	141256.4	17.737	15.650	154.402	2905.305	31.955	5.052

Trim (Positive by Stern) : 0.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	142802.2	17.714	15.556	154.539	2911.903	31.750	5.104
10.000	144350.1	17.690	15.463	154.680	2918.655	31.551	5.156
10.100	145899.1	17.666	15.372	154.826	2925.905	31.356	5.208
10.200	147449.8	17.641	15.275	154.967	2932.837	31.166	5.259
10.300	149001.6	17.616	15.181	155.113	2940.111	30.981	5.311
10.400	150555.1	17.590	15.081	155.258	2947.317	30.800	5.363
10.500	152109.9	17.564	14.984	155.405	2954.729	30.624	5.415
10.600	153666.3	17.537	14.880	155.550	2962.054	30.452	5.467
10.700	155223.9	17.510	14.773	155.696	2969.414	30.284	5.519
10.800	156783.1	17.482	14.668	155.844	2976.974	30.120	5.570
10.900	158343.8	17.454	14.559	155.995	2984.711	29.961	5.622
11.000	159906.2	17.425	14.449	156.144	2992.329	29.806	5.674
11.100	161469.9	17.395	14.337	156.297	3000.295	29.654	5.726
11.200	163035.3	17.365	14.221	156.448	3008.110	29.506	5.778
11.300	164602.2	17.335	14.104	156.600	3015.993	29.362	5.830
11.400	166170.5	17.304	13.986	156.755	3024.180	29.221	5.882
11.500	167740.3	17.272	13.866	156.909	3032.240	29.084	5.934
11.600	169312.1	17.240	13.741	157.066	3040.459	28.951	5.986
11.700	170884.9	17.207	13.616	157.223	3048.748	28.821	6.038
11.800	172459.7	17.173	13.490	157.380	3057.007	28.694	6.090
11.900	174036.0	17.139	13.361	157.540	3065.471	28.571	6.142
12.000	175613.9	17.104	13.231	157.701	3074.010	28.450	6.194
12.100	177193.1	17.069	13.099	157.861	3082.529	28.333	6.246
12.200	178774.2	17.033	12.965	158.021	3091.078	28.218	6.298
12.300	180356.8	16.997	12.831	158.181	3099.637	28.106	6.350
12.400	181940.9	16.960	12.694	158.344	3108.355	27.997	6.402
12.500	183526.7	16.922	12.556	158.506	3117.033	27.890	6.454
12.600	185114.3	16.884	12.416	158.668	3125.772	27.787	6.507
12.700	186703.7	16.846	12.269	158.824	3134.082	27.685	6.559
12.800	188294.5	16.806	12.127	158.986	3142.873	27.586	6.611
12.900	189886.7	16.766	11.981	159.155	3152.125	27.490	6.663
13.000	191480.7	16.726	11.837	159.322	3161.281	27.396	6.715
13.100	193076.5	16.684	11.690	159.491	3170.617	27.304	6.767
13.200	194673.8	16.643	11.542	159.659	3179.902	27.215	6.820
13.300	196272.9	16.600	11.392	159.830	3189.344	27.128	6.872
13.400	197873.7	16.558	11.240	160.001	3198.920	27.043	6.924
13.500	199476.2	16.514	11.087	160.174	3208.534	26.960	6.977
13.600	201080.5	16.470	10.931	160.348	3218.435	26.878	7.029
13.700	202686.4	16.425	10.773	160.521	3228.168	26.799	7.081
13.800	204294.1	16.380	10.610	160.691	3237.650	26.722	7.134
13.900	205903.6	16.334	10.451	160.868	3247.712	26.648	7.186
14.000	207514.9	16.288	10.292	161.046	3257.785	26.575	7.238
14.100	209127.9	16.241	10.131	161.225	3268.059	26.504	7.291
14.200	210742.7	16.193	9.971	161.402	3278.203	26.434	7.343
14.300	212359.2	16.145	9.809	161.581	3288.440	26.367	7.396
14.400	213977.6	16.096	9.645	161.761	3298.758	26.302	7.449
14.500	215597.8	16.047	9.474	161.936	3308.643	26.238	7.500
14.600	217219.8	15.997	9.308	162.121	3319.355	26.176	7.553
14.700	218843.5	15.947	9.141	162.301	3329.784	26.115	7.606
14.800	220468.7	15.896	8.975	162.483	3340.364	26.056	7.658
14.900	222096.2	15.844	8.803	162.670	3351.226	25.999	7.711
15.000	223725.5	15.792	8.632	162.856	3362.047	25.944	7.763
15.100	225356.6	15.740	8.460	163.038	3372.696	25.889	7.816
15.200	226989.5	15.687	8.281	163.219	3383.238	25.836	7.869
15.300	228624.4	15.633	8.108	163.406	3394.214	25.785	7.921
15.400	230261.1	15.579	7.935	163.590	3405.043	25.735	7.974
15.500	231899.5	15.524	7.761	163.775	3415.895	25.687	8.027
15.600	233540.0	15.469	7.584	163.959	3426.777	25.640	8.080
15.700	235182.0	15.413	7.406	164.135	3437.093	25.593	8.132
15.800	236826.0	15.356	7.235	164.316	3447.911	25.548	8.185
15.900	238471.7	15.300	7.139	164.421	3452.139	25.504	8.238
16.000	240118.4	15.243	6.966	164.600	3462.772	25.461	8.291
16.100	241766.9	15.186	6.791	164.767	3472.562	25.419	8.344
16.200	243417.2	15.128	6.622	164.944	3483.212	25.378	8.396
16.300	245069.1	15.070	6.455	165.118	3493.679	25.339	8.450
16.400	246722.8	15.012	6.289	165.290	3503.953	25.300	8.502
16.500	248378.2	14.953	6.115	165.453	3513.588	25.262	8.555
16.600	250035.2	14.894	5.950	165.626	3524.022	25.225	8.607
16.700	251694.0	14.834	5.787	165.796	3534.335	25.189	8.660

Trim (Positive by Stern) : 0.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	253354.5	14.774	5.622	165.964	3544.420	25.155	8.713
16.900	255016.7	14.714	5.449	166.125	3554.007	25.121	8.766
17.000	256680.4	14.653	5.288	166.297	3564.425	25.089	8.819
17.100	258345.9	14.592	5.128	166.465	3574.584	25.058	8.872
17.200	260013.1	14.531	4.965	166.633	3584.804	25.027	8.925
17.300	261681.8	14.469	4.795	166.792	3594.242	24.998	8.979
17.400	263352.3	14.407	4.637	166.960	3604.457	24.970	9.032
17.500	265024.4	14.345	4.478	167.127	3614.636	24.942	9.084
17.600	266698.2	14.282	4.316	167.294	3624.794	24.915	9.137
17.700	268373.6	14.220	4.157	167.456	3634.673	24.889	9.190
17.800	270050.6	14.157	3.991	167.611	3643.952	24.864	9.243
17.900	271729.1	14.093	3.836	167.777	3654.227	24.840	9.297
18.000	273409.1	14.029	3.679	167.942	3664.321	24.816	9.349
18.100	275091.0	13.966	3.527	168.102	3674.211	24.793	9.402
18.200	276774.4	13.902	3.373	168.263	3684.216	24.771	9.456
18.300	278459.5	13.837	3.213	168.416	3693.543	24.750	9.509
18.400	280146.0	13.773	3.066	168.575	3703.518	24.729	9.562
18.500	281834.3	13.708	2.915	168.731	3713.204	24.708	9.615
18.600	283524.0	13.643	2.767	168.890	3723.165	24.688	9.668
18.700	285215.3	13.578	2.622	169.044	3732.823	24.670	9.722
18.800	286908.1	13.513	2.476	169.197	3742.428	24.651	9.774
18.900	288602.4	13.448	2.319	169.336	3750.994	24.632	9.827
19.000	290298.2	13.382	2.178	169.490	3760.738	24.617	9.882
19.100	291995.6	13.317	2.040	169.640	3770.217	24.600	9.935
19.200	293693.9	13.251	1.903	169.792	3779.899	24.584	9.988
19.300	295394.1	13.185	1.766	169.941	3789.348	24.568	10.041
19.400	297095.9	13.119	1.631	170.087	3798.606	24.554	10.095
19.500	298799.1	13.053	1.496	170.232	3807.799	24.540	10.148
19.600	300503.9	12.987	1.346	170.359	3815.621	24.526	10.200
19.700	302210.0	12.921	1.220	170.501	3824.724	24.512	10.253
19.800	303917.0	12.855	1.096	170.641	3833.716	24.499	10.306
19.900	305625.6	12.789	0.976	170.779	3842.497	24.488	10.360
20.000	307335.8	12.723	0.856	170.915	3851.073	24.476	10.413
20.100	309047.3	12.657	0.743	171.046	3859.471	24.465	10.467
20.200	310759.9	12.591	0.631	171.173	3867.550	24.454	10.520
20.300	312474.1	12.525	0.521	171.300	3875.590	24.444	10.574
20.400	314189.2	12.459	0.416	171.420	3883.219	24.433	10.626
20.500	315905.5	12.393	0.313	171.539	3890.812	24.424	10.680
20.600	317623.2	12.328	0.214	171.654	3898.139	24.414	10.733
20.700	319341.8	12.262	0.118	171.766	3905.216	24.404	10.786
20.800	321061.5	12.197	0.025	171.875	3912.192	24.396	10.839
20.900	322782.3	12.132	-0.064	171.979	3918.835	24.388	10.894
21.000	324504.1	12.067	-0.151	172.082	3925.369	24.380	10.947
21.100	326227.0	12.002	-0.232	172.179	3931.582	24.371	10.999
21.200	327950.9	11.937	-0.312	172.273	3937.607	24.362	11.052
21.300	329675.6	11.873	-0.389	172.365	3943.494	24.356	11.106
21.400	331401.1	11.809	-0.463	172.454	3949.200	24.349	11.159
21.500	333127.8	11.745	-0.535	172.541	3954.733	24.342	11.213
21.600	334855.1	11.682	-0.602	172.623	3959.986	24.336	11.266
21.700	336583.3	11.618	-0.668	172.704	3965.182	24.328	11.318
21.800	338312.2	11.555	-0.731	172.783	3970.239	24.323	11.372
21.900	340041.9	11.493	-0.792	172.861	3975.158	24.319	11.426
22.000	341772.3	11.430	-0.851	172.938	3980.000	24.314	11.479
22.100	343503.6	11.368	-0.906	173.011	3984.673	24.310	11.532
22.200	345235.6	11.306	-0.959	173.083	3989.269	24.306	11.585
22.300	346968.2	11.245	-1.011	173.154	3993.748	24.302	11.638
22.400	348701.7	11.184	-1.060	173.223	3998.136	24.299	11.691
22.500	350435.7	11.123	-1.108	173.293	4002.507	24.297	11.745
22.600	352170.3	11.063	-1.153	173.359	4006.689	24.295	11.798
22.700	353905.8	11.003	-1.194	173.423	4010.724	24.294	11.851
22.800	355641.8	10.943	-1.234	173.485	4014.673	24.292	11.905
22.900	357378.4	10.884	-1.272	173.546	4018.560	24.291	11.958
23.000	359115.7	10.825	-1.309	173.607	4022.404	24.290	12.011
23.200	362591.8	10.708	-1.371	173.718	4029.468	24.288	12.116
23.400	366070.3	10.593	-1.425	173.824	4036.260	24.289	12.223
23.500	367810.2	10.536	-1.451	173.876	4039.605	24.291	12.277
23.600	369550.8	10.480	-1.472	173.923	4042.679	24.290	12.329
23.800	373032.4	10.368	-1.509	174.017	4048.738	24.292	12.434
24.000	376516.6	10.258	-1.540	174.108	4054.660	24.297	12.541

Trim (Positive by Stern) : 1.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	38934.7	12.740	17.384	141.519	2392.791	85.768	1.513
3.100	40353.5	12.903	17.387	141.885	2406.002	83.214	1.565
3.200	41775.9	13.056	17.393	142.240	2418.932	80.818	1.617
3.300	43201.6	13.199	17.396	142.583	2431.394	78.570	1.668
3.400	44631.1	13.332	17.389	142.920	2444.073	76.453	1.720
3.500	46063.6	13.458	17.390	143.244	2456.026	74.459	1.771
3.600	47499.2	13.576	17.384	143.553	2467.243	72.578	1.823
3.700	48938.0	13.688	17.390	143.861	2478.829	70.797	1.875
3.800	50379.7	13.794	17.388	144.154	2489.609	69.114	1.926
3.900	51824.3	13.893	17.386	144.440	2500.255	67.517	1.978
4.000	53271.9	13.987	17.373	144.723	2511.099	66.001	2.030
4.100	54722.0	14.076	17.366	144.992	2521.107	64.560	2.081
4.200	56175.0	14.162	17.366	145.258	2531.242	63.186	2.133
4.300	57630.5	14.242	17.361	145.513	2540.810	61.879	2.185
4.400	59088.5	14.318	17.348	145.768	2550.676	60.633	2.237
4.500	60548.7	14.391	17.339	146.013	2560.061	59.443	2.288
4.600	62011.5	14.460	17.329	146.250	2568.969	58.307	2.340
4.700	63476.8	14.526	17.311	146.484	2578.104	57.218	2.392
4.800	64944.4	14.588	17.297	146.711	2586.808	56.177	2.443
4.900	66414.4	14.648	17.292	146.936	2595.428	55.179	2.495
5.000	67886.4	14.705	17.282	147.148	2603.596	54.219	2.547
5.100	69360.4	14.760	17.272	147.359	2611.590	53.301	2.599
5.200	70836.6	14.811	17.261	147.561	2619.255	52.418	2.650
5.300	72314.6	14.860	17.248	147.760	2626.763	51.570	2.702
5.400	73794.8	14.906	17.238	147.955	2634.177	50.756	2.754
5.500	75276.9	14.952	17.228	148.146	2641.428	49.970	2.805
5.600	76760.7	14.995	17.213	148.329	2648.195	49.216	2.857
5.700	78246.3	15.037	17.199	148.509	2654.935	48.487	2.909
5.800	79734.2	15.078	17.193	148.693	2662.080	47.786	2.961
5.900	81223.6	15.116	17.183	148.866	2668.679	47.107	3.012
6.000	82714.6	15.153	17.171	149.036	2675.095	46.453	3.064
6.100	84207.3	15.188	17.158	149.202	2681.310	45.822	3.116
6.200	85701.6	15.222	17.144	149.364	2687.379	45.212	3.167
6.300	87197.6	15.255	17.128	149.524	2693.467	44.623	3.219
6.400	88695.2	15.286	17.112	149.682	2699.379	44.053	3.271
6.500	90194.3	15.316	17.094	149.838	2705.340	43.502	3.322
6.600	91694.9	15.345	17.073	149.991	2711.127	42.969	3.374
6.700	93197.1	15.372	17.049	150.146	2717.259	42.452	3.426
6.800	94700.7	15.398	17.018	150.298	2723.226	41.953	3.478
6.900	96206.0	15.423	16.989	150.452	2729.429	41.468	3.529
7.000	97712.9	15.447	16.958	150.604	2735.709	40.997	3.581
7.100	99221.3	15.470	16.925	150.756	2741.954	40.543	3.633
7.200	100731.4	15.491	16.889	150.911	2748.469	40.101	3.684
7.300	102242.8	15.511	16.848	151.063	2754.839	39.674	3.736
7.400	103755.6	15.530	16.807	151.212	2761.152	39.258	3.788
7.500	105269.9	15.548	16.763	151.362	2767.510	38.856	3.839
7.600	106785.8	15.565	16.718	151.509	2773.822	38.465	3.891
7.700	108303.1	15.581	16.671	151.658	2780.250	38.085	3.943
7.800	109821.9	15.595	16.620	151.805	2786.570	37.717	3.995
7.900	111341.8	15.609	16.571	151.951	2792.964	37.359	4.046
8.000	112863.5	15.621	16.518	152.098	2799.456	37.011	4.098
8.100	114386.7	15.633	16.463	152.241	2805.718	36.673	4.150
8.200	115911.4	15.643	16.408	152.386	2812.192	36.345	4.201
8.300	117437.3	15.652	16.348	152.530	2818.572	36.026	4.253
8.400	118964.9	15.661	16.291	152.674	2825.170	35.714	4.305
8.500	120493.7	15.668	16.226	152.817	2831.597	35.413	4.357
8.600	122024.3	15.675	16.164	152.963	2838.266	35.119	4.408
8.700	123556.3	15.680	16.098	153.110	2845.093	34.833	4.460
8.800	125089.4	15.684	16.026	153.255	2851.665	34.556	4.512
8.900	126624.4	15.688	15.958	153.405	2858.746	34.286	4.564
9.000	128160.7	15.691	15.883	153.554	2865.711	34.024	4.616
9.100	129698.5	15.693	15.807	153.701	2872.651	33.768	4.667
9.200	131237.7	15.693	15.727	153.851	2879.740	33.519	4.719
9.300	132778.5	15.693	15.648	154.002	2886.980	33.277	4.771
9.400	134320.6	15.692	15.564	154.150	2894.033	33.041	4.823
9.500	135864.5	15.690	15.480	154.304	2901.484	32.811	4.875
9.600	137409.5	15.686	15.392	154.452	2908.635	32.587	4.927
9.700	138955.8	15.682	15.302	154.601	2915.951	32.367	4.978
9.800	140504.5	15.678	15.214	154.756	2923.641	32.155	5.030

Trim (Positive by Stern) : 1.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	142055.5	15.673	15.130	154.914	2931.656	31.946	5.082
10.000	143607.0	15.667	15.036	155.069	2939.411	31.744	5.134
10.100	145160.0	15.659	14.941	155.222	2947.065	31.546	5.186
10.200	146714.5	15.651	14.843	155.377	2954.907	31.353	5.238
10.300	148270.5	15.642	14.744	155.532	2962.776	31.165	5.290
10.400	149828.3	15.632	14.644	155.689	2970.806	30.982	5.342
10.500	151387.1	15.620	14.533	155.840	2978.428	30.804	5.394
10.600	152947.9	15.609	14.427	155.995	2986.383	30.629	5.446
10.700	154510.3	15.596	14.317	156.154	2994.558	30.460	5.498
10.800	156074.3	15.583	14.205	156.313	3002.764	30.294	5.550
10.900	157639.8	15.568	14.094	156.474	3011.224	30.133	5.602
11.000	159207.0	15.553	13.978	156.636	3019.649	29.976	5.654
11.100	160775.7	15.537	13.863	156.797	3028.115	29.822	5.706
11.200	162346.2	15.520	13.742	156.959	3036.721	29.672	5.758
11.300	163918.2	15.503	13.622	157.123	3045.365	29.526	5.810
11.400	165491.9	15.484	13.499	157.288	3054.055	29.384	5.862
11.500	167067.2	15.464	13.373	157.455	3062.947	29.246	5.915
11.600	168644.3	15.444	13.248	157.619	3071.694	29.111	5.967
11.700	170222.7	15.423	13.119	157.787	3080.646	28.979	6.019
11.800	171803.1	15.401	12.990	157.954	3089.559	28.851	6.071
11.900	173384.6	15.379	12.860	158.121	3098.553	28.725	6.123
12.000	174968.3	15.355	12.728	158.290	3107.626	28.603	6.175
12.100	176553.8	15.331	12.594	158.457	3116.620	28.484	6.228
12.200	178140.8	15.306	12.458	158.627	3125.824	28.368	6.280
12.300	179729.6	15.280	12.322	158.796	3134.980	28.255	6.332
12.400	181320.4	15.253	12.178	158.971	3144.667	28.144	6.385
12.500	182912.3	15.226	12.037	159.144	3154.134	28.036	6.437
12.600	184506.3	15.197	11.894	159.315	3163.537	27.931	6.489
12.700	186102.0	15.168	11.748	159.490	3173.160	27.828	6.542
12.800	187699.4	15.138	11.602	159.663	3182.720	27.728	6.594
12.900	189298.5	15.108	11.454	159.838	3192.445	27.629	6.647
13.000	190899.4	15.076	11.304	160.012	3202.152	27.534	6.699
13.100	192502.1	15.044	11.146	160.194	3212.483	27.441	6.751
13.200	194107.0	15.011	10.981	160.365	3221.890	27.350	6.804
13.300	195713.2	14.977	10.828	160.543	3231.953	27.261	6.856
13.400	197321.1	14.943	10.672	160.721	3242.157	27.174	6.909
13.500	198930.9	14.907	10.516	160.901	3252.350	27.089	6.961
13.600	200542.5	14.871	10.360	161.080	3262.494	27.008	7.014
13.700	202156.1	14.834	10.193	161.269	3273.459	26.927	7.067
13.800	203771.3	14.797	10.034	161.450	3283.800	26.849	7.119
13.900	205388.4	14.759	9.874	161.631	3294.170	26.773	7.172
14.000	207007.3	14.720	9.714	161.812	3304.541	26.699	7.224
14.100	208628.1	14.680	9.541	162.004	3315.798	26.627	7.277
14.200	210250.8	14.639	9.376	162.188	3326.410	26.556	7.330
14.300	211875.2	14.598	9.205	162.364	3336.401	26.488	7.382
14.400	213501.6	14.556	9.033	162.556	3347.760	26.421	7.435
14.500	215129.7	14.514	8.865	162.744	3358.757	26.356	7.488
14.600	216759.7	14.470	8.697	162.932	3369.723	26.293	7.541
14.700	218391.7	14.426	8.521	163.127	3381.231	26.232	7.594
14.800	220025.6	14.382	8.351	163.316	3392.387	26.172	7.647
14.900	221661.4	14.336	8.180	163.505	3403.490	26.114	7.699
15.000	223299.0	14.290	8.010	163.691	3414.385	26.057	7.752
15.100	224938.6	14.244	7.825	163.881	3425.639	26.002	7.805
15.200	226580.0	14.196	7.654	164.069	3436.773	25.948	7.858
15.300	228223.4	14.149	7.486	164.254	3447.711	25.895	7.911
15.400	229868.6	14.100	7.385	164.370	3452.696	25.844	7.964
15.500	231514.8	14.052	7.217	164.552	3463.583	25.793	8.016
15.600	233162.9	14.003	7.048	164.732	3474.274	25.744	8.069
15.700	234812.9	13.953	6.869	164.910	3484.888	25.697	8.123
15.800	236464.5	13.903	6.703	165.088	3495.622	25.650	8.176
15.900	238117.9	13.852	6.539	165.263	3506.090	25.604	8.229
16.000	239773.1	13.801	6.376	165.435	3516.381	25.560	8.282
16.100	241430.0	13.749	6.201	165.617	3527.458	25.516	8.335
16.200	243088.2	13.697	6.032	165.781	3537.172	25.475	8.388
16.300	244748.5	13.644	5.871	165.951	3547.384	25.434	8.441
16.400	246410.7	13.591	5.702	166.127	3558.218	25.394	8.494
16.500	248074.4	13.538	5.539	166.296	3568.405	25.354	8.547
16.600	249739.8	13.484	5.369	166.456	3577.838	25.317	8.600
16.700	251406.9	13.429	5.203	166.630	3588.546	25.281	8.654

Trim (Positive by Stern) : 1.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	253075.7	13.374	5.042	166.799	3598.782	25.245	8.707
16.900	254746.3	13.319	4.882	166.965	3608.785	25.211	8.760
17.000	256418.3	13.263	4.714	167.119	3617.900	25.177	8.813
17.100	258092.2	13.207	4.547	167.296	3628.822	25.145	8.866
17.200	259767.6	13.151	4.388	167.461	3638.833	25.114	8.919
17.300	261444.7	13.094	4.231	167.623	3648.667	25.084	8.973
17.400	263123.6	13.037	4.057	167.784	3658.480	25.055	9.026
17.500	264803.8	12.979	3.902	167.948	3668.545	25.026	9.079
17.600	266485.8	12.921	3.747	168.110	3678.440	24.998	9.133
17.700	268169.5	12.863	3.586	168.278	3688.832	24.972	9.187
17.800	269854.8	12.805	3.430	168.436	3698.621	24.944	9.239
17.900	271541.4	12.746	3.271	168.585	3707.624	24.919	9.293
18.000	273229.7	12.687	3.123	168.739	3717.165	24.894	9.346
18.100	274919.6	12.627	2.963	168.905	3727.632	24.870	9.399
18.200	276611.1	12.568	2.815	169.056	3737.042	24.847	9.453
18.300	278304.1	12.508	2.659	169.197	3745.577	24.823	9.506
18.400	279998.6	12.448	2.507	169.356	3755.737	24.801	9.559
18.500	281694.5	12.387	2.364	169.507	3765.191	24.779	9.613
18.600	283391.8	12.327	2.222	169.655	3774.504	24.759	9.666
18.700	285091.0	12.266	2.075	169.808	3784.257	24.738	9.720
18.800	286791.3	12.205	1.924	169.942	3792.537	24.719	9.773
18.900	288493.0	12.144	1.789	170.087	3801.650	24.700	9.826
19.000	290196.4	12.083	1.656	170.229	3810.609	24.681	9.880
19.100	291901.2	12.021	1.512	170.382	3820.485	24.664	9.933
19.200	293607.3	11.960	1.380	170.522	3829.339	24.647	9.987
19.300	295314.8	11.898	1.249	170.659	3837.959	24.630	10.040
19.400	297023.5	11.836	1.108	170.777	3845.121	24.615	10.095
19.500	298733.7	11.774	0.986	170.910	3853.545	24.599	10.147
19.600	300445.0	11.713	0.865	171.041	3861.803	24.584	10.200
19.700	302157.6	11.651	0.749	171.168	3869.780	24.570	10.254
19.800	303871.3	11.589	0.634	171.292	3877.559	24.557	10.308
19.900	305586.6	11.527	0.523	171.412	3885.086	24.543	10.361
20.000	307302.8	11.465	0.415	171.528	3892.330	24.530	10.414
20.100	309020.3	11.403	0.294	171.624	3898.075	24.517	10.468
20.200	310738.8	11.342	0.193	171.735	3905.050	24.505	10.521
20.300	312458.3	11.280	0.096	171.844	3911.913	24.493	10.575
20.400	314178.9	11.219	0.003	171.949	3918.552	24.481	10.628
20.500	315900.5	11.157	-0.087	172.051	3924.949	24.470	10.682
20.600	317623.1	11.096	-0.174	172.150	3931.239	24.460	10.736
20.700	319346.6	11.035	-0.257	172.244	3937.132	24.448	10.788
20.800	321070.2	10.974	-0.338	172.335	3942.914	24.438	10.842
20.900	322795.6	10.913	-0.415	172.422	3948.437	24.428	10.896
21.000	324521.8	10.853	-0.490	172.509	3953.888	24.417	10.948
21.100	326248.8	10.793	-0.561	172.592	3959.113	24.408	11.002
21.200	327976.7	10.733	-0.630	172.671	3964.125	24.400	11.056
21.300	329705.3	10.673	-0.696	172.748	3969.026	24.392	11.110
21.400	331434.8	10.613	-0.760	172.823	3973.689	24.383	11.163
21.500	333164.8	10.554	-0.823	172.896	3978.291	24.375	11.216
21.600	334895.6	10.495	-0.883	172.968	3982.791	24.367	11.269
21.700	336627.0	10.436	-0.941	173.037	3987.109	24.361	11.322
21.800	338359.3	10.378	-0.997	173.104	3991.313	24.355	11.376
21.900	340092.2	10.320	-1.050	173.169	3995.360	24.348	11.429
22.000	341825.8	10.262	-1.103	173.234	3999.357	24.344	11.483
22.100	343559.8	10.205	-1.153	173.297	4003.260	24.337	11.534
22.200	345294.6	10.147	-1.201	173.358	4007.031	24.333	11.589
22.300	347029.9	10.091	-1.246	173.416	4010.666	24.329	11.642
22.400	348765.8	10.034	-1.288	173.472	4014.160	24.324	11.695
22.500	350502.3	9.978	-1.330	173.528	4017.601	24.322	11.749
22.600	352239.3	9.922	-1.369	173.583	4021.013	24.318	11.802
22.700	353976.9	9.866	-1.404	173.634	4024.223	24.315	11.855
22.800	355714.9	9.811	-1.438	173.683	4027.309	24.313	11.908
22.900	357453.5	9.756	-1.469	173.731	4030.292	24.310	11.961
23.000	359192.3	9.702	-1.499	173.778	4033.271	24.308	12.015
23.200	362671.9	9.594	-1.551	173.868	4038.885	24.306	12.121
23.400	366153.0	9.488	-1.595	173.949	4044.092	24.303	12.227
23.500	367894.2	9.436	-1.615	173.990	4046.677	24.302	12.279
23.600	369635.6	9.383	-1.633	174.029	4049.167	24.303	12.333
23.800	373120.0	9.280	-1.661	174.101	4053.796	24.304	12.440
24.000	376605.4	9.179	-1.684	174.171	4058.318	24.307	12.546

Trim (Positive by Stern) : 2.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	38183.3	6.449	16.376	141.243	2380.335	87.165	1.515
3.100	39599.3	6.805	16.410	141.622	2394.016	84.527	1.566
3.200	41019.1	7.137	16.441	141.985	2407.159	82.053	1.617
3.300	42442.4	7.450	16.473	142.338	2420.014	79.737	1.668
3.400	43869.2	7.744	16.503	142.681	2432.521	77.560	1.718
3.500	45299.5	8.020	16.521	143.018	2445.117	75.508	1.769
3.600	46733.0	8.280	16.545	143.343	2457.117	73.576	1.820
3.700	48169.6	8.527	16.570	143.658	2468.813	71.749	1.871
3.800	49609.3	8.761	16.593	143.962	2480.058	70.021	1.922
3.900	51052.1	8.982	16.615	144.258	2491.051	68.384	1.973
4.000	52497.8	9.192	16.622	144.549	2502.227	66.828	2.025
4.100	53946.4	9.391	16.639	144.832	2512.850	65.353	2.076
4.200	55397.8	9.581	16.650	145.112	2523.697	63.948	2.127
4.300	56851.9	9.762	16.660	145.380	2533.854	62.612	2.178
4.400	58308.5	9.934	16.673	145.638	2543.604	61.337	2.229
4.500	59767.7	10.098	16.682	145.888	2552.920	60.121	2.281
4.600	61229.4	10.255	16.690	146.132	2562.042	58.960	2.332
4.700	62693.4	10.405	16.697	146.368	2570.837	57.849	2.383
4.800	64159.9	10.549	16.709	146.603	2579.836	56.784	2.435
4.900	65628.6	10.687	16.716	146.829	2588.374	55.766	2.486
5.000	67099.1	10.819	16.720	147.048	2596.520	54.789	2.537
5.100	68572.3	10.946	16.725	147.263	2604.630	53.852	2.589
5.200	70047.5	11.067	16.731	147.473	2612.485	52.952	2.640
5.300	71524.7	11.184	16.730	147.673	2619.867	52.087	2.692
5.400	73004.1	11.296	16.735	147.876	2627.550	51.256	2.743
5.500	74485.3	11.404	16.737	148.072	2634.919	50.457	2.794
5.600	75968.5	11.508	16.739	148.261	2641.994	49.686	2.846
5.700	77453.6	11.608	16.740	148.446	2648.953	48.943	2.897
5.800	78940.4	11.705	16.738	148.627	2655.697	48.228	2.949
5.900	80429.2	11.797	16.736	148.807	2662.490	47.538	3.000
6.000	81919.5	11.887	16.729	148.981	2668.973	46.873	3.052
6.100	83411.7	11.973	16.724	149.156	2675.704	46.231	3.103
6.200	84905.6	12.056	16.712	149.327	2682.212	45.611	3.155
6.300	86401.2	12.137	16.700	149.500	2689.027	45.012	3.206
6.400	87899.0	12.215	16.689	149.679	2696.245	44.434	3.258
6.500	89398.0	12.289	16.670	149.849	2703.065	43.875	3.309
6.600	90898.9	12.361	16.648	150.019	2709.919	43.334	3.361
6.700	92401.4	12.431	16.624	150.188	2716.830	42.810	3.412
6.800	93905.6	12.497	16.597	150.355	2723.818	42.302	3.464
6.900	95411.4	12.562	16.566	150.521	2730.727	41.810	3.515
7.000	96918.9	12.623	16.532	150.685	2737.531	41.335	3.567
7.100	98428.1	12.683	16.499	150.849	2744.508	40.873	3.619
7.200	99939.0	12.740	16.464	151.012	2751.490	40.425	3.670
7.300	101451.1	12.795	16.420	151.169	2758.097	39.991	3.722
7.400	102965.3	12.848	16.381	151.331	2765.169	39.570	3.773
7.500	104480.7	12.898	16.337	151.490	2772.067	39.161	3.825
7.600	105998.1	12.947	16.295	151.649	2779.106	38.764	3.877
7.700	107517.1	12.995	16.251	151.809	2786.184	38.379	3.928
7.800	109037.4	13.039	16.204	151.965	2793.145	38.004	3.980
7.900	110559.3	13.082	16.153	152.121	2800.119	37.641	4.032
8.000	112082.8	13.124	16.101	152.278	2807.154	37.288	4.083
8.100	113607.9	13.163	16.046	152.433	2814.196	36.945	4.135
8.200	115134.4	13.201	15.989	152.586	2821.216	36.610	4.187
8.300	116662.6	13.237	15.930	152.744	2828.471	36.286	4.238
8.400	118192.2	13.271	15.867	152.899	2835.585	35.972	4.290
8.500	119723.4	13.304	15.801	153.056	2842.887	35.666	4.342
8.600	121256.2	13.334	15.733	153.213	2850.236	35.369	4.394
8.700	122790.7	13.364	15.665	153.373	2857.787	35.079	4.445
8.800	124326.8	13.392	15.592	153.531	2865.304	34.798	4.497
8.900	125864.3	13.418	15.517	153.690	2872.845	34.525	4.549
9.000	127403.1	13.443	15.441	153.851	2880.560	34.258	4.601
9.100	128943.8	13.466	15.359	154.009	2888.143	33.999	4.653
9.200	130486.3	13.488	15.279	154.169	2895.950	33.746	4.704
9.300	132030.1	13.508	15.194	154.329	2903.702	33.500	4.756
9.400	133575.5	13.527	15.107	154.488	2911.470	33.261	4.808
9.500	135122.9	13.544	15.022	154.649	2919.570	33.026	4.860
9.600	136671.5	13.560	14.931	154.809	2927.461	32.798	4.912
9.700	138222.0	13.575	14.840	154.970	2935.557	32.576	4.964
9.800	139773.9	13.588	14.746	155.132	2943.644	32.360	5.016

Trim (Positive by Stern) : 2.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	141327.6	13.600	14.651	155.295	2951.916	32.149	5.068
10.000	142883.2	13.611	14.556	155.460	2960.375	31.943	5.120
10.100	144439.9	13.621	14.455	155.624	2968.693	31.743	5.172
10.200	145998.3	13.629	14.354	155.787	2977.079	31.547	5.224
10.300	147558.3	13.635	14.249	155.953	2985.614	31.357	5.276
10.400	149121.8	13.642	14.152	156.128	2994.874	31.172	5.328
10.500	150685.5	13.646	14.045	156.298	3003.709	30.991	5.380
10.600	152250.8	13.649	13.935	156.467	3012.540	30.814	5.432
10.700	153817.8	13.651	13.823	156.636	3021.411	30.643	5.484
10.800	155386.7	13.652	13.708	156.808	3030.466	30.475	5.536
10.900	156957.1	13.651	13.593	156.979	3039.489	30.312	5.588
11.000	158529.2	13.650	13.467	157.143	3048.082	30.152	5.641
11.100	160103.4	13.647	13.344	157.317	3057.405	29.997	5.693
11.200	161679.0	13.644	13.222	157.490	3066.626	29.846	5.745
11.300	163256.4	13.639	13.099	157.665	3075.986	29.699	5.797
11.400	164835.4	13.633	12.974	157.839	3085.303	29.555	5.849
11.500	166416.4	13.626	12.847	158.014	3094.744	29.415	5.902
11.600	167998.9	13.618	12.718	158.189	3104.124	29.278	5.954
11.700	169583.5	13.609	12.588	158.363	3113.562	29.144	6.006
11.800	171169.6	13.599	12.456	158.540	3123.141	29.014	6.059
11.900	172757.4	13.587	12.324	158.716	3132.707	28.887	6.111
12.000	174347.3	13.575	12.182	158.900	3142.928	28.763	6.164
12.100	175938.9	13.562	12.044	159.079	3152.709	28.642	6.216
12.200	177532.2	13.547	11.904	159.258	3162.594	28.524	6.268
12.300	179127.2	13.532	11.762	159.440	3172.627	28.410	6.321
12.400	180724.2	13.515	11.619	159.621	3182.686	28.298	6.373
12.500	182323.1	13.498	11.474	159.803	3192.840	28.188	6.426
12.600	183923.6	13.480	11.328	159.984	3202.936	28.081	6.478
12.700	185526.2	13.460	11.170	160.176	3213.898	27.977	6.531
12.800	187130.6	13.440	11.019	160.362	3224.379	27.875	6.583
12.900	188736.7	13.418	10.866	160.547	3234.888	27.776	6.636
13.000	190344.8	13.396	10.713	160.733	3245.405	27.679	6.689
13.100	191954.7	13.373	10.559	160.917	3255.841	27.584	6.741
13.200	193566.5	13.348	10.396	161.107	3266.994	27.491	6.794
13.300	195179.5	13.323	10.238	161.294	3277.711	27.401	6.847
13.400	196795.1	13.297	10.079	161.480	3288.320	27.313	6.899
13.500	198412.5	13.270	9.921	161.664	3298.921	27.227	6.952
13.600	200031.9	13.242	9.751	161.859	3310.305	27.143	7.005
13.700	201653.5	13.213	9.578	162.038	3320.487	27.062	7.058
13.800	203276.5	13.183	9.415	162.227	3331.442	26.983	7.110
13.900	204901.4	13.153	9.246	162.421	3342.910	26.906	7.164
14.000	206528.2	13.121	9.079	162.613	3354.136	26.830	7.217
14.100	208157.0	13.089	8.912	162.804	3365.287	26.757	7.269
14.200	209787.7	13.055	8.744	162.995	3376.458	26.685	7.322
14.300	211420.4	13.021	8.567	163.196	3388.434	26.616	7.375
14.400	213054.9	12.986	8.397	163.389	3399.806	26.548	7.428
14.500	214691.5	12.950	8.227	163.581	3411.090	26.482	7.481
14.600	216330.0	12.914	8.049	163.779	3423.008	26.418	7.534
14.700	217970.3	12.876	7.878	163.971	3434.360	26.355	7.588
14.800	219612.7	12.838	7.700	164.153	3444.984	26.294	7.640
14.900	221257.0	12.799	7.601	164.275	3450.283	26.234	7.693
15.000	222902.3	12.760	7.432	164.465	3461.615	26.176	7.746
15.100	224549.6	12.720	7.265	164.651	3472.729	26.119	7.800
15.200	226198.6	12.680	7.092	164.842	3484.269	26.064	7.853
15.300	227849.6	12.638	6.926	165.026	3495.388	26.009	7.906
15.400	229502.4	12.597	6.761	165.208	3506.272	25.956	7.959
15.500	231157.0	12.554	6.599	165.386	3516.910	25.904	8.012
15.600	232813.5	12.511	6.421	165.565	3527.800	25.853	8.066
15.700	234471.6	12.467	6.258	165.744	3538.570	25.804	8.119
15.800	236131.6	12.423	6.098	165.919	3549.131	25.755	8.172
15.900	237793.4	12.378	5.930	166.101	3560.335	25.709	8.225
16.000	239457.0	12.332	5.768	166.275	3570.894	25.663	8.279
16.100	241122.1	12.286	5.608	166.446	3581.211	25.618	8.332
16.200	242789.3	12.240	5.434	166.617	3591.592	25.575	8.385
16.300	244457.9	12.193	5.273	166.789	3602.109	25.533	8.439
16.400	246128.3	12.145	5.114	166.960	3612.436	25.492	8.492
16.500	247800.3	12.097	4.956	167.127	3622.562	25.452	8.545
16.600	249474.2	12.048	4.787	167.303	3633.484	25.414	8.599
16.700	251149.6	11.999	4.620	167.464	3643.111	25.377	8.653

Trim (Positive by Stern) : 2.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	252826.7	11.950	4.463	167.630	3653.207	25.341	8.706
16.900	254505.5	11.899	4.296	167.805	3664.037	25.305	8.759
17.000	256185.9	11.849	4.137	167.970	3674.119	25.271	8.813
17.100	257868.1	11.798	3.972	168.124	3683.311	25.238	8.866
17.200	259551.9	11.747	3.810	168.294	3693.965	25.205	8.920
17.300	261237.3	11.695	3.653	168.458	3704.031	25.173	8.973
17.400	262924.3	11.643	3.498	168.618	3713.861	25.142	9.026
17.500	264612.8	11.590	3.337	168.764	3722.611	25.112	9.080
17.600	266303.1	11.537	3.177	168.932	3733.246	25.083	9.133
17.700	267994.9	11.484	3.026	169.087	3742.882	25.055	9.187
17.800	269688.2	11.430	2.877	169.240	3752.296	25.027	9.241
17.900	271382.7	11.376	2.711	169.390	3761.723	25.000	9.294
18.000	273079.0	11.322	2.566	169.542	3771.232	24.974	9.348
18.100	274776.6	11.267	2.422	169.691	3780.517	24.948	9.402
18.200	276476.1	11.212	2.271	169.846	3790.409	24.923	9.455
18.300	278176.8	11.157	2.127	169.991	3799.569	24.898	9.508
18.400	279879.0	11.101	1.978	170.126	3807.823	24.875	9.562
18.500	281582.6	11.046	1.833	170.275	3817.404	24.853	9.616
18.600	283287.8	10.990	1.693	170.418	3826.436	24.831	9.670
18.700	284994.3	10.934	1.556	170.558	3835.178	24.809	9.723
18.800	286702.2	10.877	1.412	170.683	3842.882	24.788	9.776
18.900	288411.1	10.821	1.283	170.818	3851.349	24.769	9.830
19.000	290121.6	10.764	1.156	170.950	3859.585	24.749	9.884
19.100	291833.3	10.707	1.032	171.079	3867.616	24.730	9.938
19.200	293546.4	10.650	0.910	171.204	3875.395	24.712	9.991
19.300	295260.5	10.594	0.779	171.314	3882.041	24.694	10.045
19.400	296975.8	10.536	0.665	171.436	3889.603	24.677	10.098
19.500	298692.4	10.479	0.554	171.554	3896.895	24.661	10.152
19.600	300410.0	10.422	0.445	171.667	3903.958	24.644	10.205
19.700	302128.5	10.365	0.339	171.777	3910.753	24.630	10.260
19.800	303848.4	10.308	0.235	171.883	3917.286	24.614	10.313
19.900	305569.2	10.251	0.120	171.970	3922.383	24.599	10.367
20.000	307291.1	10.194	0.026	172.071	3928.661	24.584	10.420
20.100	309013.8	10.137	-0.066	172.169	3934.745	24.570	10.474
20.200	310737.4	10.080	-0.154	172.262	3940.557	24.556	10.528
20.300	312462.2	10.023	-0.240	172.352	3946.148	24.542	10.581
20.400	314187.5	9.967	-0.322	172.437	3951.448	24.528	10.634
20.500	315913.9	9.910	-0.403	172.519	3956.525	24.515	10.687
20.600	317641.1	9.854	-0.497	172.582	3960.060	24.503	10.742
20.700	319368.8	9.798	-0.568	172.662	3965.032	24.490	10.795
20.800	321097.3	9.742	-0.638	172.738	3969.802	24.479	10.849
20.900	322826.7	9.686	-0.705	172.811	3974.286	24.468	10.903
21.000	324556.7	9.631	-0.770	172.882	3978.723	24.457	10.956
21.100	326287.5	9.575	-0.833	172.952	3983.057	24.446	11.009
21.200	328018.9	9.520	-0.894	173.020	3987.241	24.436	11.063
21.300	329750.8	9.465	-0.953	173.086	3991.304	24.427	11.116
21.400	331483.6	9.411	-1.010	173.150	3995.205	24.418	11.169
21.500	333217.0	9.356	-1.064	173.213	3999.026	24.409	11.222
21.600	334950.9	9.302	-1.117	173.273	4002.757	24.402	11.277
21.700	336685.5	9.248	-1.169	173.333	4006.368	24.394	11.330
21.800	338420.5	9.195	-1.218	173.390	4009.857	24.387	11.383
21.900	340156.1	9.142	-1.265	173.445	4013.181	24.380	11.436
22.000	341892.3	9.089	-1.309	173.497	4016.382	24.374	11.490
22.100	343629.1	9.036	-1.352	173.549	4019.514	24.367	11.543
22.200	345366.3	8.984	-1.393	173.598	4022.520	24.362	11.596
22.300	347103.8	8.932	-1.432	173.645	4025.375	24.357	11.650
22.400	348841.9	8.880	-1.468	173.690	4028.065	24.351	11.702
22.500	350580.7	8.828	-1.503	173.732	4030.683	24.346	11.755
22.600	352319.6	8.777	-1.536	173.774	4033.243	24.342	11.810
22.700	354059.0	8.727	-1.567	173.814	4035.707	24.338	11.863
22.800	355798.7	8.676	-1.595	173.853	4038.069	24.334	11.916
22.900	357538.3	8.626	-1.621	173.888	4040.282	24.331	11.970
23.000	359278.8	8.577	-1.646	173.923	4042.460	24.328	12.023
23.200	362760.8	8.478	-1.689	173.992	4046.717	24.323	12.129
23.400	366244.2	8.381	-1.724	174.054	4050.589	24.319	12.235
23.500	367986.1	8.333	-1.740	174.083	4052.452	24.318	12.288
23.600	369728.5	8.286	-1.754	174.113	4054.327	24.318	12.342
23.800	373213.8	8.192	-1.776	174.167	4057.778	24.315	12.446
24.000	376700.5	8.100	-1.791	174.216	4060.895	24.317	12.553

Trim (Positive by Stern) : 3.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	37479.7	-0.010	15.321	140.824	2360.719	88.440	1.540
3.100	38891.8	0.547	15.381	141.225	2375.554	85.727	1.589
3.200	40307.7	1.069	15.443	141.606	2389.398	83.191	1.638
3.300	41727.3	1.559	15.504	141.974	2402.800	80.813	1.687
3.400	43150.4	2.020	15.559	142.328	2415.618	78.580	1.737
3.500	44577.2	2.453	15.608	142.684	2429.046	76.480	1.787
3.600	46007.4	2.863	15.658	143.021	2441.523	74.501	1.836
3.700	47440.9	3.250	15.700	143.354	2454.093	72.633	1.886
3.800	48877.7	3.616	15.743	143.674	2465.991	70.867	1.936
3.900	50317.0	3.964	15.788	143.984	2477.635	69.193	1.986
4.000	51759.9	4.294	15.828	144.284	2488.777	67.607	2.036
4.100	53205.9	4.608	15.869	144.578	2499.784	66.101	2.087
4.200	54654.6	4.907	15.905	144.861	2510.258	64.668	2.137
4.300	56106.2	5.192	15.943	145.139	2520.684	63.305	2.187
4.400	57560.5	5.464	15.976	145.408	2530.763	62.005	2.238
4.500	59017.4	5.723	16.005	145.668	2540.369	60.766	2.288
4.600	60477.0	5.972	16.035	145.924	2549.962	59.583	2.339
4.700	61939.1	6.210	16.065	146.171	2559.294	58.449	2.389
4.800	63403.6	6.437	16.092	146.412	2568.286	57.366	2.440
4.900	64870.4	6.656	16.117	146.647	2577.023	56.329	2.491
5.000	66339.5	6.865	16.137	146.873	2585.375	55.336	2.542
5.100	67810.9	7.066	16.159	147.098	2593.790	54.383	2.592
5.200	69284.5	7.260	16.180	147.316	2601.941	53.467	2.643
5.300	70760.3	7.446	16.198	147.528	2609.810	52.588	2.694
5.400	72238.0	7.625	16.214	147.734	2617.476	51.743	2.745
5.500	73717.9	7.797	16.227	147.938	2625.146	50.930	2.796
5.600	75199.8	7.963	16.239	148.138	2632.806	50.145	2.847
5.700	76683.5	8.123	16.243	148.332	2640.066	49.391	2.898
5.800	78169.4	8.277	16.249	148.528	2647.721	48.664	2.949
5.900	79657.2	8.426	16.250	148.723	2655.436	47.963	3.000
6.000	81146.9	8.570	16.247	148.915	2663.029	47.287	3.051
6.100	82637.9	8.708	16.241	149.106	2670.630	46.636	3.102
6.200	84131.4	8.842	16.231	149.294	2678.202	46.006	3.153
6.300	85626.8	8.970	16.220	149.483	2685.935	45.399	3.204
6.400	87124.0	9.095	16.204	149.669	2693.569	44.811	3.255
6.500	88623.0	9.214	16.184	149.852	2701.119	44.244	3.307
6.600	90124.0	9.330	16.166	150.038	2708.926	43.695	3.358
6.700	91626.6	9.442	16.141	150.215	2716.365	43.162	3.409
6.800	93131.2	9.550	16.119	150.399	2724.202	42.648	3.460
6.900	94637.7	9.654	16.093	150.578	2731.875	42.150	3.512
7.000	96145.8	9.755	16.063	150.755	2739.531	41.668	3.563
7.100	97655.6	9.852	16.030	150.930	2747.063	41.200	3.614
7.200	99167.3	9.945	15.997	151.105	2754.643	40.747	3.666
7.300	100680.7	10.036	15.961	151.277	2762.193	40.307	3.717
7.400	102195.6	10.123	15.921	151.446	2769.540	39.880	3.768
7.500	103712.4	10.208	15.879	151.616	2777.077	39.466	3.820
7.600	105231.0	10.289	15.838	151.788	2784.832	39.064	3.871
7.700	106751.1	10.368	15.792	151.956	2792.374	38.673	3.923
7.800	108272.8	10.443	15.740	152.121	2799.796	38.294	3.974
7.900	109796.4	10.516	15.691	152.291	2807.618	37.926	4.026
8.000	111321.6	10.587	15.638	152.458	2815.359	37.567	4.077
8.100	112848.6	10.655	15.583	152.629	2823.324	37.219	4.129
8.200	114377.2	10.720	15.522	152.796	2831.117	36.882	4.180
8.300	115907.5	10.783	15.460	152.966	2839.091	36.554	4.232
8.400	117439.5	10.843	15.395	153.136	2847.129	36.235	4.284
8.500	118973.1	10.901	15.328	153.306	2855.167	35.925	4.335
8.600	120508.5	10.957	15.258	153.477	2863.346	35.624	4.387
8.700	122045.6	11.010	15.185	153.647	2871.531	35.331	4.439
8.800	123584.3	11.062	15.110	153.818	2879.806	35.046	4.490
8.900	125124.9	11.111	15.033	153.989	2888.137	34.768	4.542
9.000	126667.0	11.158	14.954	154.159	2896.442	34.498	4.594
9.100	128210.9	11.203	14.870	154.330	2904.801	34.235	4.646
9.200	129756.5	11.246	14.787	154.502	2913.294	33.979	4.697
9.300	131303.8	11.287	14.701	154.670	2921.742	33.728	4.749
9.400	132852.8	11.326	14.613	154.841	2930.314	33.484	4.801
9.500	134403.7	11.363	14.524	155.014	2939.051	33.247	4.853
9.600	135956.1	11.399	14.430	155.185	2947.710	33.016	4.905
9.700	137510.1	11.432	14.335	155.356	2956.402	32.791	4.957
9.800	139066.3	11.464	14.239	155.530	2965.330	32.571	5.009

Trim (Positive by Stern) : 3.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	140623.8	11.494	14.140	155.703	2974.187	32.357	5.061
10.000	142183.0	11.522	14.038	155.876	2983.121	32.149	5.113
10.100	143744.3	11.549	13.935	156.052	2992.270	31.946	5.165
10.200	145307.1	11.574	13.829	156.228	3001.365	31.748	5.217
10.300	146871.7	11.597	13.721	156.405	3010.623	31.556	5.269
10.400	148437.6	11.619	13.612	156.582	3019.943	31.368	5.321
10.500	150005.9	11.639	13.501	156.761	3029.343	31.185	5.373
10.600	151576.3	11.657	13.381	156.946	3039.262	31.007	5.425
10.700	153147.9	11.674	13.265	157.126	3048.784	30.833	5.477
10.800	154721.6	11.689	13.149	157.306	3058.471	30.663	5.530
10.900	156297.1	11.703	13.031	157.488	3068.207	30.498	5.582
11.000	157876.0	11.717	12.918	157.678	3078.594	30.337	5.634
11.100	159455.1	11.728	12.795	157.861	3088.442	30.180	5.686
11.200	161036.2	11.738	12.672	158.044	3098.293	30.027	5.739
11.300	162619.1	11.746	12.546	158.228	3108.241	29.877	5.791
11.400	164203.9	11.753	12.419	158.411	3118.184	29.732	5.843
11.500	165790.5	11.759	12.275	158.593	3128.073	29.590	5.896
11.600	167379.1	11.763	12.143	158.780	3138.281	29.451	5.948
11.700	168969.4	11.766	12.009	158.966	3148.533	29.316	6.001
11.800	170561.6	11.767	11.873	159.154	3158.912	29.184	6.053
11.900	172155.7	11.767	11.735	159.342	3169.301	29.056	6.106
12.000	173751.6	11.766	11.595	159.531	3179.819	28.930	6.158
12.100	175349.5	11.764	11.453	159.721	3190.346	28.808	6.211
12.200	176949.5	11.760	11.301	159.918	3201.578	28.688	6.263
12.300	178551.2	11.755	11.154	160.111	3212.481	28.572	6.316
12.400	180154.9	11.749	11.006	160.304	3223.341	28.458	6.368
12.500	181760.6	11.742	10.856	160.496	3234.278	28.347	6.421
12.600	183368.1	11.733	10.706	160.688	3245.164	28.238	6.474
12.700	184977.7	11.723	10.547	160.887	3256.668	28.132	6.527
12.800	186589.2	11.712	10.393	161.082	3267.830	28.029	6.579
12.900	188202.7	11.700	10.240	161.274	3278.923	27.927	6.632
13.000	189818.0	11.687	10.085	161.466	3289.967	27.829	6.685
13.100	191435.3	11.673	9.920	161.666	3301.712	27.732	6.738
13.200	193054.6	11.657	9.761	161.861	3313.015	27.639	6.791
13.300	194675.7	11.640	9.601	162.056	3324.344	27.547	6.844
13.400	196298.9	11.623	9.441	162.250	3335.602	27.458	6.896
13.500	197924.2	11.604	9.270	162.453	3347.679	27.371	6.950
13.600	199551.4	11.584	9.105	162.649	3359.140	27.286	7.002
13.700	201180.4	11.563	8.940	162.844	3370.590	27.204	7.055
13.800	202811.6	11.541	8.765	163.050	3382.842	27.123	7.109
13.900	204444.8	11.518	8.596	163.247	3394.499	27.045	7.162
14.000	206079.9	11.494	8.427	163.443	3406.062	26.968	7.215
14.100	207717.1	11.469	8.250	163.647	3418.269	26.894	7.268
14.200	209356.1	11.443	8.078	163.843	3429.881	26.821	7.321
14.300	210997.5	11.416	7.901	164.030	3440.793	26.751	7.374
14.400	212640.5	11.388	7.802	164.156	3446.351	26.681	7.427
14.500	214284.7	11.360	7.632	164.351	3457.997	26.614	7.480
14.600	215930.7	11.331	7.464	164.544	3469.476	26.548	7.534
14.700	217578.6	11.301	7.298	164.733	3480.724	26.484	7.587
14.800	219228.7	11.270	7.124	164.930	3492.759	26.421	7.640
14.900	220880.6	11.238	6.959	165.118	3503.999	26.359	7.694
15.000	222533.8	11.206	6.796	165.301	3515.033	26.299	7.747
15.100	224189.5	11.172	6.624	165.493	3526.779	26.240	7.800
15.200	225846.8	11.138	6.461	165.675	3537.746	26.183	7.854
15.300	227506.0	11.103	6.292	165.846	3547.939	26.127	7.907
15.400	229167.1	11.067	6.124	166.034	3559.474	26.072	7.961
15.500	230829.9	11.031	5.964	166.213	3570.406	26.019	8.014
15.600	232494.5	10.993	5.805	166.390	3581.143	25.966	8.067
15.700	234161.0	10.955	5.639	166.573	3592.427	25.916	8.121
15.800	235829.2	10.917	5.479	166.750	3603.255	25.866	8.174
15.900	237499.1	10.877	5.321	166.924	3613.886	25.818	8.228
16.000	239170.8	10.838	5.164	167.096	3624.348	25.771	8.281
16.100	240844.3	10.797	4.990	167.271	3635.099	25.725	8.335
16.200	242519.5	10.757	4.832	167.444	3645.709	25.681	8.388
16.300	244196.4	10.715	4.676	167.615	3656.149	25.638	8.442
16.400	245875.1	10.673	4.511	167.794	3667.334	25.596	8.496
16.500	247555.5	10.631	4.353	167.965	3677.826	25.555	8.549
16.600	249237.6	10.588	4.196	168.133	3688.042	25.516	8.603
16.700	250921.6	10.544	4.025	168.300	3698.341	25.477	8.656

Trim (Positive by Stern) : 3.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	252607.0	10.500	3.869	168.467	3708.700	25.439	8.710
16.900	254294.0	10.456	3.715	168.632	3718.852	25.403	8.764
17.000	255982.9	10.410	3.554	168.802	3729.485	25.368	8.818
17.100	257673.3	10.365	3.399	168.964	3739.507	25.333	8.871
17.200	259365.1	10.319	3.239	169.115	3748.728	25.298	8.924
17.300	261058.7	10.272	3.090	169.271	3758.390	25.265	8.978
17.400	262754.0	10.225	2.932	169.436	3768.869	25.233	9.033
17.500	264450.7	10.178	2.782	169.590	3778.438	25.202	9.086
17.600	266148.8	10.130	2.627	169.731	3787.020	25.171	9.140
17.700	267848.7	10.082	2.475	169.889	3797.197	25.140	9.193
17.800	269549.8	10.033	2.330	170.038	3806.543	25.111	9.247
17.900	271252.5	9.985	2.188	170.183	3815.611	25.082	9.300
18.000	272956.9	9.935	2.029	170.324	3824.482	25.055	9.354
18.100	274662.3	9.886	1.889	170.469	3833.633	25.028	9.409
18.200	276369.4	9.836	1.751	170.610	3842.531	25.002	9.462
18.300	278077.7	9.786	1.615	170.748	3851.137	24.976	9.516
18.400	279787.3	9.735	1.479	170.880	3859.351	24.952	9.571
18.500	281498.3	9.685	1.343	171.005	3866.991	24.928	9.624
18.600	283210.5	9.634	1.217	171.134	3875.011	24.904	9.677
18.700	284924.1	9.583	1.092	171.260	3882.808	24.882	9.731
18.800	286638.8	9.531	0.970	171.382	3890.304	24.860	9.785
18.900	288354.7	9.480	0.842	171.493	3896.927	24.840	9.839
19.000	290071.7	9.429	0.726	171.610	3904.137	24.819	9.893
19.100	291789.5	9.377	0.613	171.724	3911.080	24.798	9.946
19.200	293509.1	9.325	0.502	171.833	3917.731	24.779	10.000
19.300	295229.4	9.273	0.385	171.928	3923.323	24.760	10.055
19.400	296950.8	9.222	0.282	172.032	3929.727	24.741	10.108
19.500	298673.3	9.170	0.182	172.133	3935.888	24.723	10.162
19.600	300396.3	9.118	0.085	172.230	3941.790	24.705	10.215
19.700	302120.4	9.066	-0.009	172.322	3947.420	24.687	10.269
19.800	303845.5	9.014	-0.112	172.399	3951.866	24.670	10.323
19.900	305571.5	8.962	-0.197	172.486	3957.207	24.653	10.376
20.000	307297.6	8.911	-0.279	172.569	3962.281	24.636	10.430
20.100	309025.2	8.859	-0.360	172.649	3967.161	24.622	10.485
20.200	310753.7	8.808	-0.437	172.725	3971.797	24.605	10.538
20.300	312482.8	8.756	-0.514	172.798	3976.194	24.589	10.591
20.400	314212.3	8.705	-0.601	172.852	3979.133	24.575	10.645
20.500	315942.8	8.654	-0.669	172.921	3983.359	24.561	10.699
20.600	317673.8	8.603	-0.736	172.989	3987.470	24.547	10.753
20.700	319405.5	8.552	-0.800	173.054	3991.412	24.533	10.806
20.800	321137.8	8.501	-0.864	173.117	3995.214	24.521	10.859
20.900	322870.8	8.451	-0.925	173.178	3998.837	24.508	10.913
21.000	324604.3	8.401	-0.985	173.236	4002.292	24.497	10.967
21.100	326338.4	8.351	-1.060	173.275	4004.201	24.486	11.020
21.200	328073.0	8.301	-1.114	173.333	4007.672	24.476	11.074
21.300	329808.2	8.251	-1.166	173.389	4011.031	24.465	11.128
21.400	331543.8	8.202	-1.215	173.443	4014.236	24.455	11.181
21.500	333280.1	8.153	-1.263	173.494	4017.309	24.446	11.234
21.600	335016.7	8.104	-1.309	173.545	4020.315	24.437	11.288
21.700	336753.9	8.055	-1.353	173.593	4023.176	24.428	11.341
21.800	338491.5	8.007	-1.396	173.639	4025.914	24.420	11.395
21.900	340229.5	7.959	-1.435	173.683	4028.487	24.413	11.448
22.000	341968.0	7.911	-1.473	173.724	4030.983	24.405	11.502
22.100	343706.8	7.863	-1.509	173.764	4033.367	24.398	11.555
22.200	345446.2	7.816	-1.543	173.803	4035.663	24.391	11.608
22.300	347185.8	7.769	-1.576	173.839	4037.846	24.384	11.661
22.400	348925.8	7.722	-1.606	173.874	4039.897	24.378	11.715
22.500	350666.2	7.676	-1.635	173.906	4041.856	24.372	11.768
22.600	352406.6	7.630	-1.661	173.937	4043.730	24.367	11.821
22.700	354147.7	7.584	-1.687	173.967	4045.531	24.362	11.875
22.800	355889.0	7.539	-1.710	173.996	4047.229	24.356	11.927
22.900	357630.3	7.494	-1.732	174.022	4048.815	24.353	11.981
23.000	359372.2	7.449	-1.753	174.047	4050.340	24.349	12.034
23.200	362856.5	7.360	-1.788	174.096	4053.266	24.342	12.140
23.400	366341.6	7.273	-1.817	174.138	4055.868	24.336	12.246
23.500	368084.4	7.230	-1.829	174.158	4057.085	24.334	12.299
23.600	369827.5	7.187	-1.839	174.178	4058.287	24.333	12.353
23.800	373314.2	7.103	-1.854	174.214	4060.512	24.331	12.459
24.000	376801.5	7.020	-1.863	174.244	4062.384	24.330	12.565

Trim (Positive by Stern) : 4.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	36827.4	-6.603	14.141	140.229	2332.914	89.557	1.587
3.100	38233.5	-5.838	14.256	140.660	2348.824	86.792	1.634
3.200	39644.0	-5.121	14.363	141.074	2364.102	84.204	1.681
3.300	41058.5	-4.448	14.455	141.475	2379.165	81.778	1.728
3.400	42476.8	-3.815	14.546	141.859	2393.489	79.500	1.776
3.500	43898.9	-3.219	14.633	142.228	2407.154	77.359	1.823
3.600	45324.6	-2.656	14.714	142.584	2420.231	75.342	1.871
3.700	46753.7	-2.124	14.791	142.930	2433.024	73.439	1.920
3.800	48186.0	-1.620	14.865	143.263	2445.323	71.641	1.968
3.900	49621.8	-1.142	14.931	143.584	2457.061	69.938	2.017
4.000	51060.8	-0.688	15.002	143.903	2468.976	68.325	2.065
4.100	52503.0	-0.256	15.064	144.209	2480.231	66.793	2.114
4.200	53948.1	0.155	15.127	144.510	2491.494	65.337	2.163
4.300	55396.2	0.547	15.184	144.799	2502.178	63.952	2.212
4.400	56847.1	0.921	15.241	145.082	2512.719	62.632	2.262
4.500	58300.9	1.279	15.294	145.354	2522.846	61.370	2.311
4.600	59757.3	1.621	15.344	145.622	2532.842	60.167	2.361
4.700	61216.3	1.949	15.393	145.882	2542.570	59.017	2.410
4.800	62677.9	2.263	15.439	146.136	2552.036	57.917	2.460
4.900	64142.0	2.564	15.482	146.383	2561.276	56.865	2.510
5.000	65608.5	2.853	15.521	146.623	2570.229	55.855	2.559
5.100	67077.4	3.130	15.558	146.860	2579.148	54.888	2.609
5.200	68548.8	3.397	15.591	147.093	2588.002	53.959	2.659
5.300	70022.3	3.654	15.619	147.322	2596.736	53.068	2.709
5.400	71498.1	3.901	15.642	147.545	2605.456	52.209	2.760
5.500	72976.1	4.139	15.660	147.767	2614.079	51.384	2.810
5.600	74456.4	4.368	15.677	147.988	2622.879	50.590	2.860
5.700	75938.7	4.588	15.684	148.198	2631.087	49.826	2.910
5.800	77423.4	4.802	15.696	148.417	2639.995	49.090	2.961
5.900	78910.0	5.007	15.699	148.628	2648.530	48.380	3.011
6.000	80398.8	5.204	15.699	148.838	2657.160	47.695	3.062
6.100	81889.6	5.395	15.695	149.044	2665.640	47.034	3.112
6.200	83382.5	5.579	15.686	149.245	2673.900	46.396	3.163
6.300	84877.4	5.757	15.678	149.448	2682.442	45.780	3.213
6.400	86374.3	5.929	15.667	149.650	2690.954	45.184	3.264
6.500	87873.3	6.095	15.653	149.845	2699.316	44.607	3.315
6.600	89374.1	6.255	15.636	150.041	2707.656	44.050	3.365
6.700	90876.2	6.410	15.616	150.234	2715.931	43.511	3.416
6.800	92381.0	6.559	15.595	150.427	2724.318	42.990	3.467
6.900	93887.6	6.704	15.571	150.618	2732.643	42.485	3.518
7.000	95396.2	6.844	15.546	150.807	2740.925	41.996	3.569
7.100	96906.5	6.979	15.516	150.994	2749.144	41.522	3.620
7.200	98418.8	7.110	15.484	151.180	2757.341	41.063	3.671
7.300	99932.9	7.236	15.451	151.367	2765.734	40.618	3.722
7.400	101449.0	7.359	15.414	151.552	2774.052	40.186	3.773
7.500	102966.4	7.477	15.374	151.737	2782.396	39.768	3.824
7.600	104486.0	7.592	15.330	151.920	2790.722	39.361	3.875
7.700	106007.5	7.702	15.283	152.103	2799.093	38.967	3.927
7.800	107530.8	7.809	15.232	152.286	2807.519	38.584	3.978
7.900	109056.1	7.912	15.182	152.469	2816.137	38.211	4.029
8.000	110582.9	8.012	15.123	152.649	2824.482	37.849	4.080
8.100	112111.9	8.109	15.066	152.833	2833.239	37.498	4.132
8.200	113642.6	8.202	15.005	153.016	2841.928	37.157	4.183
8.300	115175.0	8.292	14.939	153.198	2850.548	36.825	4.234
8.400	116709.3	8.378	14.871	153.380	2859.334	36.502	4.286
8.500	118245.4	8.462	14.801	153.563	2868.112	36.189	4.337
8.600	119783.5	8.543	14.730	153.746	2877.056	35.883	4.389
8.700	121323.4	8.621	14.656	153.930	2886.057	35.586	4.440
8.800	122865.1	8.696	14.580	154.113	2895.119	35.297	4.492
8.900	124408.5	8.768	14.501	154.297	2904.209	35.016	4.544
9.000	125953.9	8.838	14.420	154.479	2913.309	34.742	4.595
9.100	127500.9	8.905	14.338	154.660	2922.460	34.473	4.647
9.200	129049.9	8.970	14.251	154.843	2931.648	34.214	4.699
9.300	130600.6	9.031	14.163	155.026	2940.953	33.960	4.750
9.400	132153.2	9.091	14.072	155.209	2950.249	33.714	4.802
9.500	133707.7	9.148	13.980	155.392	2959.646	33.473	4.854
9.600	135264.0	9.203	13.885	155.575	2969.060	33.239	4.906
9.700	136822.0	9.256	13.786	155.759	2978.530	33.011	4.958
9.800	138382.0	9.306	13.686	155.944	2988.120	32.789	5.009

Trim (Positive by Stern) : 4.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	139943.7	9.354	13.583	156.129	2997.763	32.573	5.061
10.000	141507.4	9.400	13.479	156.315	3007.470	32.362	5.113
10.100	143073.3	9.443	13.367	156.506	3017.660	32.156	5.165
10.200	144640.7	9.485	13.257	156.694	3027.574	31.956	5.217
10.300	146209.9	9.525	13.146	156.883	3037.548	31.762	5.270
10.400	147781.2	9.563	13.032	157.071	3047.556	31.572	5.322
10.500	149354.3	9.598	12.917	157.260	3057.609	31.387	5.374
10.600	150929.2	9.632	12.801	157.448	3067.747	31.205	5.426
10.700	152506.2	9.664	12.682	157.638	3077.935	31.029	5.478
10.800	154084.8	9.694	12.562	157.829	3088.181	30.858	5.530
10.900	155665.6	9.722	12.440	158.019	3098.491	30.691	5.583
11.000	157248.6	9.749	12.312	158.216	3109.271	30.527	5.635
11.100	158832.9	9.774	12.185	158.410	3119.852	30.369	5.687
11.200	160419.5	9.797	12.057	158.604	3130.469	30.214	5.740
11.300	162008.0	9.818	11.926	158.799	3141.209	30.063	5.792
11.400	163598.5	9.838	11.794	158.995	3152.017	29.915	5.844
11.500	165192.5	9.857	11.669	159.200	3163.538	29.771	5.897
11.600	166787.0	9.874	11.533	159.398	3174.524	29.631	5.949
11.700	168383.6	9.888	11.388	159.603	3186.122	29.494	6.002
11.800	169982.1	9.902	11.247	159.803	3197.398	29.361	6.055
11.900	171582.7	9.913	11.103	160.004	3208.726	29.231	6.107
12.000	173184.8	9.924	10.950	160.197	3219.410	29.104	6.160
12.100	174789.3	9.932	10.804	160.397	3230.778	28.979	6.212
12.200	176396.1	9.939	10.651	160.604	3242.669	28.858	6.265
12.300	178004.6	9.945	10.501	160.806	3254.258	28.740	6.318
12.400	179615.3	9.949	10.350	161.008	3265.808	28.624	6.371
12.500	181227.9	9.952	10.200	161.208	3277.299	28.511	6.423
12.600	182842.7	9.953	10.040	161.415	3289.388	28.401	6.476
12.700	184459.5	9.953	9.886	161.616	3301.145	28.293	6.529
12.800	186078.3	9.952	9.730	161.818	3312.891	28.188	6.582
12.900	187699.0	9.949	9.573	162.019	3324.585	28.085	6.635
13.000	189321.9	9.945	9.407	162.230	3337.055	27.985	6.688
13.100	190946.9	9.939	9.246	162.433	3348.965	27.888	6.741
13.200	192573.8	9.933	9.085	162.634	3360.810	27.793	6.794
13.300	194202.8	9.924	8.915	162.846	3373.457	27.700	6.847
13.400	195834.1	9.915	8.750	163.052	3385.603	27.610	6.900
13.500	197467.2	9.905	8.584	163.255	3397.641	27.522	6.953
13.600	199102.4	9.893	8.411	163.466	3410.282	27.436	7.006
13.700	200739.7	9.880	8.243	163.671	3422.447	27.352	7.060
13.800	202379.0	9.866	8.077	163.873	3434.491	27.271	7.113
13.900	204019.9	9.851	7.975	164.012	3440.872	27.191	7.166
14.000	205663.1	9.835	7.811	164.208	3452.470	27.113	7.219
14.100	207307.8	9.818	7.644	164.407	3464.334	27.037	7.273
14.200	208954.2	9.800	7.479	164.603	3476.020	26.963	7.326
14.300	210603.0	9.781	7.305	164.806	3488.421	26.891	7.379
14.400	212253.6	9.761	7.139	165.000	3500.036	26.820	7.433
14.500	213906.0	9.740	6.976	165.190	3511.418	26.750	7.486
14.600	215560.6	9.718	6.804	165.388	3523.516	26.683	7.540
14.700	217217.0	9.695	6.640	165.575	3534.829	26.616	7.593
14.800	218875.5	9.671	6.471	165.751	3545.287	26.551	7.647
14.900	220535.6	9.646	6.303	165.943	3557.140	26.487	7.700
15.000	222197.4	9.621	6.143	166.128	3568.376	26.426	7.754
15.100	223861.1	9.594	5.984	166.310	3579.426	26.365	7.807
15.200	225526.9	9.567	5.818	166.497	3590.976	26.306	7.861
15.300	227194.2	9.539	5.659	166.678	3602.081	26.248	7.914
15.400	228863.5	9.510	5.501	166.857	3613.001	26.192	7.968
15.500	230534.4	9.480	5.344	167.033	3623.769	26.137	8.021
15.600	232207.5	9.449	5.177	167.219	3635.393	26.083	8.075
15.700	233882.0	9.418	5.019	167.395	3646.186	26.032	8.129
15.800	235558.3	9.386	4.862	167.568	3656.765	25.981	8.183
15.900	237236.6	9.353	4.691	167.745	3667.680	25.932	8.236
16.000	238916.4	9.320	4.534	167.921	3678.507	25.884	8.290
16.100	240598.0	9.286	4.379	168.093	3689.141	25.837	8.344
16.200	242281.5	9.251	4.216	168.274	3700.443	25.792	8.398
16.300	243966.7	9.215	4.060	168.446	3711.136	25.748	8.452
16.400	245653.5	9.179	3.907	168.616	3721.627	25.704	8.505
16.500	247342.1	9.143	3.746	168.792	3732.659	25.662	8.559
16.600	249032.4	9.105	3.585	168.952	3742.483	25.621	8.613
16.700	250724.2	9.068	3.434	169.118	3752.793	25.581	8.666

Trim (Positive by Stern) : 4.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	252417.8	9.029	3.285	169.280	3762.853	25.542	8.720
16.900	254113.1	8.990	3.127	169.451	3773.750	25.504	8.774
17.000	255809.9	8.951	2.979	169.610	3783.711	25.466	8.828
17.100	257507.6	8.911	2.833	169.765	3793.375	25.430	8.882
17.200	259207.6	8.870	2.671	169.921	3803.194	25.394	8.936
17.300	260909.2	8.829	2.526	170.075	3812.857	25.359	8.990
17.400	262612.2	8.788	2.385	170.224	3822.265	25.325	9.044
17.500	264316.7	8.746	2.235	170.380	3832.299	25.292	9.098
17.600	266022.8	8.704	2.093	170.526	3841.499	25.259	9.151
17.700	267730.2	8.661	1.946	170.661	3849.896	25.228	9.206
17.800	269439.1	8.618	1.810	170.802	3858.757	25.198	9.260
17.900	271149.3	8.575	1.677	170.940	3867.352	25.168	9.314
18.000	272860.9	8.531	1.545	171.073	3875.655	25.138	9.367
18.100	274573.7	8.487	1.408	171.193	3882.899	25.110	9.421
18.200	276287.8	8.442	1.283	171.322	3890.836	25.083	9.475
18.300	278003.1	8.398	1.160	171.447	3898.533	25.056	9.529
18.400	279719.7	8.353	1.039	171.568	3905.974	25.030	9.583
18.500	281437.5	8.308	0.920	171.684	3913.040	25.005	9.637
18.600	283156.2	8.263	0.797	171.792	3919.397	24.981	9.691
18.700	284876.3	8.217	0.685	171.904	3926.210	24.957	9.745
18.800	286597.3	8.172	0.575	172.012	3932.749	24.934	9.799
18.900	288319.4	8.126	0.467	172.115	3938.960	24.911	9.853
19.000	290042.5	8.080	0.356	172.209	3944.441	24.888	9.906
19.100	291766.6	8.034	0.256	172.307	3950.382	24.867	9.961
19.200	293491.7	7.988	0.159	172.402	3956.054	24.845	10.015
19.300	295217.3	7.942	0.064	172.491	3961.428	24.825	10.069
19.400	296944.1	7.896	-0.036	172.568	3965.823	24.803	10.122
19.500	298671.5	7.850	-0.123	172.651	3970.817	24.783	10.176
19.600	300399.7	7.803	-0.207	172.729	3975.529	24.764	10.230
19.700	302128.9	7.757	-0.289	172.804	3979.981	24.744	10.284
19.800	303858.7	7.711	-0.379	172.866	3983.378	24.725	10.338
19.900	305589.1	7.665	-0.454	172.937	3987.636	24.707	10.392
20.000	307320.2	7.619	-0.526	173.004	3991.667	24.688	10.445
20.100	309052.1	7.573	-0.597	173.069	3995.508	24.671	10.499
20.200	310784.4	7.528	-0.666	173.131	3999.167	24.654	10.553
20.300	312517.4	7.482	-0.744	173.179	4001.720	24.637	10.606
20.400	314250.9	7.436	-0.808	173.240	4005.299	24.623	10.661
20.500	315985.0	7.391	-0.869	173.298	4008.712	24.608	10.715
20.600	317719.8	7.346	-0.929	173.354	4011.981	24.592	10.768
20.700	319454.9	7.300	-0.988	173.408	4015.099	24.578	10.821
20.800	321190.6	7.255	-1.046	173.460	4018.058	24.565	10.876
20.900	322926.7	7.210	-1.117	173.494	4019.594	24.552	10.929
21.000	324663.5	7.165	-1.168	173.544	4022.479	24.539	10.982
21.100	326400.6	7.120	-1.218	173.591	4025.230	24.527	11.036
21.200	328138.0	7.076	-1.266	173.637	4027.875	24.515	11.089
21.300	329876.1	7.032	-1.313	173.682	4030.384	24.504	11.143
21.400	331614.4	6.988	-1.358	173.722	4032.708	24.494	11.197
21.500	333353.1	6.944	-1.401	173.761	4034.863	24.483	11.250
21.600	335092.3	6.901	-1.459	173.779	4035.431	24.473	11.304
21.700	336831.8	6.857	-1.497	173.817	4037.611	24.463	11.357
21.800	338571.5	6.814	-1.532	173.852	4039.672	24.453	11.410
21.900	340311.7	6.772	-1.565	173.886	4041.608	24.445	11.464
22.000	342052.1	6.729	-1.597	173.917	4043.442	24.436	11.517
22.100	343792.9	6.687	-1.627	173.947	4045.192	24.428	11.570
22.200	345533.9	6.645	-1.655	173.976	4046.844	24.419	11.623
22.300	347275.3	6.603	-1.682	174.002	4048.386	24.413	11.678
22.400	349016.6	6.562	-1.707	174.027	4049.817	24.406	11.731
22.500	350758.6	6.521	-1.730	174.051	4051.199	24.398	11.783
22.600	352500.5	6.480	-1.752	174.074	4052.503	24.392	11.837
22.700	354242.7	6.440	-1.772	174.095	4053.742	24.386	11.890
22.800	355985.0	6.399	-1.791	174.115	4054.885	24.380	11.943
22.900	357727.8	6.359	-1.809	174.133	4055.929	24.376	11.996
23.000	359470.5	6.320	-1.825	174.150	4056.900	24.371	12.050
23.200	362956.5	6.241	-1.852	174.181	4058.663	24.361	12.155
23.400	366443.0	6.164	-1.873	174.206	4060.081	24.356	12.262
23.500	368186.4	6.126	-1.882	174.216	4060.660	24.352	12.315
23.600	369930.0	6.089	-1.888	174.226	4061.213	24.350	12.368
23.800	373416.5	6.014	-1.895	174.242	4062.054	24.346	12.473
24.000	376904.2	5.941	-1.896	174.253	4062.677	24.343	12.579

Trim (Positive by Stern) : 5.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
3.000	36233.6	-13.272	12.739	139.324	2289.163	90.444	1.658
3.100	37631.5	-12.301	12.949	139.839	2309.126	87.661	1.701
3.200	39033.6	-11.389	13.122	140.310	2326.919	85.053	1.745
3.300	40440.8	-10.533	13.289	140.764	2344.272	82.602	1.790
3.400	41852.2	-9.726	13.436	141.190	2360.377	80.297	1.835
3.500	43267.8	-8.966	13.569	141.595	2375.570	78.129	1.880
3.600	44687.3	-8.248	13.694	141.984	2390.136	76.086	1.926
3.700	46110.6	-7.569	13.812	142.360	2404.229	74.157	1.972
3.800	47537.6	-6.925	13.920	142.720	2417.633	72.334	2.018
3.900	48968.1	-6.314	14.023	143.069	2430.607	70.608	2.065
4.000	50402.0	-5.734	14.119	143.404	2443.021	68.973	2.112
4.100	51839.3	-5.183	14.212	143.732	2455.231	67.421	2.159
4.200	53279.7	-4.657	14.299	144.049	2466.975	65.946	2.206
4.300	54723.2	-4.156	14.379	144.354	2478.233	64.542	2.254
4.400	56169.7	-3.678	14.455	144.651	2489.174	63.205	2.302
4.500	57619.3	-3.220	14.534	144.945	2500.251	61.930	2.349
4.600	59071.6	-2.783	14.603	145.228	2510.835	60.712	2.398
4.700	60526.8	-2.364	14.671	145.508	2521.447	59.547	2.446
4.800	61984.7	-1.963	14.729	145.780	2531.806	58.434	2.494
4.900	63445.3	-1.578	14.786	146.049	2542.191	57.367	2.543
5.000	64908.5	-1.209	14.837	146.312	2552.393	56.345	2.591
5.100	66374.3	-0.854	14.878	146.569	2562.374	55.366	2.640
5.200	67842.7	-0.513	14.917	146.823	2572.367	54.426	2.689
5.300	69313.7	-0.185	14.958	147.076	2582.635	53.521	2.738
5.400	70787.1	0.130	14.990	147.324	2592.587	52.653	2.787
5.500	72263.0	0.434	15.016	147.567	2602.408	51.819	2.836
5.600	73741.2	0.726	15.036	147.805	2612.057	51.017	2.886
5.700	75221.8	1.008	15.052	148.041	2621.671	50.244	2.935
5.800	76704.9	1.280	15.071	148.278	2631.561	49.499	2.985
5.900	78190.2	1.542	15.080	148.506	2641.012	48.781	3.034
6.000	79677.9	1.794	15.088	148.734	2650.524	48.089	3.084
6.100	81167.7	2.038	15.090	148.957	2659.915	47.421	3.134
6.200	82659.7	2.274	15.087	149.175	2669.014	46.776	3.184
6.300	84154.0	2.501	15.086	149.393	2678.463	46.151	3.234
6.400	85650.4	2.721	15.079	149.607	2687.632	45.548	3.284
6.500	87148.6	2.933	15.069	149.817	2696.691	44.965	3.334
6.600	88649.1	3.138	15.055	150.025	2705.686	44.401	3.384
6.700	90151.7	3.336	15.038	150.230	2714.644	43.855	3.434
6.800	91656.5	3.528	15.023	150.438	2723.897	43.326	3.485
6.900	93163.3	3.714	15.000	150.641	2732.882	42.815	3.535
7.000	94672.1	3.894	14.977	150.845	2742.038	42.319	3.585
7.100	96183.0	4.067	14.950	151.047	2751.114	41.840	3.636
7.200	97695.8	4.235	14.919	151.248	2760.178	41.375	3.686
7.300	99210.6	4.398	14.884	151.448	2769.284	40.925	3.737
7.400	100727.4	4.556	14.849	151.651	2778.621	40.489	3.788
7.500	102246.3	4.708	14.809	151.852	2787.859	40.066	3.838
7.600	103767.1	4.856	14.763	152.051	2797.019	39.656	3.889
7.700	105289.8	4.998	14.713	152.245	2806.023	39.257	3.940
7.800	106814.8	5.137	14.667	152.448	2815.648	38.871	3.991
7.900	108341.8	5.271	14.615	152.649	2825.166	38.495	4.042
8.000	109870.7	5.400	14.559	152.847	2834.605	38.131	4.093
8.100	111401.4	5.525	14.499	153.045	2844.050	37.777	4.144
8.200	112934.2	5.646	14.435	153.242	2853.510	37.433	4.195
8.300	114469.0	5.764	14.371	153.440	2863.113	37.097	4.246
8.400	116005.8	5.877	14.301	153.635	2872.519	36.771	4.297
8.500	117544.5	5.987	14.231	153.832	2882.239	36.454	4.348
8.600	119085.1	6.093	14.157	154.028	2891.883	36.145	4.400
8.700	120627.6	6.195	14.078	154.220	2901.355	35.844	4.451
8.800	122172.1	6.294	13.999	154.414	2911.051	35.551	4.502
8.900	123718.6	6.390	13.919	154.607	2920.876	35.265	4.554
9.000	125267.2	6.482	13.837	154.804	2930.850	34.988	4.605
9.100	126816.9	6.571	13.749	154.996	2940.574	34.717	4.657
9.200	128369.0	6.657	13.658	155.188	2950.305	34.454	4.708
9.300	129924.0	6.741	13.576	155.391	2960.932	34.197	4.760
9.400	131479.6	6.821	13.483	155.587	2971.083	33.948	4.811
9.500	133037.9	6.899	13.388	155.784	2981.257	33.705	4.863
9.600	134598.0	6.973	13.290	155.980	2991.482	33.468	4.915
9.700	136160.7	7.044	13.184	156.182	3002.207	33.237	4.967
9.800	137724.7	7.113	13.081	156.380	3012.590	33.013	5.018

Trim (Positive by Stern) : 5.000 (m)

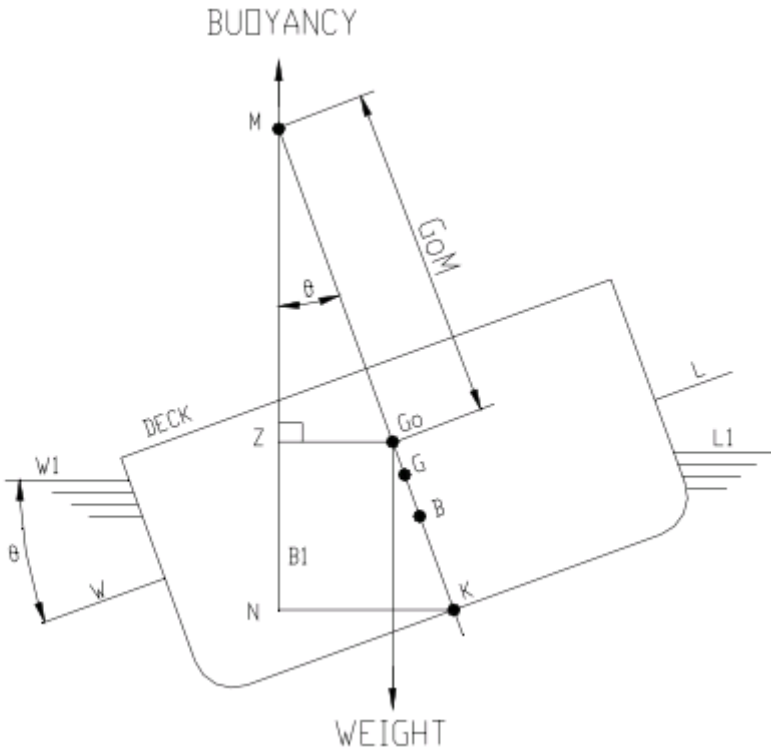
Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
9.900	139290.8	7.180	12.975	156.578	3023.068	32.794	5.070
10.000	140859.0	7.243	12.868	156.777	3033.563	32.581	5.122
10.100	142429.1	7.304	12.758	156.975	3044.100	32.374	5.174
10.200	144001.3	7.363	12.646	157.174	3054.698	32.171	5.226
10.300	145575.4	7.420	12.533	157.373	3065.306	31.974	5.278
10.400	147151.3	7.473	12.418	157.570	3075.988	31.781	5.330
10.500	148729.5	7.525	12.301	157.769	3086.672	31.593	5.382
10.600	150309.9	7.574	12.175	157.975	3097.985	31.411	5.434
10.700	151892.0	7.621	12.052	158.176	3108.954	31.233	5.487
10.800	153476.1	7.666	11.928	158.378	3119.983	31.059	5.539
10.900	155062.4	7.709	11.801	158.581	3131.115	30.890	5.591
11.000	156650.6	7.749	11.673	158.784	3142.281	30.725	5.643
11.100	158240.8	7.788	11.542	158.989	3153.576	30.564	5.696
11.200	159833.5	7.824	11.403	159.200	3165.455	30.407	5.748
11.300	161427.8	7.859	11.266	159.408	3177.085	30.254	5.800
11.400	163024.5	7.891	11.128	159.616	3188.741	30.105	5.853
11.500	164623.1	7.922	10.988	159.825	3200.491	29.960	5.906
11.600	166223.8	7.951	10.847	160.034	3212.273	29.818	5.958
11.700	167826.5	7.977	10.705	160.243	3224.048	29.679	6.011
11.800	169431.7	8.002	10.554	160.460	3236.577	29.544	6.063
11.900	171038.7	8.025	10.408	160.671	3248.608	29.412	6.116
12.000	172649.6	8.048	10.270	160.889	3261.249	29.283	6.169
12.100	174261.0	8.068	10.123	161.098	3273.244	29.157	6.221
12.200	175874.6	8.085	9.966	161.316	3286.077	29.034	6.274
12.300	177490.2	8.102	9.815	161.526	3298.262	28.913	6.327
12.400	179108.0	8.116	9.663	161.736	3310.447	28.796	6.380
12.500	180728.0	8.129	9.502	161.952	3323.294	28.681	6.433
12.600	182350.0	8.140	9.337	162.156	3335.062	28.569	6.486
12.700	183974.2	8.150	9.181	162.366	3347.390	28.460	6.539
12.800	185600.5	8.158	9.016	162.584	3360.383	28.354	6.592
12.900	187229.0	8.165	8.855	162.796	3372.959	28.250	6.645
13.000	188859.6	8.170	8.694	163.008	3385.481	28.149	6.698
13.100	190492.3	8.173	8.525	163.226	3398.552	28.050	6.751
13.200	192127.2	8.176	8.360	163.438	3411.204	27.954	6.804
13.300	193764.2	8.176	8.197	163.649	3423.723	27.860	6.858
13.400	195403.2	8.176	8.096	163.797	3430.745	27.768	6.911
13.500	197043.8	8.174	7.938	164.000	3442.680	27.679	6.964
13.600	198686.3	8.171	7.774	164.207	3455.039	27.592	7.017
13.700	200331.0	8.167	7.611	164.412	3467.265	27.506	7.071
13.800	201977.6	8.162	7.440	164.624	3480.193	27.423	7.124
13.900	203626.5	8.155	7.277	164.827	3492.381	27.342	7.178
14.000	205277.4	8.147	7.116	165.026	3504.314	27.262	7.231
14.100	206929.5	8.139	6.947	165.232	3516.915	27.185	7.284
14.200	208584.3	8.128	6.786	165.430	3528.834	27.109	7.338
14.300	210241.1	8.117	6.627	165.623	3540.518	27.034	7.391
14.400	211900.0	8.105	6.460	165.823	3552.783	26.961	7.445
14.500	213560.5	8.091	6.300	166.014	3564.424	26.890	7.498
14.600	215223.1	8.077	6.143	166.201	3575.872	26.820	7.552
14.700	216887.6	8.061	5.978	166.395	3587.821	26.751	7.606
14.800	218554.0	8.044	5.819	166.582	3599.266	26.685	7.659
14.900	220222.1	8.027	5.662	166.765	3610.494	26.619	7.713
15.000	221892.3	8.008	5.507	166.946	3621.546	26.556	7.767
15.100	223564.3	7.989	5.340	167.137	3633.504	26.494	7.820
15.200	225237.9	7.968	5.182	167.318	3644.598	26.433	7.874
15.300	226913.9	7.947	5.018	167.487	3654.806	26.374	7.928
15.400	228591.3	7.925	4.854	167.675	3666.612	26.317	7.982
15.500	230270.4	7.902	4.698	167.854	3677.689	26.261	8.035
15.600	231951.3	7.878	4.544	168.032	3688.613	26.206	8.089
15.700	233634.2	7.853	4.381	168.216	3700.235	26.153	8.143
15.800	235318.6	7.828	4.225	168.393	3711.212	26.101	8.197
15.900	237004.8	7.801	4.072	168.567	3721.979	26.050	8.251
16.000	238692.9	7.774	3.911	168.748	3733.385	26.001	8.305
16.100	240382.8	7.747	3.757	168.921	3744.150	25.953	8.359
16.200	242074.3	7.718	3.605	169.090	3754.674	25.906	8.413
16.300	243767.5	7.689	3.447	169.264	3765.695	25.860	8.466
16.400	245462.5	7.659	3.289	169.425	3775.576	25.816	8.521
16.500	247159.1	7.628	3.141	169.590	3785.908	25.771	8.574
16.600	248857.1	7.597	2.997	169.751	3795.986	25.729	8.629
16.700	250557.0	7.565	2.842	169.921	3806.898	25.686	8.682

Trim (Positive by Stern) : 5.000 (m)

Dk (m)	DispS (MT)	LCB (m)	LCF (m)	TPC (MT/cm)	MCT (MT-m/cm)	KMT (m)	VCB (m)
16.800	252258.5	7.533	2.698	170.080	3816.913	25.646	8.737
16.900	253961.4	7.500	2.557	170.234	3826.650	25.605	8.790
17.000	255666.2	7.466	2.407	170.397	3837.111	25.566	8.845
17.100	257372.4	7.432	2.265	170.548	3846.647	25.528	8.899
17.200	259080.0	7.397	2.122	170.690	3855.523	25.491	8.953
17.300	260789.0	7.362	1.987	170.835	3864.706	25.454	9.007
17.400	262499.4	7.327	1.855	170.977	3873.638	25.419	9.061
17.500	264211.3	7.291	1.725	171.115	3882.350	25.384	9.115
17.600	265924.5	7.254	1.598	171.250	3890.698	25.351	9.169
17.700	267639.1	7.218	1.472	171.379	3898.709	25.318	9.223
17.800	269354.9	7.181	1.343	171.501	3906.082	25.286	9.277
17.900	271072.0	7.143	1.224	171.626	3913.795	25.254	9.331
18.000	272790.3	7.106	1.106	171.748	3921.257	25.224	9.385
18.100	274509.8	7.068	0.990	171.866	3928.420	25.195	9.440
18.200	276230.4	7.029	0.868	171.972	3934.662	25.166	9.493
18.300	277952.0	6.991	0.759	172.084	3941.455	25.138	9.548
18.400	279674.9	6.952	0.651	172.192	3947.992	25.110	9.601
18.500	281398.7	6.913	0.546	172.297	3954.242	25.083	9.655
18.600	283123.4	6.874	0.442	172.396	3960.144	25.057	9.709
18.700	284849.2	6.835	0.336	172.485	3965.268	25.032	9.763
18.800	286575.9	6.795	0.240	172.578	3970.861	25.007	9.818
18.900	288303.6	6.756	0.147	172.667	3976.148	24.982	9.872
19.000	290032.0	6.716	0.056	172.751	3981.073	24.958	9.926
19.100	291761.0	6.676	-0.039	172.823	3985.149	24.934	9.980
19.200	293491.1	6.636	-0.122	172.901	3989.730	24.910	10.033
19.300	295221.9	6.596	-0.203	172.974	3994.069	24.887	10.087
19.400	296952.9	6.556	-0.283	173.044	3998.110	24.864	10.141
19.500	298685.1	6.516	-0.367	173.103	4001.391	24.842	10.195
19.600	300417.8	6.477	-0.439	173.168	4005.218	24.822	10.250
19.700	302151.3	6.437	-0.510	173.231	4008.837	24.800	10.303
19.800	303885.0	6.397	-0.580	173.290	4012.254	24.780	10.357
19.900	305619.5	6.357	-0.656	173.338	4014.753	24.760	10.411
20.000	307354.5	6.317	-0.721	173.395	4018.007	24.741	10.465
20.100	309090.1	6.278	-0.784	173.449	4021.073	24.723	10.519
20.200	310826.2	6.238	-0.847	173.500	4023.953	24.705	10.573
20.300	312562.8	6.198	-0.918	173.539	4025.822	24.687	10.626
20.400	314299.7	6.159	-0.975	173.589	4028.656	24.671	10.680
20.500	316037.3	6.120	-1.031	173.637	4031.334	24.655	10.733
20.600	317775.0	6.080	-1.085	173.683	4033.832	24.639	10.787
20.700	319513.4	6.041	-1.137	173.726	4036.193	24.624	10.840
20.800	321251.4	6.002	-1.200	173.755	4037.434	24.611	10.895
20.900	322990.5	5.964	-1.247	173.796	4039.744	24.596	10.948
21.000	324729.9	5.925	-1.293	173.836	4041.902	24.582	11.001
21.100	326469.7	5.886	-1.337	173.872	4043.875	24.569	11.055
21.200	328210.1	5.848	-1.379	173.906	4045.716	24.557	11.110
21.300	329950.5	5.810	-1.421	173.937	4047.384	24.544	11.163
21.400	331691.2	5.772	-1.475	173.950	4047.634	24.531	11.216
21.500	333432.2	5.734	-1.510	173.981	4049.291	24.519	11.269
21.600	335173.4	5.696	-1.544	174.008	4050.812	24.509	11.323
21.700	336915.0	5.658	-1.577	174.035	4052.232	24.498	11.377
21.800	338656.8	5.621	-1.608	174.059	4053.518	24.487	11.429
21.900	340398.9	5.584	-1.637	174.080	4054.685	24.478	11.484
22.000	342141.1	5.547	-1.666	174.100	4055.696	24.468	11.537
22.100	343883.6	5.511	-1.710	174.100	4055.155	24.459	11.590
22.200	345625.9	5.474	-1.733	174.120	4056.264	24.449	11.643
22.300	347368.5	5.438	-1.755	174.139	4057.269	24.442	11.697
22.400	349111.5	5.402	-1.775	174.156	4058.183	24.434	11.750
22.500	350854.4	5.367	-1.793	174.171	4059.008	24.426	11.803
22.600	352597.6	5.331	-1.810	174.186	4059.776	24.419	11.856
22.700	354340.8	5.296	-1.826	174.199	4060.462	24.412	11.910
22.800	356084.1	5.261	-1.841	174.210	4061.053	24.405	11.962
22.900	357827.6	5.227	-1.854	174.220	4061.543	24.399	12.015
23.000	359571.2	5.192	-1.865	174.229	4061.971	24.394	12.069
23.200	363058.4	5.124	-1.883	174.243	4062.595	24.383	12.174
23.400	366546.1	5.058	-1.894	174.250	4062.842	24.376	12.281
23.500	368289.7	5.025	-1.898	174.252	4062.885	24.371	12.333
23.600	370033.5	4.992	-1.901	174.254	4062.919	24.368	12.386
23.800	373520.9	4.928	-1.905	174.257	4062.915	24.363	12.492
24.000	377008.6	4.865	-1.906	174.258	4062.918	24.359	12.598

7.5 Cross Curves of Stability

KG assumed at 0.000 m above Base Line
Calculations Performed with Free Trim Effect



B - Center of buoyancy of vessel floating at waterline W.L.

B_1 - Center of buoyancy of vessel floating at waterline $W_1.L_1$.

G - Center of Gravity of vessel. (Solid)

Go - Virtual center of gravity of vessel. (Fluid)

M - Transverse metacenter for waterline WL

GM - Metacenter height (Solid)

K - Top of keel. (i.e. Moulded)

KN - Righting Lever of vessel calculated about the keel

GoM - Metacenter Height (Fluid)

KGo - Virtual KG = KG + Free Surface Allowance

GoZ - KN-KGo Sin θ

KN TABLE

Trim (Positive by Stern) : -2.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.258	8.001	13.458	16.298	18.027	19.134	19.819	20.191	20.318	20.252	20.028	19.694	19.299	18.906	18.631
40000.000	2.911	7.188	12.661	15.636	17.493	18.713	19.504	19.976	20.203	20.232	20.104	19.871	19.574	19.292	19.072
45000.000	2.637	6.536	11.932	15.027	16.995	18.318	19.208	19.775	20.093	20.213	20.175	20.031	19.827	19.643	19.433
50000.000	2.416	6.002	11.260	14.462	16.525	17.945	18.926	19.584	19.989	20.194	20.247	20.181	20.068	19.952	19.719
55000.000	2.233	5.558	10.639	13.938	16.086	17.594	18.661	19.403	19.890	20.175	20.306	20.327	20.296	20.215	19.942
60000.000	2.080	5.183	10.063	13.446	15.674	17.259	18.408	19.230	19.796	20.160	20.368	20.462	20.505	20.428	20.113
65000.000	1.950	4.862	9.529	12.984	15.287	16.942	18.169	19.064	19.705	20.144	20.421	20.592	20.689	20.599	20.245
70000.000	1.838	4.585	9.038	12.548	14.921	16.643	17.939	18.905	19.619	20.126	20.475	20.715	20.843	20.731	20.346
75000.000	1.740	4.344	8.597	12.136	14.575	16.360	17.719	18.754	19.535	20.110	20.523	20.830	20.969	20.832	20.421
80000.000	1.655	4.132	8.202	11.744	14.246	16.091	17.509	18.611	19.453	20.091	20.571	20.930	21.066	20.906	20.476
85000.000	1.579	3.944	7.849	11.372	13.933	15.835	17.309	18.470	19.376	20.075	20.617	21.012	21.137	20.959	20.514
90000.000	1.512	3.778	7.532	11.018	13.634	15.592	17.119	18.335	19.300	20.058	20.660	21.076	21.186	20.994	20.537
95000.000	1.452	3.629	7.246	10.680	13.348	15.359	16.938	18.207	19.227	20.042	20.697	21.120	21.217	21.013	20.549
100000.000	1.398	3.496	6.987	10.359	13.074	15.135	16.763	18.082	19.157	20.025	20.725	21.147	21.231	21.020	20.550
105000.000	1.350	3.376	6.753	10.055	12.812	14.921	16.597	17.963	19.087	20.009	20.742	21.157	21.233	21.015	20.542
110000.000	1.306	3.267	6.540	9.769	12.559	14.716	16.438	17.850	19.021	19.994	20.747	21.153	21.222	21.001	20.527
115000.000	1.266	3.168	6.347	9.503	12.317	14.518	16.285	17.741	18.956	19.979	20.741	21.138	21.201	20.978	20.505
120000.000	1.230	3.079	6.171	9.257	12.083	14.327	16.138	17.635	18.894	19.958	20.722	21.111	21.171	20.947	20.478
125000.000	1.198	2.997	6.009	9.030	11.858	14.143	15.996	17.533	18.835	19.932	20.692	21.074	21.132	20.910	20.445
130000.000	1.168	2.922	5.862	8.819	11.642	13.966	15.858	17.436	18.778	19.899	20.653	21.029	21.087	20.867	20.408
135000.000	1.140	2.854	5.727	8.624	11.433	13.796	15.727	17.343	18.724	19.859	20.605	20.977	21.035	20.820	20.366
140000.000	1.115	2.792	5.603	8.444	11.233	13.630	15.599	17.252	18.671	19.812	20.550	20.918	20.977	20.768	20.322
145000.000	1.093	2.734	5.489	8.277	11.040	13.470	15.475	17.165	18.618	19.758	20.488	20.855	20.915	20.712	20.274
150000.000	1.071	2.681	5.384	8.122	10.857	13.315	15.355	17.082	18.563	19.697	20.420	20.786	20.849	20.651	20.223
155000.000	1.052	2.633	5.288	7.979	10.684	13.166	15.240	17.000	18.505	19.631	20.347	20.712	20.779	20.589	20.170
160000.000	1.034	2.588	5.198	7.847	10.521	13.020	15.128	16.923	18.444	19.559	20.270	20.635	20.706	20.523	20.115
165000.000	1.018	2.547	5.116	7.725	10.368	12.880	15.019	16.847	18.379	19.482	20.187	20.554	20.631	20.456	20.059
170000.000	1.003	2.509	5.041	7.612	10.224	12.743	14.914	16.774	18.309	19.402	20.101	20.470	20.553	20.386	20.000
175000.000	0.989	2.475	4.971	7.507	10.090	12.610	14.811	16.702	18.236	19.317	20.012	20.384	20.472	20.315	19.940
180000.000	0.976	2.443	4.906	7.410	9.964	12.483	14.712	16.630	18.158	19.229	19.920	20.294	20.390	20.243	19.879
185000.000	0.964	2.413	4.847	7.321	9.846	12.359	14.615	16.557	18.076	19.138	19.826	20.203	20.307	20.169	19.817
190000.000	0.953	2.386	4.792	7.238	9.736	12.239	14.521	16.482	17.991	19.044	19.730	20.109	20.222	20.094	19.754
195000.000	0.943	2.361	4.741	7.161	9.633	12.125	14.431	16.406	17.903	18.948	19.631	20.014	20.135	20.019	19.691
200000.000	0.934	2.338	4.695	7.090	9.537	12.016	14.342	16.327	17.811	18.849	19.531	19.918	20.047	19.942	19.627
205000.000	0.926	2.316	4.652	7.024	9.448	11.912	14.256	16.245	17.717	18.748	19.430	19.820	19.958	19.864	19.562
210000.000	0.918	2.297	4.612	6.963	9.366	11.814	14.173	16.160	17.620	18.646	19.327	19.722	19.867	19.786	19.497
215000.000	0.911	2.279	4.576	6.907	9.289	11.721	14.091	16.072	17.521	18.541	19.223	19.623	19.776	19.707	19.431
220000.000	0.904	2.263	4.542	6.855	9.217	11.634	14.010	15.982	17.419	18.435	19.118	19.523	19.684	19.627	19.365

KN TABLE

Trim (Positive by Stern) : -2.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
225000.000	0.898	2.248	4.511	6.807	9.151	11.552	13.928	15.888	17.315	18.328	19.012	19.422	19.592	19.546	19.299
230000.000	0.893	2.234	4.483	6.763	9.089	11.474	13.847	15.792	17.209	18.219	18.905	19.321	19.499	19.465	19.232
235000.000	0.888	2.221	4.457	6.722	9.032	11.402	13.765	15.694	17.102	18.109	18.798	19.219	19.406	19.383	19.165
240000.000	0.883	2.210	4.433	6.685	8.979	11.334	13.683	15.593	16.993	17.998	18.690	19.117	19.313	19.301	19.098
245000.000	0.879	2.199	4.411	6.650	8.931	11.271	13.599	15.491	16.882	17.886	18.581	19.014	19.219	19.219	19.029
250000.000	0.875	2.189	4.391	6.618	8.886	11.213	13.515	15.386	16.770	17.773	18.472	18.912	19.126	19.137	18.961
255000.000	0.872	2.181	4.373	6.589	8.844	11.159	13.430	15.279	16.656	17.659	18.362	18.809	19.033	19.055	18.892
260000.000	0.868	2.173	4.356	6.562	8.806	11.108	13.344	15.171	16.541	17.544	18.251	18.706	18.939	18.973	18.824
265000.000	0.866	2.166	4.341	6.537	8.771	11.061	13.258	15.062	16.425	17.429	18.140	18.602	18.846	18.892	18.756
270000.000	0.863	2.159	4.327	6.515	8.738	11.016	13.171	14.950	16.308	17.312	18.028	18.499	18.753	18.810	18.687
275000.000	0.861	2.153	4.315	6.495	8.709	10.972	13.084	14.838	16.190	17.195	17.916	18.395	18.659	18.729	18.619
280000.000	0.859	2.148	4.304	6.476	8.682	10.930	12.996	14.724	16.070	17.077	17.804	18.291	18.566	18.648	18.552
285000.000	0.857	2.143	4.293	6.460	8.658	10.887	12.909	14.610	15.950	16.958	17.691	18.187	18.473	18.567	18.484
290000.000	0.855	2.139	4.284	6.445	8.636	10.844	12.821	14.495	15.829	16.839	17.577	18.082	18.379	18.486	18.417
295000.000	0.854	2.135	4.276	6.431	8.616	10.800	12.734	14.380	15.708	16.719	17.464	17.977	18.286	18.405	18.350
300000.000	0.852	2.132	4.269	6.419	8.598	10.755	12.646	14.265	15.585	16.599	17.349	17.872	18.192	18.325	18.283
305000.000	0.851	2.129	4.262	6.408	8.582	10.708	12.559	14.150	15.462	16.478	17.235	17.767	18.098	18.244	18.217
310000.000	0.850	2.126	4.257	6.399	8.568	10.660	12.472	14.036	15.338	16.356	17.120	17.662	18.004	18.163	18.150
315000.000	0.849	2.124	4.252	6.391	8.555	10.610	12.385	13.921	15.214	16.234	17.004	17.556	17.910	18.082	18.083
320000.000	0.849	2.122	4.247	6.384	8.543	10.559	12.298	13.808	15.089	16.111	16.888	17.449	17.816	18.001	18.017
325000.000	0.848	2.121	4.244	6.378	8.529	10.506	12.211	13.695	14.964	15.987	16.772	17.343	17.721	17.920	17.950
330000.000	0.848	2.119	4.241	6.373	8.515	10.452	12.124	13.582	14.839	15.864	16.655	17.236	17.626	17.838	17.883
335000.000	0.847	2.118	4.239	6.369	8.498	10.396	12.037	13.471	14.714	15.739	16.537	17.129	17.531	17.757	17.816
340000.000	0.847	2.118	4.237	6.366	8.479	10.339	11.949	13.360	14.589	15.614	16.420	17.021	17.436	17.675	17.749
345000.000	0.847	2.117	4.236	6.364	8.456	10.280	11.862	13.250	14.465	15.489	16.302	16.913	17.340	17.593	17.682
350000.000	0.847	2.117	4.236	6.363	8.431	10.219	11.774	13.140	14.342	15.364	16.183	16.805	17.244	17.511	17.614
355000.000	0.847	2.117	4.236	6.363	8.403	10.157	11.685	13.032	14.219	15.238	16.064	16.696	17.147	17.428	17.547
360000.000	0.847	2.117	4.236	6.363	8.371	10.093	11.597	12.924	14.097	15.113	15.945	16.587	17.051	17.345	17.479

KN TABLE

Trim (Positive by Stern) : -1.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.264	8.019	13.481	16.317	18.067	19.180	19.861	20.232	20.360	20.292	20.070	19.734	19.338	18.952	18.676
40000.000	2.917	7.202	12.681	15.647	17.516	18.748	19.541	20.013	20.240	20.270	20.144	19.910	19.612	19.327	19.142
45000.000	2.642	6.548	11.951	15.034	17.005	18.342	19.239	19.807	20.129	20.249	20.216	20.075	19.874	19.685	19.513
50000.000	2.421	6.014	11.280	14.470	16.531	17.962	18.954	19.616	20.024	20.234	20.286	20.226	20.109	20.007	19.797
55000.000	2.238	5.569	10.659	13.946	16.091	17.603	18.684	19.434	19.925	20.213	20.351	20.368	20.335	20.278	20.015
60000.000	2.084	5.193	10.083	13.456	15.679	17.266	18.429	19.261	19.830	20.195	20.406	20.505	20.548	20.495	20.182
65000.000	1.953	4.871	9.547	12.996	15.293	16.950	18.184	19.094	19.740	20.181	20.463	20.630	20.739	20.663	20.310
70000.000	1.841	4.594	9.055	12.562	14.929	16.652	17.952	18.934	19.653	20.164	20.512	20.752	20.898	20.792	20.406
75000.000	1.743	4.352	8.613	12.151	14.584	16.369	17.732	18.780	19.570	20.146	20.563	20.868	21.025	20.890	20.478
80000.000	1.658	4.139	8.218	11.761	14.258	16.102	17.522	18.631	19.486	20.128	20.608	20.972	21.120	20.961	20.530
85000.000	1.582	3.952	7.864	11.390	13.946	15.848	17.324	18.490	19.408	20.110	20.651	21.059	21.189	21.011	20.564
90000.000	1.515	3.785	7.547	11.037	13.650	15.605	17.134	18.354	19.329	20.093	20.694	21.125	21.236	21.043	20.585
95000.000	1.455	3.637	7.261	10.701	13.365	15.373	16.953	18.225	19.256	20.074	20.733	21.169	21.266	21.061	20.595
100000.000	1.401	3.503	7.002	10.381	13.093	15.152	16.780	18.101	19.181	20.055	20.763	21.194	21.279	21.065	20.594
105000.000	1.353	3.383	6.768	10.076	12.832	14.939	16.615	17.983	19.109	20.039	20.783	21.203	21.278	21.059	20.584
110000.000	1.309	3.274	6.555	9.790	12.581	14.735	16.456	17.869	19.042	20.021	20.789	21.198	21.265	21.043	20.568
115000.000	1.269	3.176	6.361	9.525	12.340	14.538	16.305	17.760	18.976	20.004	20.781	21.180	21.243	21.019	20.544
120000.000	1.233	3.086	6.185	9.279	12.107	14.349	16.158	17.654	18.913	19.985	20.761	21.152	21.211	20.987	20.515
125000.000	1.201	3.004	6.024	9.051	11.883	14.167	16.017	17.553	18.854	19.959	20.729	21.114	21.172	20.949	20.481
130000.000	1.171	2.930	5.877	8.841	11.668	13.991	15.881	17.457	18.796	19.927	20.689	21.068	21.125	20.905	20.443
135000.000	1.143	2.861	5.742	8.646	11.460	13.821	15.749	17.363	18.742	19.887	20.640	21.014	21.072	20.856	20.401
140000.000	1.118	2.799	5.618	8.465	11.260	13.657	15.623	17.273	18.689	19.840	20.583	20.955	21.014	20.803	20.355
145000.000	1.095	2.742	5.504	8.299	11.068	13.497	15.500	17.186	18.637	19.785	20.520	20.889	20.951	20.746	20.307
150000.000	1.074	2.689	5.399	8.144	10.885	13.344	15.380	17.102	18.584	19.724	20.451	20.819	20.884	20.686	20.255
155000.000	1.055	2.640	5.302	8.001	10.712	13.194	15.265	17.021	18.528	19.658	20.376	20.744	20.812	20.622	20.202
160000.000	1.037	2.596	5.213	7.869	10.549	13.049	15.153	16.943	18.469	19.586	20.297	20.666	20.738	20.556	20.146
165000.000	1.021	2.555	5.131	7.747	10.396	12.909	15.045	16.868	18.405	19.509	20.214	20.584	20.661	20.487	20.088
170000.000	1.006	2.517	5.056	7.634	10.252	12.773	14.940	16.795	18.336	19.428	20.127	20.498	20.582	20.416	20.029
175000.000	0.992	2.482	4.986	7.529	10.118	12.641	14.837	16.724	18.263	19.344	20.038	20.410	20.501	20.344	19.968
180000.000	0.979	2.450	4.921	7.432	9.991	12.513	14.739	16.654	18.186	19.256	19.945	20.320	20.418	20.270	19.906
185000.000	0.967	2.421	4.862	7.343	9.873	12.389	14.642	16.583	18.105	19.164	19.851	20.227	20.333	20.196	19.842
190000.000	0.956	2.393	4.807	7.260	9.763	12.270	14.548	16.510	18.020	19.071	19.754	20.133	20.246	20.119	19.778
195000.000	0.946	2.368	4.756	7.183	9.660	12.155	14.457	16.435	17.932	18.974	19.656	20.037	20.158	20.042	19.714
200000.000	0.937	2.345	4.710	7.111	9.565	12.045	14.369	16.358	17.841	18.876	19.556	19.941	20.069	19.964	19.648
205000.000	0.929	2.324	4.666	7.045	9.475	11.941	14.283	16.277	17.747	18.775	19.454	19.843	19.979	19.885	19.583
210000.000	0.921	2.304	4.627	6.984	9.392	11.843	14.200	16.192	17.650	18.673	19.352	19.744	19.887	19.806	19.517
215000.000	0.914	2.287	4.590	6.928	9.314	11.750	14.118	16.105	17.551	18.569	19.248	19.645	19.796	19.725	19.450
220000.000	0.907	2.270	4.556	6.876	9.243	11.662	14.038	16.015	17.450	18.464	19.143	19.545	19.703	19.644	19.383

KN TABLE

Trim (Positive by Stern) : -1.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
225000.000	0.901	2.255	4.525	6.827	9.176	11.579	13.959	15.922	17.347	18.356	19.038	19.444	19.611	19.563	19.316
230000.000	0.896	2.241	4.497	6.783	9.114	11.501	13.879	15.826	17.241	18.248	18.931	19.343	19.518	19.481	19.248
235000.000	0.891	2.228	4.471	6.742	9.056	11.428	13.798	15.728	17.134	18.139	18.824	19.241	19.425	19.399	19.180
240000.000	0.886	2.217	4.447	6.703	9.002	11.360	13.716	15.628	17.025	18.028	18.716	19.140	19.332	19.317	19.111
245000.000	0.882	2.206	4.424	6.668	8.953	11.297	13.633	15.525	16.914	17.916	18.608	19.037	19.239	19.235	19.042
250000.000	0.878	2.196	4.404	6.636	8.908	11.237	13.549	15.421	16.802	17.803	18.498	18.935	19.146	19.153	18.974
255000.000	0.874	2.187	4.385	6.606	8.865	11.182	13.464	15.314	16.689	17.690	18.389	18.832	19.052	19.071	18.905
260000.000	0.871	2.179	4.368	6.579	8.827	11.131	13.378	15.206	16.574	17.575	18.278	18.729	18.959	18.990	18.836
265000.000	0.868	2.172	4.353	6.554	8.791	11.084	13.291	15.097	16.458	17.459	18.167	18.626	18.866	18.908	18.768
270000.000	0.866	2.165	4.339	6.531	8.758	11.040	13.204	14.985	16.341	17.343	18.056	18.523	18.773	18.827	18.700
275000.000	0.863	2.159	4.326	6.510	8.728	10.997	13.117	14.873	16.223	17.226	17.944	18.419	18.680	18.746	18.633
280000.000	0.861	2.153	4.314	6.491	8.700	10.955	13.029	14.759	16.104	17.108	17.831	18.315	18.587	18.666	18.565
285000.000	0.859	2.149	4.303	6.474	8.675	10.913	12.941	14.645	15.984	16.989	17.719	18.211	18.494	18.585	18.498
290000.000	0.857	2.144	4.294	6.458	8.652	10.870	12.853	14.530	15.863	16.870	17.605	18.107	18.401	18.504	18.432
295000.000	0.856	2.140	4.285	6.444	8.631	10.826	12.765	14.414	15.741	16.750	17.492	18.002	18.307	18.424	18.365
300000.000	0.854	2.137	4.277	6.431	8.613	10.780	12.677	14.299	15.619	16.629	17.377	17.897	18.214	18.343	18.299
305000.000	0.853	2.133	4.271	6.420	8.596	10.733	12.589	14.183	15.495	16.508	17.263	17.792	18.120	18.263	18.233
310000.000	0.852	2.130	4.264	6.410	8.582	10.684	12.501	14.068	15.371	16.386	17.147	17.687	18.026	18.182	18.166
315000.000	0.851	2.128	4.259	6.401	8.569	10.634	12.414	13.953	15.246	16.264	17.032	17.581	17.932	18.102	18.100
320000.000	0.850	2.126	4.255	6.393	8.557	10.582	12.326	13.839	15.121	16.141	16.916	17.474	17.838	18.021	18.034
325000.000	0.850	2.124	4.251	6.387	8.544	10.529	12.238	13.725	14.995	16.017	16.799	17.368	17.744	17.940	17.967
330000.000	0.849	2.122	4.247	6.381	8.530	10.474	12.150	13.612	14.869	15.893	16.682	17.261	17.649	17.859	17.901
335000.000	0.848	2.121	4.244	6.377	8.514	10.418	12.062	13.499	14.743	15.768	16.564	17.154	17.554	17.777	17.834
340000.000	0.848	2.120	4.242	6.374	8.494	10.360	11.974	13.387	14.618	15.643	16.446	17.046	17.458	17.696	17.768
345000.000	0.848	2.119	4.241	6.371	8.472	10.300	11.886	13.276	14.493	15.517	16.328	16.938	17.363	17.614	17.701
350000.000	0.847	2.119	4.240	6.369	8.446	10.239	11.797	13.166	14.369	15.391	16.209	16.830	17.267	17.532	17.633
355000.000	0.847	2.119	4.239	6.368	8.417	10.176	11.707	13.056	14.245	15.265	16.090	16.721	17.171	17.449	17.566
360000.000	0.847	2.118	4.239	6.368	8.385	10.112	11.618	12.947	14.122	15.139	15.970	16.612	17.074	17.367	17.498

KN TABLE

Trim (Positive by Stern) : 0.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.268	8.027	13.454	16.276	18.031	19.157	19.852	20.237	20.378	20.321	20.112	19.793	19.403	19.025	18.754
40000.000	2.920	7.210	12.664	15.615	17.483	18.727	19.532	20.018	20.260	20.301	20.190	19.964	19.680	19.402	19.231
45000.000	2.646	6.556	11.943	15.010	16.977	18.323	19.232	19.816	20.149	20.286	20.262	20.129	19.929	19.744	19.596
50000.000	2.424	6.021	11.279	14.453	16.509	17.944	18.950	19.625	20.045	20.266	20.328	20.281	20.166	20.071	19.873
55000.000	2.241	5.576	10.665	13.934	16.074	17.589	18.682	19.444	19.948	20.247	20.390	20.416	20.385	20.345	20.085
60000.000	2.087	5.200	10.092	13.450	15.668	17.257	18.426	19.271	19.853	20.231	20.447	20.549	20.596	20.559	20.247
65000.000	1.956	4.879	9.560	12.994	15.286	16.944	18.184	19.105	19.764	20.213	20.501	20.675	20.791	20.723	20.370
70000.000	1.844	4.601	9.068	12.564	14.926	16.649	17.954	18.946	19.675	20.196	20.552	20.793	20.952	20.848	20.462
75000.000	1.746	4.359	8.626	12.157	14.585	16.370	17.735	18.792	19.592	20.178	20.598	20.906	21.077	20.942	20.530
80000.000	1.661	4.147	8.232	11.771	14.262	16.106	17.528	18.644	19.511	20.160	20.644	21.014	21.169	21.011	20.579
85000.000	1.585	3.959	7.879	11.404	13.954	15.854	17.331	18.503	19.431	20.141	20.685	21.102	21.236	21.059	20.611
90000.000	1.518	3.793	7.561	11.053	13.660	15.614	17.144	18.369	19.352	20.122	20.725	21.166	21.281	21.089	20.629
95000.000	1.458	3.644	7.275	10.719	13.378	15.384	16.965	18.240	19.276	20.104	20.764	21.209	21.309	21.103	20.636
100000.000	1.404	3.511	7.016	10.400	13.109	15.165	16.794	18.117	19.202	20.083	20.797	21.233	21.320	21.107	20.634
105000.000	1.356	3.390	6.782	10.097	12.850	14.954	16.630	18.000	19.129	20.064	20.818	21.241	21.318	21.098	20.623
110000.000	1.312	3.282	6.570	9.812	12.600	14.752	16.473	17.887	19.061	20.044	20.824	21.235	21.304	21.081	20.605
115000.000	1.272	3.183	6.376	9.547	12.361	14.557	16.322	17.777	18.995	20.026	20.815	21.217	21.280	21.055	20.579
120000.000	1.236	3.094	6.200	9.301	12.130	14.369	16.177	17.674	18.932	20.007	20.794	21.187	21.247	21.022	20.550
125000.000	1.204	3.012	6.039	9.074	11.908	14.189	16.038	17.572	18.872	19.983	20.762	21.149	21.206	20.983	20.515
130000.000	1.174	2.937	5.892	8.864	11.693	14.014	15.903	17.475	18.814	19.952	20.720	21.101	21.159	20.939	20.475
135000.000	1.147	2.869	5.757	8.669	11.487	13.845	15.772	17.382	18.759	19.912	20.670	21.047	21.105	20.889	20.432
140000.000	1.122	2.807	5.634	8.489	11.288	13.683	15.646	17.293	18.706	19.864	20.612	20.986	21.046	20.835	20.386
145000.000	1.099	2.749	5.520	8.322	11.097	13.525	15.524	17.206	18.656	19.810	20.547	20.920	20.982	20.777	20.337
150000.000	1.078	2.697	5.415	8.167	10.914	13.372	15.405	17.123	18.604	19.748	20.476	20.848	20.914	20.716	20.285
155000.000	1.058	2.648	5.319	8.025	10.741	13.223	15.290	17.042	18.551	19.682	20.401	20.772	20.842	20.652	20.230
160000.000	1.040	2.604	5.230	7.893	10.579	13.079	15.179	16.964	18.492	19.609	20.321	20.692	20.767	20.584	20.174
165000.000	1.024	2.563	5.148	7.771	10.426	12.939	15.071	16.889	18.429	19.533	20.237	20.609	20.689	20.515	20.115
170000.000	1.009	2.525	5.072	7.658	10.282	12.804	14.966	16.817	18.361	19.452	20.150	20.523	20.609	20.444	20.055
175000.000	0.995	2.491	5.002	7.553	10.147	12.672	14.865	16.746	18.289	19.367	20.061	20.433	20.526	20.370	19.993
180000.000	0.982	2.458	4.938	7.456	10.021	12.545	14.765	16.678	18.212	19.280	19.968	20.342	20.442	20.295	19.930
185000.000	0.970	2.429	4.878	7.367	9.903	12.421	14.669	16.608	18.131	19.189	19.873	20.249	20.356	20.219	19.866
190000.000	0.960	2.402	4.823	7.283	9.792	12.301	14.576	16.538	18.047	19.095	19.777	20.154	20.268	20.142	19.801
195000.000	0.950	2.377	4.772	7.206	9.689	12.186	14.485	16.464	17.960	18.999	19.678	20.058	20.179	20.064	19.735
200000.000	0.940	2.353	4.726	7.135	9.593	12.076	14.397	16.387	17.869	18.901	19.578	19.961	20.088	19.985	19.669
205000.000	0.932	2.332	4.682	7.069	9.503	11.972	14.311	16.307	17.775	18.801	19.477	19.863	19.997	19.904	19.602
210000.000	0.924	2.313	4.643	7.007	9.419	11.873	14.227	16.223	17.679	18.699	19.375	19.765	19.906	19.823	19.535
215000.000	0.917	2.295	4.606	6.950	9.341	11.780	14.146	16.136	17.580	18.595	19.271	19.665	19.813	19.742	19.467

KN TABLE

Trim (Positive by Stern) : 0.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
220000.000	0.910	2.278	4.572	6.898	9.269	11.691	14.067	16.046	17.479	18.490	19.167	19.565	19.721	19.660	19.399
225000.000	0.904	2.263	4.541	6.849	9.202	11.608	13.989	15.954	17.376	18.383	19.061	19.464	19.628	19.578	19.331
230000.000	0.899	2.249	4.512	6.804	9.139	11.530	13.910	15.858	17.271	18.275	18.955	19.364	19.535	19.495	19.262
235000.000	0.894	2.236	4.485	6.763	9.081	11.456	13.831	15.761	17.164	18.166	18.848	19.262	19.442	19.413	19.192
240000.000	0.889	2.224	4.461	6.724	9.027	11.387	13.750	15.660	17.055	18.056	18.741	19.161	19.350	19.331	19.123
245000.000	0.885	2.213	4.438	6.688	8.977	11.323	13.667	15.558	16.945	17.944	18.632	19.059	19.257	19.249	19.054
250000.000	0.881	2.203	4.418	6.656	8.931	11.263	13.582	15.454	16.833	17.831	18.523	18.957	19.164	19.168	18.985
255000.000	0.877	2.194	4.399	6.625	8.888	11.207	13.497	15.347	16.720	17.718	18.414	18.854	19.071	19.086	18.916
260000.000	0.874	2.186	4.381	6.597	8.848	11.156	13.411	15.239	16.605	17.603	18.303	18.752	18.978	19.005	18.848
265000.000	0.871	2.178	4.365	6.572	8.812	11.108	13.324	15.130	16.490	17.488	18.193	18.649	18.886	18.924	18.780
270000.000	0.868	2.171	4.351	6.548	8.778	11.064	13.236	15.019	16.373	17.372	18.081	18.545	18.793	18.843	18.713
275000.000	0.866	2.165	4.337	6.526	8.748	11.021	13.148	14.906	16.255	17.254	17.970	18.442	18.700	18.763	18.645
280000.000	0.863	2.159	4.325	6.507	8.720	10.981	13.060	14.792	16.135	17.137	17.857	18.338	18.607	18.682	18.579
285000.000	0.861	2.154	4.314	6.489	8.694	10.938	12.972	14.678	16.015	17.018	17.744	18.234	18.514	18.602	18.512
290000.000	0.859	2.149	4.304	6.472	8.670	10.895	12.883	14.562	15.894	16.898	17.631	18.130	18.421	18.521	18.446
295000.000	0.858	2.145	4.295	6.457	8.649	10.850	12.794	14.446	15.772	16.778	17.517	18.025	18.327	18.441	18.380
300000.000	0.856	2.141	4.286	6.444	8.629	10.804	12.706	14.330	15.649	16.658	17.403	17.920	18.234	18.361	18.314
305000.000	0.855	2.138	4.279	6.432	8.612	10.756	12.617	14.214	15.525	16.536	17.288	17.815	18.140	18.280	18.248
310000.000	0.854	2.135	4.272	6.421	8.596	10.707	12.529	14.098	15.401	16.414	17.173	17.709	18.046	18.200	18.182
315000.000	0.853	2.132	4.267	6.412	8.582	10.656	12.440	13.983	15.276	16.291	17.057	17.603	17.952	18.120	18.116
320000.000	0.852	2.129	4.262	6.404	8.570	10.604	12.352	13.868	15.150	16.168	16.940	17.497	17.858	18.039	18.050
325000.000	0.851	2.127	4.257	6.396	8.558	10.550	12.263	13.753	15.023	16.044	16.824	17.390	17.764	17.958	17.984
330000.000	0.850	2.125	4.253	6.390	8.544	10.494	12.175	13.638	14.897	15.919	16.706	17.283	17.669	17.877	17.918
335000.000	0.849	2.124	4.250	6.385	8.528	10.437	12.086	13.525	14.770	15.794	16.588	17.176	17.574	17.796	17.851
340000.000	0.849	2.123	4.247	6.381	8.508	10.379	11.996	13.412	14.644	15.668	16.470	17.068	17.479	17.715	17.785
345000.000	0.848	2.122	4.245	6.377	8.485	10.318	11.907	13.299	14.518	15.542	16.351	16.960	17.383	17.633	17.718
350000.000	0.848	2.121	4.244	6.375	8.458	10.256	11.817	13.188	14.393	15.415	16.232	16.851	17.287	17.551	17.651
355000.000	0.848	2.120	4.243	6.373	8.429	10.192	11.726	13.077	14.268	15.289	16.113	16.743	17.191	17.469	17.583
360000.000	0.848	2.120	4.242	6.373	8.397	10.127	11.635	12.967	14.144	15.162	15.993	16.633	17.095	17.386	17.516

KN TABLE

Trim (Positive by Stern) : 1.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.269	8.023	13.380	16.182	17.930	19.069	19.791	20.201	20.369	20.342	20.159	19.862	19.500	19.137	18.883
40000.000	2.922	7.211	12.611	15.542	17.404	18.654	19.481	19.993	20.258	20.326	20.239	20.035	19.760	19.498	19.326
45000.000	2.648	6.559	11.908	14.955	16.917	18.263	19.194	19.801	20.151	20.308	20.308	20.187	20.007	19.830	19.678
50000.000	2.426	6.026	11.258	14.410	16.462	17.898	18.916	19.614	20.056	20.292	20.372	20.334	20.236	20.144	19.945
55000.000	2.243	5.581	10.654	13.903	16.038	17.554	18.654	19.436	19.957	20.277	20.431	20.473	20.449	20.408	20.149
60000.000	2.089	5.206	10.091	13.428	15.640	17.230	18.406	19.265	19.866	20.259	20.490	20.600	20.651	20.615	20.306
65000.000	1.959	4.885	9.565	12.980	15.266	16.924	18.169	19.101	19.778	20.240	20.541	20.721	20.842	20.775	20.425
70000.000	1.847	4.607	9.077	12.556	14.912	16.636	17.944	18.945	19.691	20.224	20.588	20.836	20.999	20.897	20.514
75000.000	1.749	4.365	8.638	12.155	14.577	16.362	17.731	18.794	19.608	20.205	20.635	20.946	21.120	20.988	20.578
80000.000	1.663	4.154	8.244	11.774	14.258	16.101	17.527	18.650	19.525	20.185	20.676	21.051	21.211	21.054	20.624
85000.000	1.588	3.966	7.892	11.411	13.955	15.854	17.335	18.511	19.445	20.166	20.716	21.139	21.276	21.100	20.653
90000.000	1.521	3.800	7.575	11.064	13.664	15.618	17.150	18.379	19.367	20.147	20.754	21.202	21.319	21.128	20.669
95000.000	1.461	3.652	7.289	10.734	13.386	15.391	16.974	18.253	19.290	20.126	20.792	21.243	21.344	21.141	20.674
100000.000	1.407	3.518	7.031	10.418	13.120	15.174	16.804	18.131	19.217	20.106	20.827	21.266	21.354	21.142	20.669
105000.000	1.359	3.398	6.797	10.117	12.864	14.966	16.643	18.014	19.146	20.086	20.847	21.273	21.351	21.132	20.657
110000.000	1.315	3.290	6.585	9.833	12.617	14.767	16.488	17.902	19.077	20.065	20.852	21.266	21.336	21.113	20.637
115000.000	1.276	3.192	6.392	9.569	12.381	14.574	16.339	17.793	19.012	20.044	20.843	21.247	21.311	21.086	20.611
120000.000	1.240	3.102	6.216	9.324	12.152	14.389	16.195	17.691	18.949	20.025	20.821	21.217	21.277	21.053	20.580
125000.000	1.207	3.020	6.056	9.097	11.932	14.210	16.056	17.591	18.889	20.003	20.788	21.177	21.236	21.013	20.544
130000.000	1.177	2.946	5.909	8.887	11.720	14.038	15.923	17.494	18.831	19.973	20.746	21.129	21.188	20.967	20.504
135000.000	1.150	2.878	5.774	8.693	11.514	13.870	15.794	17.402	18.776	19.933	20.694	21.074	21.133	20.917	20.460
140000.000	1.125	2.815	5.651	8.513	11.317	13.708	15.668	17.312	18.723	19.885	20.634	21.013	21.074	20.862	20.413
145000.000	1.102	2.758	5.537	8.346	11.127	13.551	15.547	17.227	18.673	19.831	20.569	20.945	21.009	20.804	20.363
150000.000	1.081	2.706	5.432	8.192	10.945	13.399	15.430	17.143	18.623	19.769	20.498	20.873	20.940	20.742	20.310
155000.000	1.062	2.657	5.336	8.050	10.772	13.252	15.316	17.063	18.571	19.703	20.422	20.796	20.868	20.678	20.255
160000.000	1.044	2.613	5.247	7.918	10.610	13.109	15.205	16.986	18.514	19.630	20.341	20.715	20.792	20.610	20.198
165000.000	1.028	2.572	5.165	7.796	10.457	12.969	15.097	16.911	18.452	19.554	20.258	20.630	20.713	20.540	20.139
170000.000	1.013	2.534	5.089	7.683	10.313	12.834	14.993	16.839	18.385	19.473	20.171	20.543	20.632	20.468	20.078
175000.000	0.999	2.500	5.020	7.578	10.178	12.703	14.892	16.769	18.313	19.389	20.081	20.453	20.548	20.393	20.016
180000.000	0.986	2.468	4.955	7.481	10.052	12.577	14.793	16.701	18.236	19.301	19.988	20.361	20.463	20.318	19.952
185000.000	0.974	2.438	4.896	7.391	9.933	12.453	14.697	16.633	18.156	19.211	19.894	20.268	20.375	20.241	19.887
190000.000	0.963	2.411	4.841	7.308	9.823	12.334	14.604	16.564	18.072	19.118	19.797	20.173	20.286	20.162	19.821
195000.000	0.953	2.386	4.790	7.231	9.719	12.218	14.513	16.492	17.985	19.022	19.699	20.077	20.196	20.083	19.755
200000.000	0.944	2.363	4.743	7.159	9.623	12.109	14.425	16.416	17.895	18.924	19.599	19.980	20.105	20.002	19.687
205000.000	0.935	2.341	4.700	7.093	9.532	12.004	14.339	16.336	17.801	18.824	19.498	19.882	20.014	19.921	19.619
210000.000	0.928	2.322	4.660	7.031	9.449	11.905	14.256	16.252	17.705	18.723	19.396	19.783	19.922	19.839	19.551
215000.000	0.920	2.303	4.623	6.974	9.370	11.811	14.175	16.166	17.607	18.619	19.293	19.684	19.830	19.756	19.482
220000.000	0.914	2.287	4.589	6.921	9.297	11.723	14.096	16.076	17.506	18.514	19.189	19.584	19.737	19.674	19.413

KN TABLE

Trim (Positive by Stern) : 1.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
225000.000	0.908	2.271	4.557	6.872	9.230	11.639	14.019	15.984	17.403	18.408	19.084	19.484	19.644	19.591	19.343
230000.000	0.902	2.257	4.528	6.826	9.167	11.560	13.942	15.889	17.298	18.300	18.978	19.383	19.552	19.509	19.273
235000.000	0.897	2.244	4.501	6.784	9.108	11.486	13.864	15.791	17.192	18.191	18.871	19.282	19.459	19.427	19.203
240000.000	0.892	2.232	4.476	6.745	9.053	11.416	13.782	15.692	17.083	18.081	18.764	19.180	19.366	19.345	19.134
245000.000	0.888	2.221	4.453	6.709	9.003	11.351	13.699	15.589	16.973	17.970	18.655	19.079	19.274	19.263	19.065
250000.000	0.884	2.211	4.432	6.676	8.956	11.291	13.614	15.485	16.861	17.857	18.546	18.977	19.181	19.182	18.996
255000.000	0.880	2.202	4.413	6.645	8.912	11.234	13.529	15.378	16.749	17.744	18.437	18.875	19.089	19.101	18.927
260000.000	0.877	2.193	4.395	6.616	8.872	11.182	13.442	15.271	16.634	17.630	18.327	18.772	18.996	19.020	18.859
265000.000	0.874	2.185	4.379	6.590	8.834	11.133	13.355	15.161	16.518	17.514	18.216	18.669	18.903	18.939	18.792
270000.000	0.871	2.178	4.363	6.566	8.800	11.088	13.267	15.050	16.402	17.398	18.105	18.566	18.811	18.858	18.724
275000.000	0.868	2.171	4.350	6.544	8.768	11.046	13.178	14.937	16.284	17.281	17.993	18.463	18.718	18.778	18.658
280000.000	0.866	2.165	4.337	6.523	8.739	11.005	13.089	14.823	16.164	17.163	17.881	18.359	18.625	18.697	18.591
285000.000	0.864	2.160	4.325	6.504	8.713	10.962	13.000	14.708	16.044	17.044	17.768	18.255	18.532	18.617	18.525
290000.000	0.862	2.155	4.315	6.487	8.688	10.918	12.911	14.592	15.923	16.925	17.655	18.151	18.439	18.537	18.459
295000.000	0.860	2.150	4.305	6.472	8.666	10.873	12.822	14.476	15.800	16.804	17.541	18.046	18.346	18.457	18.393
300000.000	0.858	2.146	4.296	6.458	8.646	10.826	12.732	14.360	15.677	16.683	17.426	17.941	18.252	18.377	18.327
305000.000	0.857	2.142	4.288	6.445	8.628	10.778	12.643	14.243	15.553	16.561	17.311	17.836	18.158	18.296	18.262
310000.000	0.856	2.139	4.281	6.433	8.611	10.728	12.554	14.126	15.428	16.439	17.195	17.730	18.065	18.216	18.196
315000.000	0.854	2.136	4.275	6.423	8.597	10.676	12.465	14.010	15.302	16.316	17.079	17.623	17.971	18.136	18.130
320000.000	0.853	2.133	4.269	6.414	8.584	10.623	12.375	13.893	15.176	16.192	16.962	17.517	17.876	18.055	18.065
325000.000	0.852	2.131	4.264	6.406	8.572	10.568	12.286	13.778	15.049	16.067	16.845	17.410	17.782	17.975	17.999
330000.000	0.851	2.129	4.260	6.400	8.557	10.512	12.196	13.662	14.921	15.942	16.728	17.303	17.687	17.894	17.933
335000.000	0.851	2.127	4.256	6.394	8.539	10.454	12.106	13.547	14.794	15.817	16.609	17.195	17.592	17.813	17.867
340000.000	0.850	2.125	4.253	6.389	8.519	10.394	12.015	13.433	14.667	15.690	16.491	17.087	17.497	17.732	17.800
345000.000	0.849	2.124	4.250	6.385	8.495	10.333	11.925	13.320	14.540	15.564	16.372	16.979	17.401	17.650	17.733
350000.000	0.849	2.123	4.248	6.382	8.468	10.270	11.833	13.207	14.414	15.437	16.252	16.870	17.305	17.568	17.666
355000.000	0.849	2.122	4.247	6.380	8.438	10.205	11.742	13.095	14.288	15.309	16.132	16.761	17.209	17.486	17.599
360000.000	0.849	2.122	4.246	6.378	8.405	10.139	11.650	12.984	14.163	15.182	16.012	16.652	17.113	17.403	17.531

KN TABLE

Trim (Positive by Stern) : 2.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.267	8.005	13.258	16.035	17.766	18.919	19.680	20.133	20.341	20.356	20.213	19.954	19.618	19.281	19.032
40000.000	2.921	7.204	12.523	15.431	17.278	18.531	19.388	19.939	20.239	20.344	20.287	20.112	19.867	19.623	19.431
45000.000	2.648	6.557	11.846	14.870	16.824	18.168	19.114	19.755	20.141	20.327	20.354	20.259	20.096	19.936	19.756
50000.000	2.426	6.026	11.216	14.345	16.390	17.826	18.852	19.576	20.047	20.312	20.415	20.400	20.319	20.223	20.013
55000.000	2.244	5.584	10.628	13.853	15.982	17.498	18.606	19.405	19.956	20.297	20.473	20.527	20.521	20.468	20.210
60000.000	2.091	5.209	10.078	13.390	15.597	17.188	18.368	19.243	19.868	20.280	20.525	20.654	20.713	20.668	20.360
65000.000	1.961	4.889	9.562	12.952	15.233	16.893	18.142	19.085	19.783	20.262	20.576	20.773	20.890	20.822	20.474
70000.000	1.849	4.612	9.082	12.538	14.888	16.613	17.925	18.934	19.698	20.247	20.622	20.883	21.041	20.940	20.559
75000.000	1.751	4.371	8.646	12.145	14.560	16.346	17.719	18.787	19.614	20.227	20.666	20.988	21.158	21.029	20.621
80000.000	1.666	4.160	8.255	11.770	14.248	16.091	17.521	18.648	19.532	20.207	20.707	21.087	21.246	21.092	20.663
85000.000	1.591	3.973	7.904	11.413	13.950	15.848	17.332	18.514	19.453	20.188	20.746	21.170	21.308	21.135	20.690
90000.000	1.524	3.807	7.588	11.072	13.665	15.616	17.152	18.384	19.376	20.168	20.784	21.231	21.351	21.161	20.704
95000.000	1.464	3.659	7.303	10.745	13.391	15.394	16.979	18.259	19.302	20.144	20.818	21.271	21.375	21.173	20.707
100000.000	1.411	3.526	7.046	10.433	13.129	15.181	16.813	18.140	19.230	20.124	20.850	21.293	21.383	21.172	20.701
105000.000	1.362	3.407	6.813	10.136	12.876	14.977	16.654	18.026	19.159	20.103	20.870	21.299	21.379	21.161	20.686
110000.000	1.319	3.298	6.601	9.854	12.633	14.780	16.501	17.915	19.092	20.082	20.874	21.291	21.363	21.141	20.665
115000.000	1.279	3.200	6.409	9.591	12.399	14.590	16.353	17.808	19.027	20.061	20.865	21.271	21.337	21.113	20.639
120000.000	1.243	3.111	6.233	9.347	12.173	14.408	16.212	17.706	18.965	20.042	20.842	21.240	21.302	21.078	20.606
125000.000	1.211	3.029	6.073	9.121	11.955	14.231	16.075	17.608	18.905	20.020	20.808	21.200	21.260	21.038	20.570
130000.000	1.181	2.955	5.926	8.912	11.744	14.059	15.943	17.513	18.848	19.990	20.764	21.152	21.211	20.992	20.529
135000.000	1.154	2.887	5.792	8.718	11.542	13.894	15.815	17.421	18.792	19.950	20.712	21.096	21.157	20.941	20.484
140000.000	1.129	2.825	5.668	8.539	11.346	13.733	15.691	17.332	18.740	19.903	20.652	21.034	21.096	20.886	20.437
145000.000	1.106	2.767	5.555	8.372	11.157	13.579	15.570	17.247	18.690	19.848	20.586	20.966	21.032	20.827	20.386
150000.000	1.085	2.715	5.451	8.219	10.976	13.427	15.454	17.165	18.642	19.787	20.515	20.893	20.962	20.765	20.333
155000.000	1.065	2.667	5.354	8.076	10.805	13.281	15.341	17.085	18.591	19.720	20.439	20.815	20.889	20.700	20.278
160000.000	1.048	2.622	5.266	7.944	10.642	13.138	15.231	17.008	18.535	19.649	20.359	20.733	20.813	20.632	20.220
165000.000	1.031	2.582	5.184	7.823	10.489	13.001	15.124	16.933	18.473	19.572	20.275	20.648	20.734	20.561	20.160
170000.000	1.016	2.544	5.108	7.710	10.346	12.867	15.020	16.861	18.406	19.492	20.188	20.560	20.651	20.488	20.099
175000.000	1.003	2.509	5.038	7.605	10.211	12.736	14.919	16.792	18.335	19.408	20.098	20.470	20.567	20.413	20.036
180000.000	0.990	2.477	4.974	7.508	10.084	12.609	14.821	16.724	18.259	19.321	20.006	20.378	20.480	20.337	19.972
185000.000	0.978	2.448	4.914	7.418	9.966	12.487	14.726	16.658	18.179	19.231	19.911	20.285	20.392	20.259	19.906
190000.000	0.967	2.420	4.859	7.335	9.855	12.367	14.632	16.590	18.095	19.138	19.815	20.190	20.302	20.179	19.839
195000.000	0.957	2.395	4.808	7.257	9.751	12.252	14.542	16.519	18.008	19.043	19.717	20.094	20.212	20.099	19.772
200000.000	0.948	2.372	4.761	7.185	9.654	12.142	14.454	16.443	17.918	18.945	19.618	19.997	20.120	20.017	19.703
205000.000	0.939	2.351	4.718	7.118	9.564	12.037	14.368	16.363	17.825	18.846	19.517	19.899	20.029	19.934	19.635
210000.000	0.931	2.331	4.678	7.056	9.479	11.938	14.285	16.280	17.730	18.745	19.416	19.800	19.937	19.852	19.565
215000.000	0.924	2.312	4.640	6.999	9.401	11.843	14.204	16.194	17.632	18.642	19.313	19.701	19.844	19.769	19.495
220000.000	0.917	2.296	4.606	6.945	9.327	11.754	14.126	16.104	17.532	18.537	19.209	19.601	19.752	19.686	19.424

KN TABLE

Trim (Positive by Stern) : 2.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
225000.000	0.911	2.280	4.574	6.896	9.259	11.670	14.049	16.012	17.429	18.431	19.104	19.501	19.659	19.604	19.354
230000.000	0.906	2.266	4.545	6.850	9.196	11.591	13.973	15.917	17.324	18.323	18.998	19.401	19.567	19.521	19.284
235000.000	0.900	2.252	4.517	6.808	9.136	11.516	13.894	15.819	17.218	18.215	18.891	19.300	19.474	19.439	19.214
240000.000	0.895	2.240	4.492	6.768	9.081	11.446	13.813	15.720	17.109	18.105	18.784	19.199	19.382	19.357	19.144
245000.000	0.891	2.229	4.469	6.731	9.030	11.380	13.730	15.617	16.999	17.993	18.676	19.097	19.289	19.276	19.075
250000.000	0.887	2.219	4.447	6.697	8.982	11.319	13.645	15.513	16.888	17.881	18.568	18.995	19.197	19.195	19.006
255000.000	0.883	2.209	4.427	6.665	8.938	11.262	13.559	15.407	16.775	17.768	18.458	18.893	19.105	19.114	18.938
260000.000	0.880	2.200	4.409	6.636	8.896	11.209	13.472	15.299	16.661	17.653	18.348	18.791	19.012	19.033	18.870
265000.000	0.876	2.192	4.392	6.609	8.858	11.160	13.384	15.190	16.545	17.538	18.238	18.688	18.920	18.952	18.803
270000.000	0.873	2.185	4.376	6.584	8.823	11.114	13.295	15.079	16.428	17.422	18.126	18.585	18.827	18.872	18.736
275000.000	0.871	2.178	4.362	6.561	8.791	11.071	13.206	14.966	16.310	17.304	18.015	18.482	18.734	18.792	18.669
280000.000	0.868	2.172	4.349	6.540	8.761	11.029	13.117	14.852	16.190	17.186	17.902	18.378	18.641	18.711	18.603
285000.000	0.866	2.166	4.336	6.521	8.733	10.986	13.027	14.737	16.070	17.067	17.789	18.274	18.548	18.631	18.537
290000.000	0.864	2.160	4.325	6.503	8.708	10.941	12.937	14.620	15.948	16.948	17.675	18.169	18.455	18.551	18.471
295000.000	0.862	2.156	4.315	6.487	8.685	10.895	12.847	14.503	15.826	16.827	17.561	18.064	18.362	18.471	18.405
300000.000	0.860	2.151	4.306	6.472	8.664	10.847	12.757	14.386	15.702	16.706	17.446	17.959	18.268	18.391	18.340
305000.000	0.859	2.147	4.297	6.458	8.645	10.797	12.667	14.268	15.577	16.584	17.331	17.854	18.175	18.311	18.274
310000.000	0.857	2.143	4.290	6.446	8.628	10.747	12.577	14.151	15.452	16.461	17.215	17.748	18.081	18.230	18.209
315000.000	0.856	2.140	4.283	6.435	8.613	10.694	12.487	14.034	15.326	16.337	17.099	17.641	17.986	18.150	18.143
320000.000	0.855	2.137	4.276	6.425	8.599	10.640	12.396	13.916	15.198	16.213	16.982	17.534	17.892	18.070	18.078
325000.000	0.854	2.134	4.271	6.417	8.584	10.584	12.306	13.800	15.071	16.088	16.864	17.427	17.797	17.989	18.012
330000.000	0.853	2.132	4.266	6.409	8.568	10.527	12.215	13.683	14.942	15.962	16.746	17.320	17.703	17.908	17.946
335000.000	0.852	2.130	4.262	6.403	8.550	10.468	12.123	13.567	14.814	15.836	16.628	17.212	17.608	17.828	17.880
340000.000	0.851	2.128	4.258	6.397	8.528	10.407	12.032	13.452	14.686	15.709	16.509	17.104	17.512	17.746	17.814
345000.000	0.850	2.126	4.255	6.393	8.503	10.345	11.940	13.337	14.559	15.582	16.389	16.995	17.417	17.665	17.747
350000.000	0.850	2.125	4.253	6.389	8.476	10.281	11.847	13.223	14.431	15.455	16.269	16.886	17.321	17.583	17.680
355000.000	0.850	2.124	4.251	6.386	8.445	10.215	11.754	13.110	14.305	15.327	16.149	16.777	17.225	17.500	17.613
360000.000	0.849	2.123	4.249	6.384	8.411	10.147	11.661	12.997	14.179	15.199	16.029	16.668	17.128	17.417	17.545

KN TABLE

Trim (Positive by Stern) : 3.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.261	7.961	13.088	15.825	17.552	18.720	19.517	20.028	20.294	20.362	20.271	20.055	19.762	19.464	19.202
40000.000	2.917	7.188	12.400	15.276	17.114	18.375	19.258	19.854	20.204	20.354	20.338	20.201	19.988	19.765	19.544
45000.000	2.646	6.549	11.757	14.755	16.695	18.045	19.009	19.684	20.115	20.340	20.401	20.339	20.202	20.052	19.839
50000.000	2.426	6.023	11.153	14.257	16.295	17.728	18.768	19.518	20.029	20.327	20.460	20.469	20.406	20.303	20.077
55000.000	2.244	5.583	10.586	13.784	15.907	17.422	18.537	19.358	19.942	20.313	20.513	20.592	20.600	20.528	20.265
60000.000	2.092	5.211	10.052	13.337	15.539	17.131	18.315	19.204	19.857	20.296	20.564	20.711	20.780	20.715	20.409
65000.000	1.962	4.892	9.551	12.913	15.188	16.850	18.103	19.055	19.773	20.278	20.611	20.823	20.940	20.864	20.519
70000.000	1.851	4.616	9.082	12.510	14.854	16.580	17.897	18.912	19.691	20.260	20.657	20.930	21.077	20.978	20.600
75000.000	1.753	4.376	8.652	12.126	14.535	16.322	17.699	18.775	19.609	20.241	20.698	21.028	21.191	21.063	20.658
80000.000	1.668	4.166	8.264	11.760	14.231	16.075	17.508	18.641	19.533	20.221	20.739	21.120	21.275	21.124	20.698
85000.000	1.593	3.980	7.915	11.410	13.940	15.838	17.326	18.512	19.456	20.204	20.774	21.196	21.336	21.165	20.723
90000.000	1.527	3.815	7.601	11.075	13.660	15.612	17.150	18.385	19.383	20.182	20.811	21.254	21.376	21.189	20.735
95000.000	1.467	3.667	7.318	10.754	13.392	15.394	16.981	18.266	19.310	20.162	20.842	21.292	21.399	21.201	20.736
100000.000	1.414	3.534	7.061	10.447	13.134	15.186	16.819	18.148	19.240	20.137	20.869	21.313	21.406	21.198	20.728
105000.000	1.366	3.415	6.829	10.153	12.886	14.985	16.663	18.035	19.172	20.117	20.887	21.318	21.401	21.185	20.713
110000.000	1.322	3.307	6.618	9.875	12.646	14.792	16.513	17.926	19.106	20.096	20.889	21.309	21.384	21.164	20.690
115000.000	1.283	3.209	6.426	9.614	12.415	14.605	16.367	17.823	19.041	20.076	20.879	21.289	21.357	21.135	20.663
120000.000	1.247	3.120	6.251	9.371	12.192	14.425	16.228	17.721	18.979	20.056	20.855	21.258	21.322	21.100	20.630
125000.000	1.215	3.039	6.091	9.147	11.978	14.250	16.093	17.624	18.921	20.033	20.821	21.217	21.279	21.058	20.592
130000.000	1.185	2.964	5.945	8.938	11.769	14.082	15.962	17.530	18.864	20.003	20.777	21.168	21.230	21.012	20.551
135000.000	1.158	2.897	5.811	8.745	11.569	13.918	15.836	17.440	18.809	19.964	20.725	21.112	21.175	20.961	20.506
140000.000	1.133	2.834	5.688	8.566	11.375	13.759	15.713	17.351	18.757	19.916	20.665	21.050	21.114	20.905	20.457
145000.000	1.110	2.778	5.574	8.400	11.188	13.604	15.594	17.267	18.707	19.862	20.600	20.981	21.049	20.846	20.406
150000.000	1.089	2.725	5.470	8.246	11.008	13.455	15.478	17.185	18.659	19.802	20.529	20.907	20.980	20.784	20.352
155000.000	1.070	2.677	5.374	8.105	10.837	13.309	15.366	17.107	18.609	19.735	20.453	20.829	20.906	20.718	20.296
160000.000	1.052	2.633	5.286	7.973	10.675	13.168	15.257	17.030	18.553	19.664	20.373	20.747	20.830	20.650	20.238
165000.000	1.036	2.592	5.204	7.851	10.523	13.031	15.151	16.956	18.492	19.588	20.289	20.662	20.750	20.579	20.178
170000.000	1.021	2.554	5.128	7.738	10.379	12.898	15.048	16.884	18.425	19.508	20.202	20.574	20.666	20.505	20.116
175000.000	1.007	2.519	5.059	7.634	10.245	12.768	14.947	16.814	18.354	19.425	20.113	20.484	20.581	20.430	20.053
180000.000	0.994	2.487	4.994	7.537	10.118	12.642	14.849	16.747	18.280	19.339	20.021	20.392	20.494	20.353	19.988
185000.000	0.982	2.458	4.934	7.446	9.999	12.520	14.754	16.682	18.200	19.249	19.927	20.299	20.405	20.274	19.922
190000.000	0.971	2.431	4.879	7.363	9.888	12.402	14.662	16.614	18.116	19.156	19.831	20.204	20.315	20.193	19.855
195000.000	0.961	2.405	4.828	7.285	9.784	12.287	14.572	16.543	18.029	19.061	19.734	20.108	20.225	20.111	19.786
200000.000	0.952	2.382	4.781	7.213	9.687	12.177	14.484	16.467	17.939	18.964	19.635	20.011	20.133	20.029	19.717
205000.000	0.943	2.361	4.737	7.145	9.596	12.072	14.398	16.387	17.847	18.865	19.534	19.913	20.041	19.946	19.647
210000.000	0.935	2.341	4.697	7.083	9.511	11.972	14.315	16.305	17.751	18.764	19.433	19.815	19.950	19.863	19.576
215000.000	0.928	2.322	4.659	7.025	9.432	11.877	14.234	16.218	17.654	18.661	19.330	19.716	19.857	19.780	19.505
220000.000	0.921	2.305	4.624	6.971	9.358	11.788	14.157	16.129	17.553	18.557	19.226	19.617	19.765	19.698	19.434

KN TABLE

Trim (Positive by Stern) : 3.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
225000.000	0.915	2.289	4.592	6.921	9.289	11.704	14.079	16.037	17.451	18.451	19.122	19.517	19.673	19.615	19.363
230000.000	0.909	2.275	4.562	6.874	9.225	11.624	14.003	15.943	17.347	18.344	19.016	19.417	19.581	19.533	19.293
235000.000	0.904	2.261	4.535	6.831	9.165	11.549	13.924	15.845	17.241	18.235	18.910	19.316	19.488	19.451	19.223
240000.000	0.899	2.249	4.509	6.791	9.109	11.478	13.843	15.745	17.133	18.126	18.803	19.215	19.396	19.369	19.153
245000.000	0.894	2.237	4.485	6.754	9.057	11.412	13.759	15.644	17.023	18.015	18.695	19.114	19.304	19.288	19.084
250000.000	0.890	2.227	4.463	6.719	9.009	11.349	13.674	15.540	16.912	17.902	18.586	19.012	19.212	19.207	19.016
255000.000	0.886	2.217	4.442	6.687	8.963	11.292	13.587	15.434	16.799	17.789	18.477	18.910	19.119	19.126	18.947
260000.000	0.883	2.208	4.423	6.657	8.922	11.238	13.500	15.326	16.685	17.675	18.367	18.808	19.027	19.045	18.880
265000.000	0.879	2.199	4.406	6.629	8.883	11.188	13.411	15.216	16.569	17.560	18.256	18.705	18.934	18.965	18.813
270000.000	0.876	2.192	4.390	6.604	8.847	11.141	13.322	15.105	16.452	17.443	18.145	18.602	18.842	18.885	18.746
275000.000	0.874	2.185	4.375	6.580	8.814	11.096	13.233	14.992	16.334	17.326	18.033	18.498	18.749	18.804	18.680
280000.000	0.871	2.178	4.361	6.558	8.783	11.053	13.143	14.878	16.214	17.207	17.921	18.394	18.656	18.724	18.614
285000.000	0.869	2.172	4.348	6.538	8.755	11.008	13.052	14.762	16.093	17.088	17.808	18.290	18.563	18.644	18.548
290000.000	0.866	2.166	4.336	6.519	8.729	10.962	12.961	14.645	15.971	16.968	17.694	18.186	18.470	18.564	18.482
295000.000	0.864	2.161	4.326	6.502	8.705	10.915	12.870	14.528	15.848	16.847	17.579	18.081	18.376	18.484	18.416
300000.000	0.862	2.156	4.316	6.486	8.683	10.866	12.780	14.410	15.724	16.725	17.464	17.975	18.282	18.403	18.351
305000.000	0.861	2.152	4.307	6.472	8.663	10.815	12.689	14.291	15.599	16.603	17.348	17.869	18.189	18.323	18.285
310000.000	0.859	2.148	4.299	6.459	8.645	10.763	12.597	14.173	15.473	16.479	17.232	17.763	18.094	18.243	18.220
315000.000	0.858	2.144	4.291	6.448	8.628	10.710	12.506	14.055	15.346	16.355	17.115	17.656	18.000	18.163	18.155
320000.000	0.856	2.141	4.284	6.437	8.612	10.655	12.414	13.936	15.218	16.231	16.998	17.549	17.906	18.082	18.090
325000.000	0.855	2.138	4.278	6.428	8.596	10.598	12.322	13.818	15.090	16.105	16.880	17.442	17.811	18.002	18.024
330000.000	0.854	2.135	4.273	6.420	8.578	10.540	12.230	13.701	14.961	15.979	16.761	17.334	17.716	17.921	17.958
335000.000	0.853	2.133	4.268	6.413	8.558	10.479	12.137	13.584	14.832	15.852	16.643	17.226	17.621	17.840	17.892
340000.000	0.852	2.131	4.264	6.406	8.535	10.418	12.045	13.467	14.703	15.725	16.523	17.118	17.525	17.759	17.826
345000.000	0.851	2.129	4.260	6.401	8.509	10.354	11.951	13.351	14.574	15.598	16.404	17.009	17.430	17.677	17.759
350000.000	0.851	2.127	4.257	6.397	8.480	10.289	11.858	13.236	14.446	15.469	16.283	16.900	17.334	17.595	17.692
355000.000	0.850	2.126	4.255	6.393	8.449	10.221	11.763	13.122	14.319	15.341	16.163	16.790	17.237	17.513	17.625
360000.000	0.850	2.125	4.253	6.391	8.414	10.153	11.669	13.008	14.192	15.212	16.042	16.681	17.140	17.430	17.557

KN TABLE

Trim (Positive by Stern) : 4.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.250	7.878	12.861	15.565	17.292	18.480	19.315	19.884	20.226	20.362	20.332	20.172	19.932	19.664	19.384
40000.000	2.911	7.157	12.243	15.083	16.915	18.190	19.100	19.738	20.152	20.357	20.391	20.297	20.124	19.922	19.666
45000.000	2.642	6.534	11.640	14.606	16.538	17.897	18.881	19.589	20.074	20.347	20.450	20.421	20.318	20.165	19.926
50000.000	2.424	6.015	11.070	14.147	16.171	17.611	18.667	19.443	19.994	20.335	20.502	20.543	20.502	20.391	20.142
55000.000	2.243	5.580	10.526	13.698	15.811	17.329	18.455	19.297	19.912	20.321	20.553	20.658	20.679	20.590	20.316
60000.000	2.092	5.210	10.014	13.271	15.468	17.058	18.250	19.157	19.833	20.305	20.599	20.766	20.841	20.759	20.452
65000.000	1.963	4.893	9.529	12.862	15.132	16.792	18.051	19.018	19.754	20.289	20.644	20.875	20.985	20.900	20.557
70000.000	1.852	4.619	9.075	12.473	14.812	16.538	17.858	18.885	19.677	20.271	20.687	20.976	21.110	21.009	20.634
75000.000	1.755	4.381	8.655	12.100	14.503	16.290	17.672	18.753	19.601	20.250	20.726	21.069	21.216	21.091	20.691
80000.000	1.671	4.171	8.271	11.743	14.208	16.052	17.490	18.628	19.525	20.230	20.764	21.146	21.299	21.151	20.728
85000.000	1.596	3.986	7.925	11.401	13.924	15.824	17.315	18.504	19.453	20.210	20.801	21.216	21.356	21.190	20.751
90000.000	1.530	3.822	7.613	11.073	13.651	15.604	17.144	18.384	19.385	20.190	20.833	21.270	21.395	21.212	20.761
95000.000	1.470	3.675	7.332	10.759	13.389	15.392	16.980	18.267	19.316	20.170	20.862	21.307	21.417	21.222	20.761
100000.000	1.417	3.543	7.076	10.457	13.136	15.188	16.823	18.152	19.247	20.149	20.883	21.326	21.423	21.218	20.752
105000.000	1.369	3.424	6.845	10.169	12.892	14.991	16.670	18.043	19.182	20.128	20.896	21.330	21.417	21.205	20.735
110000.000	1.326	3.316	6.635	9.895	12.657	14.802	16.523	17.936	19.116	20.109	20.897	21.321	21.399	21.183	20.712
115000.000	1.287	3.218	6.444	9.637	12.430	14.618	16.380	17.835	19.055	20.089	20.885	21.300	21.372	21.154	20.683
120000.000	1.251	3.130	6.269	9.396	12.211	14.441	16.243	17.735	18.994	20.067	20.862	21.269	21.336	21.117	20.649
125000.000	1.219	3.049	6.110	9.172	11.999	14.269	16.110	17.640	18.935	20.043	20.828	21.228	21.293	21.075	20.611
130000.000	1.189	2.975	5.964	8.965	11.794	14.102	15.980	17.547	18.880	20.012	20.784	21.179	21.244	21.028	20.569
135000.000	1.162	2.907	5.831	8.772	11.596	13.940	15.857	17.458	18.825	19.973	20.733	21.122	21.188	20.977	20.523
140000.000	1.137	2.845	5.708	8.594	11.404	13.783	15.734	17.371	18.774	19.927	20.674	21.059	21.127	20.921	20.474
145000.000	1.114	2.788	5.595	8.429	11.219	13.630	15.617	17.287	18.724	19.873	20.609	20.990	21.062	20.861	20.422
150000.000	1.093	2.736	5.491	8.276	11.041	13.482	15.502	17.207	18.676	19.813	20.538	20.916	20.992	20.798	20.368
155000.000	1.074	2.688	5.395	8.134	10.871	13.339	15.391	17.129	18.625	19.747	20.463	20.838	20.919	20.732	20.312
160000.000	1.056	2.644	5.307	8.003	10.710	13.198	15.283	17.052	18.569	19.677	20.383	20.757	20.841	20.663	20.253
165000.000	1.040	2.603	5.225	7.881	10.558	13.062	15.178	16.979	18.508	19.601	20.300	20.672	20.760	20.592	20.193
170000.000	1.025	2.565	5.150	7.768	10.415	12.930	15.075	16.907	18.442	19.522	20.214	20.585	20.677	20.518	20.130
175000.000	1.011	2.531	5.080	7.664	10.280	12.801	14.975	16.838	18.371	19.439	20.125	20.495	20.592	20.442	20.066
180000.000	0.998	2.499	5.015	7.566	10.153	12.676	14.878	16.771	18.296	19.353	20.034	20.404	20.504	20.364	20.001
185000.000	0.987	2.469	4.956	7.476	10.034	12.555	14.783	16.705	18.217	19.264	19.941	20.311	20.416	20.284	19.935
190000.000	0.976	2.442	4.900	7.392	9.923	12.436	14.691	16.637	18.135	19.172	19.845	20.216	20.326	20.203	19.867
195000.000	0.966	2.416	4.849	7.314	9.819	12.323	14.602	16.565	18.049	19.078	19.748	20.120	20.236	20.121	19.798
200000.000	0.956	2.393	4.802	7.241	9.721	12.213	14.514	16.490	17.959	18.981	19.649	20.024	20.144	20.039	19.728
205000.000	0.948	2.371	4.758	7.174	9.630	12.108	14.429	16.411	17.866	18.882	19.549	19.927	20.053	19.956	19.657
210000.000	0.940	2.351	4.717	7.111	9.545	12.008	14.346	16.328	17.771	18.781	19.448	19.829	19.961	19.873	19.586
215000.000	0.932	2.332	4.679	7.052	9.465	11.913	14.266	16.242	17.674	18.679	19.346	19.730	19.869	19.791	19.514
220000.000	0.925	2.315	4.644	6.998	9.391	11.822	14.187	16.153	17.574	18.575	19.242	19.631	19.777	19.708	19.443

KN TABLE

Trim (Positive by Stern) : 4.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
225000.000	0.919	2.299	4.611	6.947	9.321	11.738	14.110	16.061	17.472	18.469	19.138	19.531	19.685	19.626	19.372
230000.000	0.913	2.284	4.581	6.900	9.256	11.657	14.032	15.966	17.368	18.362	19.033	19.431	19.593	19.544	19.301
235000.000	0.908	2.271	4.552	6.856	9.195	11.582	13.953	15.869	17.261	18.254	18.926	19.330	19.501	19.462	19.231
240000.000	0.903	2.258	4.526	6.815	9.139	11.511	13.871	15.769	17.154	18.144	18.819	19.230	19.409	19.380	19.162
245000.000	0.898	2.246	4.502	6.777	9.086	11.443	13.787	15.668	17.044	18.033	18.712	19.128	19.316	19.299	19.093
250000.000	0.894	2.235	4.479	6.742	9.037	11.381	13.702	15.564	16.933	17.921	18.603	19.027	19.224	19.218	19.025
255000.000	0.890	2.225	4.458	6.709	8.991	11.322	13.615	15.458	16.820	17.808	18.494	18.925	19.132	19.137	18.957
260000.000	0.886	2.216	4.439	6.678	8.948	11.268	13.526	15.350	16.706	17.693	18.384	18.823	19.040	19.057	18.889
265000.000	0.882	2.207	4.420	6.650	8.909	11.217	13.437	15.240	16.590	17.578	18.273	18.720	18.947	18.976	18.823
270000.000	0.879	2.199	4.403	6.623	8.872	11.169	13.348	15.128	16.472	17.461	18.162	18.617	18.855	18.896	18.756
275000.000	0.876	2.191	4.388	6.599	8.838	11.122	13.257	15.015	16.354	17.344	18.050	18.513	18.762	18.816	18.690
280000.000	0.874	2.184	4.373	6.576	8.806	11.075	13.166	14.900	16.234	17.225	17.937	18.409	18.669	18.735	18.624
285000.000	0.871	2.178	4.360	6.555	8.777	11.029	13.075	14.785	16.113	17.106	17.823	18.304	18.575	18.655	18.558
290000.000	0.869	2.172	4.348	6.536	8.750	10.982	12.983	14.667	15.991	16.985	17.709	18.199	18.482	18.575	18.492
295000.000	0.867	2.167	4.337	6.518	8.725	10.933	12.891	14.549	15.867	16.864	17.594	18.094	18.388	18.494	18.426
300000.000	0.865	2.161	4.326	6.502	8.703	10.883	12.799	14.430	15.743	16.742	17.479	17.988	18.295	18.414	18.361
305000.000	0.863	2.157	4.316	6.487	8.682	10.831	12.707	14.311	15.617	16.619	17.362	17.882	18.200	18.334	18.295
310000.000	0.861	2.152	4.308	6.473	8.663	10.778	12.615	14.192	15.490	16.495	17.246	17.775	18.106	18.254	18.230
315000.000	0.859	2.148	4.300	6.461	8.644	10.723	12.522	14.072	15.363	16.371	17.129	17.669	18.012	18.173	18.165
320000.000	0.858	2.145	4.292	6.449	8.626	10.667	12.429	13.953	15.234	16.245	17.011	17.561	17.917	18.093	18.100
325000.000	0.856	2.142	4.286	6.439	8.607	10.609	12.336	13.834	15.105	16.119	16.893	17.454	17.822	18.012	18.034
330000.000	0.855	2.139	4.280	6.430	8.586	10.549	12.242	13.715	14.976	15.993	16.774	17.346	17.727	17.932	17.968
335000.000	0.854	2.136	4.275	6.423	8.564	10.488	12.149	13.597	14.846	15.866	16.655	17.237	17.632	17.851	17.902
340000.000	0.853	2.134	4.270	6.416	8.540	10.424	12.054	13.479	14.716	15.738	16.535	17.129	17.536	17.769	17.836
345000.000	0.852	2.131	4.266	6.410	8.513	10.360	11.960	13.363	14.587	15.610	16.415	17.020	17.440	17.687	17.769
350000.000	0.852	2.130	4.263	6.405	8.482	10.293	11.865	13.246	14.458	15.481	16.294	16.910	17.344	17.605	17.702
355000.000	0.851	2.128	4.260	6.401	8.449	10.224	11.769	13.131	14.329	15.352	16.174	16.801	17.247	17.522	17.635
360000.000	0.851	2.127	4.258	6.396	8.413	10.154	11.674	13.016	14.202	15.223	16.052	16.691	17.150	17.439	17.567

KN TABLE

Trim (Positive by Stern) : 5.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
35000.000	3.234	7.749	12.582	15.258	16.993	18.209	19.085	19.710	20.134	20.356	20.395	20.299	20.116	19.880	19.581
40000.000	2.902	7.098	12.043	14.853	16.686	17.980	18.921	19.603	20.079	20.353	20.446	20.402	20.276	20.076	19.799
45000.000	2.637	6.510	11.493	14.426	16.354	17.727	18.735	19.480	20.013	20.346	20.497	20.514	20.446	20.281	20.014
50000.000	2.421	6.003	10.965	14.008	16.029	17.478	18.552	19.357	19.945	20.337	20.544	20.619	20.602	20.472	20.203
55000.000	2.242	5.573	10.450	13.590	15.698	17.220	18.361	19.227	19.873	20.323	20.590	20.727	20.757	20.648	20.363
60000.000	2.091	5.207	9.962	13.191	15.378	16.972	18.177	19.101	19.802	20.308	20.634	20.827	20.900	20.801	20.491
65000.000	1.963	4.893	9.497	12.799	15.062	16.724	17.992	18.974	19.729	20.292	20.677	20.927	21.029	20.931	20.591
70000.000	1.853	4.622	9.060	12.426	14.759	16.485	17.813	18.850	19.656	20.273	20.716	21.017	21.143	21.035	20.664
75000.000	1.757	4.385	8.652	12.065	14.463	16.252	17.637	18.728	19.586	20.254	20.753	21.098	21.236	21.114	20.717
80000.000	1.673	4.177	8.276	11.719	14.178	16.024	17.465	18.608	19.517	20.235	20.789	21.171	21.314	21.170	20.753
85000.000	1.599	3.993	7.934	11.387	13.903	15.804	17.299	18.491	19.448	20.215	20.822	21.232	21.370	21.207	20.774
90000.000	1.533	3.829	7.625	11.067	13.638	15.592	17.136	18.378	19.381	20.195	20.852	21.280	21.408	21.230	20.783
95000.000	1.474	3.683	7.345	10.760	13.382	15.386	16.977	18.266	19.315	20.176	20.873	21.315	21.428	21.237	20.782
100000.000	1.421	3.551	7.092	10.465	13.135	15.188	16.824	18.156	19.252	20.156	20.891	21.334	21.434	21.233	20.772
105000.000	1.373	3.433	6.862	10.183	12.897	14.996	16.675	18.050	19.188	20.140	20.898	21.336	21.427	21.219	20.754
110000.000	1.330	3.326	6.653	9.914	12.667	14.810	16.531	17.947	19.125	20.119	20.897	21.327	21.409	21.197	20.729
115000.000	1.291	3.228	6.463	9.659	12.444	14.629	16.392	17.846	19.065	20.099	20.885	21.305	21.382	21.167	20.700
120000.000	1.255	3.140	6.289	9.421	12.228	14.455	16.257	17.749	19.007	20.076	20.862	21.274	21.346	21.130	20.665
125000.000	1.223	3.059	6.130	9.199	12.020	14.286	16.126	17.655	18.949	20.049	20.829	21.232	21.302	21.088	20.626
130000.000	1.193	2.986	5.985	8.993	11.817	14.122	15.999	17.564	18.895	20.018	20.787	21.183	21.252	21.040	20.583
135000.000	1.166	2.918	5.852	8.801	11.622	13.962	15.875	17.475	18.842	19.979	20.736	21.126	21.196	20.988	20.537
140000.000	1.142	2.856	5.729	8.624	11.433	13.807	15.756	17.391	18.791	19.933	20.678	21.063	21.135	20.932	20.488
145000.000	1.119	2.800	5.617	8.459	11.250	13.657	15.639	17.308	18.741	19.880	20.614	20.994	21.070	20.872	20.435
150000.000	1.098	2.748	5.513	8.307	11.074	13.509	15.526	17.227	18.691	19.821	20.544	20.921	20.999	20.808	20.381
155000.000	1.079	2.700	5.418	8.165	10.906	13.367	15.416	17.150	18.639	19.756	20.470	20.844	20.925	20.742	20.324
160000.000	1.061	2.655	5.329	8.034	10.746	13.228	15.308	17.075	18.583	19.686	20.391	20.763	20.847	20.673	20.265
165000.000	1.045	2.615	5.248	7.913	10.594	13.094	15.204	17.002	18.522	19.612	20.309	20.679	20.767	20.601	20.204
170000.000	1.030	2.577	5.172	7.800	10.451	12.962	15.103	16.931	18.457	19.533	20.223	20.592	20.684	20.527	20.141
175000.000	1.016	2.542	5.103	7.695	10.317	12.834	15.003	16.862	18.386	19.451	20.135	20.503	20.599	20.450	20.077
180000.000	1.003	2.510	5.038	7.598	10.190	12.711	14.907	16.795	18.312	19.366	20.044	20.413	20.512	20.372	20.011
185000.000	0.991	2.481	4.978	7.507	10.071	12.589	14.813	16.727	18.233	19.277	19.952	20.320	20.424	20.292	19.944
190000.000	0.980	2.453	4.923	7.423	9.959	12.472	14.721	16.658	18.151	19.186	19.857	20.226	20.334	20.211	19.876
195000.000	0.970	2.428	4.871	7.344	9.854	12.358	14.632	16.586	18.065	19.092	19.760	20.131	20.244	20.129	19.806
200000.000	0.961	2.404	4.823	7.271	9.756	12.249	14.545	16.511	17.976	18.996	19.663	20.035	20.153	20.047	19.736
205000.000	0.952	2.382	4.779	7.203	9.665	12.144	14.460	16.432	17.884	18.898	19.563	19.938	20.062	19.964	19.664
210000.000	0.944	2.362	4.738	7.140	9.579	12.044	14.378	16.349	17.789	18.797	19.462	19.840	19.971	19.882	19.593
215000.000	0.937	2.343	4.699	7.081	9.499	11.949	14.297	16.263	17.692	18.695	19.360	19.742	19.879	19.799	19.522
220000.000	0.930	2.326	4.664	7.026	9.424	11.859	14.218	16.174	17.592	18.591	19.256	19.643	19.788	19.717	19.450

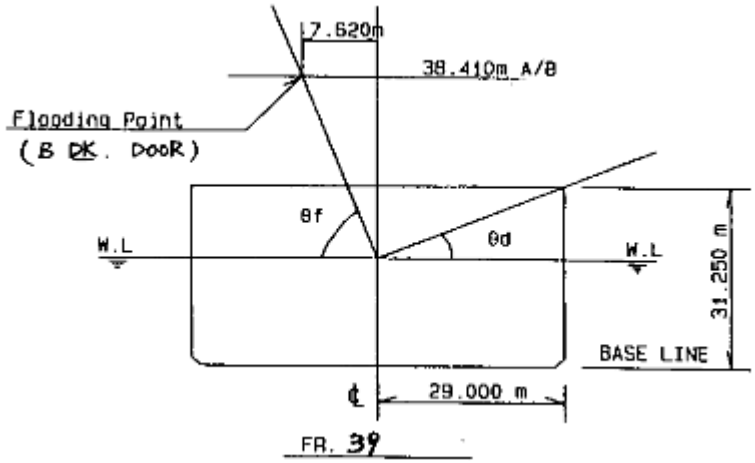
KN TABLE

Trim (Positive by Stern) : 5.000 (m)

Displacement (MT)	Heel (degrees) 2.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000
225000.000	0.923	2.309	4.631	6.974	9.354	11.773	14.140	16.082	17.490	18.486	19.152	19.543	19.696	19.635	19.380
230000.000	0.917	2.294	4.600	6.927	9.288	11.693	14.061	15.988	17.386	18.379	19.047	19.443	19.604	19.553	19.309
235000.000	0.912	2.280	4.571	6.882	9.227	11.616	13.980	15.891	17.280	18.270	18.941	19.343	19.512	19.471	19.239
240000.000	0.906	2.267	4.544	6.840	9.170	11.544	13.898	15.791	17.172	18.160	18.833	19.243	19.420	19.390	19.170
245000.000	0.902	2.255	4.519	6.801	9.116	11.477	13.814	15.689	17.062	18.049	18.726	19.141	19.328	19.309	19.101
250000.000	0.897	2.244	4.496	6.765	9.066	11.414	13.727	15.585	16.951	17.937	18.618	19.040	19.236	19.228	19.033
255000.000	0.893	2.233	4.474	6.732	9.019	11.355	13.640	15.479	16.838	17.823	18.508	18.938	19.143	19.147	18.966
260000.000	0.889	2.224	4.454	6.700	8.976	11.299	13.551	15.371	16.724	17.709	18.398	18.835	19.051	19.067	18.898
265000.000	0.886	2.215	4.435	6.671	8.935	11.247	13.461	15.261	16.608	17.594	18.287	18.732	18.958	18.986	18.831
270000.000	0.882	2.206	4.418	6.644	8.898	11.196	13.371	15.149	16.490	17.477	18.175	18.629	18.865	18.906	18.765
275000.000	0.879	2.198	4.402	6.618	8.863	11.147	13.279	15.036	16.371	17.359	18.063	18.525	18.772	18.825	18.698
280000.000	0.876	2.191	4.386	6.595	8.830	11.098	13.188	14.920	16.251	17.240	17.950	18.420	18.679	18.745	18.632
285000.000	0.874	2.184	4.372	6.573	8.800	11.049	13.095	14.804	16.129	17.120	17.836	18.316	18.586	18.665	18.566
290000.000	0.871	2.178	4.359	6.553	8.773	11.000	13.003	14.686	16.007	16.999	17.721	18.210	18.492	18.584	18.501
295000.000	0.869	2.172	4.348	6.534	8.747	10.950	12.910	14.567	15.883	16.878	17.606	18.105	18.398	18.504	18.435
300000.000	0.867	2.167	4.336	6.517	8.723	10.898	12.816	14.447	15.758	16.755	17.490	17.999	18.304	18.424	18.370
305000.000	0.865	2.162	4.326	6.501	8.701	10.845	12.723	14.327	15.631	16.631	17.374	17.892	18.210	18.343	18.304
310000.000	0.863	2.157	4.317	6.487	8.680	10.790	12.629	14.207	15.504	16.507	17.257	17.786	18.116	18.263	18.239
315000.000	0.861	2.153	4.308	6.474	8.660	10.734	12.535	14.087	15.376	16.382	17.139	17.678	18.021	18.182	18.174
320000.000	0.859	2.149	4.300	6.462	8.639	10.676	12.441	13.966	15.247	16.256	17.021	17.571	17.926	18.102	18.108
325000.000	0.858	2.145	4.293	6.451	8.617	10.617	12.346	13.846	15.117	16.130	16.902	17.463	17.831	18.021	18.043
330000.000	0.857	2.142	4.287	6.442	8.594	10.556	12.252	13.727	14.987	16.003	16.783	17.355	17.736	17.940	17.977
335000.000	0.856	2.139	4.281	6.433	8.569	10.493	12.156	13.607	14.857	15.875	16.664	17.246	17.640	17.859	17.911
340000.000	0.854	2.136	4.276	6.426	8.543	10.428	12.061	13.488	14.726	15.747	16.544	17.137	17.544	17.777	17.844
345000.000	0.854	2.134	4.272	6.419	8.514	10.362	11.965	13.370	14.596	15.619	16.423	17.028	17.448	17.695	17.777
350000.000	0.853	2.132	4.268	6.413	8.482	10.294	11.869	13.253	14.466	15.490	16.302	16.918	17.351	17.613	17.710
355000.000	0.852	2.130	4.265	6.407	8.447	10.224	11.772	13.136	14.337	15.360	16.181	16.808	17.254	17.530	17.643
360000.000	0.851	2.129	4.262	6.400	8.409	10.152	11.675	13.020	14.209	15.230	16.060	16.698	17.157	17.447	17.575

7.6 Down flooding angle - Deck Edge Points

The flooding angle is based on the unprotected openings
1. Door at B-Deck X= -126.650 m FR 39 Y= 7.620 m Z = 38.410 m



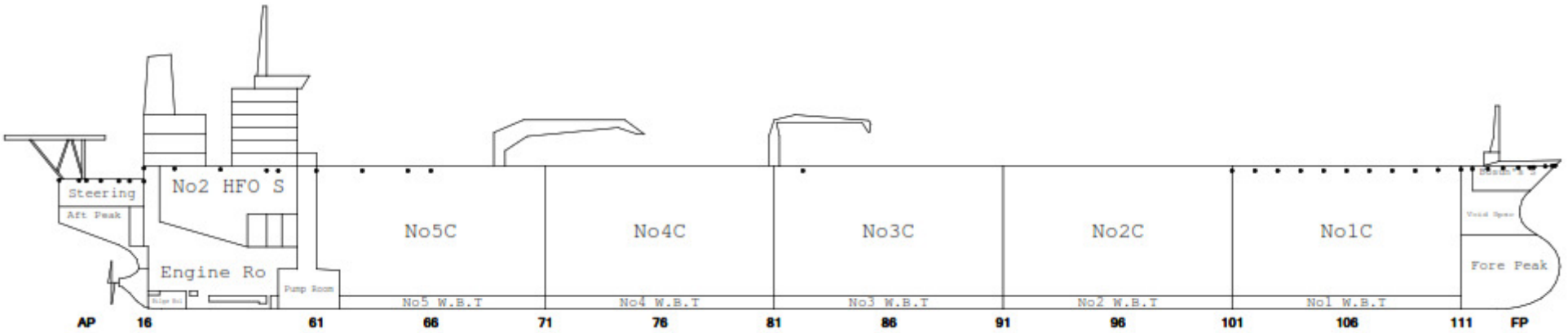
2. VENT. IN E/R F/RM X= -146.200 Y= 7.215 m Z = 39.815 m

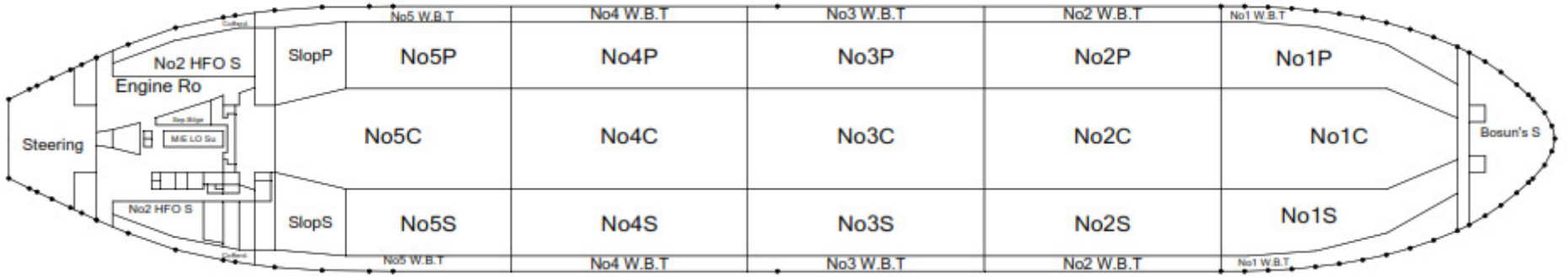
	Trim : -2.000 (m)		Trim : -1.000 (m)		Trim : 0.000 (m)		Trim : 1.000 (m)		Trim : 2.000 (m)	
Displacement (MT)	DraftMid (m)	Flood-Angle (Degrees)	DraftMid (m)	Flood-Angle (Degrees)	DraftMid (m)	Flood-Angle (Degrees)	DraftMid (m)	Flood-Angle (Degrees)	DraftMid (m)	Flood-Angle (Degrees)
35000.00	2.516	70.000	2.580	70.000	2.640	70.000	2.696	70.000	2.749	70.000
275000.00	18.043	70.000	18.057	70.000	18.069	70.000	18.079	70.000	18.088	70.000
280000.00	18.343	70.000	18.356	70.000	18.366	70.000	18.375	70.000	18.382	68.993
285000.00	18.642	70.000	18.653	70.000	18.662	70.000	18.669	69.288	18.675	67.785
290000.00	18.940	70.000	18.949	70.000	18.957	69.600	18.963	68.093	18.968	66.545
295000.00	19.237	70.000	19.245	69.925	19.251	68.384	19.256	66.843	19.260	65.333
300000.00	19.533	70.000	19.540	68.691	19.545	67.157	19.549	65.653	19.551	64.159
305000.00	19.828	69.019	19.834	67.493	19.838	65.990	19.841	64.455	19.842	62.926
310000.00	20.123	67.852	20.127	66.303	20.130	64.766	20.132	63.252	20.132	61.734
315000.00	20.417	66.637	20.420	65.103	20.422	63.596	20.423	62.073	20.422	60.512
320000.00	20.710	65.463	20.712	63.966	20.713	62.396	20.713	60.842	20.711	59.309
325000.00	21.002	64.306	21.004	62.743	21.004	61.188	21.003	59.656	21.001	58.135
330000.00	21.294	63.117	21.294	61.564	21.294	60.022	21.292	58.464	21.289	56.935
335000.00	21.585	61.968	21.585	60.374	21.583	58.810	21.581	57.279	21.578	55.777
340000.00	21.875	60.759	21.874	59.187	21.872	57.651	21.870	56.130	21.866	54.601
345000.00	22.165	59.595	22.164	58.041	22.161	56.480	22.158	54.949	22.154	53.452
350000.00	22.455	58.433	22.453	56.858	22.450	55.320	22.446	53.814	22.442	52.320
355000.00	22.744	57.274	22.741	55.722	22.738	54.185	22.734	52.666	22.729	51.184
360000.00	23.033	56.148	23.030	54.569	23.026	53.037	23.021	51.546	23.016	50.082

	Trim : 3.000 (m)		Trim : 4.000 (m)		Trim : 5.000 (m)	
Displacement (MT)	DraftMid (m)	Flood-Angle (Degrees)	DraftMid (m)	Flood-Angle (Degrees)	DraftMid (m)	Flood-Angle (Degrees)
35000.00	2.798	70.000	2.843	70.000	2.885	70.000
255000.00	16.917	70.000	16.927	70.000	16.936	70.000
260000.00	17.212	70.000	17.221	70.000	17.229	69.390
265000.00	17.507	70.000	17.515	69.680	17.521	68.158
270000.00	17.801	69.977	17.808	68.429	17.812	66.884
275000.00	18.094	68.704	18.100	67.174	18.103	65.669
280000.00	18.387	67.473	18.391	65.981	18.394	64.448
285000.00	18.679	66.258	18.682	64.733	18.683	63.220
290000.00	18.971	65.026	18.973	63.533	18.973	62.026
295000.00	19.261	63.853	19.262	62.317	19.262	60.769
300000.00	19.552	62.614	19.552	61.081	19.551	59.560
305000.00	19.842	61.401	19.841	59.889	19.839	58.357
310000.00	20.131	60.200	20.130	58.663	20.127	57.151
315000.00	20.420	58.978	20.418	57.473	20.415	55.991
320000.00	20.709	57.804	20.706	56.294	20.703	54.788
325000.00	20.998	56.605	20.994	55.102	20.991	53.630
330000.00	21.286	55.433	21.282	53.958	21.278	52.476
335000.00	21.574	54.273	21.570	52.784	21.565	51.330
340000.00	21.862	53.111	21.857	51.654	21.852	50.210
345000.00	22.149	51.993	22.144	50.517	22.139	49.080
350000.00	22.437	50.841	22.431	49.398	22.426	47.997
355000.00	22.724	49.735	22.718	48.300	22.713	46.883
360000.00	23.011	48.620	23.005	47.196	23.000	45.810

1

DECK EDGE POINTS





X(Amid) (m)	Y(CL) (m)	Z(BL) (m)	X(Amid) (m)	Y(CL) (m)	Z(BL) (m)	X(Amid) (m)	Y(CL) (m)	Z(BL) (m)	X(Amid) (m)	Y(CL) (m)	Z(BL) (m)
-165.050	8.650	29.100	-119.000	26.539	31.301	110.490	28.550	31.250	155.400	14.580	31.840
-160.600	10.850	29.041	-116.450	26.971	31.250	115.570	28.010	31.250	158.800	11.870	31.943
-159.000	11.636	29.020	-107.950	28.110	31.250	120.650	27.360	31.250	161.350	9.573	32.020
-155.800	13.194	28.988	-97.790	28.810	31.250	125.730	26.520	31.250	162.200	8.740	32.079
-151.800	15.104	28.947	-87.630	28.964	31.250	130.810	25.395	31.250	164.750	5.760	32.257
-149.400	16.235	28.923	-82.550	29.000	31.250	135.890	23.935	31.250	166.320	2.780	32.367
-146.200	17.734	28.890	0.000	29.000	31.250	140.970	22.200	31.404	166.935	0.000	32.410
-146.200	17.734	31.850	95.250	29.000	31.250	146.050	20.110	31.557			
-139.400	20.672	31.713	100.330	28.970	31.250	148.600	18.830	31.634			
-129.200	24.278	31.507	105.410	28.820	31.250	152.000	16.860	31.737			

7.7 Deadweight constants

Deadweight Constants

Name	Weight (MT)	Aft End (m)	Fore End (m)	LCG (m)	VCG (m)	TCG (m)
DWT CONSTANT	240.0	-159.000	49.530	-56.930	25.27	0.00
CREW EFFECT	10.0	-119.000	-112.200	-115.600	38.85	0.00
CONSTANTS Total	**250.0**			**-59.277**	**25.81**	**0.00**

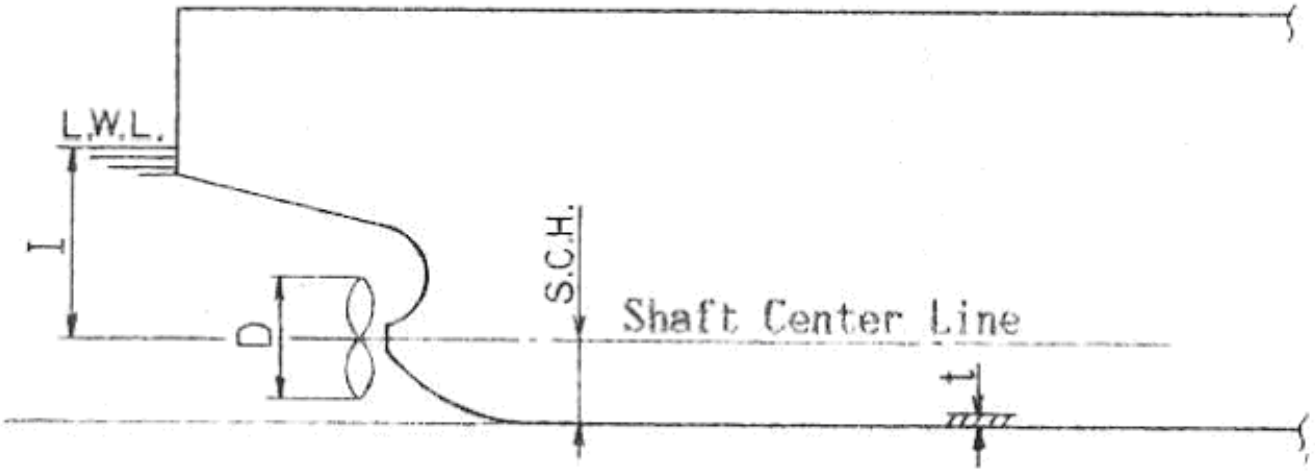
7.8 Propeller Immersion

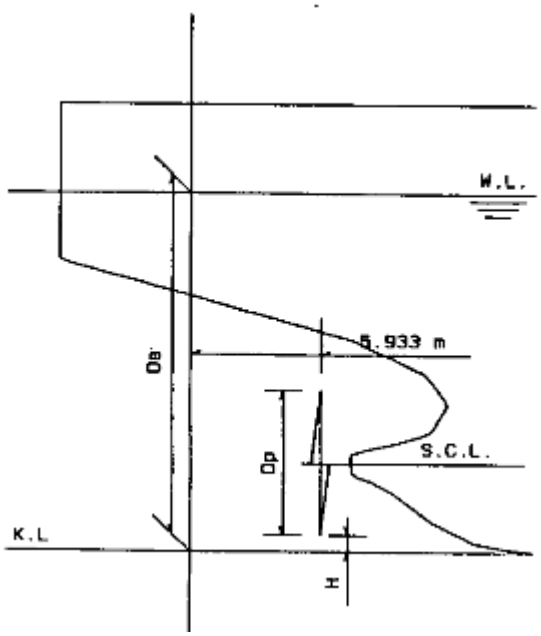
Propeller Immersion = 100 * (I+0.5*D) / D

Based on the lower edge of propeller.

D = Propeller Diameter (m) = 9.700
SCH = Shaft Center Line Height (m) = 5.025

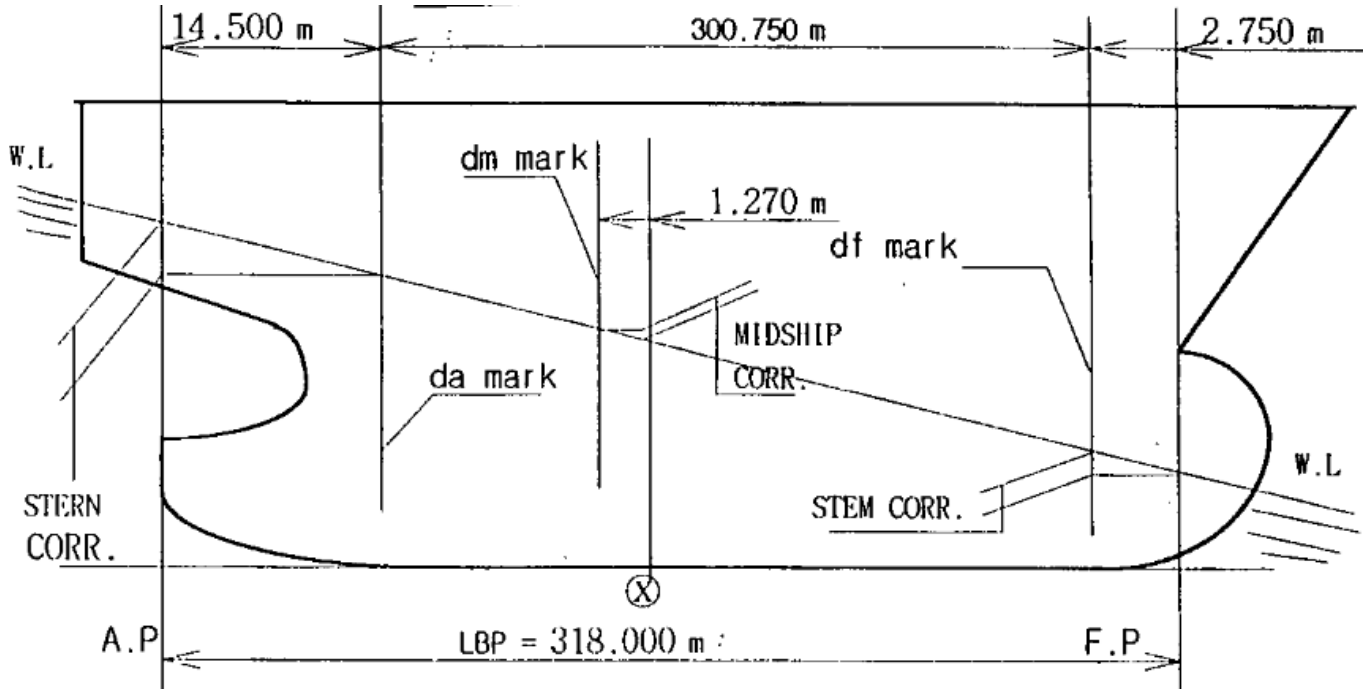
Propeller immersion greater than 100% means propeller fully immersed.





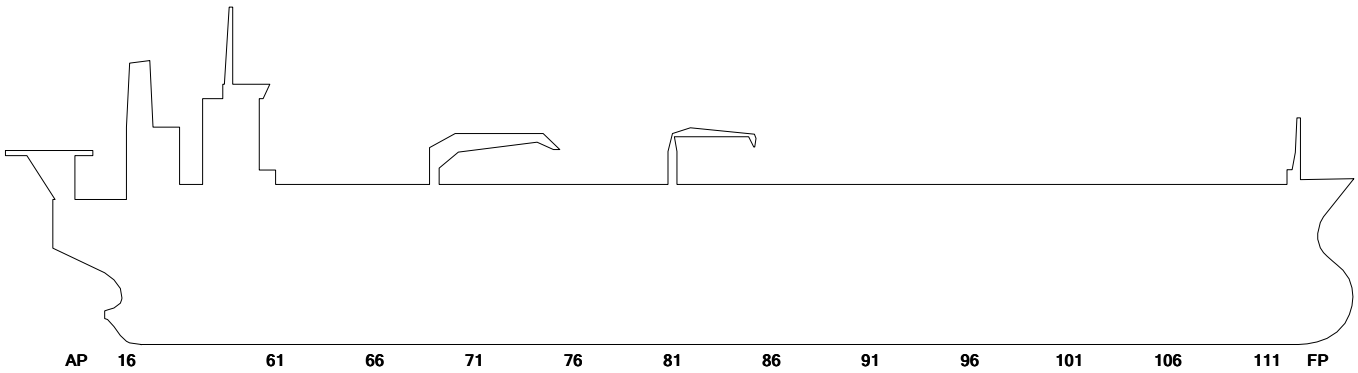
7.9 Draught Marks Location

DRAFT MARKS	X from Mid (m)	X from AP (m)
AFT	-144.500	14.500
MID	-1.270	157.730
FORE	156.250	315.250



7.10 Weather Profile

Weather Profile



Point No	X Amid (m)	Z fm BL (m)	Point No	X Amid (m)	Z fm BL (m)	Point No	X Amid (m)	Z fm BL (m)
1	-142.40	0.00	2	-145.35	0.28	3	-146.20	0.60
4	-147.80	1.80	5	-149.40	3.60	6	-151.00	5.00
7	-151.80	5.20	8	-151.80	6.80	9	-151.00	6.95
10	-149.40	7.35	11	-147.80	8.35	12	-147.43	9.05
13	-147.35	9.40	14	-147.80	11.30	15	-149.40	13.10
16	-151.80	14.50	17	-165.05	19.50	18	-165.05	29.35
19	-164.53	29.35	20	-171.71	38.27	21	-177.16	38.27
22	-177.16	39.30	23	-154.85	39.30	24	-154.84	38.27
25	-159.41	38.27	26	-159.41	29.35	27	-146.20	29.35
28	-146.20	44.01	29	-145.35	57.01	30	-140.25	57.51
31	-139.40	44.01	32	-132.60	44.01	33	-132.60	32.41
34	-126.65	32.41	35	-126.65	49.81	36	-121.55	49.81
37	-121.55	52.71	38	-121.13	52.71	39	-119.85	68.34
40	-119.00	68.34	41	-119.00	52.71	42	-109.50	52.71
43	-111.20	49.81	44	-112.20	49.81	45	-112.20	35.31
46	-107.95	35.31	47	-107.95	32.41	48	-68.57	32.41
49	-68.57	39.89	50	-62.02	42.71	51	-62.02	42.71
52	-39.47	42.71	53	-35.21	39.52	54	-36.80	39.52
55	-41.01	40.98	56	-61.21	38.99	57	-66.07	35.75
58	-66.07	32.41	59	-7.49	32.41	60	-7.49	39.12
61	-6.35	42.71	62	-1.73	43.89	63	14.65	42.59
64	15.05	41.78	65	14.78	39.99	66	14.49	39.99
67	13.18	42.08	68	-5.83	42.08	69	-5.19	39.12
70	-5.19	32.41	71	151.15	32.41	72	151.15	35.41
73	152.43	35.41	74	153.28	38.91	75	153.70	45.91
76	154.55	45.91	77	154.55	33.41	78	168.23	33.61
79	160.50	25.85	80	159.65	24.68	81	159.00	22.50
82	159.00	21.35	83	159.65	19.54	84	160.50	18.58
85	161.35	17.88	86	162.83	16.85	87	163.90	16.16
88	165.46	15.05	89	166.99	13.25	90	167.78	11.45
91	168.00	9.65	92	167.74	7.85	93	167.14	6.05
94	166.00	4.25	95	163.90	2.48	96	161.35	1.22
97	158.80	0.47	98	156.25	0.09	99	154.10	0.00
100	-142.40	0.00						

Weather Profile - Wind Areas and Levers

Draught (m)	Wind Area (m2)	Wind Lever (m)	WL-Length (m)
0.01	11175	18.178	296.8
3.12	10214	18.173	313.6
3.82	9994	18.178	315.2
4.52	9773	18.185	316.6
5.22	9550	18.193	318.4
5.92	9327	18.204	318.9
6.62	9104	18.216	319.1
7.32	8881	18.230	317.1
8.02	8660	18.244	316.1
8.72	8439	18.259	315.5
9.42	8218	18.275	315.3
10.12	7997	18.291	315.5
10.82	7776	18.309	315.5
11.52	7555	18.327	315.7
12.22	7334	18.346	316.1
12.92	7113	18.366	316.4
13.62	6891	18.388	317.0
14.32	6669	18.412	317.6
15.02	6447	18.437	318.7
15.72	6223	18.465	319.6
16.42	5999	18.496	320.4
17.12	5775	18.529	321.2
17.82	5549	18.567	322.0
18.52	5324	18.608	323.0
19.22	5097	18.654	324.2
19.92	4870	18.706	324.6
20.62	4643	18.764	324.3
21.32	4416	18.828	324.1
22.02	4189	18.901	324.1
22.72	3962	18.983	324.1
23.42	3735	19.075	324.3
24.12	3508	19.181	324.5
24.82	3281	19.302	324.8
25.52	3053	19.442	325.3
26.22	2825	19.606	325.9
26.92	2597	19.801	326.6
27.62	2368	20.035	327.3
28.32	2139	20.322	328.0
29.02	1909	20.680	328.7
29.72	1291	27.596	329.2
30.42	1060	29.976	330.4
31.12	829	33.697	331.7

7.11 MAXIMUM VCG (INTACT STABILITY)

APPLIED CRITERIA

Code	Name	Limit	Units
AREA30	Area of GZ Curve 0ψ- 30ψ	0.055	(mxRAD)
AREA40	Area of GZ Curve 0ψ- 40ψ	0.090	(mxRAD)
AREA3040	Area between 30ψ and 40ψ	0.030	(mxRAD)
GZAT30	Value of GZ at 30ψ	0.200	(m)
GZMAX25	Angle of Maximum GZ	25.000	(Deg)
GoMINIT	Initial Minimum GM	0.150	(m)
AREAAB	Weather (AreaB - AreaA)	0.000	(mxRAD)
WINDANGLE	Angle Steady Wind Pressu		
	Parameter 1 = 16.000 Limit Heel Angle deg		
FPSO_WIND	Weather Ratio A1/A2	1.400	D
	Parameter 1 = 51.500 Wind_speed m/sec , Parameter 2 = 1.000 Coeff_Cs		
Dmid	Draught Extreme at Mid	(m)	

T R I M = - 2.0 m

Limiting VCG's for each of the Applied Criteria

DISP	Dmid	VCGlim	Limiting VCG in (m)							
(MT)	(m)	(m)	AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	2.897	12.350	76.465	73.744	36.576	38.618	12.350	83.849	26.425	65.773
45000	3.250	13.643	69.537	67.296	36.050	38.016	13.643	75.477	26.924	61.072
50000	3.599	14.837	64.137	62.218	35.562	37.453	14.837	69.105	27.415	57.250
55000	3.945	15.940	59.662	57.992	35.107	36.920	15.940	63.863	27.874	53.960
60000	4.290	16.939	55.879	54.399	34.665	36.414	16.939	59.470	28.328	51.093
65000	4.632	17.873	52.623	51.313	34.259	35.934	17.873	55.727	27.799	48.562
70000	4.973	18.735	49.800	48.650	33.866	35.477	18.735	52.515	27.576	46.336
75000	5.312	19.532	47.366	46.336	33.493	35.038	19.532	49.712	27.812	44.381
80000	5.649	20.273	45.240	44.320	33.138	34.618	20.273	47.261	28.177	42.652
85000	5.985	20.977	43.378	42.538	32.796	34.218	20.977	45.092	28.695	41.433
90000	6.320	21.660	41.719	40.959	32.477	33.836	21.660	43.169	29.297	40.011

T R I M = - 2.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
95000	6.654	22.318	40.227	39.536	32.175	33.473	22.318	41.447	29.894	38.724
100000	6.987	22.959	38.888	38.258	31.876	33.127	22.959	39.904	30.596	37.558
105000	7.319	23.577	37.683	37.113	31.602	32.795	23.577	38.512	31.222	36.501
110000	7.650	24.176	36.602	36.082	31.341	32.476	24.176	37.257	31.601	35.545
115000	7.980	24.767	35.633	35.153	31.092	32.170	24.767	36.122	31.582	34.680
120000	8.309	25.355	34.751	34.311	30.850	31.875	25.355	35.091	31.500	33.895
125000	8.637	25.922	33.952	33.552	30.622	31.591	25.922	34.154	31.412	33.182
130000	8.965	26.518	33.230	32.860	30.399	31.318	26.518	33.298	31.309	32.531
135000	9.291	27.105	32.576	32.224	30.196	31.054	27.105	32.515	31.216	31.939
140000	9.617	27.676	31.970	31.654	29.996	30.799	27.676	31.799	31.206	31.399
145000	9.942	28.230	31.430	31.135	29.800	30.551	28.230	31.143	31.430	30.906
150000	10.266	28.726	30.945	30.662	29.616	30.311	28.726	30.539	30.996	30.457
155000	10.590	29.182	30.508	30.236	29.452	30.080	29.182	29.983	30.551	30.048
160000	10.912	29.285	30.111	29.854	29.285	29.856	29.575	29.471	30.165	29.678
165000	11.234	28.998	29.741	29.514	29.129	29.638	29.909	28.998	29.797	29.348
170000	11.555	28.563	29.393	29.211	28.972	29.427	30.092	28.563	29.466	29.054
175000	11.874	28.163	29.069	28.938	28.829	29.222	29.769	28.163	29.169	28.793
180000	12.193	27.796	28.766	28.691	28.676	29.023	29.476	27.796	28.903	28.560
185000	12.511	27.459	28.468	28.464	28.538	28.830	29.219	27.459	28.663	28.347
190000	12.828	27.149	28.187	28.251	28.387	28.643	29.007	27.149	28.432	28.151
195000	13.145	26.864	27.935	28.050	28.245	28.461	28.799	26.864	28.215	27.968
200000	13.460	26.602	27.678	27.858	28.098	28.284	28.628	26.602	28.010	27.795
205000	13.774	26.360	27.453	27.674	27.943	28.112	28.448	26.360	27.816	27.631
210000	14.087	26.137	27.228	27.495	27.798	27.945	28.299	26.137	27.631	27.472
215000	14.399	25.932	27.018	27.320	27.638	27.782	28.138	25.932	27.454	27.318
220000	14.711	25.745	26.827	27.148	27.477	27.619	27.978	25.745	27.282	27.167
225000	15.021	25.575	26.636	26.977	27.317	27.457	27.817	25.575	27.116	27.017
230000	15.330	25.419	26.464	26.807	27.154	27.294	27.654	25.419	26.954	26.869
235000	15.638	25.277	26.289	26.639	26.989	27.131	27.489	25.277	26.795	26.720
240000	15.945	25.146	26.132	26.471	26.812	26.965	27.323	25.146	26.640	26.572
245000	16.252	25.027	25.984	26.304	26.634	26.798	27.154	25.027	26.488	26.424
250000	16.557	24.918	25.843	26.138	26.464	26.630	26.968	24.918	26.339	26.277
255000	16.861	24.818	25.703	25.973	26.273	26.460	26.797	24.818	26.190	26.130
260000	17.164	24.727	25.572	25.810	26.092	26.288	26.627	24.727	26.044	25.984
265000	17.467	24.645	25.454	25.650	25.904	26.115	26.464	24.645	25.903	25.839
270000	17.768	24.571	25.332	25.491	25.712	25.942	26.286	24.571	25.765	25.697
275000	18.069	24.505	25.224	25.336	25.524	25.767	26.124	24.505	25.632	25.557
280000	18.368	24.447	25.116	25.184	25.336	25.593	25.949	24.447	25.504	25.419

T R I M = - 2.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
285000	18.667	24.394	25.011	25.036	25.141	25.417	25.793	24.394	25.380	25.286
290000	18.965	24.347	24.914	24.893	24.944	25.242	25.664	24.347	25.261	25.158
295000	19.262	24.305	24.809	24.755	24.748	25.067	25.519	24.305	25.149	25.036
300000	19.558	24.268	24.715	24.623	24.562	24.893	25.402	24.268	25.045	24.923
305000	19.854	24.236	24.624	24.499	24.367	24.718	25.297	24.236	24.951	24.818
310000	20.148	24.172	24.537	24.383	24.172	24.544	25.102	24.208	24.866	24.723
315000	20.442	23.981	24.453	24.274	23.981	24.370	24.561	24.185	24.788	24.638
320000	20.735	23.782	24.372	24.171	23.782	24.196	24.023	24.165	24.716	24.562
325000	21.027	23.472	24.294	24.072	23.592	24.022	23.472	24.149	24.662	24.495
330000	21.319	22.940	24.216	23.977	23.400	23.848	22.940	24.135	24.600	24.436
335000	21.610	22.426	24.139	23.886	23.216	23.673	22.426	24.124	24.546	24.384
340000	21.901	21.930	24.065	23.799	23.020	23.499	21.930	24.115	24.500	24.339
345000	22.191	21.470	23.993	23.714	22.840	23.323	21.470	24.108	24.470	24.300
350000	22.480	21.036	23.925	23.631	22.647	23.148	21.036	24.104	24.437	24.268
355000	22.769	20.649	23.858	23.549	22.464	22.971	20.649	24.103	24.404	24.241
360000	23.058	20.281	23.797	23.471	22.277	22.794	20.281	24.105	24.377	24.220

T R I M = - 1.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	2.959	12.458	76.603	73.882	36.644	38.688	12.458	83.934	26.507	65.931
45000	3.311	13.804	69.687	67.437	36.110	38.079	13.804	75.607	27.019	61.230
50000	3.660	15.000	64.262	62.332	35.616	37.509	15.000	69.236	27.506	57.387
55000	4.006	16.081	59.773	58.092	35.157	36.969	16.081	63.973	27.958	54.084
60000	4.349	17.059	55.986	54.506	34.712	36.457	17.059	59.576	28.406	51.211
65000	4.691	17.951	52.721	51.412	34.294	35.969	17.951	55.823	27.925	48.667
70000	5.031	18.774	49.892	48.732	33.898	35.505	18.774	52.608	27.658	46.432
75000	5.370	19.549	47.446	46.416	33.524	35.064	19.549	49.803	27.882	44.472
80000	5.707	20.282	45.321	44.401	33.163	34.645	20.282	47.350	28.233	42.739
85000	6.043	20.984	43.457	42.617	32.825	34.246	20.984	45.180	28.744	41.520
90000	6.377	21.655	41.796	41.036	32.504	33.867	21.655	43.253	29.333	40.097
95000	6.710	22.306	40.313	39.613	32.201	33.505	22.306	41.531	29.931	38.810
100000	7.043	22.938	38.974	38.344	31.913	33.159	22.938	39.986	30.633	37.643
105000	7.374	23.551	37.769	37.189	31.638	32.830	23.551	38.595	31.238	36.584
110000	7.705	24.159	36.687	36.157	31.376	32.513	24.159	37.340	31.636	35.628
115000	8.034	24.740	35.707	35.227	31.126	32.208	24.740	36.205	31.646	34.762
120000	8.363	25.318	34.824	34.384	30.884	31.915	25.318	35.174	31.564	33.977
125000	8.691	25.889	34.035	33.625	30.654	31.634	25.889	34.236	31.475	33.263
130000	9.018	26.481	33.311	32.931	30.441	31.362	26.481	33.380	31.371	32.612
135000	9.344	27.066	32.647	32.300	30.237	31.100	27.066	32.599	31.277	32.020
140000	9.669	27.646	32.047	31.729	30.037	30.846	27.646	31.883	31.257	31.478
145000	9.993	28.191	31.506	31.209	29.841	30.600	28.191	31.228	31.501	30.985
150000	10.316	28.700	31.020	30.736	29.660	30.361	28.700	30.623	31.070	30.535
155000	10.638	29.161	30.581	30.307	29.491	30.129	29.161	30.067	30.628	30.124
160000	10.960	29.320	30.184	29.924	29.320	29.906	29.560	29.555	30.241	29.752
165000	11.280	29.083	29.813	29.581	29.169	29.690	29.899	29.083	29.871	29.419
170000	11.600	28.649	29.465	29.275	29.013	29.479	30.163	28.649	29.538	29.123
175000	11.919	28.250	29.141	29.000	28.871	29.275	29.851	28.250	29.238	28.860
180000	12.236	27.884	28.838	28.752	28.728	29.076	29.548	27.884	28.970	28.624
185000	12.553	27.547	28.542	28.524	28.582	28.883	29.283	27.547	28.729	28.411
190000	12.869	27.237	28.263	28.310	28.444	28.696	29.056	27.237	28.499	28.214
195000	13.183	26.952	27.996	28.109	28.297	28.514	28.850	26.952	28.281	28.030
200000	13.497	26.688	27.752	27.917	28.152	28.338	28.682	26.688	28.076	27.857
205000	13.810	26.446	27.517	27.733	28.007	28.166	28.502	26.446	27.881	27.692
210000	14.122	26.223	27.293	27.554	27.853	27.999	28.353	26.223	27.696	27.533
215000	14.432	26.018	27.093	27.379	27.693	27.836	28.193	26.018	27.519	27.378
220000	14.742	25.831	26.895	27.207	27.535	27.676	28.035	25.831	27.347	27.227
225000	15.050	25.659	26.706	27.037	27.377	27.517	27.877	25.659	27.181	27.078

T R I M = - 1.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
230000	15.358	25.503	26.526	26.868	27.217	27.357	27.717	25.503	27.019	26.930
235000	15.665	25.359	26.354	26.699	27.044	27.196	27.554	25.359	26.861	26.783
240000	15.970	25.228	26.199	26.532	26.879	27.032	27.389	25.228	26.706	26.635
245000	16.275	25.107	26.042	26.365	26.702	26.867	27.207	25.107	26.553	26.487
250000	16.578	24.995	25.902	26.198	26.522	26.698	27.036	24.995	26.403	26.339
255000	16.881	24.893	25.761	26.033	26.341	26.528	26.866	24.893	26.253	26.192
260000	17.183	24.801	25.630	25.870	26.150	26.356	26.695	24.801	26.107	26.046
265000	17.484	24.717	25.511	25.710	25.971	26.183	26.531	24.717	25.965	25.901
270000	17.784	24.641	25.398	25.551	25.778	26.008	26.352	24.641	25.827	25.758
275000	18.083	24.573	25.281	25.396	25.591	25.833	26.191	24.573	25.694	25.618
280000	18.381	24.512	25.171	25.244	25.391	25.658	26.015	24.512	25.565	25.481
285000	18.678	24.457	25.065	25.095	25.205	25.482	25.857	24.457	25.440	25.347
290000	18.975	24.407	24.967	24.951	25.007	25.306	25.727	24.407	25.320	25.218
295000	19.270	24.362	24.864	24.812	24.810	25.130	25.581	24.362	25.207	25.094
300000	19.565	24.323	24.768	24.679	24.611	24.954	25.461	24.323	25.100	24.979
305000	19.859	24.288	24.676	24.553	24.426	24.778	25.356	24.288	25.003	24.872
310000	20.153	24.231	24.587	24.435	24.231	24.603	25.231	24.258	24.916	24.775
315000	20.445	24.037	24.502	24.325	24.037	24.427	24.687	24.232	24.837	24.688
320000	20.737	23.843	24.419	24.220	23.843	24.252	24.133	24.208	24.763	24.610
325000	21.029	23.567	24.328	24.119	23.647	24.077	23.567	24.188	24.698	24.541
330000	21.320	23.013	24.261	24.023	23.453	23.901	23.013	24.170	24.643	24.480
335000	21.610	22.492	24.182	23.930	23.262	23.725	22.492	24.155	24.592	24.426
340000	21.900	21.985	24.105	23.841	23.075	23.548	21.985	24.142	24.545	24.378
345000	22.189	21.514	24.032	23.754	22.884	23.371	21.514	24.132	24.504	24.336
350000	22.478	21.082	23.961	23.668	22.697	23.193	21.082	24.125	24.467	24.300
355000	22.766	20.692	23.892	23.585	22.507	23.015	20.692	24.123	24.427	24.270
360000	23.055	20.316	23.831	23.504	22.321	22.835	20.316	24.122	24.401	24.246

T R I M = 0.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	3.018	12.610	76.645	73.905	36.637	38.670	12.610	84.009	26.602	65.963
45000	3.370	13.940	69.743	67.472	36.106	38.064	13.940	75.696	27.115	61.282
50000	3.718	15.122	64.314	62.374	35.618	37.499	15.122	69.329	27.596	57.446
55000	4.063	16.169	59.830	58.150	35.155	36.963	16.169	64.061	28.041	54.149
60000	4.407	17.121	56.053	54.562	34.718	36.452	17.121	59.664	28.483	51.281
65000	4.748	17.990	52.791	51.461	34.297	35.967	17.990	55.907	28.077	48.738
70000	5.088	18.798	49.964	48.793	33.910	35.507	18.798	52.691	27.740	46.503
75000	5.426	19.566	47.518	46.478	33.535	35.071	19.566	49.886	27.934	44.543
80000	5.763	20.298	45.390	44.459	33.177	34.658	20.298	47.433	28.287	42.811
85000	6.099	20.994	43.521	42.681	32.843	34.264	20.994	45.264	28.783	41.595
90000	6.433	21.664	41.869	41.099	32.527	33.888	21.664	43.338	29.356	40.174
95000	6.766	22.310	40.385	39.684	32.223	33.530	22.310	41.616	29.952	38.889
100000	7.098	22.938	39.047	38.416	31.935	33.187	22.938	40.072	30.645	37.722
105000	7.429	23.537	37.844	37.263	31.662	32.860	23.537	38.683	31.252	36.665
110000	7.759	24.137	36.763	36.233	31.402	32.545	24.137	37.430	31.672	35.709
115000	8.088	24.717	35.783	35.303	31.162	32.244	24.717	36.295	31.702	34.843
120000	8.416	25.294	34.911	34.460	30.920	31.954	25.294	35.264	31.630	34.059
125000	8.743	25.853	34.111	33.701	30.691	31.674	25.853	34.325	31.531	33.345
130000	9.069	26.443	33.385	33.015	30.474	31.404	26.443	33.470	31.434	32.695
135000	9.394	27.028	32.729	32.378	30.269	31.143	27.028	32.690	31.329	32.102
140000	9.719	27.600	32.127	31.806	30.070	30.891	27.600	31.975	31.300	31.561
145000	10.042	28.145	31.586	31.286	29.886	30.647	28.145	31.319	31.586	31.067
150000	10.364	28.667	31.098	30.813	29.698	30.411	28.667	30.714	31.148	30.616
155000	10.686	29.133	30.658	30.383	29.533	30.181	29.133	30.158	30.709	30.205
160000	11.006	29.367	30.260	29.997	29.367	29.958	29.527	29.646	30.327	29.831
165000	11.325	29.176	29.889	29.651	29.203	29.742	29.873	29.176	29.949	29.495
170000	11.644	28.744	29.541	29.342	29.054	29.533	30.155	28.744	29.614	29.196
175000	11.961	28.346	29.214	29.066	28.914	29.329	29.924	28.346	29.312	28.930
180000	12.277	27.981	28.912	28.816	28.772	29.131	29.623	27.981	29.041	28.692
185000	12.593	27.644	28.619	28.586	28.629	28.939	29.350	27.644	28.798	28.477
190000	12.907	27.333	28.334	28.372	28.494	28.752	29.115	27.333	28.568	28.279
195000	13.220	27.047	28.071	28.170	28.351	28.570	28.921	27.047	28.350	28.094
200000	13.533	26.782	27.828	27.978	28.198	28.393	28.739	26.782	28.144	27.919
205000	13.844	26.539	27.592	27.792	28.052	28.221	28.572	26.539	27.949	27.753
210000	14.154	26.316	27.367	27.613	27.907	28.054	28.407	26.316	27.763	27.594
215000	14.463	26.111	27.158	27.437	27.748	27.892	28.248	26.111	27.585	27.439
220000	14.771	25.924	26.962	27.265	27.592	27.734	28.092	25.924	27.414	27.288
225000	15.078	25.751	26.776	27.096	27.436	27.577	27.936	25.751	27.248	27.139

T R I M = 0.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
230000	15.384	25.594	26.598	26.927	27.269	27.420	27.779	25.594	27.086	26.992
235000	15.689	25.448	26.428	26.760	27.109	27.261	27.619	25.448	26.928	26.845
240000	15.993	25.314	26.265	26.592	26.935	27.099	27.455	25.314	26.772	26.697
245000	16.296	25.190	26.108	26.425	26.758	26.933	27.274	25.190	26.619	26.549
250000	16.598	25.076	25.968	26.258	26.578	26.765	27.103	25.076	26.468	26.401
255000	16.899	24.971	25.827	26.093	26.397	26.594	26.931	24.971	26.317	26.253
260000	17.199	24.877	25.696	25.930	26.216	26.421	26.760	24.877	26.170	26.106
265000	17.499	24.792	25.576	25.768	26.026	26.247	26.596	24.792	26.027	25.961
270000	17.797	24.715	25.452	25.610	25.842	26.072	26.416	24.715	25.889	25.819
275000	18.095	24.645	25.344	25.455	25.644	25.896	26.254	24.645	25.755	25.679
280000	18.391	24.580	25.233	25.302	25.453	25.720	26.077	24.580	25.625	25.541
285000	18.687	24.522	25.126	25.153	25.256	25.543	25.918	24.522	25.500	25.407
290000	18.982	24.469	25.027	25.008	25.067	25.366	25.787	24.469	25.379	25.276
295000	19.277	24.422	24.919	24.868	24.868	25.189	25.639	24.422	25.263	25.151
300000	19.571	24.380	24.821	24.733	24.667	25.011	25.518	24.380	25.154	25.034
305000	19.863	24.342	24.727	24.605	24.471	24.835	25.411	24.342	25.055	24.925
310000	20.156	24.284	24.636	24.485	24.284	24.658	25.294	24.309	24.965	24.825
315000	20.447	24.088	24.548	24.373	24.088	24.481	24.788	24.278	24.883	24.735
320000	20.738	23.889	24.464	24.266	23.889	24.304	24.219	24.251	24.807	24.655
325000	21.029	23.651	24.383	24.164	23.691	24.127	23.651	24.226	24.741	24.584
330000	21.319	23.084	24.303	24.066	23.504	23.949	23.084	24.204	24.685	24.521
335000	21.608	22.551	24.221	23.971	23.311	23.771	22.551	24.185	24.631	24.464
340000	21.898	22.044	24.142	23.879	23.114	23.593	22.044	24.169	24.574	24.413
345000	22.186	21.572	24.066	23.789	22.922	23.413	21.572	24.157	24.532	24.368
350000	22.475	21.128	23.993	23.702	22.731	23.233	21.128	24.148	24.491	24.330
355000	22.763	20.732	23.922	23.615	22.537	23.052	20.732	24.142	24.457	24.296
360000	23.051	20.357	23.863	23.532	22.353	22.871	20.357	24.139	24.424	24.269

T R I M = 1.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	3.075	12.868	76.253	73.512	36.544	38.569	12.868	83.508	26.786	65.600
45000	3.425	14.057	69.919	67.588	36.052	37.993	14.057	76.147	27.240	61.406
50000	3.774	15.204	64.296	62.346	35.570	37.432	15.204	69.394	27.679	57.422
55000	4.119	16.222	59.846	58.136	35.111	36.908	16.222	64.121	28.119	54.153
60000	4.462	17.160	56.075	54.574	34.690	36.411	17.160	59.729	28.555	51.302
65000	4.804	18.022	52.823	51.493	34.276	35.938	18.022	55.978	28.236	48.777
70000	5.143	18.829	50.013	48.833	33.895	35.488	18.829	52.760	27.816	46.553
75000	5.481	19.592	47.571	46.521	33.528	35.062	19.592	49.962	27.988	44.597
80000	5.818	20.315	45.444	44.514	33.181	34.656	20.315	47.510	28.331	42.869
85000	6.153	21.009	43.583	42.743	32.851	34.269	21.009	45.345	28.810	41.659
90000	6.487	21.671	41.932	41.162	32.540	33.900	21.671	43.421	29.380	40.242
95000	6.820	22.310	40.455	39.755	32.243	33.547	22.310	41.705	29.973	38.963
100000	7.152	22.931	39.118	38.478	31.956	33.209	22.931	40.163	30.646	37.799
105000	7.482	23.531	37.919	37.339	31.688	32.886	23.531	38.776	31.258	36.745
110000	7.812	24.125	36.841	36.311	31.430	32.576	24.125	37.524	31.700	35.790
115000	8.140	24.704	35.871	35.380	31.190	32.278	24.704	36.390	31.760	34.925
120000	8.468	25.261	34.988	34.538	30.958	31.989	25.261	35.359	31.688	34.142
125000	8.794	25.811	34.189	33.779	30.729	31.712	25.811	34.422	31.589	33.430
130000	9.120	26.391	33.471	33.091	30.511	31.445	26.391	33.569	31.491	32.780
135000	9.444	26.974	32.815	32.458	30.305	31.188	26.974	32.789	31.385	32.188
140000	9.767	27.544	32.211	31.887	30.115	30.937	27.544	32.073	31.335	31.647
145000	10.090	28.092	31.669	31.367	29.922	30.695	28.092	31.416	31.662	31.152
150000	10.411	28.619	31.179	30.892	29.739	30.460	28.619	30.812	31.229	30.700
155000	10.731	29.079	30.738	30.461	29.569	30.232	29.079	30.257	30.793	30.288
160000	11.051	29.407	30.338	30.073	29.407	30.009	29.487	29.747	30.402	29.912
165000	11.369	29.247	29.967	29.725	29.247	29.794	29.827	29.278	30.031	29.574
170000	11.686	28.847	29.619	29.413	29.103	29.586	30.113	28.847	29.693	29.272
175000	12.002	28.451	29.299	29.133	28.958	29.383	29.999	28.451	29.389	29.002
180000	12.317	28.085	28.990	28.881	28.810	29.186	29.710	28.085	29.115	28.761
185000	12.631	27.748	28.691	28.650	28.681	28.994	29.421	27.748	28.869	28.544
190000	12.944	27.437	28.417	28.435	28.537	28.808	29.178	27.437	28.641	28.345
195000	13.256	27.150	28.147	28.233	28.397	28.626	28.971	27.150	28.421	28.159
200000	13.566	26.885	27.897	28.039	28.257	28.450	28.797	26.885	28.215	27.983
205000	13.876	26.641	27.669	27.853	28.109	28.278	28.629	26.641	28.019	27.816
210000	14.185	26.417	27.443	27.672	27.953	28.111	28.463	26.417	27.832	27.656
215000	14.492	26.212	27.234	27.496	27.804	27.949	28.304	26.212	27.654	27.500
220000	14.798	26.023	27.029	27.324	27.649	27.792	28.149	26.023	27.482	27.349

T R I M = 1.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
225000	15.104	25.850	26.845	27.155	27.485	27.638	27.995	25.850	27.315	27.200
230000	15.408	25.689	26.671	26.987	27.331	27.484	27.841	25.689	27.154	27.053
235000	15.711	25.541	26.503	26.820	27.163	27.327	27.683	25.541	26.995	26.907
240000	16.014	25.404	26.339	26.652	26.989	27.164	27.505	25.404	26.839	26.759
245000	16.315	25.278	26.182	26.484	26.812	26.998	27.337	25.278	26.685	26.611
250000	16.616	25.162	26.032	26.317	26.632	26.829	27.167	25.162	26.533	26.462
255000	16.915	25.056	25.891	26.152	26.451	26.657	26.995	25.056	26.382	26.313
260000	17.214	24.960	25.759	25.988	26.269	26.484	26.824	24.960	26.234	26.166
265000	17.512	24.872	25.638	25.826	26.088	26.309	26.652	24.872	26.090	26.020
270000	17.809	24.792	25.513	25.667	25.893	26.133	26.477	24.792	25.950	25.877
275000	18.105	24.719	25.403	25.512	25.703	25.956	26.314	24.719	25.815	25.737
280000	18.400	24.651	25.292	25.358	25.512	25.779	26.136	24.651	25.684	25.599
285000	18.695	24.590	25.184	25.208	25.314	25.600	25.976	24.590	25.558	25.463
290000	18.989	24.534	25.083	25.062	25.113	25.422	25.834	24.534	25.435	25.331
295000	19.282	24.484	24.972	24.921	24.923	25.243	25.693	24.484	25.318	25.205
300000	19.574	24.439	24.873	24.785	24.719	25.065	25.570	24.439	25.207	25.086
305000	19.866	24.398	24.777	24.655	24.522	24.886	25.462	24.398	25.106	24.975
310000	20.157	24.324	24.684	24.533	24.324	24.708	25.344	24.360	25.013	24.873
315000	20.448	24.136	24.594	24.419	24.136	24.529	24.856	24.326	24.930	24.781
320000	20.738	23.934	24.508	24.310	23.934	24.351	24.294	24.294	24.851	24.699
325000	21.028	23.711	24.425	24.206	23.741	24.172	23.711	24.265	24.781	24.626
330000	21.317	23.141	24.342	24.106	23.541	23.992	23.141	24.240	24.721	24.560
335000	21.606	22.614	24.258	24.008	23.345	23.812	22.614	24.217	24.665	24.500
340000	21.895	22.097	24.176	23.913	23.157	23.631	22.097	24.199	24.607	24.446
345000	22.183	21.622	24.098	23.821	22.963	23.449	21.622	24.184	24.563	24.399
350000	22.471	21.174	24.022	23.731	22.769	23.267	21.174	24.173	24.520	24.357
355000	22.759	20.777	23.948	23.642	22.573	23.084	20.777	24.165	24.483	24.321
360000	23.046	20.390	23.886	23.556	22.386	22.900	20.390	24.159	24.446	24.291

T R I M = 2.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	3.128	13.031	76.134	73.334	36.396	38.382	13.031	83.682	26.966	65.422
45000	3.478	14.159	69.762	67.392	35.915	37.835	14.159	76.135	27.403	61.218
50000	3.827	15.240	64.220	62.230	35.464	37.306	15.240	69.409	27.821	57.322
55000	4.173	16.253	59.797	58.067	35.032	36.811	16.253	64.159	28.214	54.096
60000	4.516	17.202	56.056	54.535	34.621	36.338	17.202	59.775	28.621	51.275
65000	4.857	18.062	52.837	51.486	34.233	35.885	18.062	56.040	28.391	48.782
70000	5.197	18.866	50.032	48.841	33.858	35.451	18.866	52.826	27.878	46.576
75000	5.535	19.620	47.600	46.550	33.507	35.037	19.620	50.033	28.046	44.630
80000	5.871	20.340	45.484	44.544	33.171	34.642	20.340	47.582	28.381	43.281
85000	6.206	21.030	43.639	42.779	32.857	34.265	21.030	45.422	28.836	41.712
90000	6.540	21.691	41.992	41.212	32.550	33.904	21.691	43.503	29.390	40.302
95000	6.873	22.325	40.523	39.813	32.251	33.558	22.325	41.793	29.981	39.030
100000	7.204	22.934	39.187	38.546	31.975	33.225	22.934	40.256	30.635	37.872
105000	7.534	23.526	37.993	37.403	31.711	32.906	23.526	38.874	31.251	36.822
110000	7.863	24.110	36.918	36.378	31.457	32.601	24.110	37.623	31.727	35.870
115000	8.191	24.677	35.941	35.451	31.221	32.307	24.677	36.490	31.811	35.007
120000	8.518	25.241	35.069	34.618	30.988	32.023	25.241	35.462	31.738	34.226
125000	8.844	25.792	34.281	33.860	30.760	31.750	25.792	34.527	31.650	33.515
130000	9.168	26.365	33.556	33.166	30.546	31.486	26.365	33.675	31.546	32.867
135000	9.492	26.938	32.900	32.540	30.349	31.230	26.938	32.895	31.439	32.275
140000	9.815	27.491	32.297	31.970	30.151	30.982	27.491	32.179	31.371	31.735
145000	10.136	28.031	31.755	31.450	29.961	30.742	28.031	31.522	31.741	31.240
150000	10.456	28.553	31.264	30.975	29.783	30.508	28.553	30.919	31.313	30.788
155000	10.775	29.012	30.821	30.543	29.612	30.282	29.012	30.366	30.882	30.375
160000	11.093	29.431	30.420	30.153	29.451	30.062	29.431	29.857	30.487	29.998
165000	11.410	29.296	30.049	29.802	29.296	29.848	29.776	29.390	30.118	29.657
170000	11.726	28.960	29.701	29.487	29.138	29.640	30.078	28.960	29.778	29.352
175000	12.041	28.563	29.373	29.204	28.996	29.438	30.077	28.563	29.470	29.079
180000	12.355	28.198	29.072	28.949	28.862	29.243	29.772	28.198	29.193	28.835
185000	12.667	27.861	28.776	28.717	28.726	29.052	29.497	27.861	28.945	28.615
190000	12.979	27.549	28.493	28.501	28.583	28.865	29.245	27.549	28.716	28.414
195000	13.289	27.261	28.226	28.296	28.446	28.684	29.046	27.261	28.496	28.226
200000	13.598	26.995	27.984	28.101	28.304	28.508	28.848	26.995	28.288	28.049
205000	13.906	26.751	27.738	27.913	28.158	28.337	28.673	26.751	28.091	27.880
210000	14.213	26.527	27.522	27.732	28.002	28.170	28.522	26.527	27.903	27.718
215000	14.519	26.320	27.312	27.556	27.852	28.009	28.362	26.320	27.723	27.562
220000	14.824	26.130	27.107	27.383	27.697	27.852	28.207	26.130	27.551	27.409
225000	15.127	25.954	26.924	27.213	27.544	27.698	28.054	25.954	27.383	27.260

T R I M = 2.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
230000	15.430	25.790	26.740	27.045	27.380	27.545	27.900	25.790	27.221	27.113
235000	15.732	25.638	26.573	26.877	27.213	27.388	27.743	25.638	27.062	26.966
240000	16.033	25.498	26.409	26.709	27.039	27.225	27.565	25.498	26.905	26.818
245000	16.332	25.370	26.253	26.541	26.863	27.059	27.397	25.370	26.750	26.669
250000	16.631	25.252	26.103	26.374	26.693	26.890	27.227	25.252	26.598	26.520
255000	16.929	25.145	25.961	26.208	26.511	26.717	27.056	25.145	26.445	26.372
260000	17.227	25.046	25.829	26.044	26.319	26.543	26.884	25.046	26.296	26.224
265000	17.523	24.956	25.697	25.882	26.137	26.368	26.712	24.956	26.151	26.078
270000	17.818	24.872	25.581	25.723	25.941	26.191	26.535	24.872	26.011	25.934
275000	18.113	24.794	25.459	25.567	25.749	26.013	26.369	24.794	25.875	25.793
280000	18.407	24.724	25.347	25.413	25.557	25.834	26.191	24.724	25.743	25.654
285000	18.700	24.659	25.238	25.262	25.368	25.655	26.030	24.659	25.614	25.518
290000	18.993	24.600	25.136	25.115	25.166	25.475	25.887	24.600	25.490	25.385
295000	19.285	24.547	25.026	24.972	24.963	25.295	25.744	24.547	25.371	25.257
300000	19.576	24.498	24.924	24.835	24.768	25.115	25.618	24.498	25.259	25.136
305000	19.867	24.453	24.826	24.703	24.568	24.934	25.509	24.453	25.155	25.023
310000	20.157	24.368	24.731	24.580	24.368	24.754	25.388	24.411	25.060	24.920
315000	20.447	24.178	24.639	24.463	24.178	24.573	24.888	24.372	24.974	24.825
320000	20.737	23.974	24.550	24.352	23.974	24.392	24.324	24.337	24.893	24.740
325000	21.026	23.757	24.463	24.245	23.777	24.211	23.757	24.304	24.828	24.664
330000	21.314	23.202	24.378	24.141	23.582	24.029	23.202	24.276	24.752	24.595
335000	21.603	22.666	24.291	24.041	23.386	23.846	22.666	24.252	24.696	24.532
340000	21.891	22.153	24.207	23.944	23.184	23.663	22.153	24.231	24.634	24.476
345000	22.179	21.676	24.126	23.849	22.987	23.479	21.676	24.213	24.587	24.426
350000	22.467	21.222	24.047	23.756	22.792	23.294	21.222	24.197	24.542	24.382
355000	22.754	20.817	23.970	23.665	22.603	23.108	20.817	24.186	24.503	24.343
360000	23.041	20.431	23.907	23.576	22.406	22.922	20.431	24.177	24.467	24.311

T R I M = 3.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	3.178	13.235	75.833	72.963	36.165	38.124	13.235	83.751	27.129	65.041
45000	3.529	14.299	69.479	67.069	35.733	37.624	14.299	76.055	27.559	60.900
50000	3.878	15.330	64.060	62.030	35.315	37.139	15.330	69.389	27.966	57.135
55000	4.224	16.291	59.692	57.932	34.907	36.676	16.291	64.172	28.345	53.975
60000	4.567	17.223	55.986	54.446	34.532	36.232	17.223	59.803	28.717	51.202
65000	4.909	18.095	52.807	51.437	34.163	35.807	18.095	56.086	29.096	48.751
70000	5.249	18.903	50.031	48.821	33.818	35.395	18.903	52.880	27.937	46.572
75000	5.587	19.656	47.621	46.551	33.478	34.998	19.656	50.098	28.098	44.646
80000	5.923	20.375	45.522	44.562	33.149	34.617	20.375	47.653	28.419	43.313
85000	6.258	21.059	43.673	42.812	32.840	34.251	21.059	45.501	28.860	41.754
90000	6.592	21.713	42.042	41.252	32.550	33.900	21.713	43.587	29.390	40.355
95000	6.924	22.340	40.575	39.855	32.264	33.562	22.340	41.882	29.993	39.091
100000	7.255	22.947	39.255	38.604	31.993	33.238	22.947	40.351	30.623	37.941
105000	7.585	23.537	38.065	37.475	31.734	32.926	23.537	38.973	31.244	36.897
110000	7.913	24.108	36.996	36.456	31.485	32.625	24.108	37.726	31.745	35.950
115000	8.241	24.667	36.023	35.533	31.242	32.335	24.667	36.597	31.862	35.091
120000	8.567	25.226	35.152	34.692	31.011	32.056	25.226	35.573	31.791	34.312
125000	8.892	25.761	34.357	33.937	30.797	31.786	25.761	34.640	31.697	33.603
130000	9.216	26.316	33.647	33.257	30.587	31.524	26.316	33.787	31.597	32.957
135000	9.538	26.878	32.989	32.626	30.378	31.271	26.878	33.007	31.489	32.366
140000	9.860	27.431	32.391	32.056	30.191	31.026	27.431	32.292	31.411	31.827
145000	10.180	27.974	31.844	31.536	30.004	30.788	27.974	31.637	31.794	31.332
150000	10.500	28.485	31.351	31.061	29.825	30.557	28.485	31.036	31.405	30.879
155000	10.818	28.955	30.906	30.628	29.655	30.332	28.955	30.484	30.974	30.466
160000	11.134	29.367	30.504	30.236	29.497	30.114	29.367	29.977	30.574	30.088
165000	11.450	29.334	30.133	29.882	29.334	29.901	29.724	29.510	30.207	29.744
170000	11.765	29.080	29.784	29.563	29.182	29.694	30.022	29.080	29.864	29.434
175000	12.078	28.684	29.456	29.277	29.042	29.493	30.152	28.684	29.554	29.158
180000	12.390	28.319	29.154	29.020	28.904	29.298	29.854	28.319	29.275	28.910
185000	12.701	27.980	28.854	28.784	28.764	29.108	29.575	27.980	29.023	28.687
190000	13.011	27.668	28.573	28.566	28.633	28.923	29.334	27.668	28.794	28.484
195000	13.320	27.379	28.308	28.360	28.488	28.743	29.100	27.379	28.572	28.294
200000	13.628	27.113	28.060	28.164	28.350	28.567	28.920	27.113	28.363	28.115
205000	13.934	26.869	27.821	27.975	28.201	28.397	28.735	26.869	28.164	27.944
210000	14.239	26.643	27.602	27.792	28.052	28.231	28.582	26.643	27.975	27.781
215000	14.543	26.435	27.392	27.615	27.902	28.070	28.422	26.435	27.794	27.623
220000	14.847	26.242	27.186	27.441	27.746	27.913	28.266	26.242	27.621	27.470
225000	15.149	26.062	27.003	27.271	27.583	27.759	28.113	26.062	27.453	27.320

T R I M = 3.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
230000	15.450	25.895	26.819	27.103	27.429	27.605	27.959	25.895	27.290	27.173
235000	15.750	25.741	26.642	26.935	27.262	27.448	27.802	25.741	27.129	27.025
240000	16.050	25.598	26.478	26.766	27.088	27.285	27.623	25.598	26.972	26.877
245000	16.348	25.468	26.322	26.598	26.912	27.118	27.456	25.468	26.816	26.728
250000	16.645	25.348	26.171	26.431	26.741	26.948	27.286	25.348	26.662	26.578
255000	16.942	25.238	26.029	26.264	26.559	26.775	27.114	25.238	26.508	26.429
260000	17.238	25.136	25.897	26.100	26.367	26.600	26.941	25.136	26.359	26.281
265000	17.532	25.042	25.763	25.937	26.183	26.423	26.767	25.042	26.213	26.134
270000	17.826	24.954	25.645	25.777	25.995	26.245	26.589	24.954	26.071	25.990
275000	18.120	24.873	25.522	25.620	25.802	26.066	26.416	24.873	25.933	25.847
280000	18.412	24.799	25.409	25.465	25.609	25.885	26.243	24.799	25.799	25.707
285000	18.704	24.731	25.298	25.313	25.408	25.704	26.081	24.731	25.669	25.569
290000	18.996	24.669	25.184	25.165	25.215	25.523	25.936	24.669	25.543	25.435
295000	19.287	24.612	25.078	25.021	25.011	25.341	25.791	24.612	25.422	25.305
300000	19.577	24.558	24.974	24.882	24.813	25.159	25.664	24.558	25.308	25.183
305000	19.867	24.508	24.873	24.749	24.611	24.977	25.551	24.508	25.203	25.069
310000	20.156	24.408	24.776	24.624	24.408	24.795	25.428	24.461	25.106	24.963
315000	20.446	24.205	24.681	24.505	24.205	24.612	24.895	24.418	25.016	24.867
320000	20.734	24.011	24.589	24.391	24.011	24.428	24.341	24.380	24.932	24.779
325000	21.023	23.792	24.500	24.280	23.812	24.245	23.792	24.345	24.862	24.699
330000	21.311	23.241	24.411	24.174	23.611	24.060	23.241	24.314	24.791	24.627
335000	21.599	22.717	24.321	24.071	23.407	23.875	22.717	24.287	24.728	24.562
340000	21.887	22.204	24.234	23.971	23.214	23.689	22.204	24.264	24.664	24.503
345000	22.174	21.723	24.149	23.873	23.013	23.503	21.723	24.243	24.614	24.450
350000	22.462	21.266	24.068	23.777	22.817	23.315	21.266	24.225	24.568	24.404
355000	22.749	20.860	23.988	23.683	22.619	23.127	20.860	24.210	24.520	24.363
360000	23.036	20.470	23.916	23.591	22.425	22.938	20.470	24.197	24.486	24.328

T R I M = 4.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	3.225	13.497	75.303	72.353	35.885	37.809	13.497	83.716	27.271	64.431
45000	3.577	14.492	69.064	66.594	35.507	37.370	14.492	75.910	27.701	60.436
50000	3.926	15.456	63.810	61.740	35.135	36.938	15.456	69.336	28.093	56.850
55000	4.273	16.381	59.522	57.731	34.766	36.514	16.381	64.163	28.454	53.784
60000	4.617	17.273	55.877	54.306	34.412	36.102	17.273	59.813	28.813	51.079
65000	4.959	18.122	52.741	51.351	34.077	35.703	18.122	56.117	29.178	48.679
70000	5.298	18.930	50.013	48.783	33.745	35.319	18.930	52.924	28.005	46.540
75000	5.637	19.706	47.625	46.535	33.432	34.946	19.706	50.156	28.141	44.644
80000	5.973	20.420	45.531	44.571	33.123	34.581	20.420	47.723	28.454	43.333
85000	6.308	21.093	43.702	42.832	32.820	34.229	21.093	45.579	28.880	41.786
90000	6.642	21.744	42.081	41.291	32.543	33.889	21.744	43.672	29.393	40.399
95000	6.974	22.369	40.629	39.899	32.268	33.562	22.369	41.972	29.997	39.145
100000	7.304	22.972	39.322	38.662	32.000	33.246	22.972	40.448	30.600	38.006
105000	7.634	23.549	38.137	37.537	31.745	32.940	23.549	39.076	31.235	36.970
110000	7.962	24.108	37.074	36.524	31.503	32.645	24.108	37.836	31.753	36.029
115000	8.289	24.660	36.107	35.607	31.266	32.360	24.660	36.712	31.906	35.175
120000	8.614	25.201	35.239	34.778	31.038	32.085	25.201	35.691	31.838	34.399
125000	8.938	25.727	34.451	34.021	30.821	31.819	25.727	34.759	31.741	33.693
130000	9.261	26.271	33.731	33.341	30.621	31.561	26.271	33.907	31.641	33.049
135000	9.583	26.828	33.079	32.713	30.419	31.311	26.828	33.128	31.539	32.460
140000	9.904	27.371	32.481	32.145	30.231	31.070	27.371	32.415	31.441	31.921
145000	10.223	27.894	31.936	31.625	30.045	30.834	27.894	31.761	31.825	31.427
150000	10.541	28.402	31.443	31.151	29.862	30.605	28.402	31.161	31.492	30.974
155000	10.858	28.867	30.996	30.717	29.697	30.382	28.867	30.610	31.071	30.560
160000	11.174	29.288	30.591	30.322	29.538	30.166	29.288	30.104	30.667	30.181
165000	11.488	29.377	30.220	29.965	29.377	29.954	29.647	29.638	30.301	29.834
170000	11.801	29.209	29.871	29.644	29.229	29.749	29.959	29.209	29.956	29.522
175000	12.113	28.813	29.543	29.354	29.090	29.549	30.211	28.813	29.643	29.241
180000	12.424	28.447	29.233	29.093	28.944	29.355	29.934	28.447	29.360	28.990
185000	12.733	28.108	28.946	28.855	28.816	29.166	29.646	28.108	29.105	28.763
190000	13.042	27.795	28.668	28.634	28.678	28.983	29.398	27.795	28.874	28.556
195000	13.349	27.506	28.394	28.426	28.534	28.804	29.166	27.506	28.651	28.364
200000	13.655	27.240	28.149	28.228	28.389	28.628	28.973	27.240	28.440	28.183
205000	13.960	26.994	27.907	28.037	28.247	28.458	28.807	26.994	28.240	28.010
210000	14.263	26.767	27.685	27.853	28.095	28.292	28.645	26.767	28.050	27.845
215000	14.566	26.555	27.473	27.675	27.943	28.132	28.483	26.555	27.868	27.686
220000	14.868	26.358	27.267	27.500	27.797	27.975	28.327	26.358	27.693	27.532
225000	15.168	26.174	27.083	27.329	27.633	27.820	28.173	26.174	27.523	27.381

T R I M = 4.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
230000	15.468	26.005	26.898	27.159	27.468	27.665	28.018	26.005	27.359	27.232
235000	15.767	25.848	26.719	26.990	27.309	27.506	27.844	25.848	27.197	27.083
240000	16.064	25.704	26.556	26.822	27.136	27.343	27.680	25.704	27.038	26.934
245000	16.361	25.571	26.398	26.653	26.958	27.175	27.513	25.571	26.881	26.784
250000	16.657	25.448	26.247	26.485	26.788	27.003	27.342	25.448	26.726	26.634
255000	16.952	25.334	26.105	26.319	26.605	26.829	27.169	25.334	26.572	26.485
260000	17.247	25.228	25.961	26.154	26.411	26.653	26.995	25.228	26.421	26.336
265000	17.540	25.129	25.834	25.991	26.224	26.475	26.819	25.129	26.274	26.189
270000	17.833	25.037	25.705	25.829	26.035	26.295	26.639	25.037	26.131	26.043
275000	18.125	24.953	25.589	25.671	25.839	26.114	26.463	24.953	25.991	25.899
280000	18.416	24.876	25.466	25.515	25.647	25.933	26.290	24.876	25.855	25.757
285000	18.707	24.806	25.355	25.362	25.445	25.750	26.126	24.806	25.723	25.618
290000	18.998	24.739	25.237	25.212	25.250	25.567	25.981	24.739	25.595	25.482
295000	19.287	24.677	25.128	25.067	25.053	25.383	25.853	24.677	25.472	25.352
300000	19.577	24.618	25.023	24.927	24.844	25.199	25.724	24.618	25.356	25.228
305000	19.866	24.562	24.919	24.793	24.648	25.014	25.589	24.562	25.249	25.112
310000	20.155	24.443	24.819	25.503	24.443	24.829	25.413	24.512	25.150	25.004
315000	20.443	24.237	24.721	24.544	24.237	24.644	24.878	24.466	25.056	24.905
320000	20.731	24.042	24.626	24.426	24.042	24.458	24.342	24.424	24.969	24.815
325000	21.019	23.801	24.533	24.313	23.841	24.272	23.801	24.387	24.891	24.732
330000	21.307	23.267	24.440	24.203	23.637	24.085	23.267	24.353	24.817	24.657
335000	21.595	22.747	24.347	24.097	23.438	23.897	22.747	24.323	24.748	24.588
340000	21.882	22.247	24.257	23.993	23.228	23.709	22.247	24.296	24.688	24.527
345000	22.169	21.773	24.170	23.893	23.033	23.519	21.773	24.272	24.634	24.472
350000	22.457	21.317	24.085	23.794	22.827	23.329	21.317	24.252	24.588	24.424
355000	22.744	20.903	24.003	23.696	22.633	23.138	20.903	24.234	24.543	24.380
360000	23.030	20.516	23.932	23.601	22.432	22.947	20.516	24.219	24.502	24.343

T R I M = 5.0 m

Limiting VCG's for each of the Applied Criteria

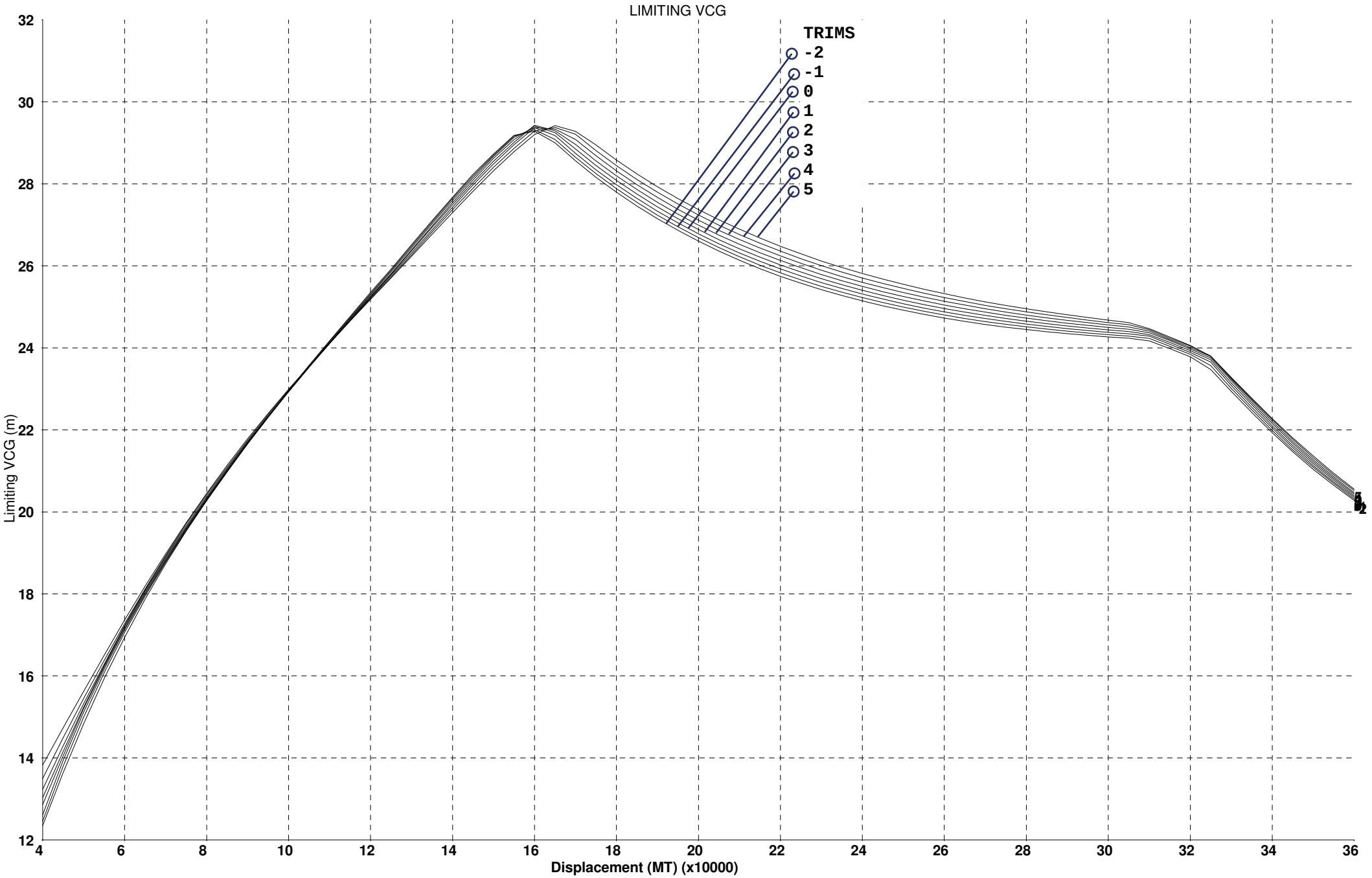
DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
40000	3.268	13.826	74.473	71.432	35.565	37.446	13.826	83.558	27.376	63.511
45000	3.622	14.735	68.488	65.958	35.242	37.080	14.735	75.704	27.818	59.810
50000	3.972	15.627	63.469	61.339	34.923	36.706	15.627	69.252	28.199	56.468
55000	4.319	16.510	59.291	57.450	34.606	36.328	16.510	64.126	28.546	53.522
60000	4.664	17.363	55.714	54.113	34.289	35.955	17.363	59.801	28.893	50.901
65000	5.006	18.190	52.632	51.222	33.975	35.587	18.190	56.132	28.486	48.565
70000	5.347	18.975	49.957	48.706	33.663	35.227	18.975	52.958	28.082	46.478
75000	5.685	19.732	47.600	46.500	33.367	34.875	19.732	50.207	28.197	44.619
80000	6.022	20.454	45.542	44.552	33.080	34.532	20.454	47.790	28.489	43.336
85000	6.357	21.142	43.728	42.838	32.796	34.198	21.142	45.658	28.895	41.807
90000	6.690	21.785	42.118	41.308	32.526	33.872	21.785	43.758	29.385	40.435
95000	7.022	22.397	40.674	39.944	32.262	33.555	22.397	42.064	29.992	39.194
100000	7.352	22.991	39.380	38.709	31.998	33.247	22.991	40.546	30.578	38.066
105000	7.681	23.559	38.207	37.597	31.756	32.950	23.559	39.182	31.216	37.040
110000	8.008	24.117	37.143	36.593	31.522	32.663	24.117	37.951	31.762	36.108
115000	8.335	24.657	36.193	35.683	31.283	32.384	24.657	36.833	31.953	35.260
120000	8.659	25.181	35.328	34.858	31.067	32.113	25.181	35.815	31.877	34.489
125000	8.983	25.700	34.536	34.106	30.855	31.851	25.700	34.885	31.786	33.786
130000	9.305	26.231	33.831	33.431	30.651	31.597	26.231	34.035	31.691	33.144
135000	9.626	26.772	33.173	32.803	30.452	31.350	26.772	33.258	31.582	32.557
140000	9.945	27.303	32.583	32.236	30.263	31.110	27.303	32.547	31.473	32.019
145000	10.263	27.817	32.033	31.717	30.078	30.878	27.817	31.895	31.638	31.526
150000	10.580	28.319	31.538	31.243	29.909	30.652	28.319	31.296	31.579	31.073
155000	10.896	28.783	31.089	30.809	29.743	30.431	28.783	30.746	31.173	30.658
160000	11.210	29.203	30.681	30.412	29.583	30.216	29.203	30.241	30.763	30.277
165000	11.524	29.423	30.310	30.052	29.423	30.007	29.573	29.776	30.399	29.929
170000	11.835	29.278	29.961	29.728	29.278	29.805	29.889	29.347	30.052	29.613
175000	12.146	28.949	29.632	29.434	29.133	29.606	30.144	28.949	29.735	29.328
180000	12.455	28.582	29.321	29.169	28.995	29.412	30.015	28.582	29.449	29.072
185000	12.763	28.243	29.031	28.927	28.851	29.225	29.731	28.243	29.190	28.842
190000	13.070	27.929	28.756	28.704	28.716	29.042	29.486	27.929	28.955	28.631
195000	13.375	27.641	28.484	28.493	28.574	28.864	29.245	27.641	28.732	28.435
200000	13.680	27.373	28.232	28.292	28.432	28.690	29.044	27.373	28.519	28.252
205000	13.983	27.125	27.996	28.100	28.286	28.521	28.860	27.125	28.318	28.077
210000	14.285	26.895	27.773	27.915	28.143	28.356	28.697	26.895	28.126	27.910
215000	14.587	26.679	27.558	27.735	27.988	28.195	28.533	26.679	27.943	27.750
220000	14.887	26.478	27.349	27.559	27.839	28.037	28.389	26.478	27.766	27.594
225000	15.186	26.292	27.162	27.386	27.672	27.879	28.232	26.292	27.595	27.441

T R I M = 5.0 m

Limiting VCG's for each of the Applied Criteria

DISP (MT)	Dmid (m)	VCGlim (m)	Limiting VCG in (m) AREA30	AREA40	AREA3040	GZAT30	GZMAX25	GoMINIT	AREAAB	FPSO_WIND
230000	15.484	26.120	26.973	27.215	27.514	27.721	28.058	26.120	27.428	27.290
235000	15.781	25.961	26.803	27.045	27.353	27.560	27.898	25.961	27.265	27.140
240000	16.077	25.814	26.639	26.876	27.179	27.396	27.734	25.814	27.104	26.990
245000	16.373	25.677	26.472	26.707	27.002	27.227	27.566	25.677	26.946	26.839
250000	16.667	25.550	26.321	26.539	26.821	27.055	27.395	25.550	26.790	26.689
255000	16.961	25.431	26.177	26.371	26.637	26.880	27.222	25.431	26.634	26.539
260000	17.254	25.321	26.032	26.206	26.452	26.702	27.046	25.321	26.482	26.389
265000	17.546	25.218	25.902	26.042	26.262	26.522	26.866	25.218	26.334	26.241
270000	17.838	25.124	25.771	25.880	26.071	26.341	26.701	25.124	26.189	26.094
275000	18.129	25.037	25.643	25.720	25.883	26.159	26.523	25.037	26.047	25.948
280000	18.419	24.956	25.530	25.562	25.680	25.975	26.350	24.956	25.908	25.804
285000	18.709	24.880	25.407	25.408	25.487	25.791	26.188	24.880	25.774	25.663
290000	18.998	24.808	25.290	25.257	25.280	25.605	26.021	24.808	25.644	25.526
295000	19.287	24.740	25.178	25.110	25.082	25.419	25.892	24.740	25.519	25.395
300000	19.576	24.676	25.070	24.969	24.881	25.233	25.741	24.676	25.402	25.270
305000	19.864	24.617	24.964	24.833	24.671	25.046	25.621	24.617	25.293	25.152
310000	20.152	24.467	24.860	24.704	24.467	24.858	25.357	24.564	25.191	25.043
315000	20.440	24.265	24.759	24.579	24.265	24.670	24.835	24.515	25.094	24.941
320000	20.728	24.059	24.660	24.459	24.059	24.482	24.319	24.470	25.003	24.847
325000	21.016	23.797	24.563	24.342	23.857	24.293	23.797	24.430	24.928	24.761
330000	21.303	23.281	24.467	24.228	23.651	24.103	23.281	24.394	24.851	24.683
335000	21.590	22.774	24.370	24.118	23.455	23.913	22.774	24.360	24.775	24.612
340000	21.877	22.276	24.276	24.012	23.247	23.722	22.276	24.330	24.707	24.548
345000	22.164	21.808	24.186	23.908	23.048	23.530	21.808	24.303	24.659	24.491
350000	22.451	21.364	24.098	23.806	22.845	23.337	21.364	24.279	24.605	24.440
355000	22.738	20.943	24.012	23.705	22.643	23.144	20.943	24.260	24.554	24.394
360000	23.025	20.554	23.928	23.605	22.438	22.950	20.554	24.243	24.509	24.353

- 2MK


LIMITING VCG
TRIMS
-2
-1
0
1
2
3
4
5
Limiting VCG (m)
Displacement (MT) (x10000)
32
30
28
26
24
22
20
18
16
14
12
4
6
8
10
12
14
16
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36

7.12 Example of Stability Calculation

LOADING - Stability Calculation Example

Condition No8 SCANT. LOAD DEP.....

Items	Full (%)	Weight (MT) (1)	LCG (m) (2)	LCG-Mom (MT-m) (3)	VCG (m) (4)	VCG-Mom (MT-m) (5)	TCG (m) (6)	TCG-Mom (MT-m) (7)	FSM (MT-m) (8)
LIGHTSHIP		**41502.1**	**-9.939**	**-412489.4**	**15.965**	**662581.1**	**-0.048**	**-1992.1**	
CONSTANTS		**250.0**	**-59.277**	**-14819.2**	**25.813**	**6453.3**	**0.000**	**0.0**	
PROVISIONS		**15.0**	**-122.820**	**-1842.3**	**33.450**	**501.8**	**0.000**	**0.0**	
1.No1 C.O.T. (C)	98	25307.0	118.724	3004548.0	17.319	438292.6	0.000	0.0	27199.8
2.No1 C.O.T. (P)	98	14227.0	117.263	1668301.0	17.600	250393.1	-16.478	-234425.4	8286.8
3.No1 C.O.T. (S)	98	14227.0	117.263	1668296.0	17.600	250392.6	16.478	234425.6	8286.8
4.No2 C.O.T. (C)	98	27688.0	69.850	1934007.0	17.314	479387.8	0.000	0.0	32182.2
5.No2 C.O.T. (P)	98	17559.0	69.850	1226496.0	17.471	306771.9	-18.106	-317917.8	9772.5
6.No2 C.O.T. (S)	98	17559.0	69.850	1226496.0	17.470	306762.0	18.106	317918.5	9772.5
7.No3 C.O.T. (C)	98	27688.0	19.050	527456.4	17.314	479387.9	0.000	0.0	32182.1
8.No3 C.O.T. (P)	98	17559.0	19.050	334498.9	17.471	306768.2	-18.106	-317917.4	9772.5
9.No3 C.O.T. (S)	98	17559.0	19.050	334498.9	17.470	306762.0	18.106	317918.5	9772.5
10.No4 C.O.T. (C)	98	27688.0	-31.750	-879094.0	17.314	479380.3	0.000	0.0	32182.1
11.No4 C.O.T. (P)	98	17559.0	-31.750	-557498.3	17.470	306764.3	-18.105	-317911.5	9772.5
12.No4 C.O.T. (S)	98	17559.0	-31.750	-557498.3	17.471	306767.8	18.105	317910.2	9772.5
13.No5 C.O.T. (C)	98	25890.0	-81.091	-2099435.0	17.502	453125.4	0.000	0.0	29070.4
14.No5 C.O.T. (P)	98	11407.0	-74.261	-847092.9	18.259	208279.5	-17.809	-203149.6	6379.2
15.No5 C.O.T. (S)	98	11407.0	-74.261	-847094.0	18.259	208279.5	17.809	203148.4	6379.2
16.Slop Tank (P)	98	4307.0	-100.279	-431903.1	20.411	87912.1	-15.995	-68890.3	2689.8
17.Slop Tank (S)	98	4307.0	-100.280	-431904.4	20.412	87912.8	15.995	68890.6	2689.8
CARGO Total		**299497.0**	**17.606**	**5273078.6**	**17.574**	**5263339.7**	**0.000**	**-0.1**	**246162.8**
18.No1 HFO Stor Tk(P)	98	1248.7	-110.075	-137450.6	22.022	27499.2	-14.769	-18441.7	1696.2
19.No1 HFO Stor Tk(S)	98	883.8	-109.898	-97127.9	21.746	19219.0	16.517	14598.0	826.2
20.No2 HFO Stor Tk(P)	98	3111.3	-123.960	-385676.8	24.272	75516.4	-17.651	-54917.1	1671.1
21.No2 HFO Stor Tk(S)	98	2581.9	-125.384	-323729.0	25.593	66079.5	17.722	45757.0	1671.1
22.No1 HFO Sett.Tk(S)	98	176.8	-113.900	-20137.5	18.170	3212.4	17.742	3136.8	320.1
23.No2 HFO Sett.Tk(S)	98	169.4	-117.274	-19866.2	18.187	3080.9	17.592	2980.1	292.2

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LOADING - Stability Calculation Example

Condition No8 SCANT. LOAD DEP.....

Items	Full (%)	Weight (MT) (1)	LCG (m) (2)	LCG-Mom (MT-m) (3)	VCG (m) (4)	VCG-Mom (MT-m) (5)	TCG (m) (6)	TCG-Mom (MT-m) (7)	FSM (MT-m) (8)
24.HFO Service Tk (S)	98	155.1	-121.047	-18774.4	18.567	2879.8	16.884	2618.7	221.6
FUEL OIL Total		**8327.0**	**-120.423**	**-1002762.4**	**23.716**	**197487.2**	**-0.513**	**-4268.2**	**6698.5**
25.DO Storage Tank(S)	98	281.8	-110.569	-31158.3	23.712	6681.9	10.818	3048.6	64.0
26.DO Service Tank(S)	98	47.0	-110.051	-5172.4	17.769	835.2	8.235	387.0	2.0
DIESEL OIL Total		**328.8**	**-110.495**	**-36330.7**	**22.862**	**7517.1**	**10.449**	**3435.7**	**66.0**
27.M/E LO Sump Tk(C)	98	50.3	-125.150	-6295.0	2.312	116.3	0.000	0.0	37.6
28.No1 Cyl.Stor.Tk(S)	98	73.2	-121.273	-8877.2	25.176	1842.9	9.003	659.0	12.6
29.No2 Cyl.Stor.Ts(S)	98	65.1	-124.945	-8133.9	25.175	1638.9	9.156	596.1	12.5
30.Turb LO Stor.Tk(S)	98	8.1	-119.850	-970.8	25.186	204.0	10.522	85.2	0.1
31.MELO Storage Tk(S)	98	64.9	-130.900	-8495.4	25.192	1634.9	9.150	593.8	12.5
32.MELO Settling T(S)	98	48.6	-127.925	-6217.2	25.186	1224.1	9.150	444.7	9.4
33.GELO Storage Tk(S)	98	12.2	-133.237	-1625.5	25.198	307.4	8.235	100.5	0.6
34.GELO Settling T(S)	98	12.2	-133.238	-1625.5	25.198	307.4	10.065	122.8	0.6
LUB OIL Total		**334.6**	**-126.242**	**-42240.5**	**21.745**	**7275.9**	**7.777**	**2602.1**	**85.8**
35.Fore Peak Tank (C)			152.867				0.000		
36.No1 W.B.Tk (P)			120.992				-18.533		
37.No1 W.B.Tk (S)			120.992				18.533		
38.No2 W.B.Tk (P)			69.746				-21.320		
39.No2 W.B.Tk (S)			69.746				21.320		
40.No3 W.B.Tk (P)			19.050				-21.354		
41.No3 W.B.Tk (S)			19.050				21.354		
42.No4 W.B.Tk (P)			-31.315				-21.191		
43.No4 W.B.Tk (S)			-31.315				21.191		
44.No5 W.B.Tk (P)			-82.363				-20.008		
45.No5 W.B.Tk (S)			-82.363				20.008		
46.Aft Peak Tank (C)	0	0.2	-145.987	-29.2	9.118	1.8	0.000	0.0	28475.5

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LOADING - Stability Calculation Example

Condition No8 SCANT. LOAD DEP.....

Items	Full (%)	Weight (MT) (1)	LCG (m) (2)	LCG-Mom (MT-m) (3)	VCG (m) (4)	VCG-Mom (MT-m) (5)	TCG (m) (6)	TCG-Mom (MT-m) (7)	FSM (MT-m) (8)
WATER BALLAST Total		**0.2**	**-145.987**	**-29.2**	**9.118**	**1.8**	**0.000**	**0.0**	**28475.5**
47.Distilled W.Tk (P)	100	256.5	-148.505	-38091.5	26.107	6696.4	-11.908	-3054.4	329.6
48.Fresh Water Tk (S)	100	256.5	-148.505	-38091.5	26.107	6696.4	11.908	3054.4	329.6
FRESH WATER Total		**513.0**	**-148.505**	**-76183.1**	**26.107**	**13392.9**	**0.000**	**0.0**	**659.3**
49.Bilge Hold Tank(C)	10	11.2	-139.951	-1567.5	0.580	6.5	0.000	0.0	91.1
50.B/W Tank (C)			-144.012				0.000		
51.LO Drain Tank (P)	10	0.3	-135.150	-40.5	3.057	0.9	-0.870	-0.3	0.7
52.LO Drain Tank (S)	10	0.3	-135.150	-40.5	3.057	0.9	0.870	0.3	0.7
53.Sep.Bilge Oil T(P)	10	10.3	-124.797	-1285.4	0.739	7.6	-3.839	-39.5	62.4
54.FO Overflow Tk (C)	10	14.0	-117.951	-1651.3	0.293	4.1	-0.664	-9.3	1034.9
55.B/W Tank (P)			-118.067				-6.153		
56.B/W Tank (S)			-118.067				6.153		
57.MELO Puri.Tank (S)	10	0.4	-120.700	-48.3	13.556	5.4	10.567	4.2	1.6
58.FO Puri Slud.Tk(S)	9	0.4	-117.300	-46.9	13.551	5.4	10.552	4.2	1.7
59.Cooling W.Tank (C)	100	44.2	-147.068	-6500.4	4.779	211.2	-0.006	-0.3	6.0
MISCELLANEOUS Total		**81.1**	**-137.865**	**-11180.9**	**2.985**	**242.1**	**-0.501**	**-40.7**	**1199.0**
GRAND Total		**350848.8**	**10.475**	**3675201.0**	**17.554**	**6158793.0**	**-0.001**	**-263.3**	**283346.9**

Stability Calculation Example

Condition No8 SCANT. LOAD DEP.....

Step 1. DISPLACEMENT

	MT/m3	MT
Cargo	0.8717	299497.0
Fuel Oil	0.9796	8327.0
Diesel Oil	0.8996	328.8
Lub Oil	0.8997	334.6
Fresh Water	1.0000	513.0
Ballast Water	1.0250	0.2
Constants and Provisions		265.0

Step 2. COMPLETE LOADING FORM

Write down in

Column (1) All weights in MT
(2) LCG (if not already provided in form)
(3) Weight x LCG
(4) KG which can be found from the tables of Cargo Spaces / Tanks
(5) Weight x KG
(6) TCG
(7) Weight x TCG
(8) Free Surface Moments

Calculate the sum in columns (1), (3), (5) and (6).

Displacement = 350849 MT - Sum of column (1)

$$KG = \frac{\text{Sum of Col(5)}}{\text{Disp}} = \frac{6158792.8}{350848.8} = 17.554 \text{ m}$$

$$LCG = \frac{\text{Sum of Col(3)}}{\text{Disp}} = \frac{3675200.9}{350848.8} = 10.475 \text{ m}$$

$$TCG = \frac{\text{Sum of Col(7)}}{\text{Disp}} = \frac{-263.3}{350848.8} = -0.001 \text{ m}$$

Step 3. HYDROSTATIC PARTICULARS

From the Hydrostatic Tables (Even Keel) find by interpolation

- Draught (at LCF) = 22.525 m
- LCB = 11.092 m
- MCT - 1cm = 4000.9 MT-m/cm
- LCF = -1.140 m
- KM(T) = 24.295 m

... Cont

Step 4. CHECK METACENTRIC HEIGHT (GoM)

GM = KM(T) - KG = 24.295 - 17.554 = 6.741 m

$$GGo = \frac{FSM(total)}{Disp} = \frac{283346.9}{350848.8} = 0.808 \text{ m}$$

KGo = KG + GGo = 17.554 + 0.808 = 18.362 m

KGo = 18.362 m < Limiting Intact KG = 21.087 m STATUS OK

Step 5. TRIM AND DRAUGHTS

BG = LCB - LCG = 11.092 - 10.475 = 0.617 m

$$Trim = \frac{(BG \times Disp)}{(MCT\text{-}1cm \times 100)} = \frac{0.617 \times 350848.8}{4000.9 \times 100} = 0.541 \text{ m}$$

$$R = \frac{(LCF \times Trim)}{LBP} = \frac{-1.140 \times 0.541}{318.00} = -0.0019 \text{ m}$$

Dfwd = (Draught at LCF) - (0.5 x Trim - R) =

22.525 - (0.5 x 0.541 - -0.0019)= 22.252 m

Daft = Dfwd + Trim = 22.252 + 0.541 = 22.794 m

... Cont

8. LONGITUDINAL STRENGTH DATA

8.1 General

In the calculation of loading conditions of the ship, the actual bending moment and shearing force at various points in longitudinal direction should be checked and confirmed to be within the allowable limits.

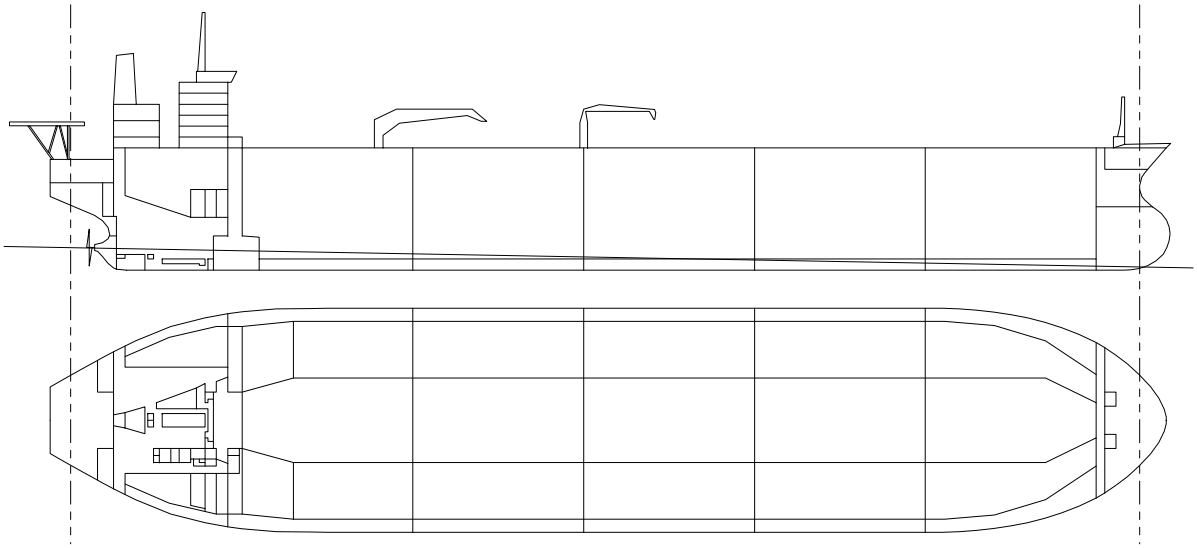
Loading conditions stated in this manual are the standard loading conditions, which were determined by the calculation based upon the operating scheme and the bending moment and shearing force were also confirmed to be within the limit of permissible values.

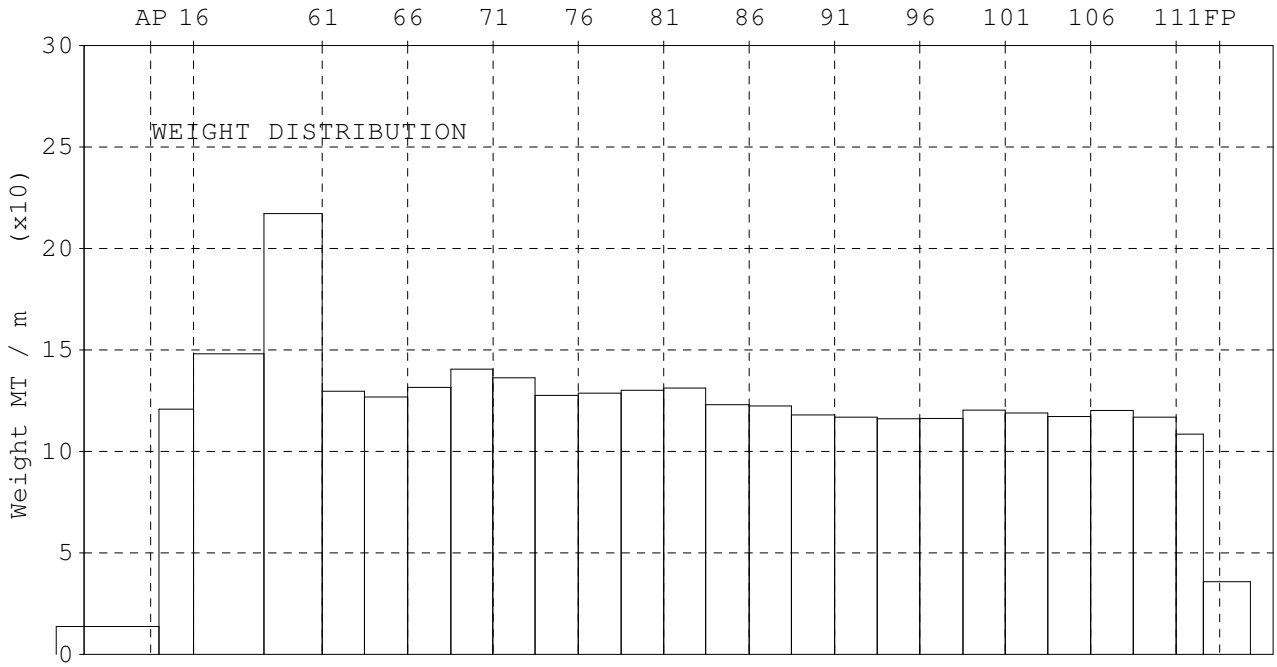
8.2 Allowable Shear Force and Bending Moment Limits

Allowable Shear Force and Bending Moment

	In Port				At Sea			
Frame No	SF(+ve) (MT)	SF(-ve) (MT)	BM(Hog) (MT*m)	BM(Sag) (MT*m)	SF(+ve) (MT)	SF(-ve) (MT)	BM(Hog) (MT*m)	BM(Sag) (MT*m)
F16	-	-	-	-	-	-	-	-
F61	19000	-19000	615000	-615000	14900	-14500	319000	-294000
F66	-	-	940000	-940000	-	-	510000	-450000
F71	20000	-20000	1221000	-1221000	16000	-15600	635000	-585000
F76	-	-	1221000	-1221000	-	-	635000	-585000
F81	22500	-22500	1221000	-1221000	20100	-20100	635000	-585000
F86	-	-	1221000	-1221000	-	-	635000	-585000
F91	22500	-22500	1221000	-1221000	19200	-19400	635000	-585000
F96	-	-	1156000	-1156000	-	-	600000	-554000
F101	22500	-22500	826000	-826000	17400	-17900	429000	-395000
F106	-	-	496000	-496000	-	-	258000	-237000
F111	11200	-11200	167000	-167000	9700	-9900	86000	-79000

8.3 Lightweight Distribution





L I G H T W E I G H T D I S T R I B U T I O N

Xaft FR	Xaft - m	Xfor FR	Xfor - m	Length m	Weight MT	LCG (amid) m	Q (MT/m)
-35	-187.000	3.1	-156.496	30.50	420.047	-171.748	13.770
3.1	-156.496	16	-146.200	10.30	1244.493	-151.348	120.873
16	-146.200	40.6	-125.254	20.95	3103.590	-135.727	148.169
40.6	-125.254	61	-107.950	17.30	3756.947	-116.602	217.119
61	-107.950	63.5	-95.322	12.63	1638.191	-101.636	129.727
63.5	-95.322	66	-82.550	12.77	1619.724	-88.936	126.819
66	-82.550	68.5	-69.642	12.91	1698.516	-76.096	131.591
68.5	-69.642	71	-57.150	12.49	1754.958	-63.396	140.482
71	-57.150	73.5	-44.658	12.49	1703.049	-50.904	136.333
73.5	-44.658	76	-31.750	12.91	1648.126	-38.204	127.681
76	-31.750	78.5	-19.013	12.74	1638.393	-25.382	128.635
78.5	-19.013	81	-6.350	12.66	1647.914	-12.682	130.134
81	-6.350	83.5	6.144	12.49	1639.956	-0.103	131.256
83.5	6.144	86	19.050	12.91	1587.691	12.597	123.023
86	19.050	88.5	31.635	12.58	1540.009	25.342	122.373
88.5	31.635	91	44.450	12.82	1512.259	38.042	118.003

L I G H T W E I G H T D I S T R I B U T I O N

Xaft FR	Xaft m	Xfor FR	Xfor m	Length m	Weight MT	LCG (amid) m	Q (MT/m)
91	44.450	93.5	57.125	12.68	1482.037	50.788	116.922
93.5	57.125	96	69.850	12.72	1476.311	63.488	116.020
96	69.850	98.5	82.660	12.81	1489.806	76.255	116.304
98.5	82.660	101	95.250	12.59	1515.739	88.955	120.388
101	95.250	103.5	107.902	12.65	1505.158	101.576	118.968
103.5	107.902	106	120.650	12.75	1493.780	114.276	117.176
106	120.650	108.5	133.260	12.61	1515.077	126.955	120.146
108.5	133.260	111	146.050	12.79	1493.817	139.655	116.798
111	146.050	120.5	154.108	8.06	874.635	150.079	108.546
120.5	154.108	137	168.150	14.04	501.881	161.129	35.741
TOTAL					**41502.110**	**-9.939**	

LOADING CONDITION SUMMARY TABLE

CONDITION NAME		LIGHTWEIGHT & CONSTANTS	No2 DOCKING COND. 10%	No3 IMO BALLAST COND	No4 LIGHT BALLAST DEP	No5 LIGHT BALLAST ARR	No6 EMCY BALLAST DEP
LIGHT SHIP	MT	41502	41502	41502	41502	41502	41502
Constants	MT	250	255	255	265	255	265
FO-DO-FW	MT	0	1533	0	9585	1533	9585
Ballast	MT	0	23756	93946	81026	92326	115948
Cargo	MT	0	0	0	0	0	0
Deadweight	MT	250	25544	94201	90875	94114	125797
Displacement	MT	41752	67046	135703	132377	135616	167299
LCG	m	-10.23	12.73	11.51	11.13	11.14	11.80
VCG	m	16.02	11.55	12.09	12.63	11.92	13.52
TCG	m	-0.05	0.12	-0.01	0.00	0.06	0.00
Draft at LCF	m	3.18	4.89	9.45	9.23	9.44	11.48
Draft at FPP	m	0.84	4.21	8.09	7.82	8.01	10.09
Draft at Mid	m	3.40	4.97	9.58	9.37	9.58	11.60
Draft at APP	m	5.96	5.73	11.07	10.93	11.16	13.11
Trim	m	5.12	1.52	2.98	3.12	3.15	3.02
Heel	deg	-0.04	0.16	-0.04	-0.01	0.17	-0.01
KM(T)	m	80.43	54.80	33.05	33.57	33.08	29.46
GGo	m	0.00	0.20	0.00	0.58	0.56	0.46
KG(eff)	m	16.02	11.75	12.09	13.21	12.48	13.98
GoM	m	64.41	43.04	20.96	20.36	20.60	15.48
Limiting VCG	m	14.18	18.37	26.96	26.58	26.94	29.22
LCF	m	13.28	17.00	14.46	14.57	14.36	12.14
LCB	m	-10.47	12.69	11.45	11.05	11.06	11.73
MCT	MT*m	2355.0	2598.0	2945.7	2930.5	2949.5	3138.5
TPC	MT	141.08	147.04	155.15	154.84	155.22	158.78
Prop.Immersion	%	48.3	46.6	101.4	100.0	102.3	122.4
Max. SF		32% at F61 H	39% at F61 H	23% at F106	83% at F61	32% at F61	77% at F81
Max. BM		42% at F79 H	44% at F76 H	54% at F79	93% at F72	60% at F78	76% at F87

LOADING CONDITION SUMMARY TABLE

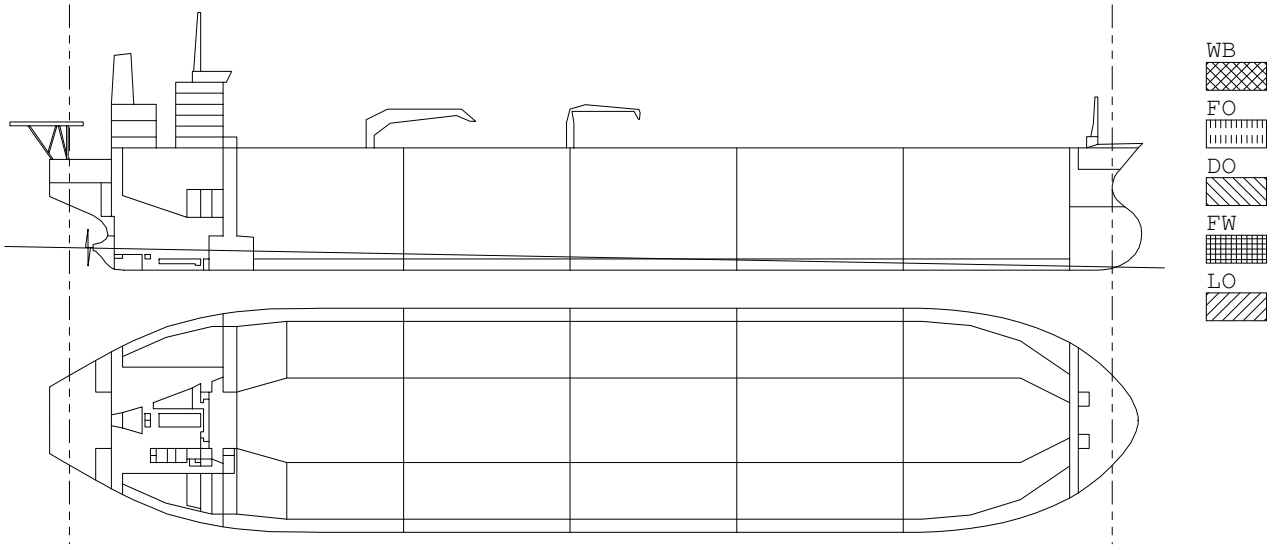
CONDITION NAME		No7 EMCY BALLAST ARR	No8 SCANT. LOAD DEP	No9 SCANT. LOAD ARR	No10 SG 0.85 LOAD DEP	No11 SG 0.85 LOAD ARR	No12 SEG 1 LOAD DEP
LIGHT SHIP	MT	41502	41502	41502	41502	41502	41502
Constants	MT	255	265	255	265	255	265
FO-DO-FW	MT	1533	9585	1533	9585	1533	9585
Ballast	MT	125548	0	2066	0	2066	43603
Cargo	MT	0	299497	299497	292044	292044	99874
Deadweight	MT	127336	309347	303352	301894	295899	153326
Displacement	MT	168838	350849	344854	343396	337401	194828
LCG	m	12.69	10.48	12.58	10.32	12.47	12.73
VCG	m	13.04	17.55	17.39	17.55	17.39	15.64
TCG	m	0.05	0.00	0.02	0.00	0.02	0.00
Draft at LCF	m	11.58	22.52	22.18	22.09	21.75	13.22
Draft at FPP	m	10.41	22.24	22.74	21.63	22.13	12.09
Draft at Mid	m	11.67	22.52	22.18	22.09	21.75	13.29
Draft at APP	m	12.94	22.80	21.62	22.55	21.37	14.49
Trim	m	2.53	0.57	-1.12	0.92	-0.77	2.40
Heel	deg	0.18	-0.01	0.22	-0.01	0.23	-0.01
KM(T)	m	29.27	24.31	24.28	24.33	24.30	27.47
GGo	m	0.45	0.81	0.82	0.81	0.82	1.00
KG(eff)	m	13.49	18.36	18.21	18.36	18.21	16.63
GoM	m	15.78	5.95	6.07	5.97	6.10	10.83
Limiting VCG	m	29.09	21.09	21.52	21.77	22.26	27.32
LCF	m	12.33	-1.25	-0.62	-1.13	-0.46	10.01
LCB	m	12.64	10.46	12.61	10.30	12.49	12.66
MCT	MT*m	3129.0	4012.1	3965.7	4001.5	3949.3	3294.7
TPC	MT	158.63	173.44	172.73	173.27	172.47	161.57
Prop.Immersion	%	120.8	222.9	211.0	220.2	208.3	136.8
Max. SF		69% at F81	55% at F111	75% at F61	53% at F111	70% at F61	58% at F61
Max. BM		95% at F86	67% at F80	86% at F80	60% at F81	78% at F80	82% at F68

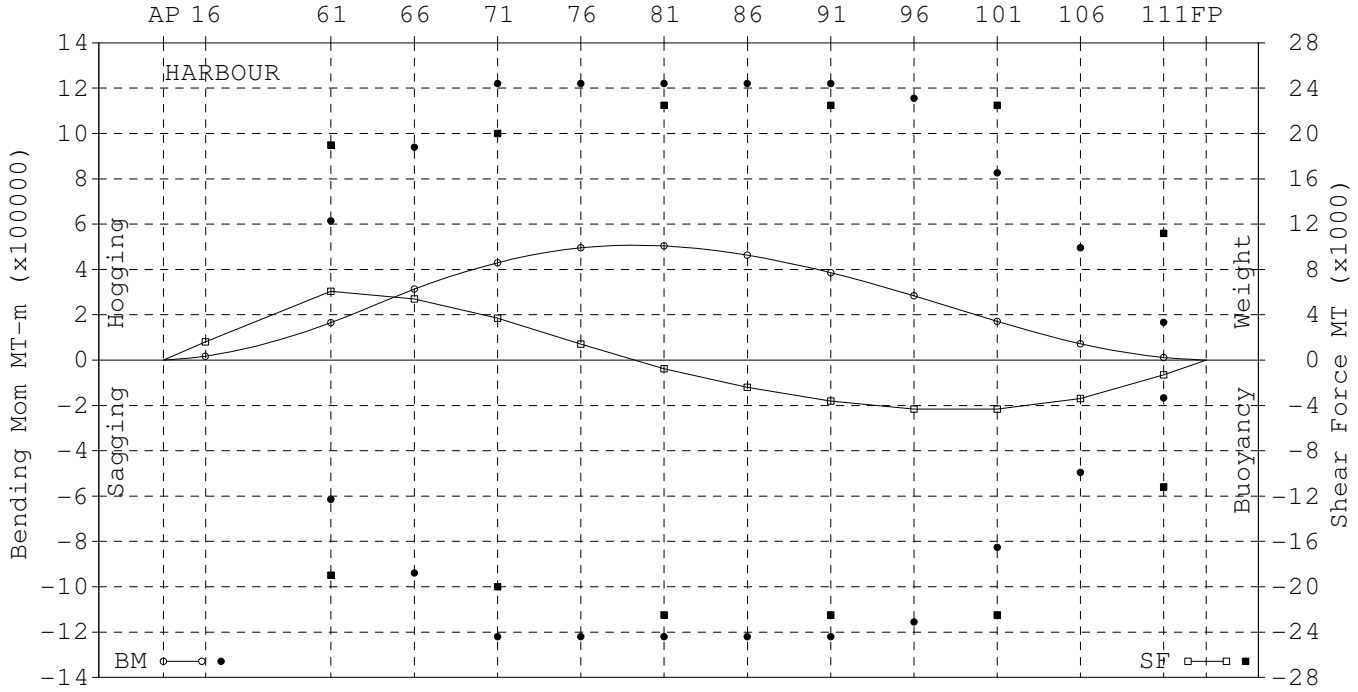
LOADING CONDITION SUMMARY TABLE

CONDITION NAME		No13 SEG 1 LOAD ARR	No14 SEG 2 LOAD DEP	No15 SEG 2 LOAD ARR	No16 SEG 3 LOAD DEP	No17 SEG 3 LOAD ARR	No18 SEG 1+2 LOAD DEP
LIGHT SHIP	MT	41502	41502	41502	41502	41502	41502
Constants	MT	255	265	255	265	255	265
FO-DO-FW	MT	1533	9585	1533	9585	1533	9585
Ballast	MT	40003	47005	58005	44403	50003	4933
Cargo	MT	99874	85620	85620	114003	114003	176880
Deadweight	MT	141666	142475	145414	168255	165794	191663
Displacement	MT	183168	183977	186916	209757	207296	233165
LCG	m	16.60	13.61	16.80	12.01	16.04	12.07
VCG	m	15.50	15.49	14.55	15.55	14.83	17.35
TCG	m	0.05	0.00	0.04	0.00	0.04	0.00
Draft at LCF	m	12.48	12.53	12.71	14.15	13.99	15.58
Draft at FPP	m	12.39	11.62	12.70	12.87	13.91	14.46
Draft at Mid	m	12.49	12.60	12.71	14.22	13.99	15.63
Draft at APP	m	12.58	13.58	12.73	15.57	14.07	16.80
Trim	m	0.20	1.96	0.03	2.70	0.16	2.34
Heel	deg	0.23	-0.01	0.22	-0.01	0.22	-0.01
KM(T)	m	27.93	28.07	27.68	26.77	26.60	25.88
GGo	m	1.06	1.42	1.40	1.46	1.47	1.02
KG(eff)	m	16.56	16.92	15.95	17.01	16.30	18.37
GoM	m	11.37	11.15	11.72	9.76	10.30	7.51
Limiting VCG	m	27.79	27.93	27.53	26.62	26.45	25.73
LCF	m	12.48	11.35	12.23	8.24	10.21	6.18
LCB	m	16.60	13.55	16.79	11.93	16.04	11.99
MCT	MT*m	3122.9	3201.6	3136.4	3415.3	3264.5	3548.9
TPC	MT	158.61	159.96	158.87	163.62	161.16	165.90
Prop.Immersion	%	117.6	127.5	119.1	147.8	132.9	160.6
Max. SF		73% at F71	93% at F81	69% at F81	83% at F91	67% at F91	64% at F91
Max. BM		70% at F85	96% at F75	68% at F86	94% at F80	49% at F97	76% at F86

LOADING CONDITION SUMMARY TABLE

CONDITION NAME		No19 SEG 1+2 LOAD ARR	No20 SEG 1+3 LOAD DEP	No21 SEG 1+3 LOAD ARR	No22 SEG 2+3 LOAD DEP	No23 SEG 2+3 LOAD ARR	No24 MARPOL AN. 1 REG 27
LIGHT SHIP	MT	41502	41502	41502	41502	41502	41502
Constants	MT	255	265	255	265	255	265
FO-DO-FW	MT	1533	9585	1533	9585	1533	8811
Ballast	MT	14399	26054	20054	38072	32054	1009
Cargo	MT	176880	213877	213877	208237	208237	299261
Deadweight	MT	193067	249780	235720	256159	242079	309347
Displacement	MT	234569	291283	277222	297661	283581	350849
LCG	m	12.36	12.24	14.89	11.72	13.12	10.80
VCG	m	16.65	16.63	16.72	16.67	16.26	17.48
TCG	m	0.03	0.00	0.03	0.00	0.03	0.00
Draft at LCF	m	15.67	19.06	18.23	19.43	18.60	22.52
Draft at FPP	m	14.65	18.63	18.61	18.89	18.40	22.38
Draft at Mid	m	15.71	19.06	18.22	19.44	18.61	22.52
Draft at APP	m	16.76	19.50	17.83	19.98	18.81	22.66
Trim	m	2.11	0.86	-0.78	1.09	0.40	0.28
Heel	deg	0.24	-0.01	0.26	-0.01	0.22	-0.02
KM(T)	m	25.81	24.66	24.71	24.62	24.72	24.30
GGo	m	1.01	1.36	1.43	1.00	0.68	3.25
KG(eff)	m	17.66	17.99	18.15	17.67	16.95	20.72
GoM	m	8.15	6.67	6.57	6.95	7.77	3.58
Limiting VCG	m	25.66	24.51	24.56	24.47	24.57	21.07
LCF	m	6.18	1.64	3.79	1.02	2.54	-1.18
LCB	m	12.29	12.22	14.92	11.69	13.11	10.79
MCT	MT*m	3545.2	3809.8	3644.9	3852.4	3743.6	4007.8
TPC	MT	165.85	170.22	167.67	170.89	169.20	173.38
Prop.Immersion	%	160.3	188.7	171.8	193.7	181.7	221.5
Max. SF		69% at F91	46% at F71	56% at F71	83% at F71	66% at F71	55% at F111
Max. BM		89% at F86	31% at F93	48% at F76	83% at F76	72% at F95	71% at F80





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1607	-	-	16623	-	-	-	-
61	6067	32	19000	164721	27	615000	-	-615000
66	5383	-	-	313778	33	940000	-	-940000
71	3701	19	20000	430140	35	1221000	-	-1221000
76	1426	-	-	496352	41	1221000	-	-1221000
81	-753	3	-22500	503719	41	1221000	-	-1221000
86	-2404	-	-	462997	38	1221000	-	-1221000
91	-3618	16	-22500	385576	32	1221000	-	-1221000
96	-4334	-	-	283412	25	1156000	-	-1156000
101	-4309	19	-22500	171588	21	826000	-	-826000
106	-3378	-	-	71927	15	496000	-	-496000
111	-1290	12	-11200	11888	7	167000	-	-167000

SF max 6067 MT 32% at F61 +Weight
BM max 507171 MT-m 42% at F79 Hogging

Estimated Deflection Amidships = 16cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

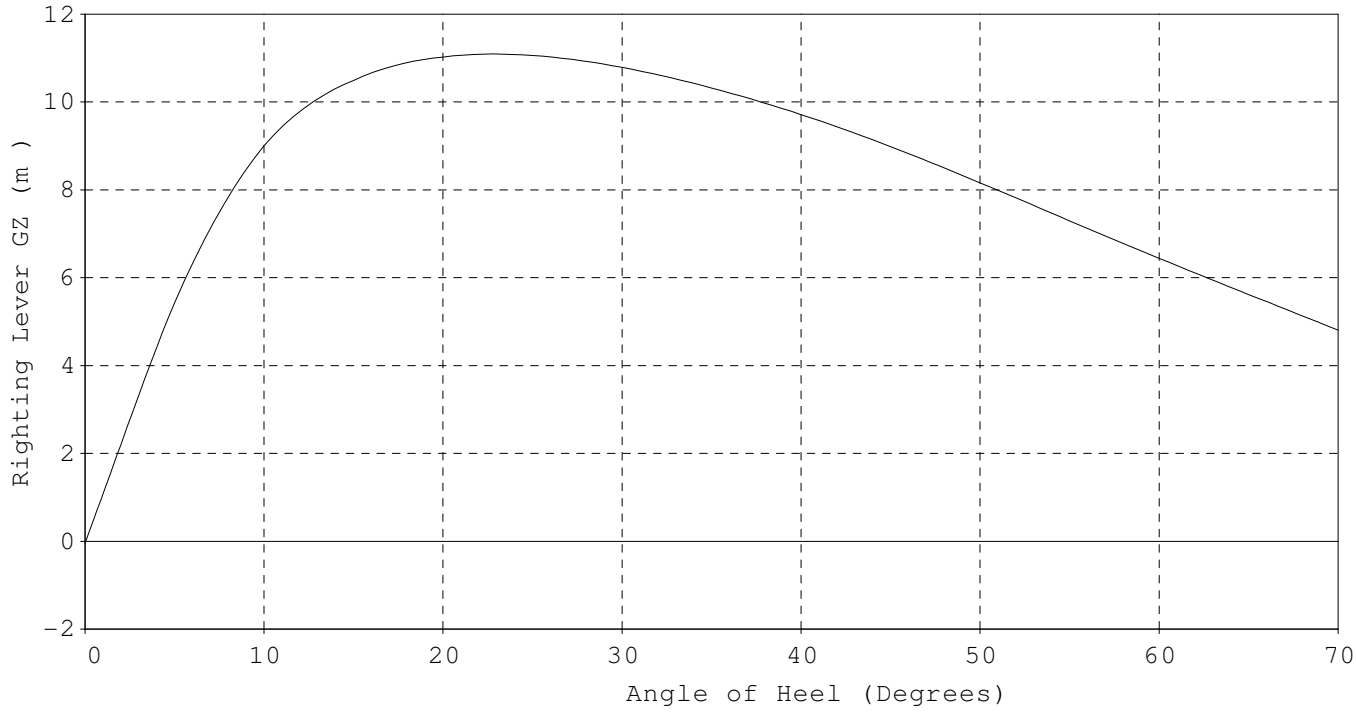
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	0	0.00	0.00	0.00	0
Ballast	0	0.00	0.00	0.00	0
Fresh Water	0	0.00	0.00	0.00	0
Fuel Oil	0	0.00	0.00	0.00	0
Diesel Oil	0	0.00	0.00	0.00	0
Lub Oil	0	0.00	0.00	0.00	0
Stores	0	0.00	0.00	0.00	0
Deadweight	250	25.81	-59.28	0.00	0
TOTALS	41752	16.02	-10.23	-0.05	0

HYDROSTATICS

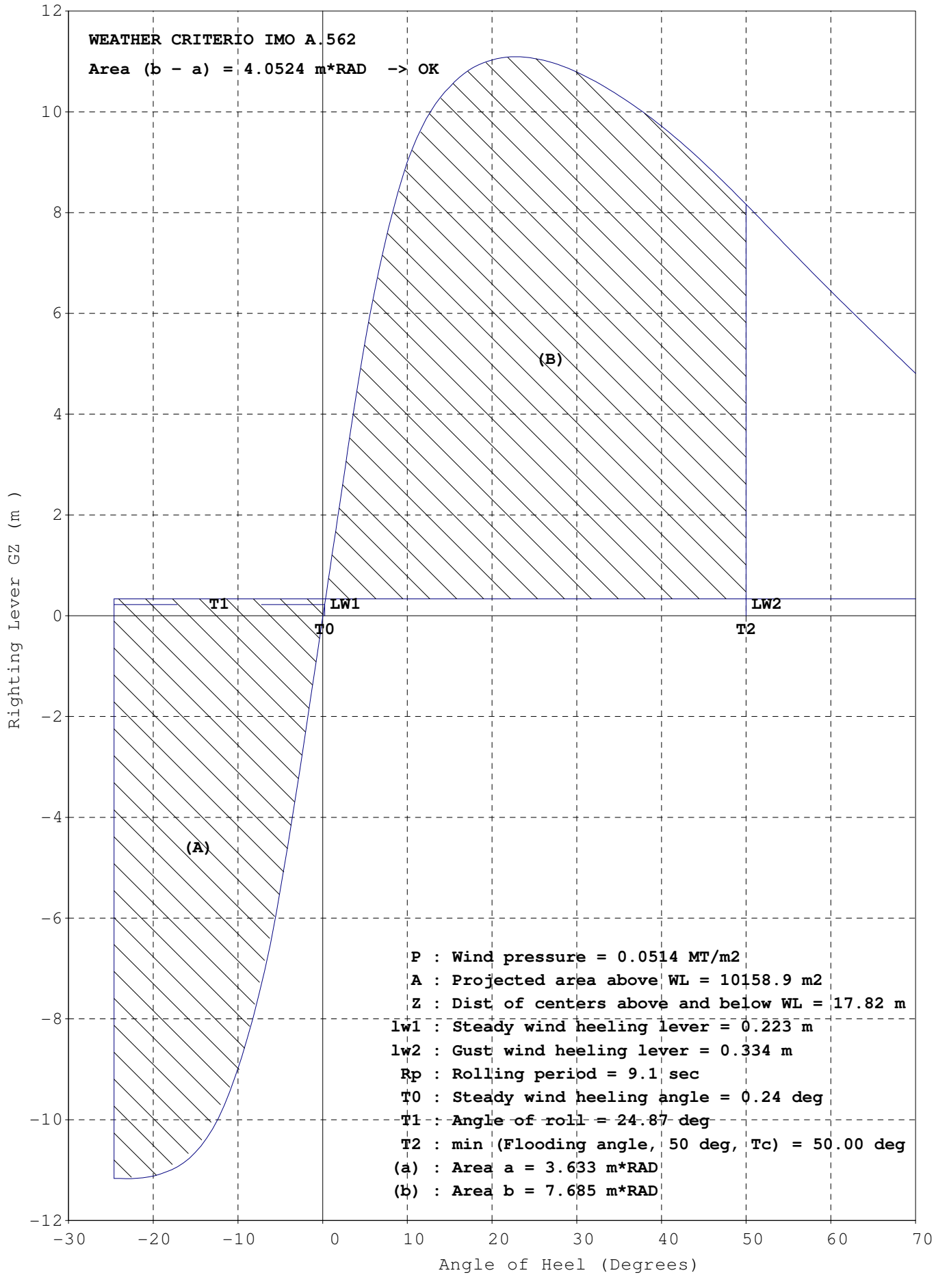
Draft FPP	0.84	m
Mk F123	0.88	m
APP	5.96	m
Mk F18	5.73	m
Mid	3.40	m
Mk	3.42	m
LCF	3.18	m
TRIM	5.12	m
HEEL	0.0	Deg
LCF	13.28	m
Prop Imm	48.3	%
Rolling	6	sec
TPC-I	141.08	MT/cm
MCT	2355.0	MT-m/cm
MCH	46935	MT-m/deg
FLood	> 70	Deg
LCB	-10.47	m
KM(T)	80.43	m
KG	16.02	m
GM	64.41	m
GGo	0.00	m
GoM	64.41	m
KG(eff)	16.02	m

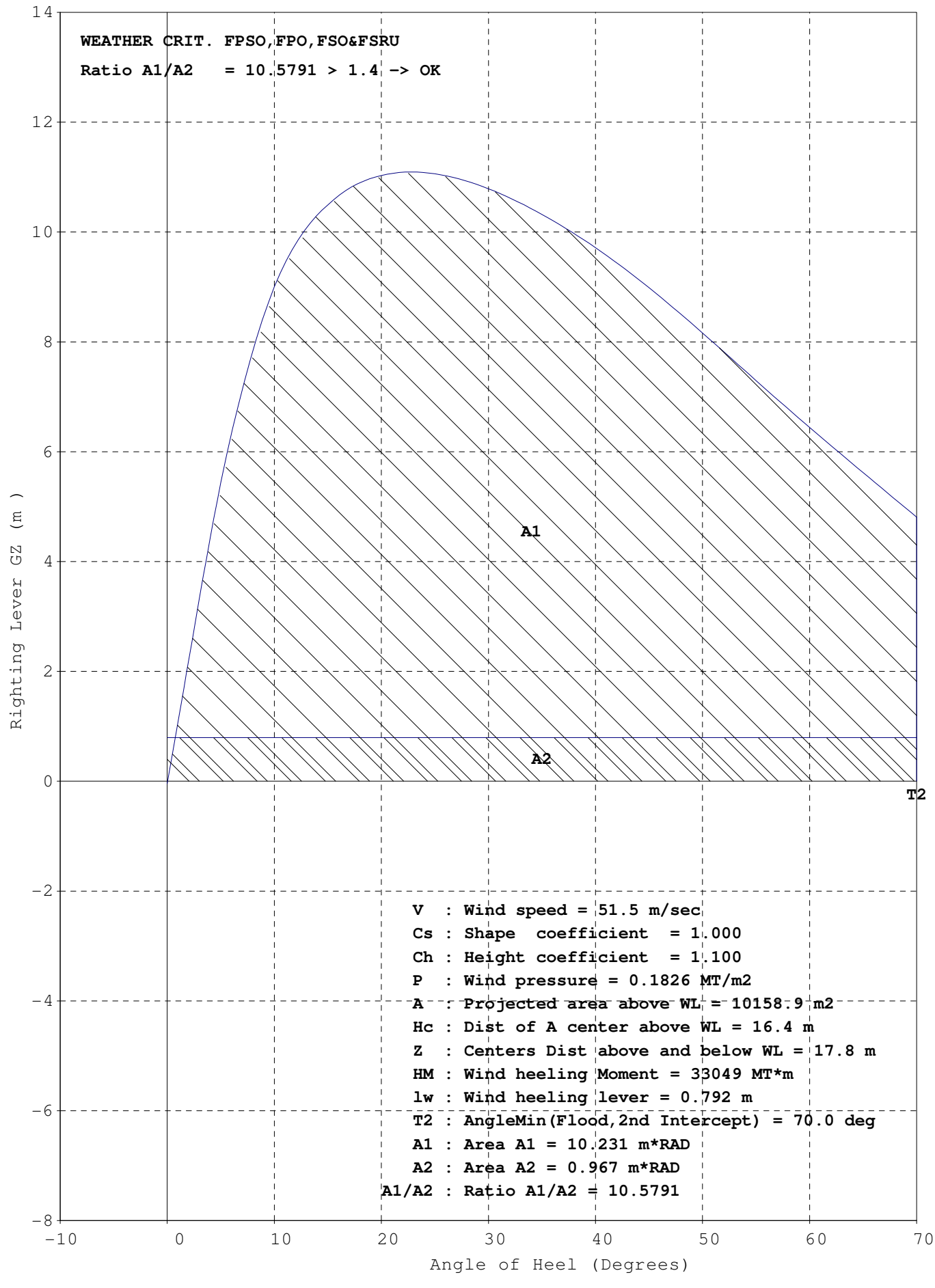
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	4.6133	>=	0.055	OK
Area 0-40 deg	m x RAD	6.4105	>=	0.09	OK
Area 30-40 deg	m x RAD	1.7973	>=	0.03	OK
GZ at/or> 30 deg	m	10.788	>=	0.2	OK
Max GZ Angle	Deg	22.808	>=	25.0	X
Maximum GZ	11.09 m				
Initial GM	m	64.408	>=	0.15	OK
Weather Area(B-A)	m x RAD	4.0524	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	10.5791	>=	1.4	OK
Lim KG-Intact	m	16.024	=<	14.181	X
Min FPP Draft	m	0.837	>=	7.825	X
SteadyWind Angle	Deg	0.24	=<	16.0	OK
Deck Edge Angle	58.00 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.05	2.19	5.44	9.01	10.49	11.03	11.06	10.79	10.32	9.71	8.99	8.16	7.30	6.44	5.62	4.81


WEATHER CRITERIO IMO A.562
Area (b - a) = 4.0524 m*RAD -> OK
(A)
(B)
T1
LW1
T0
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 10158.9 m2
Z : Dist of centers above and below WL = 17.82 m
lw1 : Steady wind heeling lever = 0.223 m
lw2 : Gust wind heeling lever = 0.334 m
Rp : Rolling period = 9.1 sec
T0 : Steady wind heeling angle = 0.24 deg
T1 : Angle of roll = 24.87 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 3.633 m*RAD
(b) : Area b = 7.685 m*RAD
Righting Lever GZ (m)
Angle of Heel (Degrees)
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-12
-30
-20
-10
0
10
20
30
40
50
60
70


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 10.5791 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.100
P : Wind pressure = 0.1826 MT/m2
A : Projected area above WL = 10158.9 m2
Hc : Dist of A center above WL = 16.4 m
Z : Centers Dist above and below WL = 17.8 m
HM : Wind heeling Moment = 33049 MT*m
lw : Wind heeling lever = 0.792 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 10.231 m*RAD
A2 : Area A2 = 0.967 m*RAD
A1/A2 : Ratio A1/A2 = 10.5791
Righting Lever GZ (m)
Angle of Heel (Degrees)
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91										
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S												

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4						
No3 W.B.Tk (S)	81	91	9782.4						
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0						

Fuel Density = .870 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2						
No1 HFO Stor Tk(S)	56	61	920.3						
No2 HFO Stor Tk(P)	20	56	3239.6						
No2 HFO Stor Tk(S)	20	56	2688.3						
No1 HFO Sett.Tk(S)	52	56	184.1						
No2 HFO Sett.Tk(S)	48	52	176.4						
HFO Service Tk (S)	43	48	161.5						
T O T A L S			8670.4						

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5						
DO Service Tank(S)	56	61	53.3						
T O T A L S			372.8						

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0						
No1 Cyl.Stor.Tk(S)	43	48	83.0						
No2 Cyl.Stor.Ts(S)	39	43	73.9						
Turb LO Stor.Tk(S)	46	48	9.2						
MELO Storage Tk(S)	32	36	73.5						
MELO Settling T(S)	36	39	55.2						
GELO Storage Tk(S)	30	32	13.8						
GELO Settling T(S)	30	32	13.8						
T O T A L S			379.5						

Fresh Water **Density = 1.000** **MT/m3** 

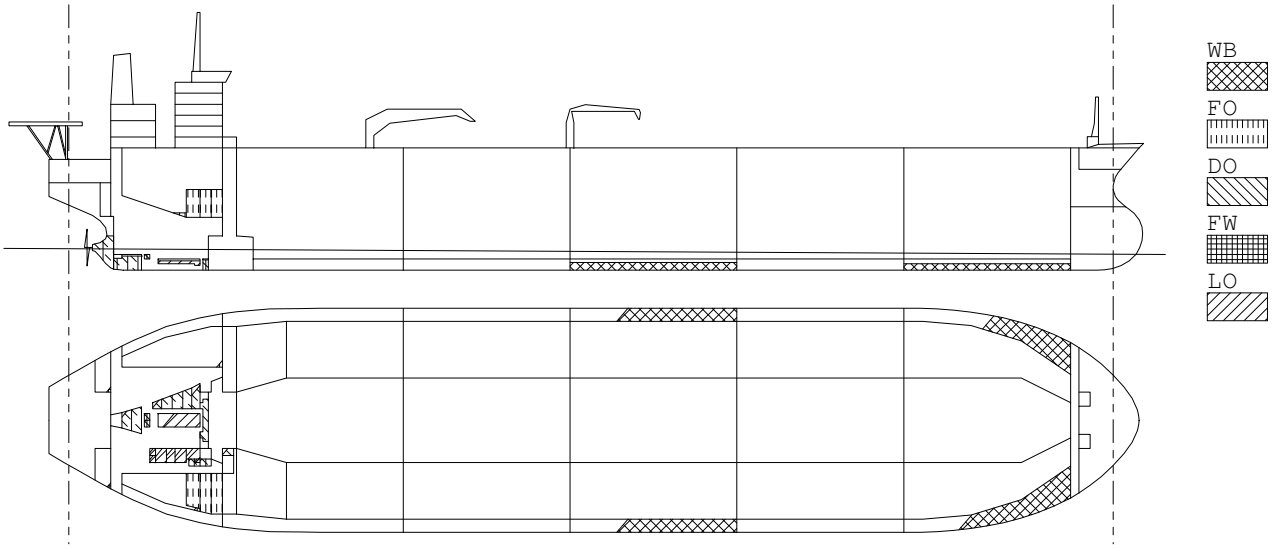
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5						
Fresh Water Tk (S)	10	16	256.5						
T O T A L S			513.0						

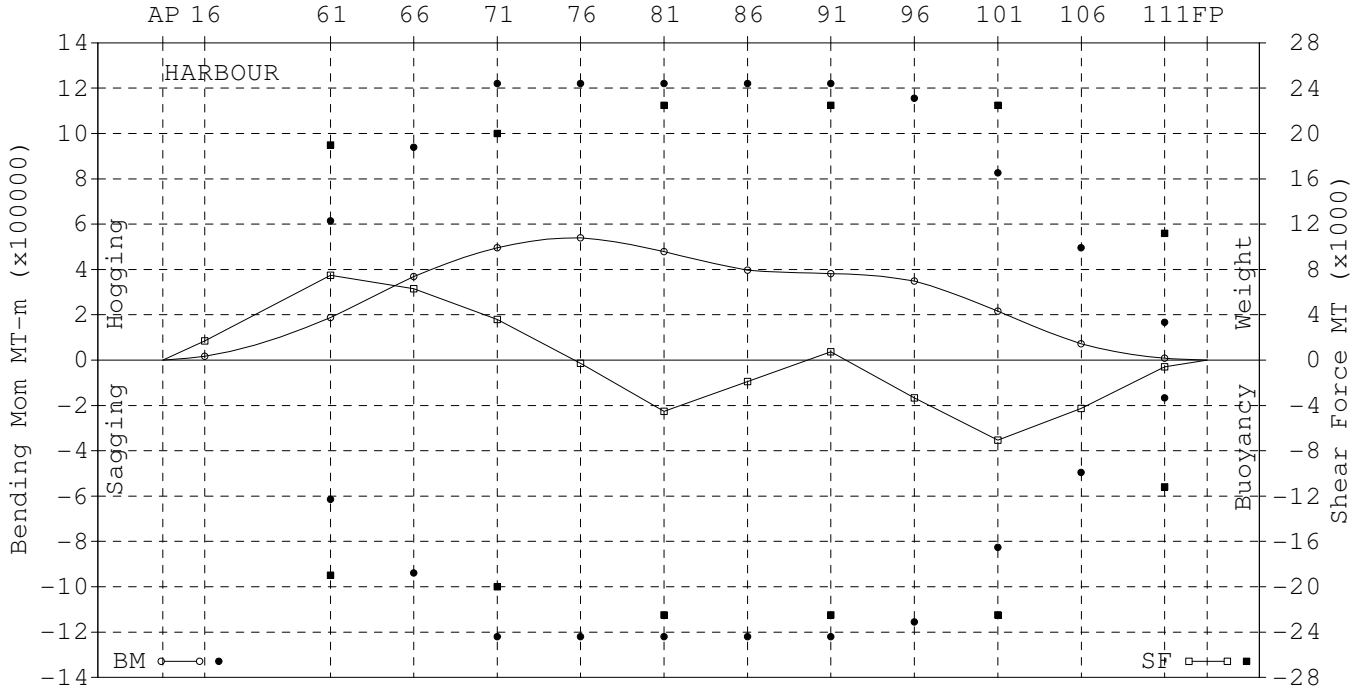
Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9						
B/W Tank (C)	17	20	8.7						
LO Drain Tank (P)	28	30	3.4						
LO Drain Tank (S)	28	30	3.4						
Sep.Bilge Oil T(P)	31	45	108.7						
FO Overflow Tk (C)	45	51	142.8						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
MELO Puri.Tank (S)	44	48	4.3						
FO Puri Slud.Tk(S)	48	52	4.3						
Cooling W.Tank (C)	11	17	44.2						
T O T A L S			444.9						

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00





FRAME	SHEAR FORCE			BENDING MOMENT				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1691	-	-	16809	-	-	-	-
61	7488	39	19000	188266	31	615000	-	-615000
66	6301	-	-	368062	39	940000	-	-940000
71	3578	18	20000	495726	41	1221000	-	-1221000
76	-291	-	-	539667	44	1221000	-	-1221000
81	-4524	20	-22500	478237	39	1221000	-	-1221000
86	-1899	-	-	396946	33	1221000	-	-1221000
91	733	3	22500	382107	31	1221000	-	-1221000
96	-3333	-	-	348822	30	1156000	-	-1156000
101	-7065	31	-22500	215456	26	826000	-	-826000
106	-4262	-	-	71841	14	496000	-	-496000
111	-606	5	-11200	7936	5	167000	-	-167000

SF max 7488 MT 39% at F61 +Weight
BM max 539792 MT-m 44% at F76 Hogging

Estimated Deflection Amidships = 16cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

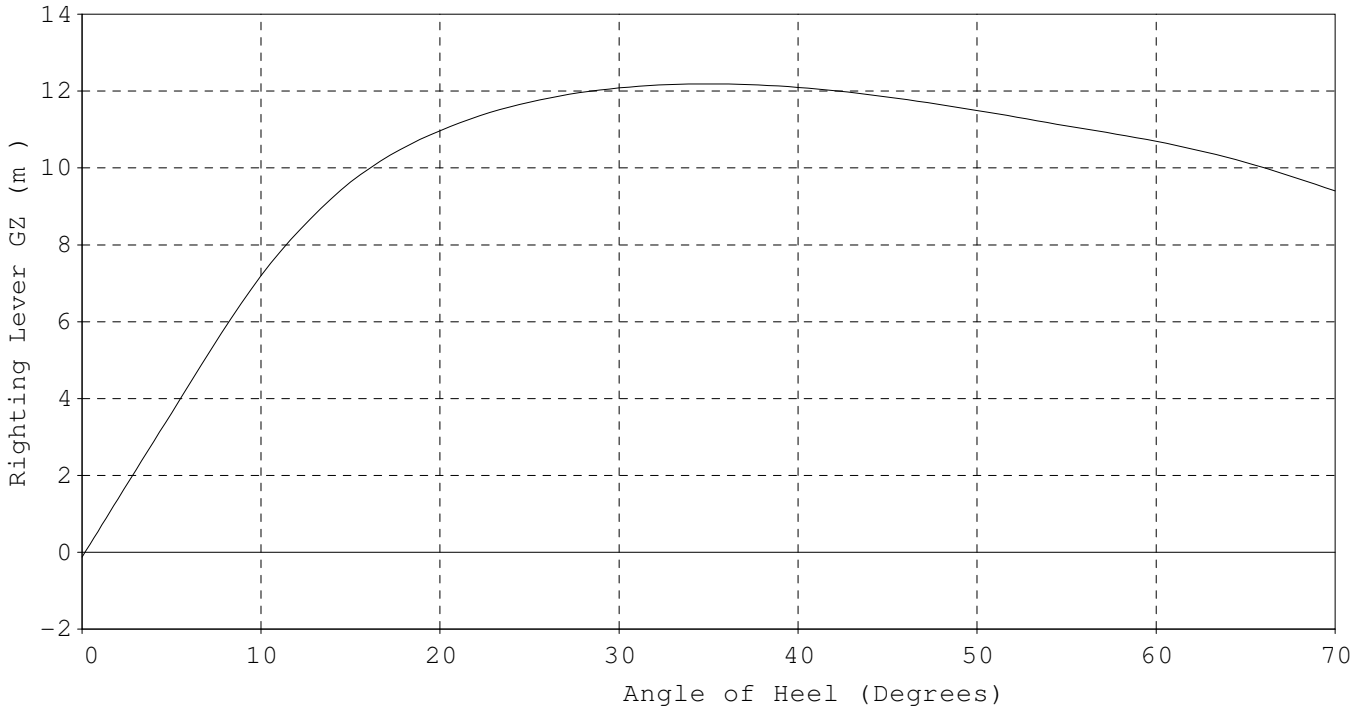
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	0	0.00	0.00	0.00	0
Ballast	23756	3.49	61.92	0.00	7316
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.75	-119.52	10.46	4176
Diesel Oil	33	16.74	-110.04	8.24	2
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	25544	4.39	49.56	0.40	13438
TOTALS	67046	11.55	12.73	0.12	13438

HYDROSTATICS

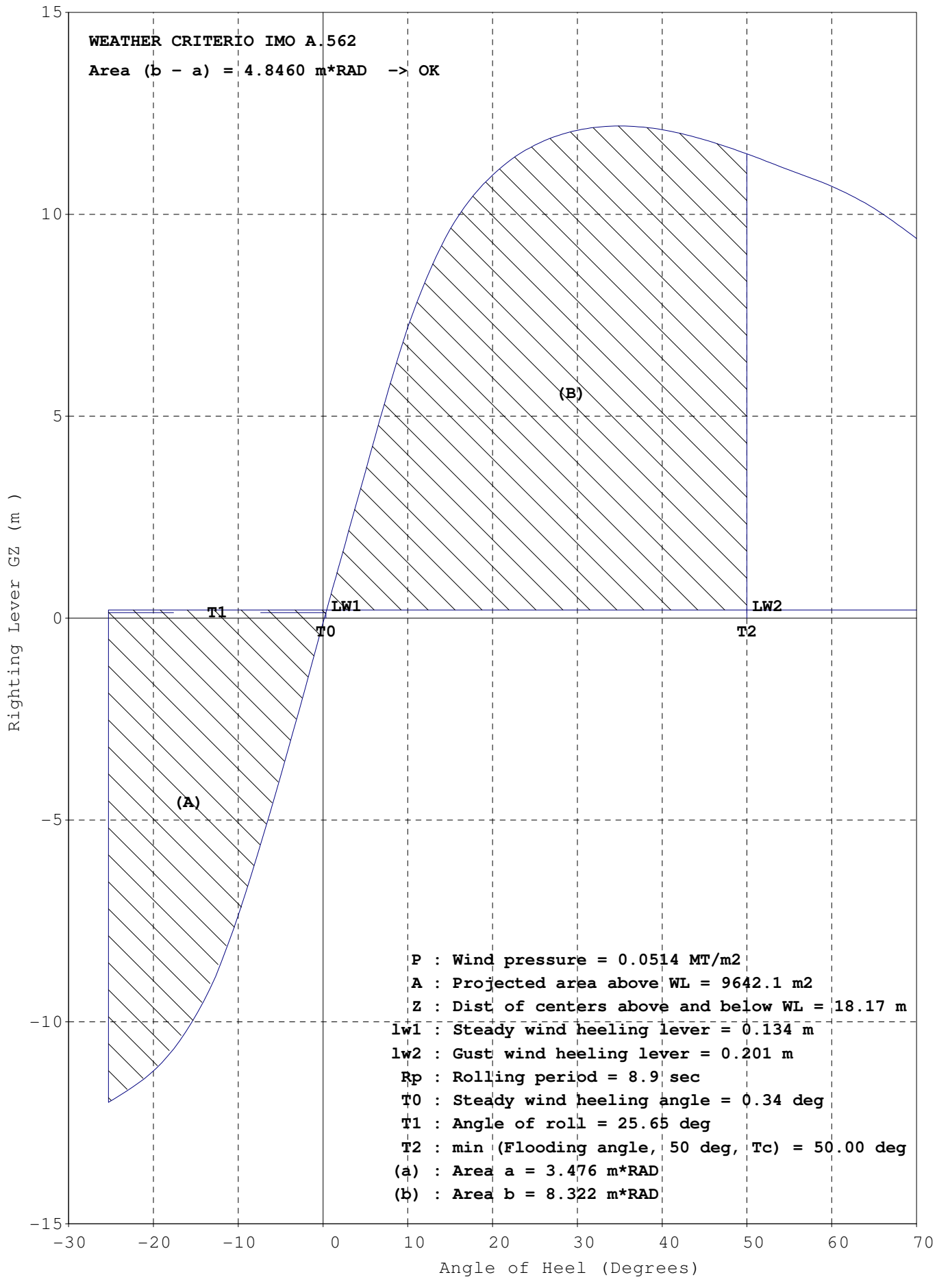
Draft FPP	4.21 m
Mk F123	4.23 m
APP	5.73 m
Mk F18	5.66 m
Mid	4.97 m
Mk	4.98 m
LCF	4.89 m
TRIM	1.52 m
HEEL	0.2 Deg
LCF	17.00 m
Prop Imm	46.6 %
Rolling	7 sec
TPC-I	147.04 MT/cm
MCT	2598.0 MT-m/cm
MCH	50366 MT-m/deg
FLood	> 70 Deg
LCB	12.69 m
KM(T)	54.80 m
KG	11.55 m
GM	43.24 m
GGo	0.20 m
GoM	43.04 m
KG(eff)	11.75 m

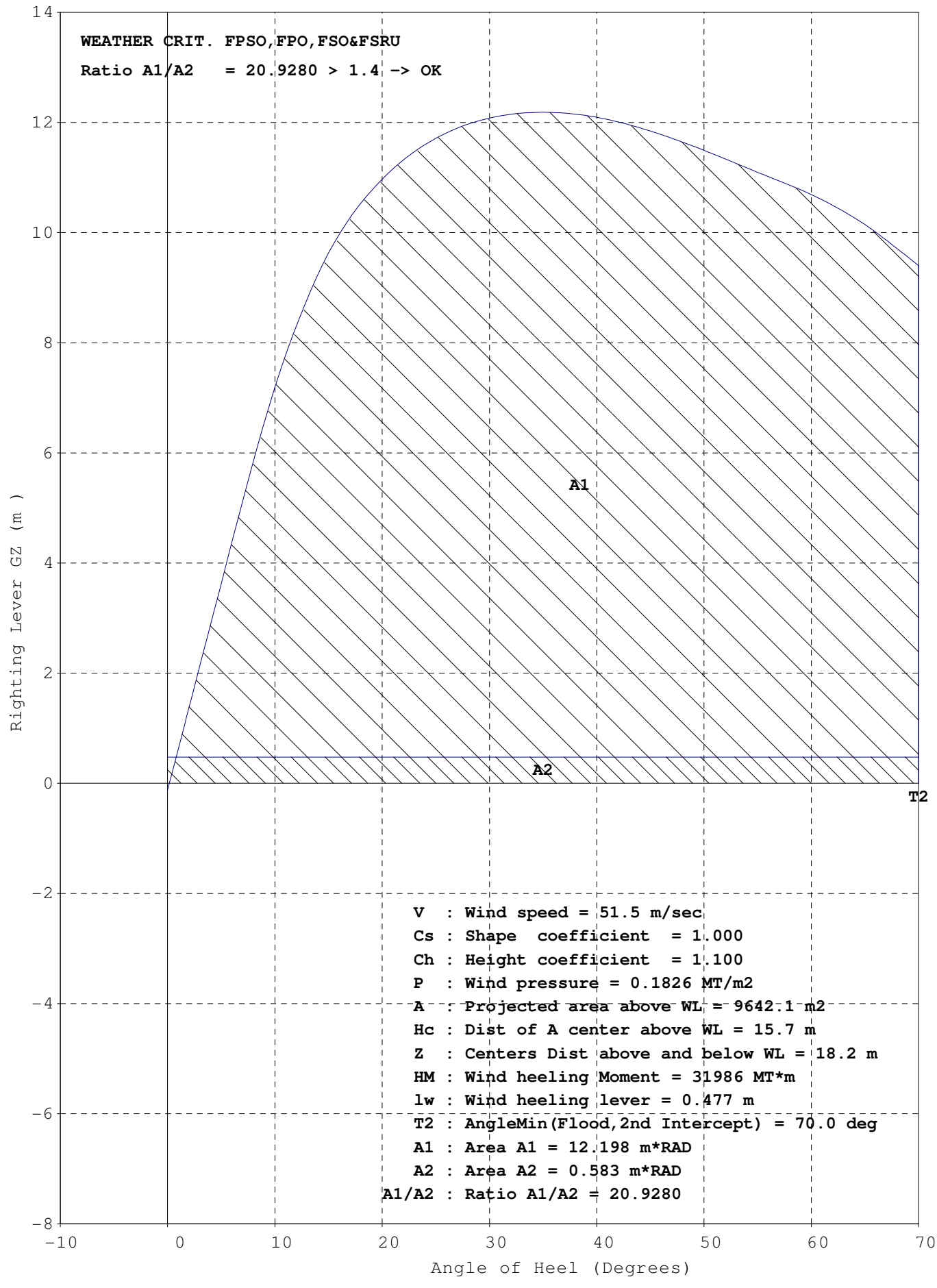
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	4.3112	>=	0.055	OK
Area 0-40 deg	m x RAD	6.4324	>=	0.09	OK
Area 30-40 deg	m x RAD	2.1212	>=	0.03	OK
GZ at/or> 30 deg	m	12.08	>=	0.2	OK
Max GZ Angle	Deg	34.907	>=	25.0	OK
Maximum GZ	12.19 m				
Initial GM	m	43.041	>=	0.15	OK
Weather Area(B-A)	m x RAD	4.846	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	20.928	>=	1.4	OK
Lim KG-Intact	m	11.755	=<	18.372	OK
Min FPP Draft	m	4.213	>=	7.825	X
SteadyWind Angle	Deg	0.343	=<	16.0	OK
Deck Edge Angle	57.29 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.12	1.38	3.62	7.20	9.63	10.97	11.71	12.08	12.19	12.10	11.85	11.50	11.09	10.69	10.15	9.40


WEATHER CRITERIO IMO A.562
Area (b - a) = 4.8460 m*RAD -> OK
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 9642.1 m2
Z : Dist of centers above and below WL = 18.17 m
lw1 : Steady wind heeling lever = 0.134 m
lw2 : Gust wind heeling lever = 0.201 m
Rp : Rolling period = 8.9 sec
T0 : Steady wind heeling angle = 0.34 deg
T1 : Angle of roll = 25.65 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 3.476 m*RAD
(b) : Area b = 8.322 m*RAD
Righting Lever GZ (m)
Angle of Heel (Degrees)
15
10
5
0
-5
-10
-15
-30
-20
-10
0
10
20
30
40
50
60
70


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 20.9280 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.100
P : Wind pressure = 0.1826 MT/m2
A : Projected area above WL = 9642.1 m2
Hc : Dist of A center above WL = 15.7 m
Z : Centers Dist above and below WL = 18.2 m
HM : Wind heeling Moment = 31986 MT*m
lw : Wind heeling lever = 0.477 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 12.198 m*RAD
A2 : Area A2 = 0.583 m*RAD
A1/A2 : Ratio A1/A2 = 20.9280
Righting Lever GZ (m)
Angle of Heel (Degrees)
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91										
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S												

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5	57	5115.0	118.614	3.61	-15.26	3490
No1 W.B.Tk (S)	101	111	8789.5	57	5115.0	118.614	3.61	15.26	3490
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4	67	6763.0	19.050	3.40	-18.48	168
No3 W.B.Tk (S)	81	91	9782.4	67	6763.0	19.050	3.40	18.48	168
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		23756.0	61.925	3.49	0.00	7316

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2						
No1 HFO Stor Tk(S)	56	61	920.3						
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		832.8	-119.521	17.75	10.46	4176

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5						
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		32.9	-110.041	16.74	8.24	2

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous **Density = .980** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max

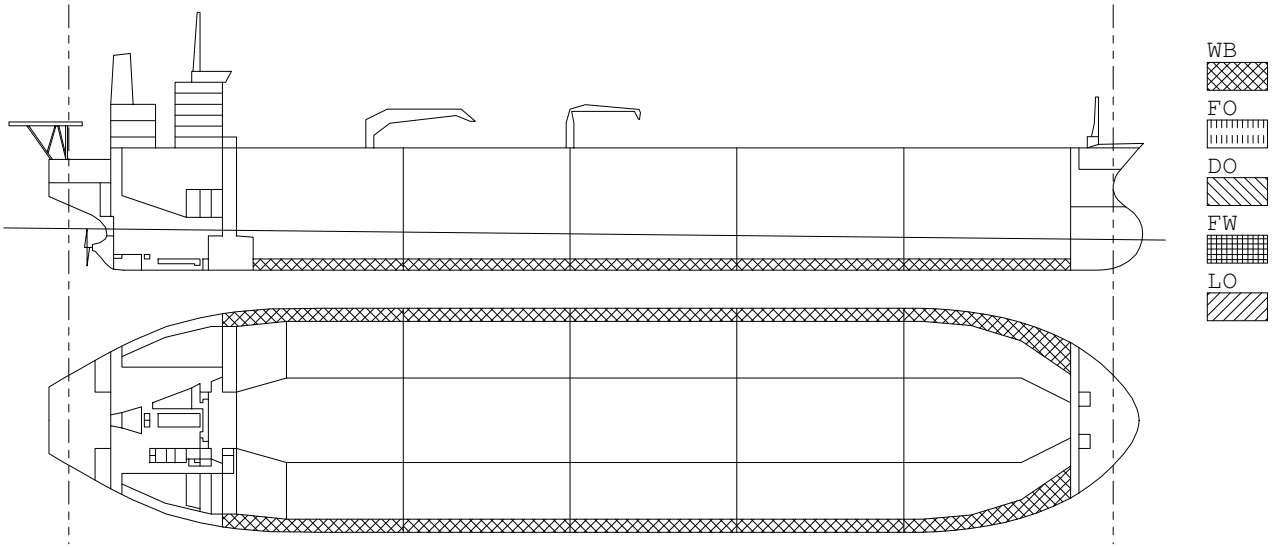
T O T A L S	147.1	129.7	-118.254	2.11	-1.44	1037

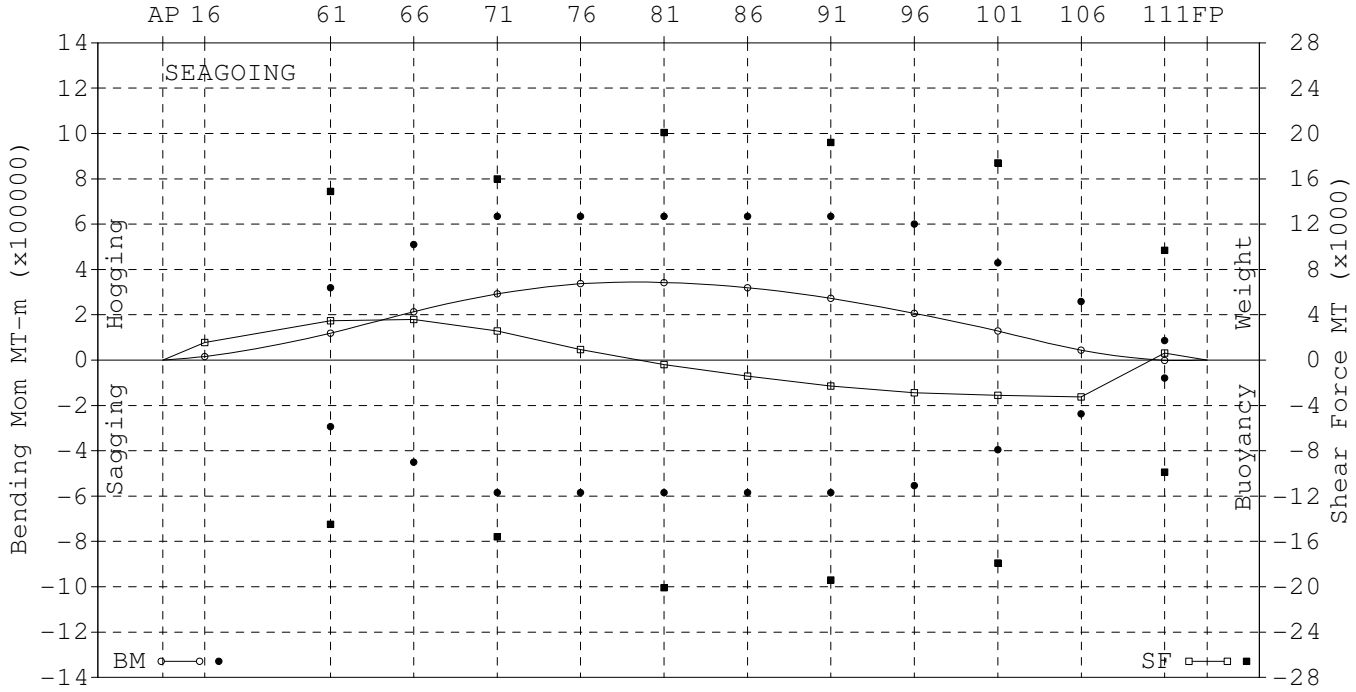
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

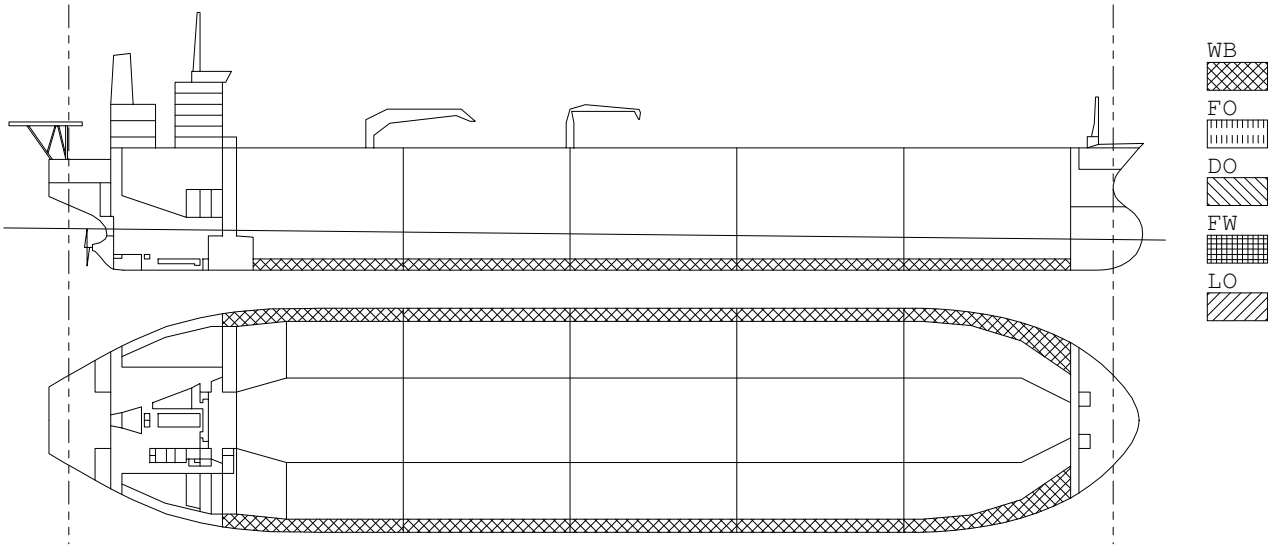


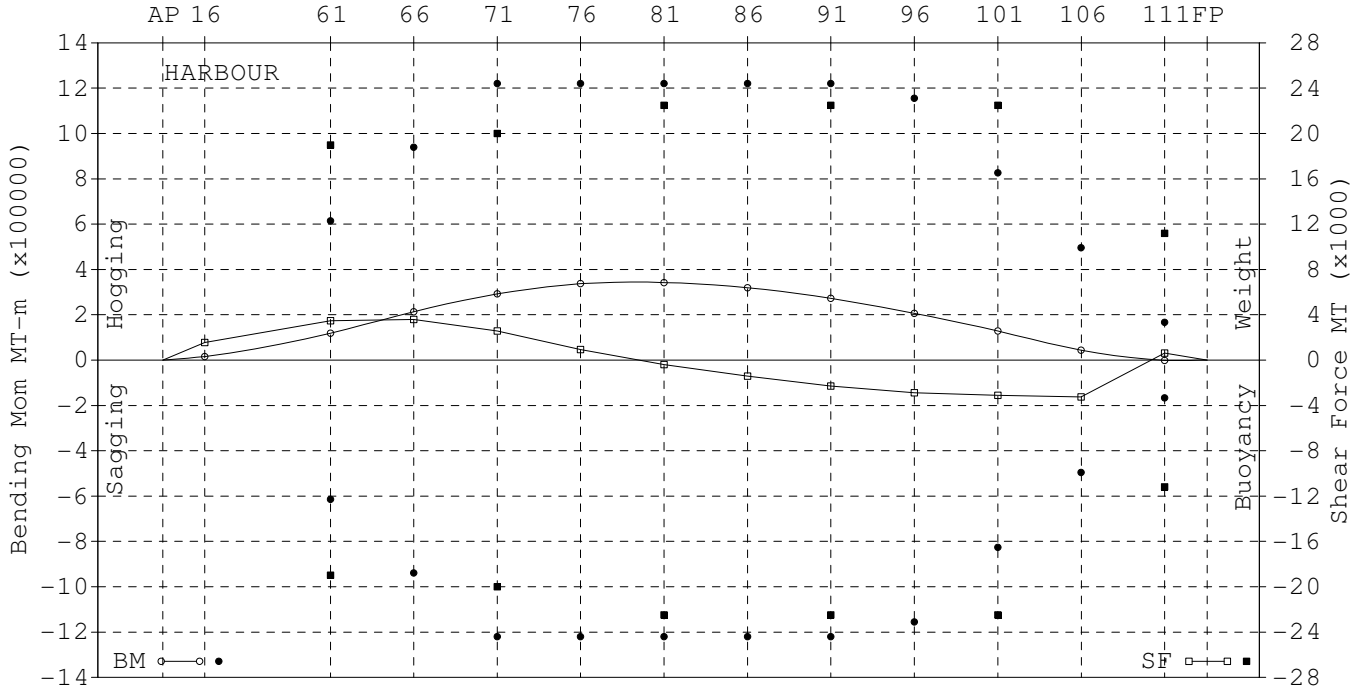


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1551	–	–	16091	–	–	–	–
61	3484	23	14900	118963	37	319000	–	-294000
66	3574	–	–	213891	42	510000	–	-450000
71	2560	16	16000	291753	46	635000	–	-585000
76	943	–	–	337232	53	635000	–	-585000
81	-386	2	-20100	342568	54	635000	–	-585000
86	-1421	–	–	319527	50	635000	–	-585000
91	-2276	12	-19400	272170	43	635000	–	-585000
96	-2882	–	–	206299	34	600000	–	-554000
101	-3104	17	-17900	128823	30	429000	–	-395000
106	-3250	–	–	43270	17	258000	–	-237000
111	623	6	9700	-819	–	86000	1	-79000

SF max 3484 MT 23% at F61 +Weight (-3250 MT 23% at F106 +Buoyancy)
BM max 344531 MT-m 54% at F79 Hogging

Estimated Deflection Amidships = 11cm HOGGING





FRAME	SHEAR FORCE			BENDING MOMENT				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1551	-	-	16091	-	-	-	-
61	3484	18	19000	118963	19	615000	-	-615000
66	3574	-	-	213891	23	940000	-	-940000
71	2560	13	20000	291753	24	1221000	-	-1221000
76	943	-	-	337232	28	1221000	-	-1221000
81	-386	2	-22500	342568	28	1221000	-	-1221000
86	-1421	-	-	319527	26	1221000	-	-1221000
91	-2276	10	-22500	272170	22	1221000	-	-1221000
96	-2882	-	-	206299	18	1156000	-	-1156000
101	-3104	14	-22500	128823	16	826000	-	-826000
106	-3250	-	-	43270	9	496000	-	-496000
111	623	6	11200	-819	-	167000	0	-167000

SF max 3484 MT 18% at F61 +Weight (-3250 MT 19% at F106 +Buoyancy)
BM max 344531 MT-m 28% at F79 Hogging

Estimated Deflection Amidships = 11cm HOGGING

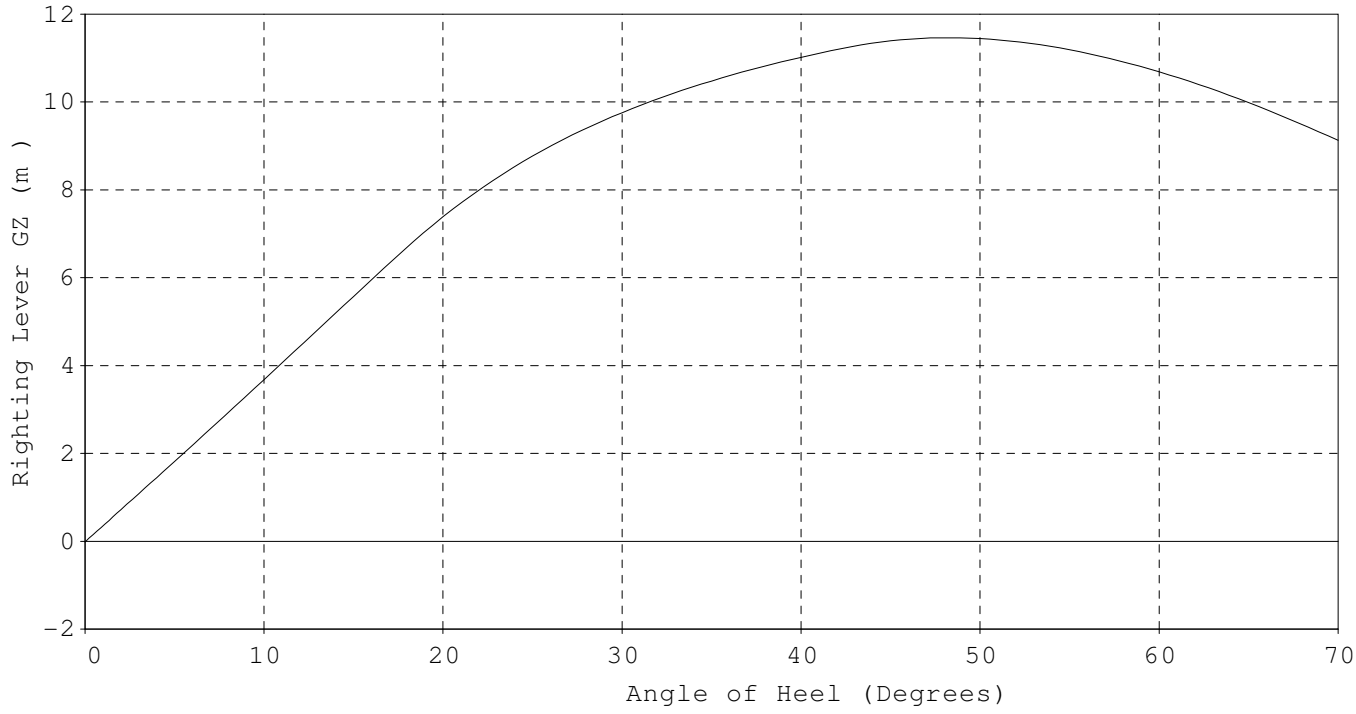
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	0	0.00	0.00	0.00	0
Ballast	93946	10.34	21.19	0.00	0
Fresh Water	0	0.00	0.00	0.00	0
Fuel Oil	0	0.00	0.00	0.00	0
Diesel Oil	0	0.00	0.00	0.00	0
Lub Oil	0	0.00	0.00	0.00	0
Stores	5	33.45	-122.82	0.00	0
Deadweight	94201	10.38	20.96	0.00	0
TOTALS	135703	12.09	11.51	-0.01	0

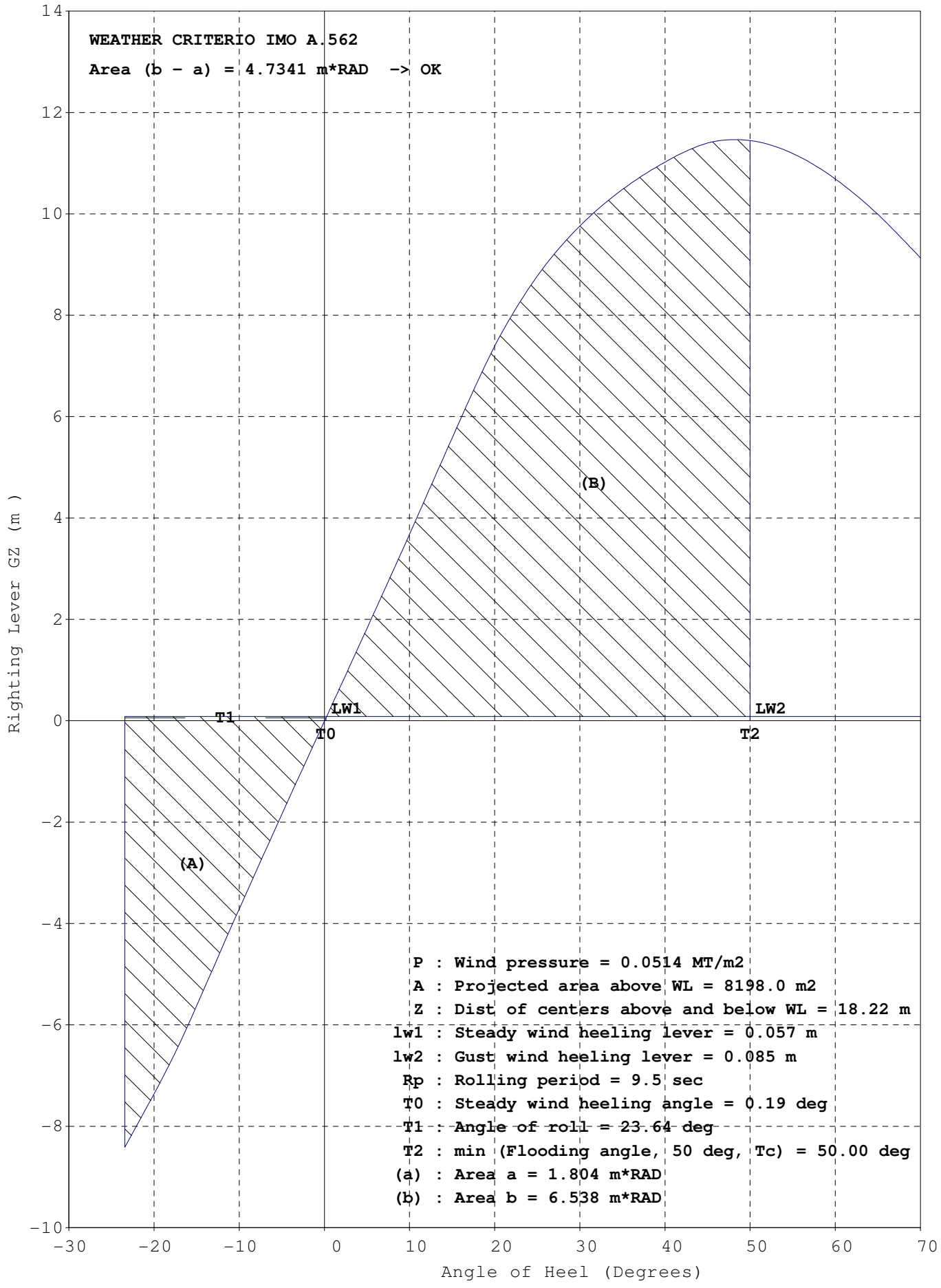
HYDROSTATICS		
Draft FPP	8.09	m
Mk F123	8.12	m
APP	11.07	m
Mk F18	10.93	m
Mid	9.58	m
Mk	9.59	m
LCF	9.45	m
TRIM	2.98	m
HEEL	0.0	Deg
LCF	14.46	m
Prop Imm	101.4	%
Rolling	10	sec
TPC-I	155.15	MT/cm
MCT	2945.7	MT-m/cm
MCH	49641	MT-m/deg
FLood	> 70	Deg
LCB	11.45	m
KM(T)	33.05	m
KG	12.09	m
GM	20.96	m
GGo	0.00	m
GoM	20.96	m
KG(eff)	12.09	m

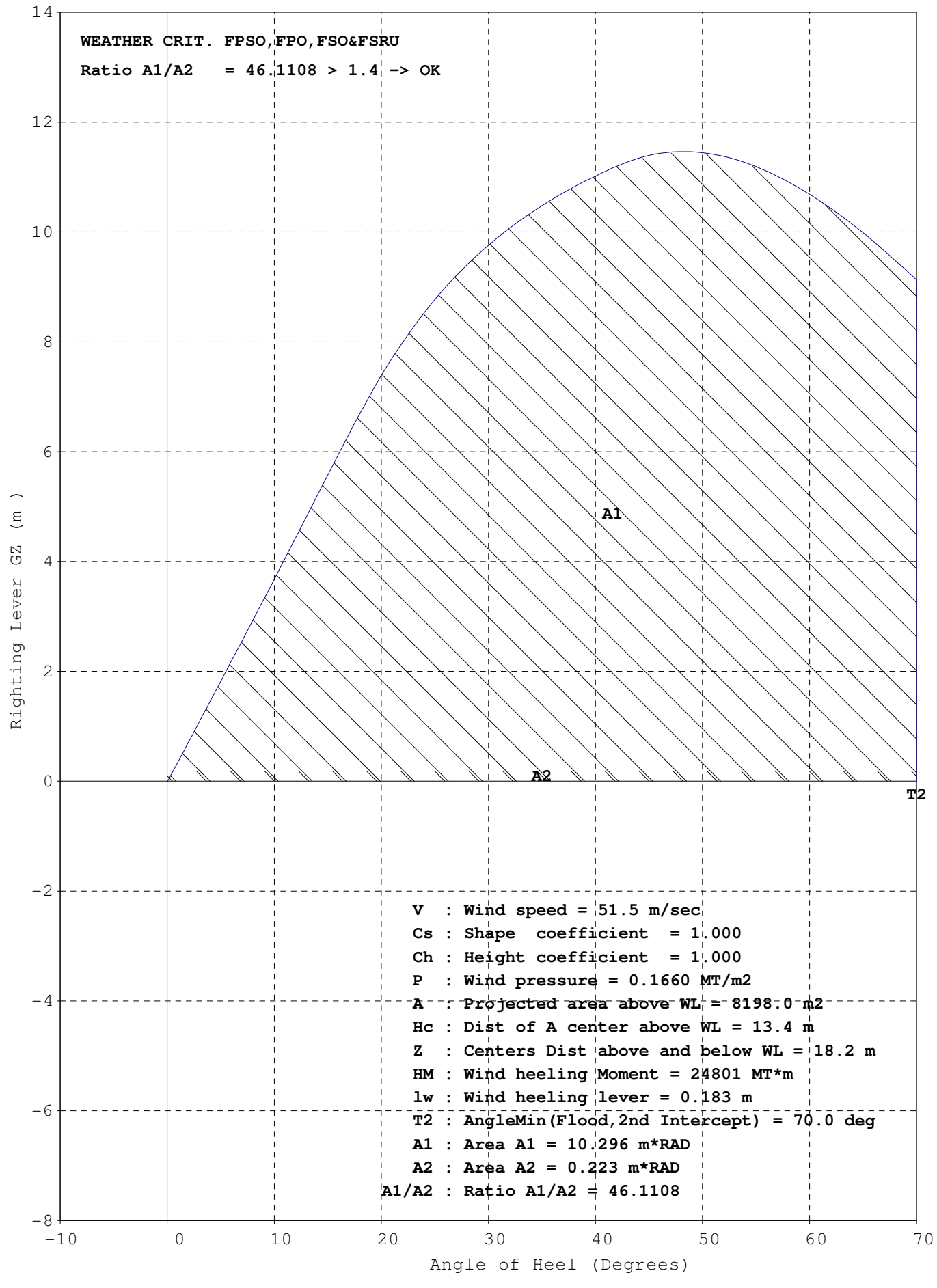
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	2.8089	>= 0.055	OK
Area 0-40 deg	m x RAD	4.6328	>= 0.09	OK
Area 30-40 deg	m x RAD	1.8239	>= 0.03	OK
GZ at/or> 30 deg	m	9.759	>= 0.2	OK
Max GZ Angle	Deg	48.243	>= 25.0	OK
Maximum GZ	11.46 m			
Initial GM	m	20.959	>= 0.15	OK
Weather Area(B-A)	m x RAD	4.7341	>= 0.0	OK
Weather Ratio A1/A2	m x RAD	46.1108	>= 1.4	OK
Lim KG-Intact	m	12.091	=<26.957	OK
Min FPP Draft	m	8.095	>= 7.825	OK
SteadyWind Angle	Deg	0.195	=< 16.0	OK
Deck Edge Angle	41.70 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.01	0.72	1.82	3.68	5.57	7.39	8.77	9.76	10.48	11.02	11.40	11.44	11.19	10.69	9.99	9.13


WEATHER CRITERIO IMO A.562
Area (b - a) = 4.7341 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 8198.0 m2
Z : Dist of centers above and below WL = 18.22 m
lw1 : Steady wind heeling lever = 0.057 m
lw2 : Gust wind heeling lever = 0.085 m
Rp : Rolling period = 9.5 sec
T0 : Steady wind heeling angle = 0.19 deg
T1 : Angle of roll = 23.64 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 1.804 m*RAD
(b) : Area b = 6.538 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 46.1108 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 8198.0 m2
Hc : Dist of A center above WL = 13.4 m
Z : Centers Dist above and below WL = 18.2 m
HM : Wind heeling Moment = 24801 MT*m
lw : Wind heeling lever = 0.183 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 10.296 m*RAD
A2 : Area A2 = 0.223 m*RAD
A1/A2 : Ratio A1/A2 = 46.1108
Righting Lever GZ (m)
Angle of Heel (Degrees)
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91										
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S												

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	0
No1 W.B.Tk (S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	0
No2 W.B.Tk (P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk (S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4	100	9752.3	-31.315	9.64	-21.19	0
No4 W.B.Tk (S)	71	81	9514.4	100	9752.3	-31.315	9.64	21.19	0
No5 W.B.Tk (P)	56	71	8009.9	100	8210.1	-82.363	12.10	-20.01	0
No5 W.B.Tk (S)	56	71	8009.9	100	8210.1	-82.363	12.10	20.01	0
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		93946.2	21.185	10.34	0.00	0

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2						
No1 HFO Stor Tk(S)	56	61	920.3						
No2 HFO Stor Tk(P)	20	56	3239.6						
No2 HFO Stor Tk(S)	20	56	2688.3						
No1 HFO Sett.Tk(S)	52	56	184.1						
No2 HFO Sett.Tk(S)	48	52	176.4						
HFO Service Tk (S)	43	48	161.5						
T O T A L S			8670.4						

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5						
DO Service Tank(S)	56	61	53.3						
T O T A L S			372.8						

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0						
No1 Cyl.Stor.Tk(S)	43	48	83.0						
No2 Cyl.Stor.Ts(S)	39	43	73.9						
Turb LO Stor.Tk(S)	46	48	9.2						
MELO Storage Tk(S)	32	36	73.5						
MELO Settling T(S)	36	39	55.2						
GELO Storage Tk(S)	30	32	13.8						
GELO Settling T(S)	30	32	13.8						
T O T A L S			379.5						

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5						
Fresh Water Tk (S)	10	16	256.5						
T O T A L S			513.0						

Miscellaneous **Density = 1.000** **MT/m3**

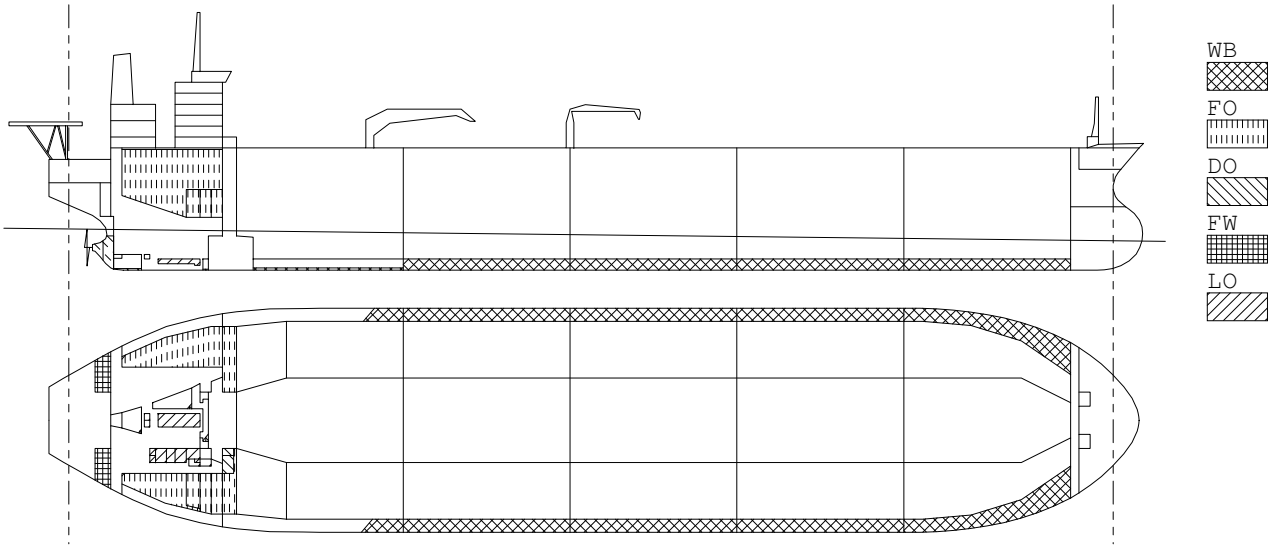
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9						
B/W Tank (C)	17	20	8.7						
LO Drain Tank (P)	28	30	3.4						
LO Drain Tank (S)	28	30	3.4						
Sep.Bilge Oil T(P)	31	45	108.7						
FO Overflow Tk (C)	45	51	142.8						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
MELO Puri.Tank (S)	44	48	4.3						
FO Puri Slud.Tk(S)	48	52	4.3						
Cooling W.Tank (C)	11	17	44.2						
T O T A L S			444.9						

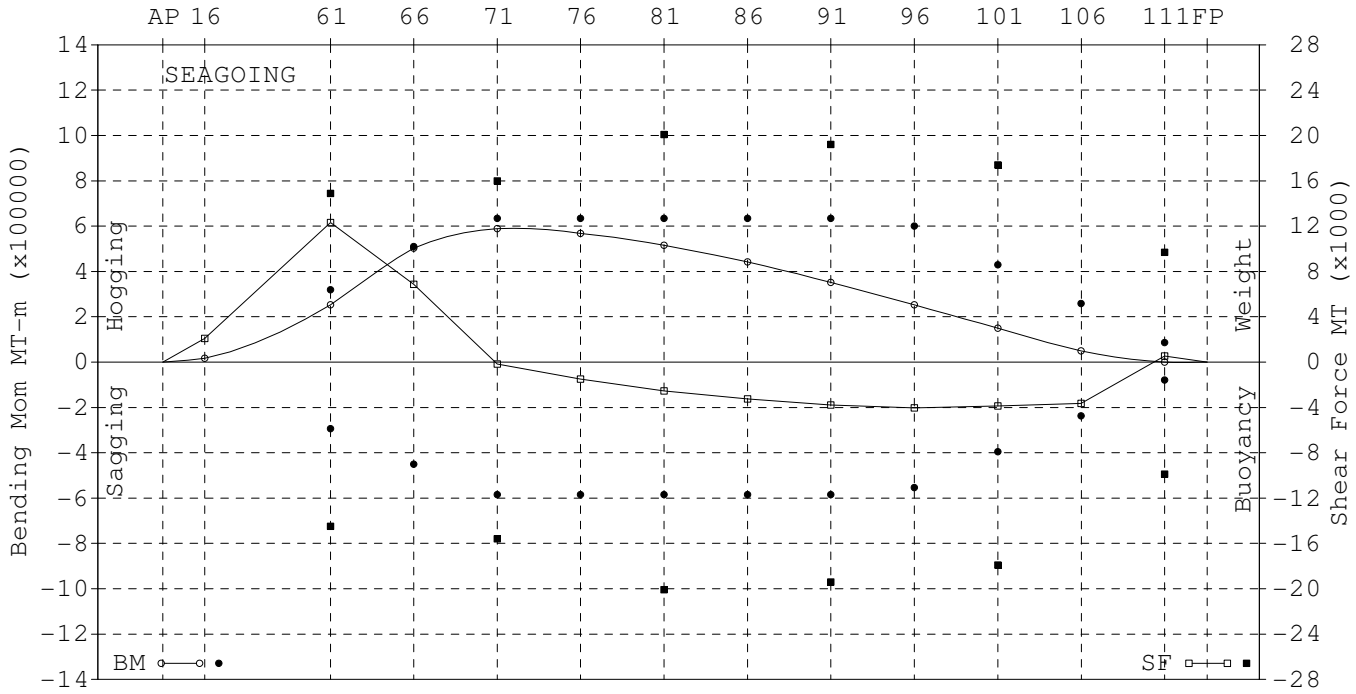
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

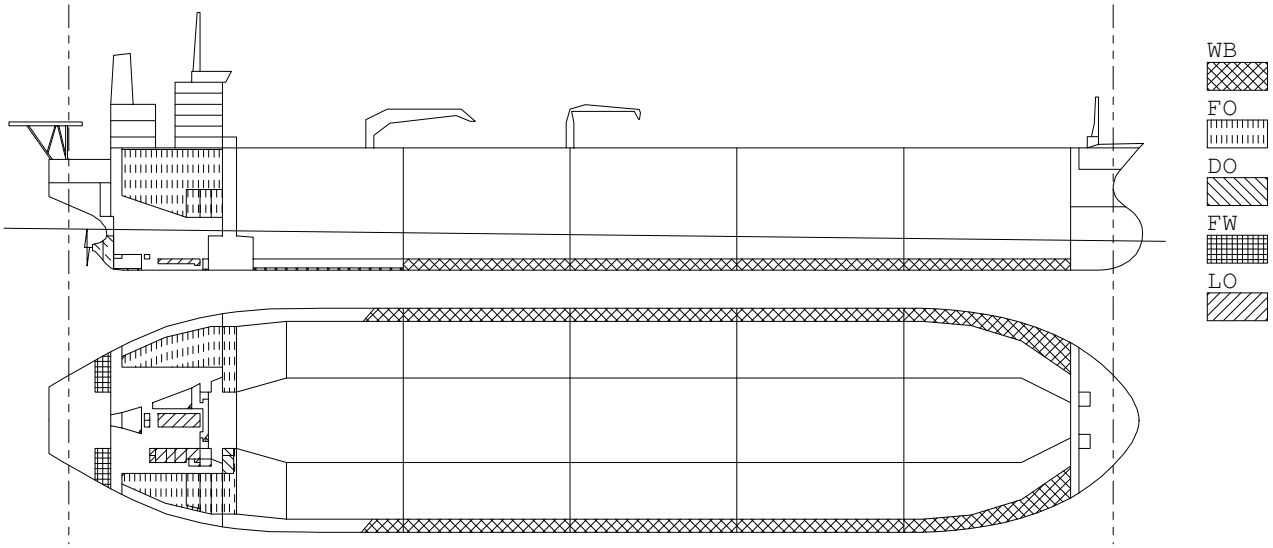


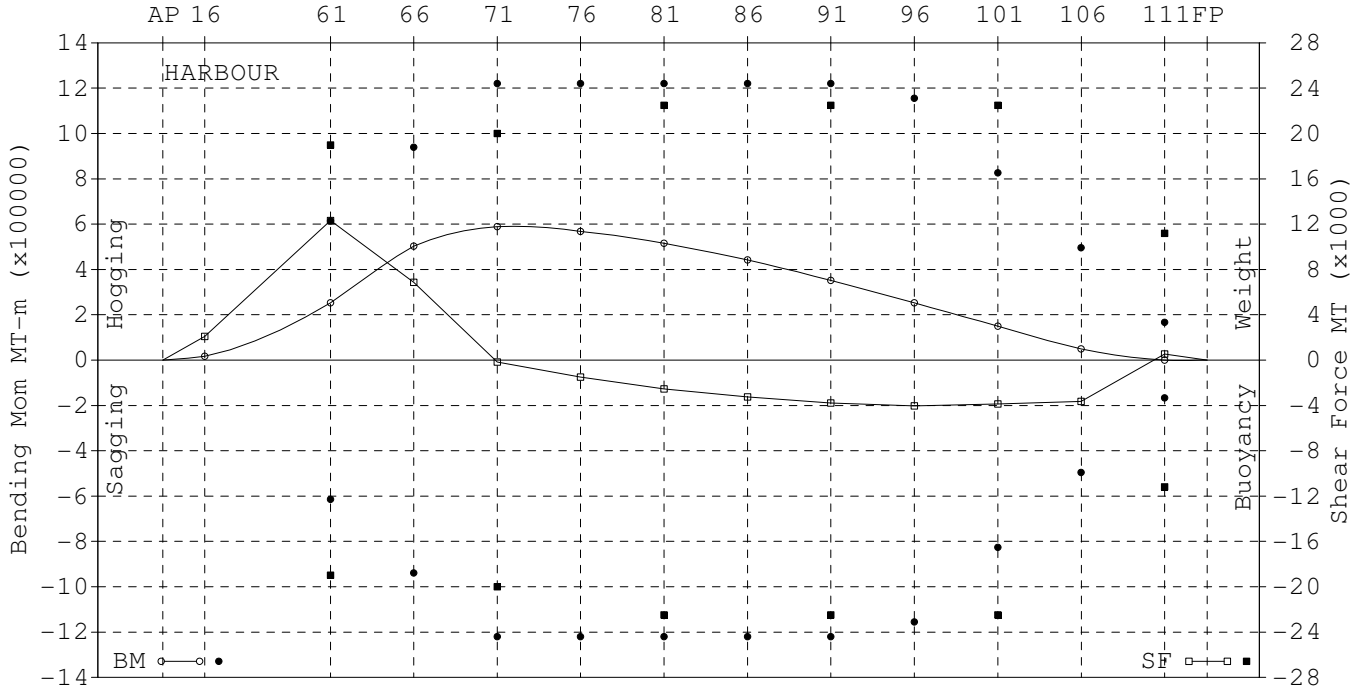


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2095	–	–	17332	–	–	–	–
61	12316	83	14900	252942	79	319000	–	-294000
66	6874	–	–	503242	99	510000	–	-450000
71	-180	1	-15600	589066	93	635000	–	-585000
76	-1511	–	–	568535	90	635000	–	-585000
81	-2539	13	-20100	515324	81	635000	–	-585000
86	-3255	–	–	441618	70	635000	–	-585000
91	-3775	19	-19400	351901	55	635000	–	-585000
96	-4029	–	–	252394	42	600000	–	-554000
101	-3883	22	-17900	150427	35	429000	–	-395000
106	-3652	–	–	49904	19	258000	–	-237000
111	528	5	9700	-192	–	86000	0	-79000

SF max 12316 MT 83% at F61 +Weight
BM max 591112 MT-m 93% at F72 Hogging (503242 MT-m 99% at F66 Hogging)

Estimated Deflection Amidships = 17cm HOGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2095	-	-	17332	-	-	-	-
61	12316	65	19000	252942	41	615000	-	-615000
66	6874	-	-	503242	54	940000	-	-940000
71	-180	1	-20000	589066	48	1221000	-	-1221000
76	-1511	-	-	568535	47	1221000	-	-1221000
81	-2539	11	-22500	515324	42	1221000	-	-1221000
86	-3255	-	-	441618	36	1221000	-	-1221000
91	-3775	17	-22500	351901	29	1221000	-	-1221000
96	-4029	-	-	252394	22	1156000	-	-1156000
101	-3883	17	-22500	150427	18	826000	-	-826000
106	-3652	-	-	49904	10	496000	-	-496000
111	528	5	11200	-192	-	167000	0	-167000

SF max 12316 MT 65% at F61 +Weight
BM max 591112 MT-m 48% at F72 Hogging (503242 MT-m 54% at F66 Hogging)

Estimated Deflection Amidships = 17cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

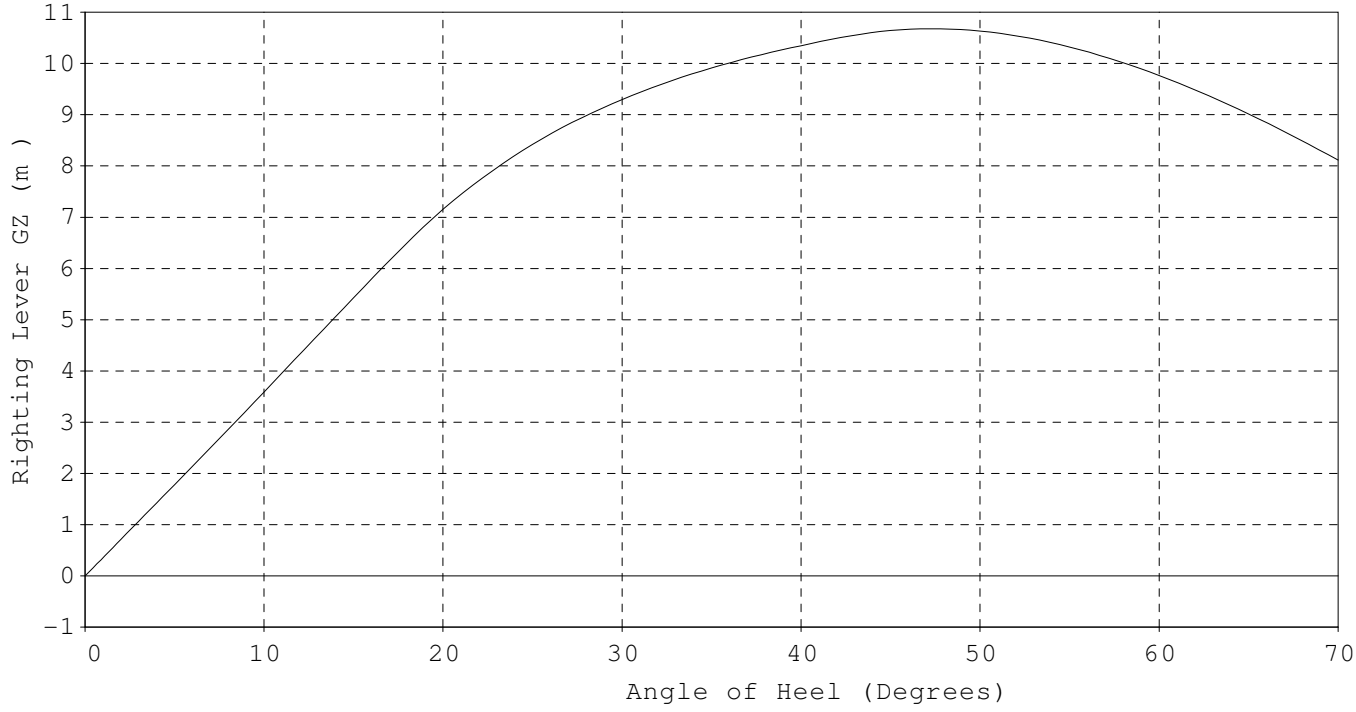
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	0	0.00	0.00	0.00	0
Ballast	81026	9.59	37.91	0.00	67857
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	90875	11.11	20.76	0.02	76566
TOTALS	132378	12.63	11.13	0.00	76566

HYDROSTATICS

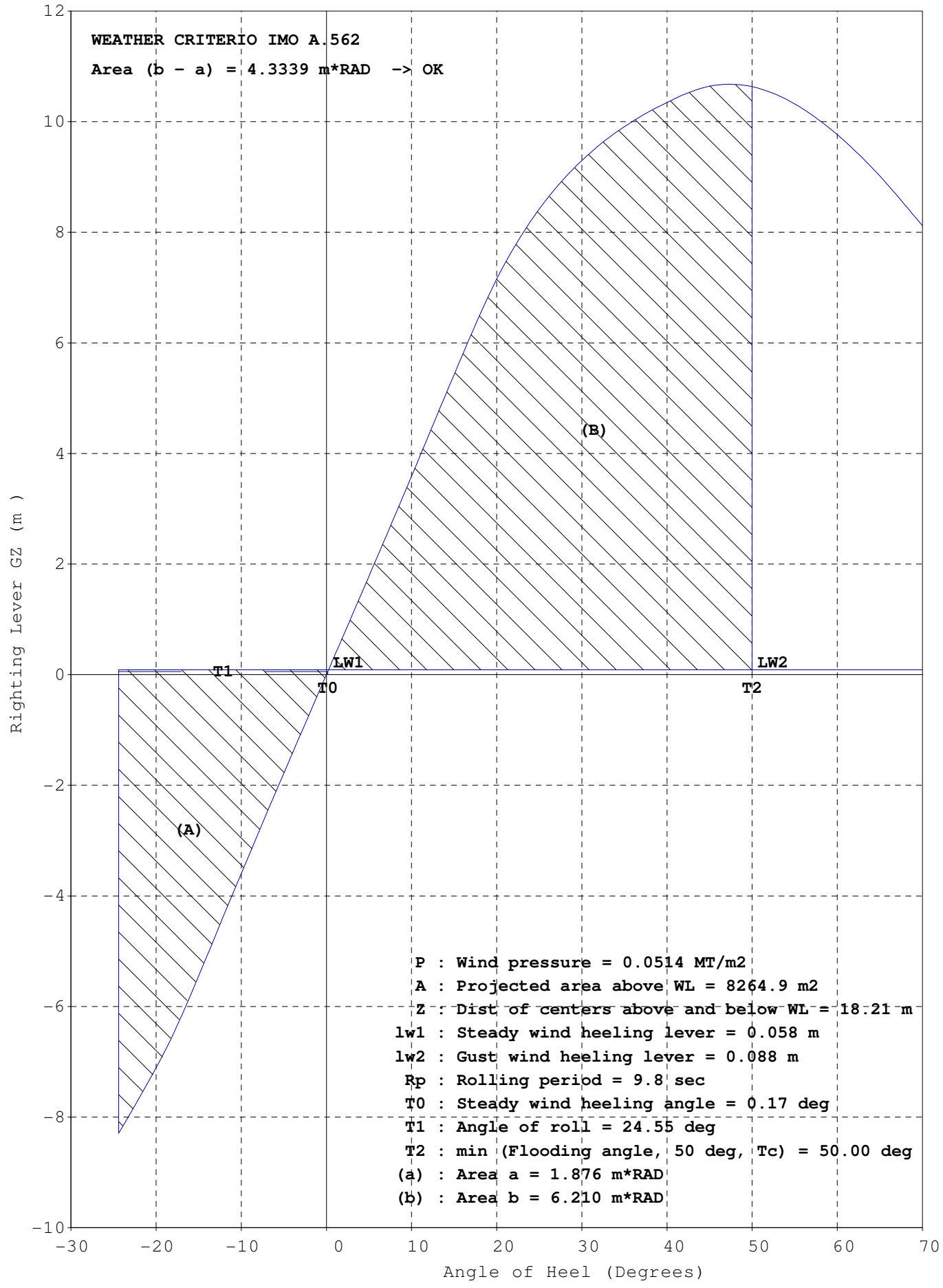
Draft FPP	7.82 m
Mk F123	7.84 m
APP	10.93 m
Mk F18	10.79 m
Mid	9.37 m
Mk	9.39 m
LCF	9.23 m
TRIM	3.12 m
HEEL	0.0 Deg
LCF	14.57 m
Prop Imm	100.0 %
Rolling	10 sec
TPC-I	154.84 MT/cm
MCT	2930.5 MT-m/cm
MCH	47043 MT-m/deg
FLood	> 70 Deg
LCB	11.05 m
KM(T)	33.57 m
KG	12.63 m
GM	20.94 m
GGo	0.58 m
GoM	20.36 m
KG(eff)	13.21 m

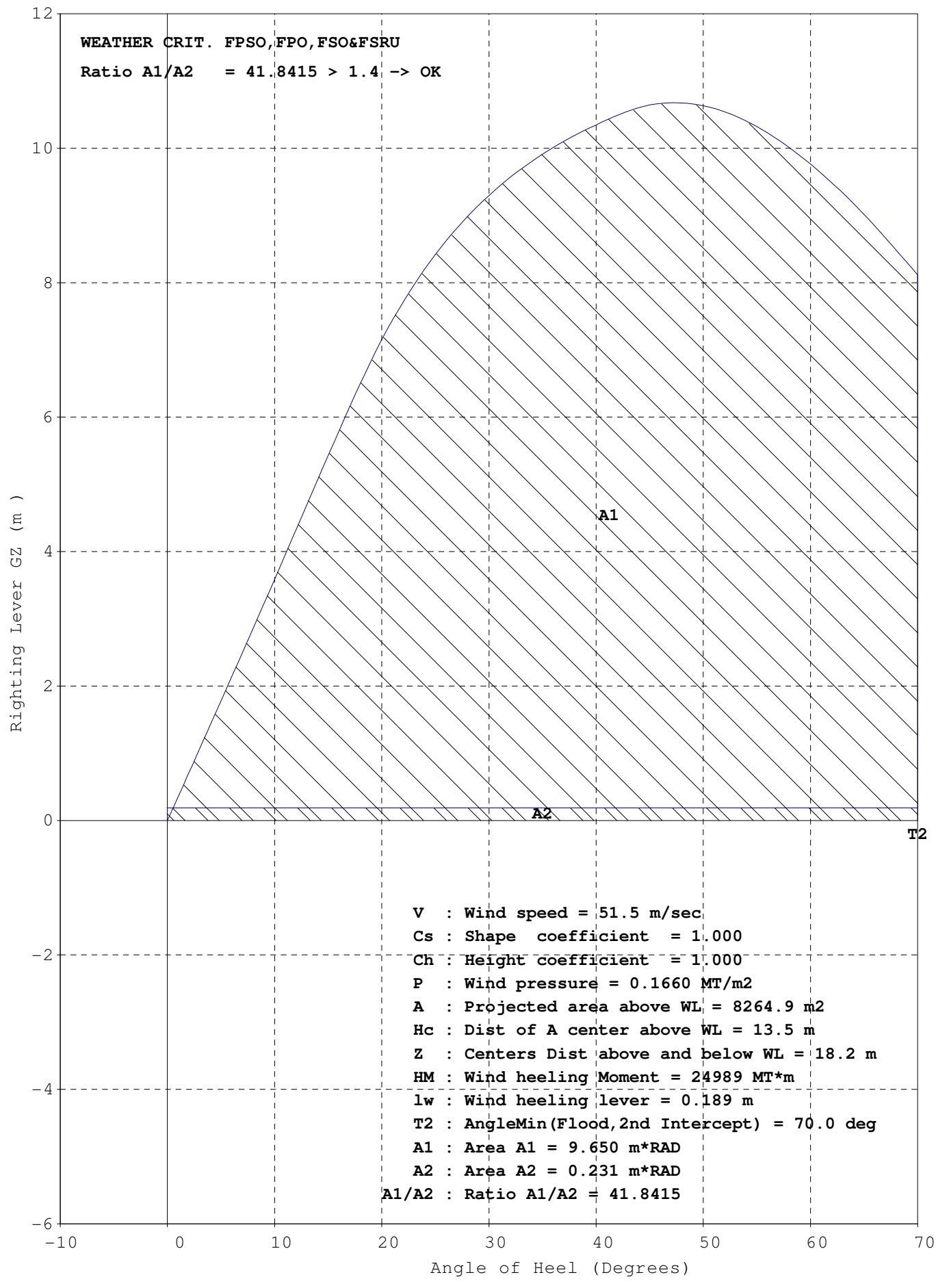
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	2.7141	>=	0.055	OK
Area 0-40 deg	m x RAD	4.4387	>=	0.09	OK
Area 30-40 deg	m x RAD	1.7246	>=	0.03	OK
GZ at/or> 30 deg	m	9.297	>=	0.2	OK
Max GZ Angle	Deg	47.324	>=	25.0	OK
Maximum GZ	10.68 m				
Initial GM	m	20.361	>=	0.15	OK
Weather Area(B-A)	m x RAD	4.3339	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	41.8415	>=	1.4	OK
Lim KG-Intact	m	13.211	=<	26.578	OK
Min FPP Draft	m	7.815	>=	7.825	X
SteadyWind Angle	Deg	0.17	=<	16.0	OK
Deck Edge Angle	42.14 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.71	1.78	3.59	5.43	7.16	8.42	9.30	9.91	10.35	10.64	10.63	10.32	9.76	9.02	8.12


WEATHER CRITERIO IMO A.562
Area (b - a) = 4.3339 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 8264.9 m2
Z : Dist of centers above and below WL = 18.21 m
lw1 : Steady wind heeling lever = 0.058 m
lw2 : Gust wind heeling lever = 0.088 m
Rp : Rolling period = 9.8 sec
T0 : Steady wind heeling angle = 0.17 deg
T1 : Angle of roll = 24.55 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 1.876 m*RAD
(b) : Area b = 6.210 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 41.8415 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 8264.9 m2
Hc : Dist of A center above WL = 13.5 m
Z : Centers Dist above and below WL = 18.2 m
HM : Wind heeling Moment = 24989 MT*m
lw : Wind heeling lever = 0.189 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 9.650 m*RAD
A2 : Area A2 = 0.231 m*RAD
A1/A2 : Ratio A1/A2 = 41.8415
Righting Lever GZ (m)
Angle of Heel (Degrees)
12
10
8
6
4
2
0
-2
-4
-6
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91										
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S												

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	0
No1 W.B.Tk (S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	0
No2 W.B.Tk (P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk (S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4	100	9752.3	-31.315	9.64	-21.19	0
No4 W.B.Tk (S)	71	81	9514.4	100	9752.3	-31.315	9.64	21.19	0
No5 W.B.Tk (P)	56	71	8009.9	21	1750.0	-77.434	1.13	-9.16	33929_Max
No5 W.B.Tk (S)	56	71	8009.9	21	1750.0	-77.434	1.13	9.16	33929_Max
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		81025.9	37.910	9.59	0.00	67857

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous **Density = .980** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max

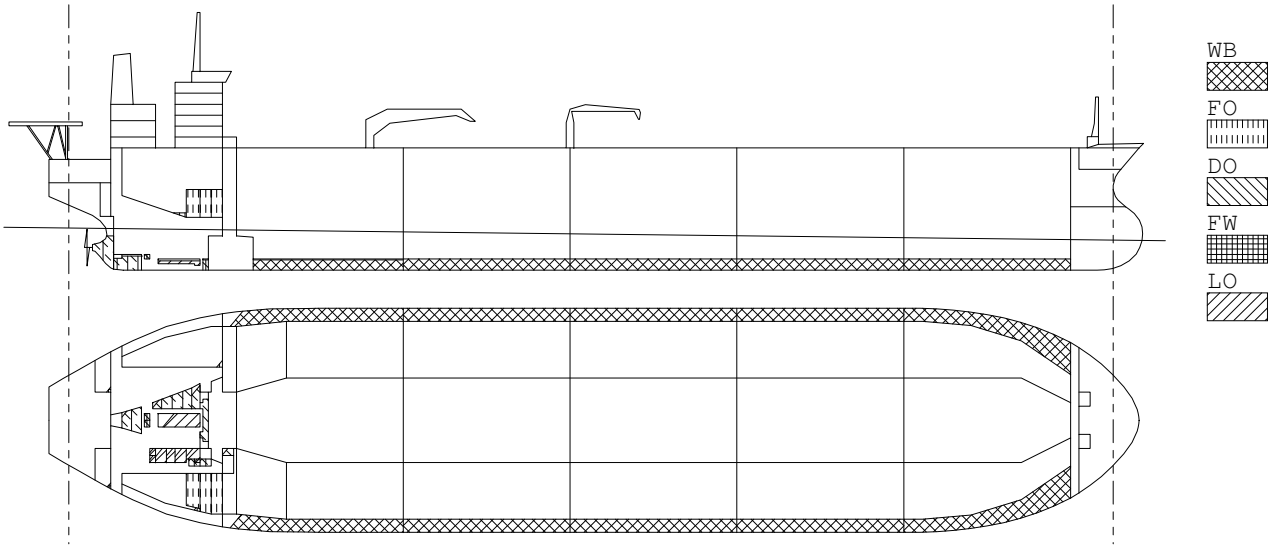
T O T A L S	147.1	14.4	-117.933	0.66	-0.35	1037

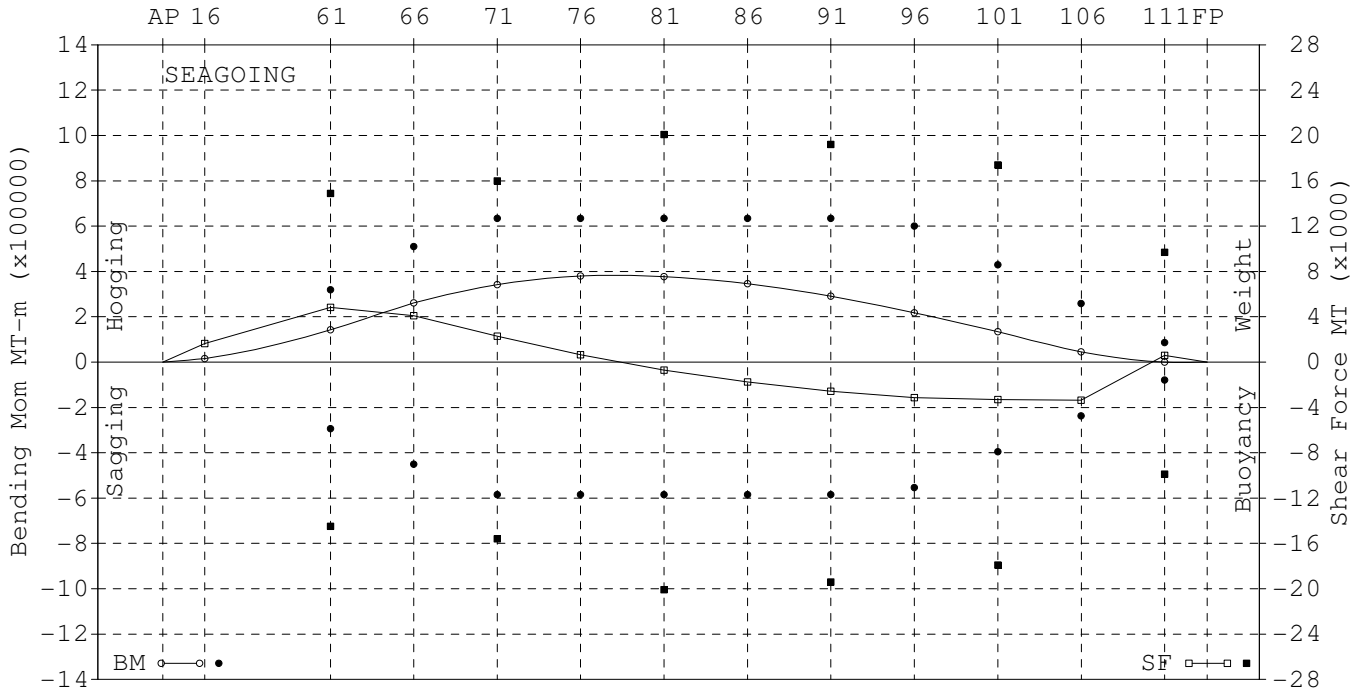
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

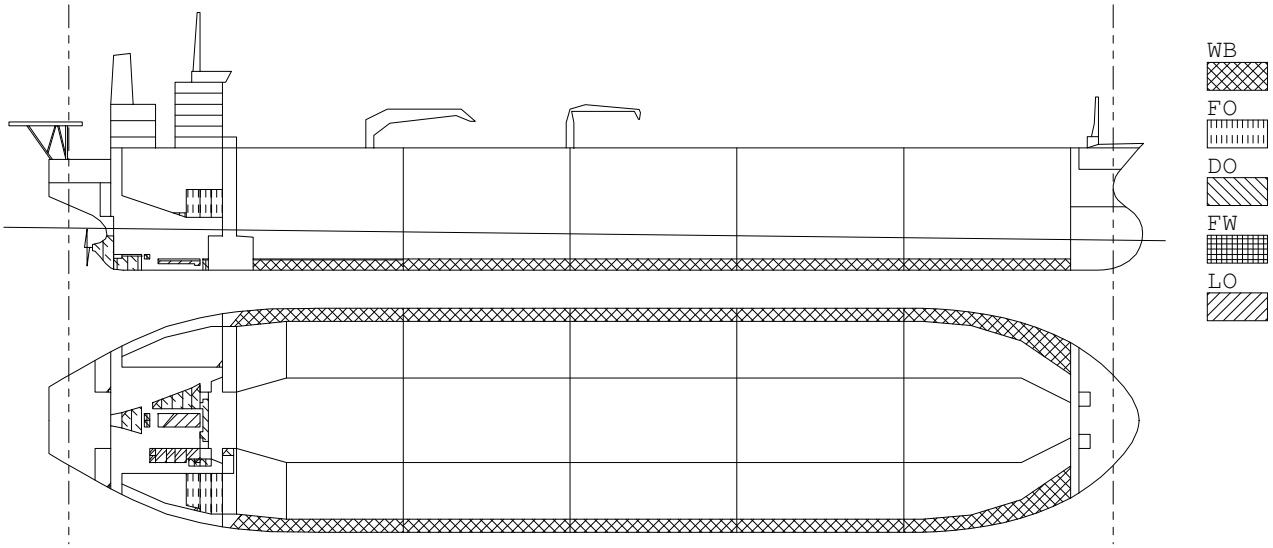


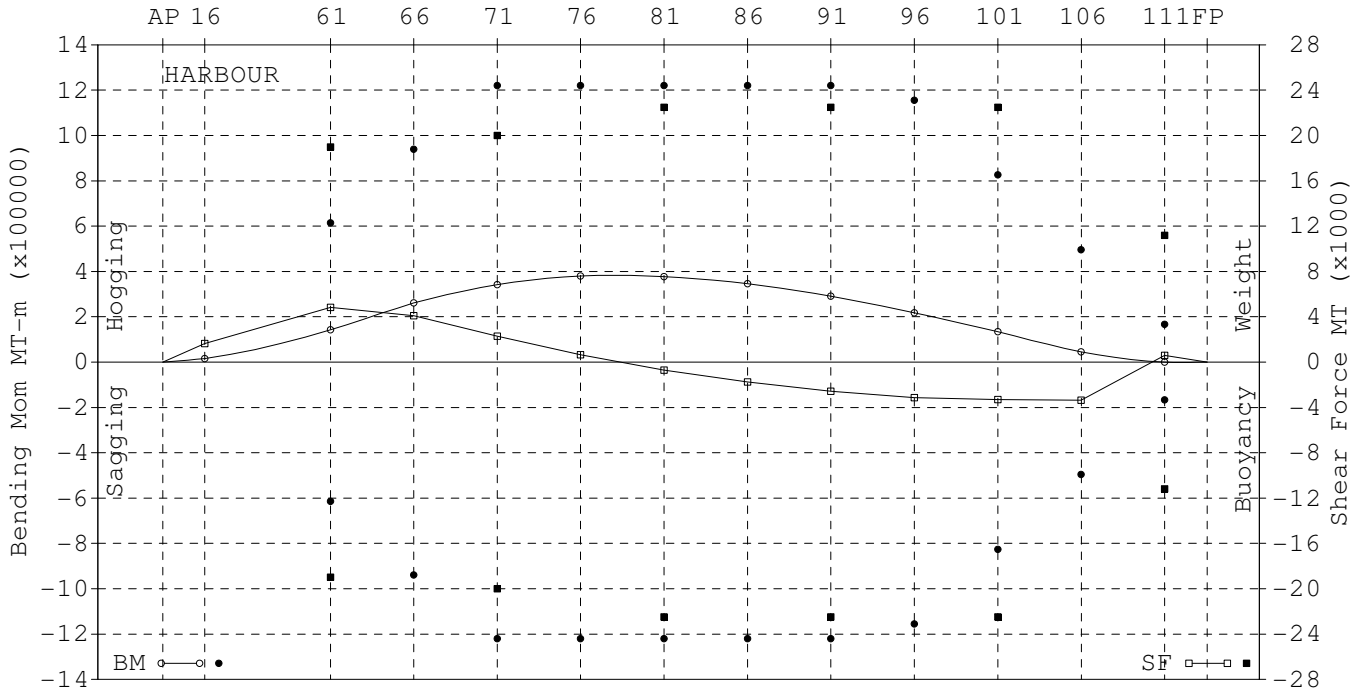


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1632	–	–	16245	–	–	–	–
61	4833	32	14900	142236	45	319000	–	-294000
66	4093	–	–	260832	51	510000	–	-450000
71	2295	14	16000	341765	54	635000	–	-585000
76	638	–	–	379960	60	635000	–	-585000
81	-710	4	-20100	377267	59	635000	–	-585000
86	-1743	–	–	345981	54	635000	–	-585000
91	-2576	13	-19400	290690	46	635000	–	-585000
96	-3138	–	–	217723	36	600000	–	-554000
101	-3296	18	-17900	134517	31	429000	–	-395000
106	-3359	–	–	45122	17	258000	–	-237000
111	595	6	9700	-651	–	86000	1	-79000

SF max 4833 MT 32% at F61 +Weight
BM max 383102 MT-m 60% at F78 Hogging

Estimated Deflection Amidships = 12cm HOGGING





FRAME	SHEAR FORCE			BENDING MOMENT				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1632	-	-	16245	-	-	-	-
61	4833	25	19000	142236	23	615000	-	-615000
66	4093	-	-	260832	28	940000	-	-940000
71	2295	11	20000	341765	28	1221000	-	-1221000
76	638	-	-	379960	31	1221000	-	-1221000
81	-710	3	-22500	377267	31	1221000	-	-1221000
86	-1743	-	-	345981	28	1221000	-	-1221000
91	-2576	11	-22500	290690	24	1221000	-	-1221000
96	-3138	-	-	217723	19	1156000	-	-1156000
101	-3296	15	-22500	134517	16	826000	-	-826000
106	-3359	-	-	45122	9	496000	-	-496000
111	595	5	11200	-651	-	167000	0	-167000

SF max 4833 MT 25% at F61 +Weight
BM max 383102 MT-m 31% at F78 Hogging

Estimated Deflection Amidships = 12cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

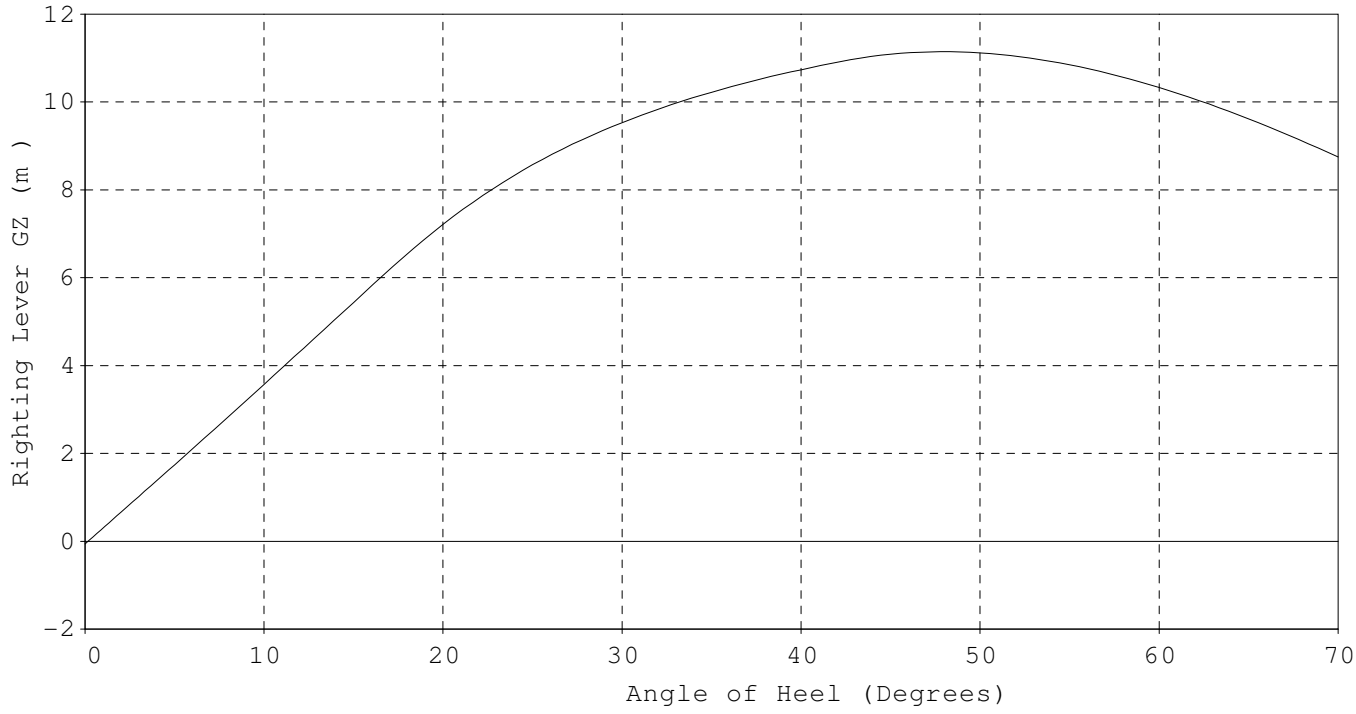
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	0	0.00	0.00	0.00	0
Ballast	92326	10.01	23.05	0.00	67857
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	94114	10.13	20.43	0.11	76566
TOTALS	135616	11.92	11.14	0.06	76566

HYDROSTATICS

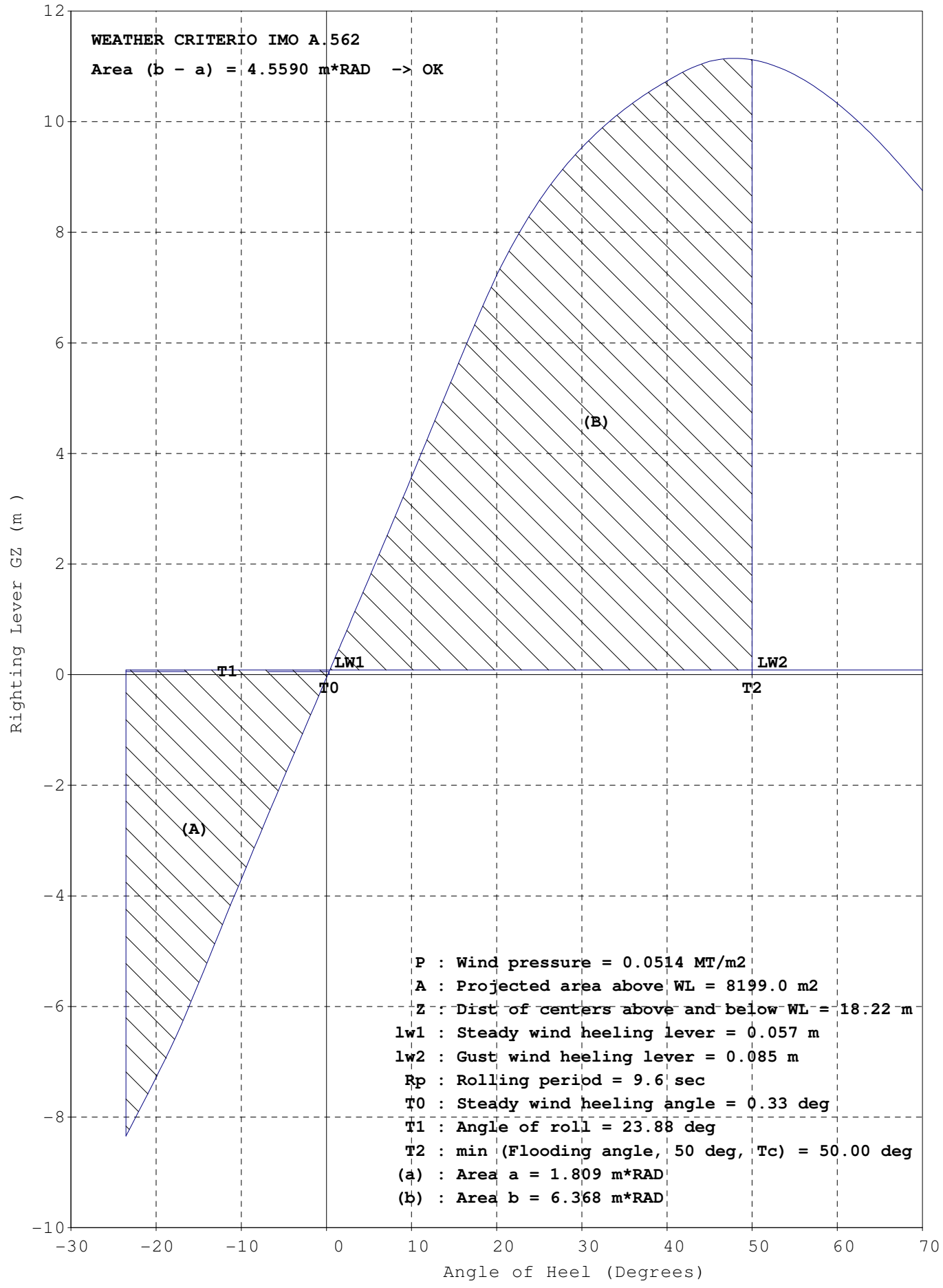
Draft FPP	8.01 m
Mk F123	8.04 m
APP	11.16 m
Mk F18	11.02 m
Mid	9.58 m
Mk	9.60 m
LCF	9.44 m
TRIM	3.15 m
HEEL	0.2 Deg
LCF	14.36 m
Prop Imm	102.3 %
Rolling	10 sec
TPC-I	155.22 MT/cm
MCT	2949.5 MT-m/cm
MCH	48767 MT-m/deg
FLood	> 70 Deg
LCB	11.06 m
KM(T)	33.08 m
KG	11.92 m
GM	21.17 m
GGo	0.56 m
GoM	20.60 m
KG(eff)	12.48 m

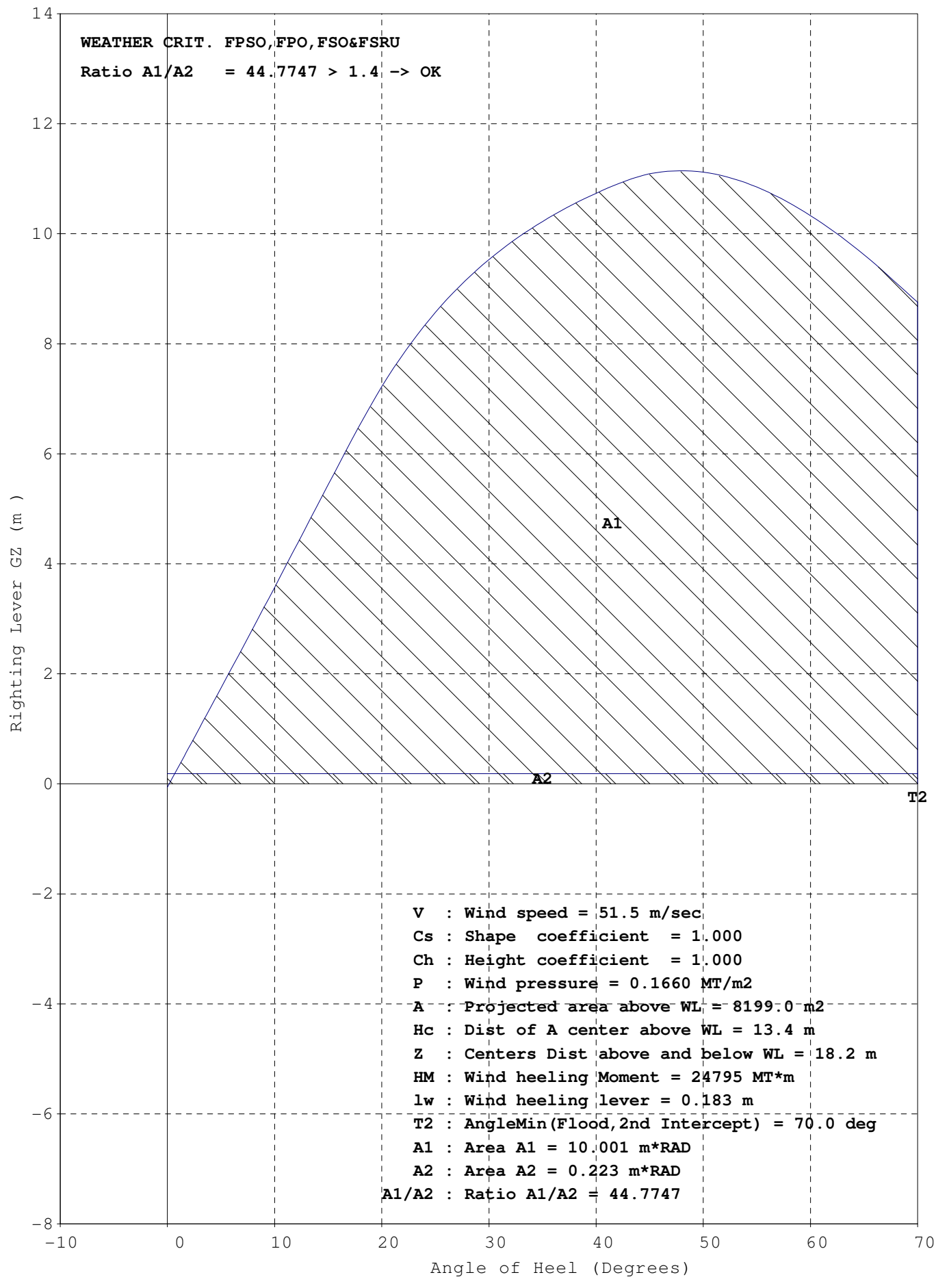
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	2.7366	>= 0.055	**OK**
Area 0-40 deg	m x RAD	4.5158	>= 0.09	**OK**
Area 30-40 deg	m x RAD	1.7792	>= 0.03	**OK**
GZ at/or> 30 deg	m	9.53	>= 0.2	**OK**
Max GZ Angle	Deg	47.929	>= 25.0	**OK**
Maximum GZ	11.15 m			
Initial GM	m	20.603	>= 0.15	**OK**
Weather Area(B-A)	m x RAD	4.559	>= 0.0	**OK**
Weather Ratio A1/A2	m x RAD	44.7747	>= 1.4	**OK**
Lim KG-Intact	m	12.481	=<26.938	**OK**
Min FPP Draft	m	8.009	>= 7.825	**OK**
SteadyWind Angle	Deg	0.327	=< 16.0	**OK**
Deck Edge Angle	41.60 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.06	0.66	1.74	3.57	5.44	7.22	8.57	9.53	10.22	10.74	11.09	11.12	10.85	10.33	9.62	8.75


WEATHER CRITERIO IMO A.562
Area (b - a) = 4.5590 m*RAD -> OK
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 8199.0 m2
Z : Dist of centers above and below WL = 18.22 m
lw1 : Steady wind heeling lever = 0.057 m
lw2 : Gust wind heeling lever = 0.085 m
Rp : Rolling period = 9.6 sec
T0 : Steady wind heeling angle = 0.33 deg
T1 : Angle of roll = 23.88 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 1.809 m*RAD
(b) : Area b = 6.368 m*RAD
Righting Lever GZ (m)
Angle of Heel (Degrees)
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
-30
-20
-10
0
10
20
30
40
50
60
70


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 44.7747 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 8199.0 m2
Hc : Dist of A center above WL = 13.4 m
Z : Centers Dist above and below WL = 18.2 m
HM : Wind heeling Moment = 24795 MT*m
lw : Wind heeling lever = 0.183 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 10.001 m*RAD
A2 : Area A2 = 0.223 m*RAD
A1/A2 : Ratio A1/A2 = 44.7747
Righting Lever GZ (m)
Angle of Heel (Degrees)
14
12
10
8
6
4
2
0
-2
-4
-6
-8
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91										
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S												

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	0
No1 W.B.Tk (S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	0
No2 W.B.Tk (P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk (S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4	100	9752.3	-31.315	9.64	-21.19	0
No4 W.B.Tk (S)	71	81	9514.4	100	9752.3	-31.315	9.64	21.19	0
No5 W.B.Tk (P)	56	71	8009.9	90	7400.0	-82.056	10.23	-19.24	33929_Max
No5 W.B.Tk (S)	56	71	8009.9	90	7400.0	-82.056	10.23	19.24	33929_Max
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		92325.9	23.052	10.01	0.00	67857

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous **Density = .980** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max

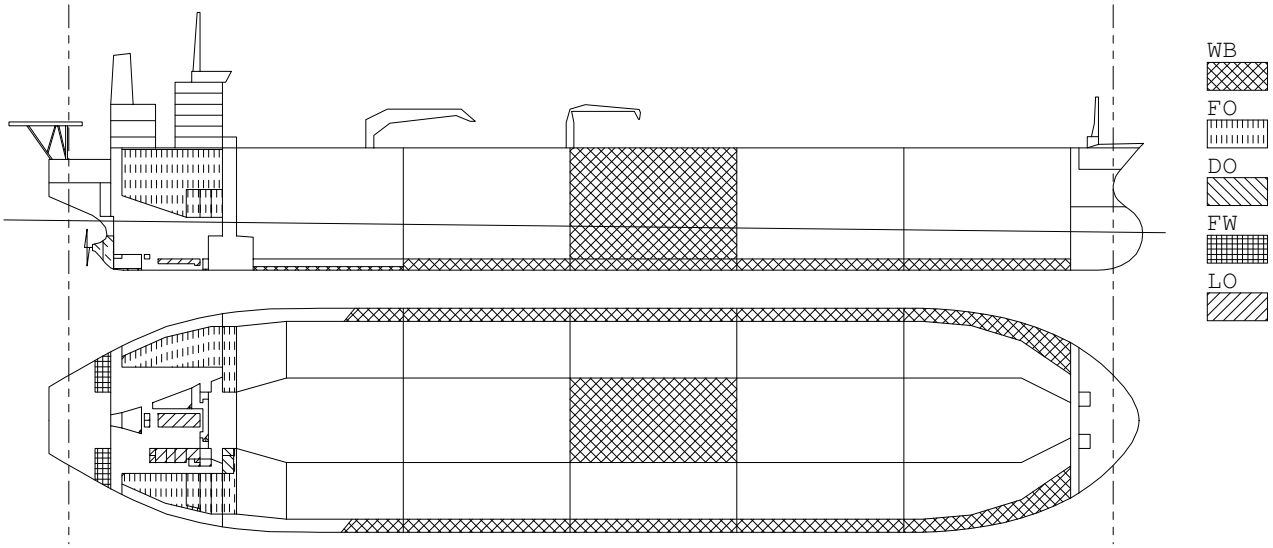
T O T A L S	147.1		129.7	-118.254	2.11	-1.44	1037

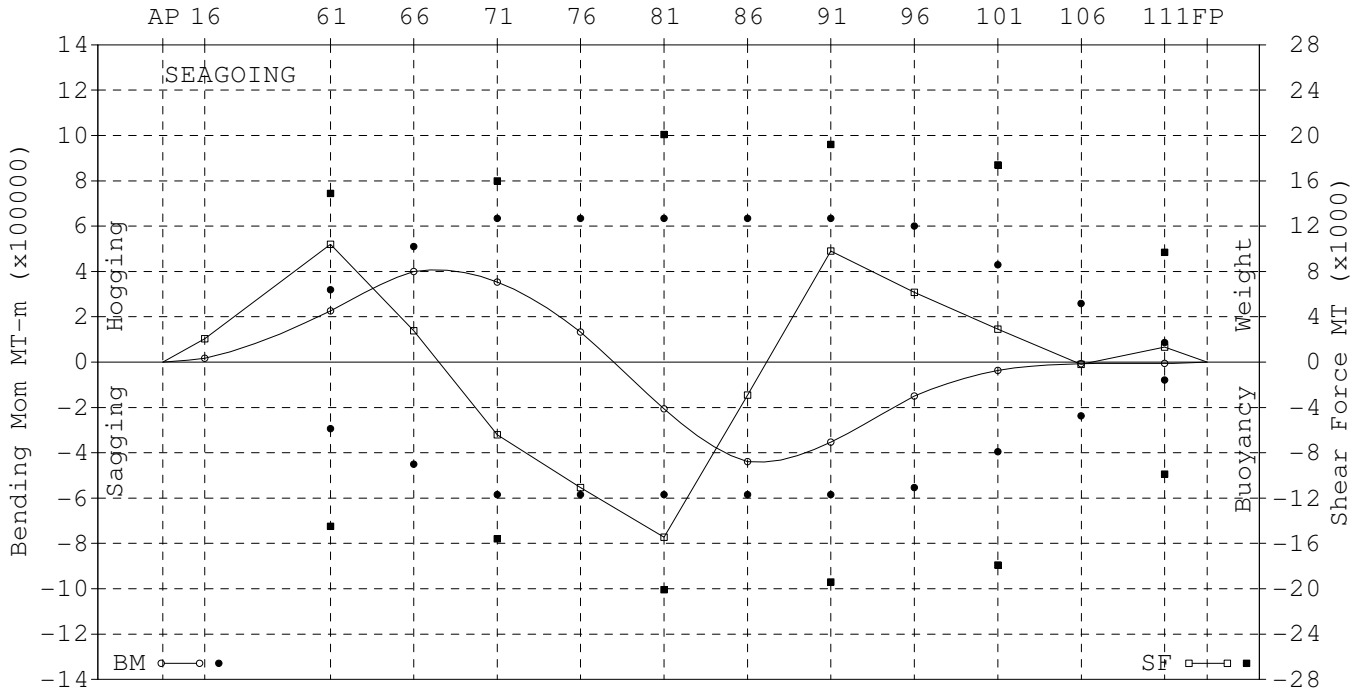
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

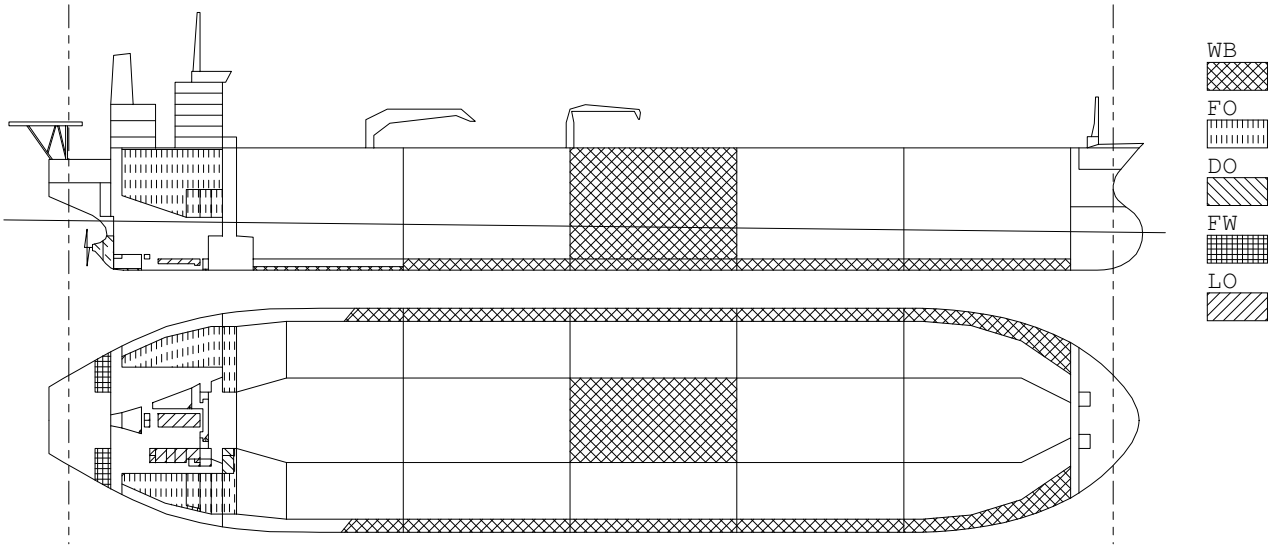


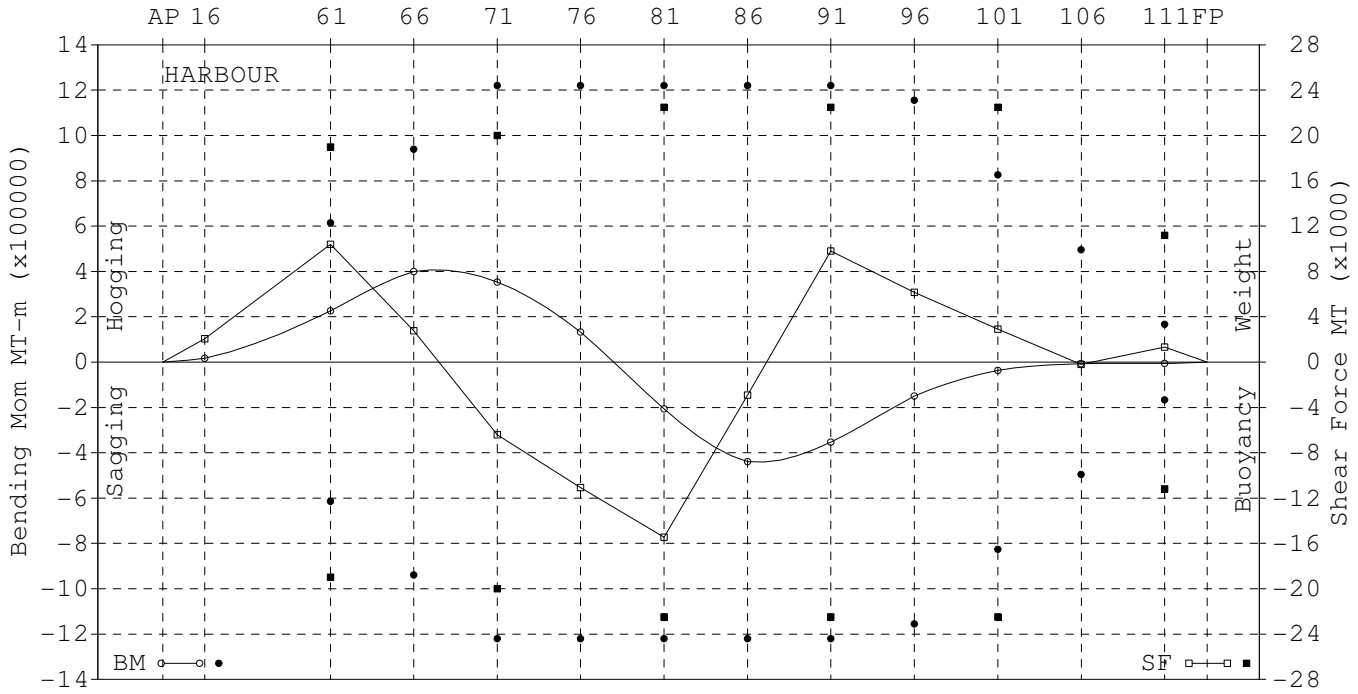


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2072	–	–	17112	–	–	–	–
61	10400	70	14900	225410	71	319000	–	-294000
66	2770	–	–	399771	78	510000	–	-450000
71	-6413	41	-15600	353551	56	635000	–	-585000
76	-11079	–	–	132375	21	635000	–	-585000
81	-15454	77	-20100	-206339	–	635000	35	-585000
86	-2918	–	–	-439761	–	635000	75	-585000
91	9801	51	19200	-352767	–	635000	60	-585000
96	6162	–	–	-150404	–	600000	27	-554000
101	2912	17	17400	-36630	–	429000	9	-395000
106	-197	–	–	-7447	–	258000	3	-237000
111	1337	14	9700	-6108	–	86000	8	-79000

SF max -15454 MT 77% at F81 +Buoyancy
BM max -442205 MT-m 76% at F87 Sagging (399771 MT-m 78% at F66 Hogging)

Estimated Deflection Amidships = -2cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2072	–	–	17112	–	–	–	–
61	10400	55	19000	225410	37	615000	–	-615000
66	2770	–	–	399771	43	940000	–	-940000
71	-6413	32	-20000	353551	29	1221000	–	-1221000
76	-11079	–	–	132375	11	1221000	–	-1221000
81	-15454	69	-22500	-206339	–	1221000	17	-1221000
86	-2918	–	–	-439761	–	1221000	36	-1221000
91	9801	44	22500	-352767	–	1221000	29	-1221000
96	6162	–	–	-150404	–	1156000	13	-1156000
101	2912	13	22500	-36630	–	826000	4	-826000
106	-197	–	–	-7447	–	496000	2	-496000
111	1337	12	11200	-6108	–	167000	4	-167000

SF max -15454 MT 69% at F81 +Buoyancy
BM max -442205 MT-m 36% at F87 Sagging (399771 MT-m 43% at F66 Hogging)

Estimated Deflection Amidships = -2cm SAGGING

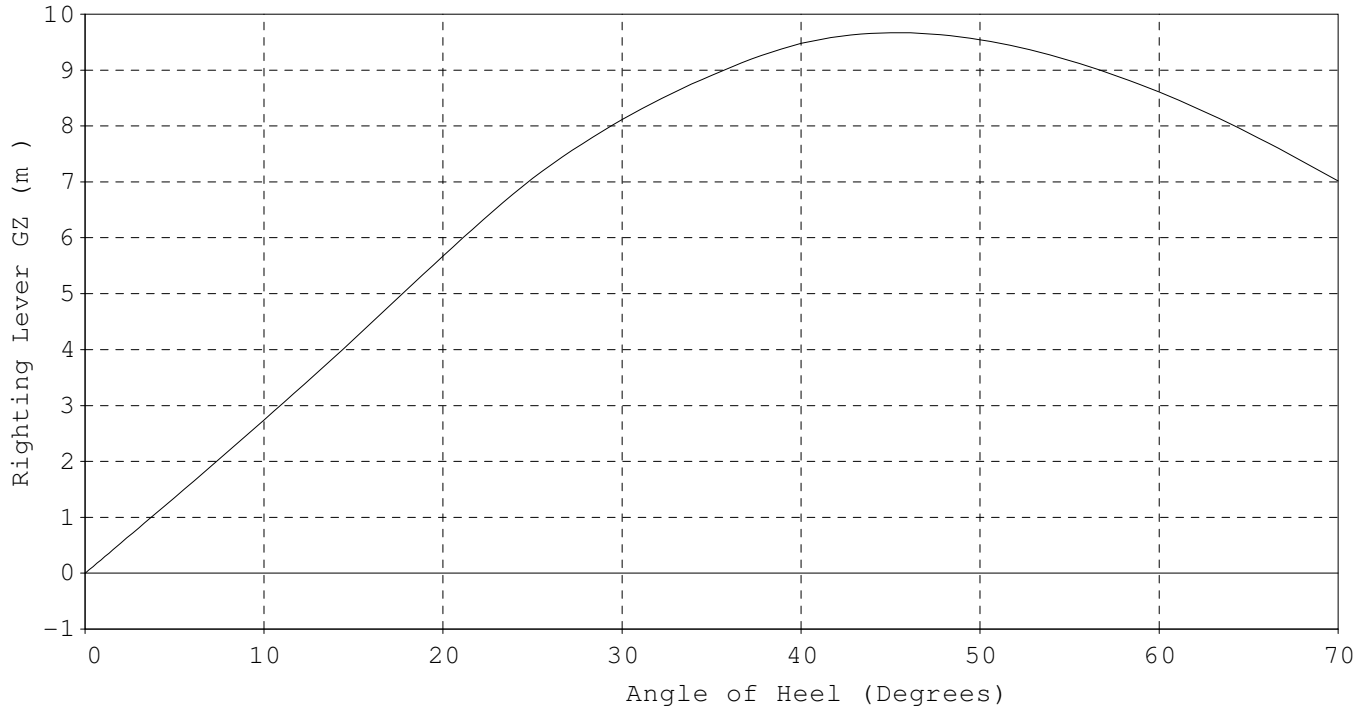
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	0	0.00	0.00	0.00	0
Ballast	115948	11.78	30.81	0.00	67857
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1208
Stores	15	33.45	-122.82	0.00	0
Deadweight	125797	12.71	18.97	0.01	76489
TOTALS	167299	13.52	11.80	0.00	76489

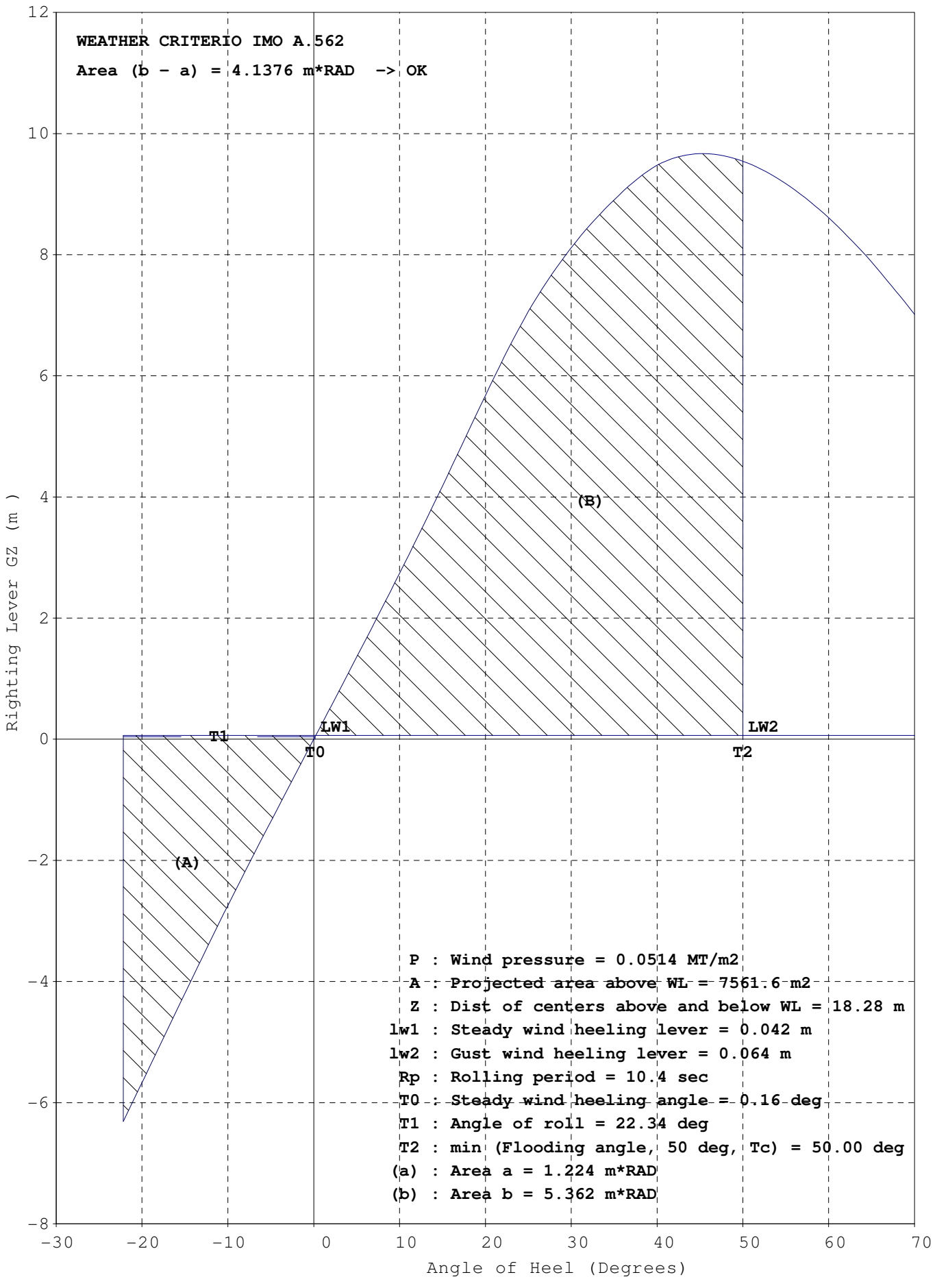
HYDROSTATICS	
Draft FPP	10.09 m
Mk F123	10.11 m
APP	13.11 m
Mk F18	12.97 m
Mid	11.60 m
Mk	11.61 m
LCF	11.48 m
TRIM	3.02 m
HEEL	0.0 Deg
LCF	12.14 m
Prop Imm	122.4 %
Rolling	10 sec
TPC-I	158.78 MT/cm
MCT	3138.5 MT-m/cm
MCH	45213 MT-m/deg
FLood	> 70 Deg
LCB	11.73 m
KM(T)	29.46 m
KG	13.52 m
GM	15.94 m
GGo	0.46 m
GoM	15.48 m
KG(eff)	13.98 m

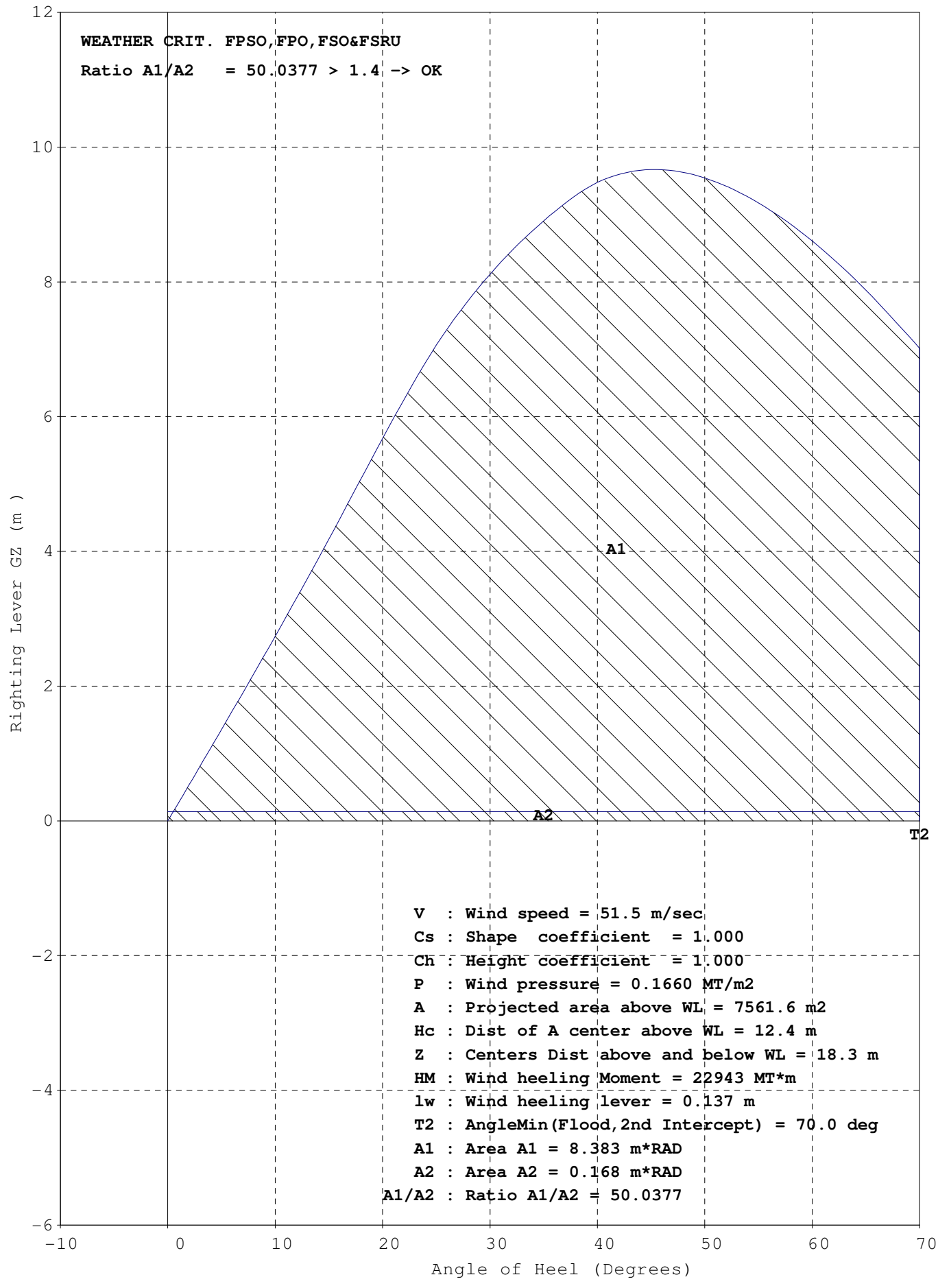
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	2.1907	>=	0.055	OK
Area 0-40 deg	m x RAD	3.7392	>=	0.09	OK
Area 30-40 deg	m x RAD	1.5485	>=	0.03	OK
GZ at/or> 30 deg	m	8.114	>=	0.2	OK
Max GZ Angle	Deg	45.328	>=	25.0	OK
Maximum GZ	9.67 m				
Initial GM	m	15.484	>=	0.15	OK
Weather Area(B-A)	m x RAD	4.1376	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	50.0377	>=	1.4	OK
Lim KG-Intact	m	13.976	=<	29.219	OK
Min FPP Draft	m	10.086	>=	7.825	OK
SteadyWind Angle	Deg	0.163	=<	16.0	OK
Deck Edge Angle	37.00 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.54	1.35	2.74	4.18	5.68	7.06	8.11	8.90	9.48	9.67	9.54	9.17	8.61	7.88	7.02


WEATHER CRITERIO IMO A.562
Area (b - a) = 4.1376 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
12
10
8
6
4
2
0
-2
-4
-6
-8
-30
-20
-10
0
10
20
30
40
50
60
70
(A)
(B)
T1
T0
LW1
T2
LW2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 7561.6 m2
Z : Dist of centers above and below WL = 18.28 m
lw1 : Steady wind heeling lever = 0.042 m
lw2 : Gust wind heeling lever = 0.064 m
Rp : Rolling period = 10.4 sec
T0 : Steady wind heeling angle = 0.16 deg
T1 : Angle of roll = 22.34 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 1.224 m*RAD
(b) : Area b = 5.362 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 50.0377 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 7561.6 m2
Hc : Dist of A center above WL = 12.4 m
Z : Centers Dist above and below WL = 18.3 m
HM : Wind heeling Moment = 22943 MT*m
lw : Wind heeling lever = 0.137 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 8.383 m*RAD
A2 : Area A2 = 0.168 m*RAD
A1/A2 : Ratio A1/A2 = 50.0377
Righting Lever GZ (m)
Angle of Heel (Degrees)
12
10
8
6
4
2
0
-2
-4
-6
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S												

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No3 C.O.T. (C)	81	91	32411.4	100	33221.7	19.050	17.61	0.00	0
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	0
No1 W.B.Tk (S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	0
No2 W.B.Tk (P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk (S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4	100	9752.3	-31.315	9.64	-21.19	0
No4 W.B.Tk (S)	71	81	9514.4	100	9752.3	-31.315	9.64	21.19	0
No5 W.B.Tk (P)	56	71	8009.9	32	2600.0	-77.567	1.62	-9.75	33929_Max
No5 W.B.Tk (S)	56	71	8009.9	32	2600.0	-77.567	1.62	9.75	33929_Max
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			130894.4		115947.6	30.809	11.78	0.00	67857

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	14
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	20

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous **Density = .980** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max

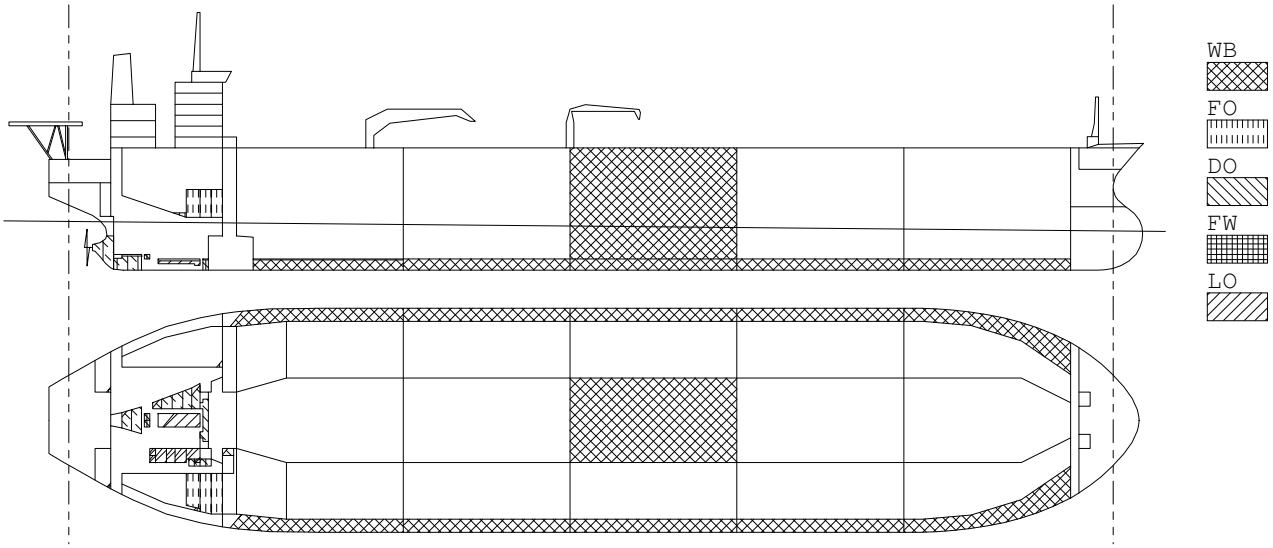
T O T A L S	147.1	14.4	-117.933	0.66	-0.35	1037

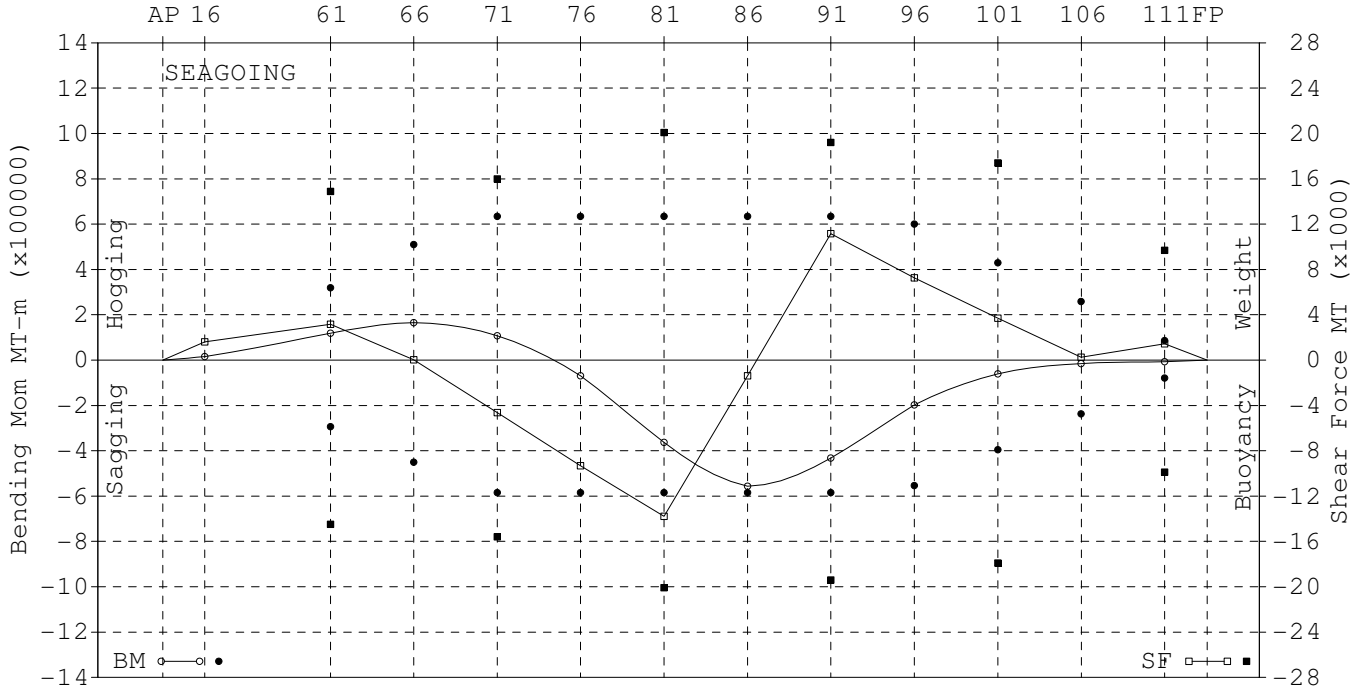
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

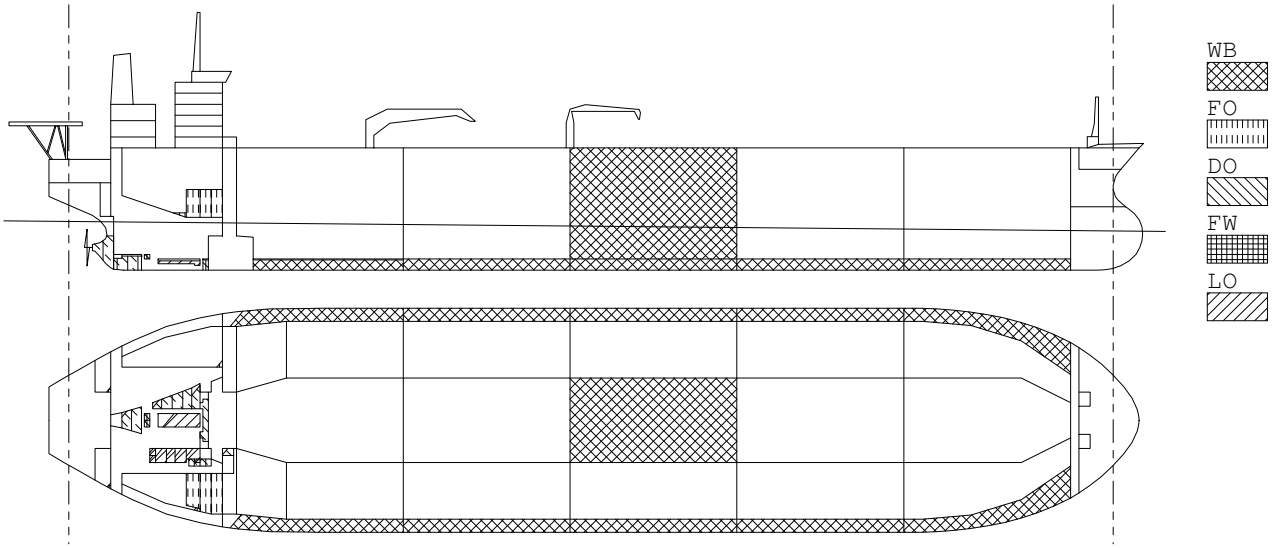


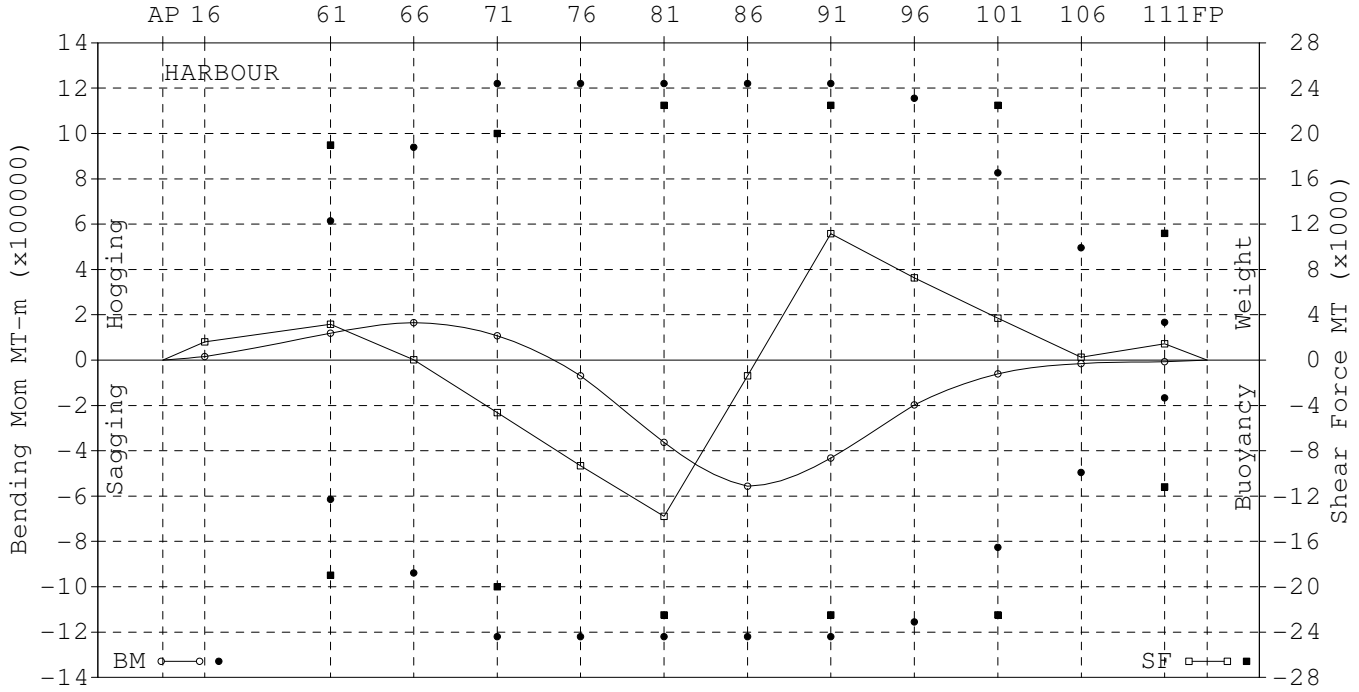


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1613	-	-	16065	-	-	-	-
61	3154	21	14900	118804	37	319000	-	-294000
66	30	-	-	165869	33	510000	-	-450000
71	-4643	30	-15600	107760	17	635000	-	-585000
76	-9326	-	-	-68541	-	635000	12	-585000
81	-13775	69	-20100	-363549	-	635000	62	-585000
86	-1373	-	-	-555910	-	635000	95	-585000
91	11155	58	19200	-431967	-	635000	74	-585000
96	7268	-	-	-198243	-	600000	36	-554000
101	3711	21	17400	-60155	-	429000	15	-395000
106	245	-	-	-15145	-	258000	6	-237000
111	1450	15	9700	-6989	-	86000	9	-79000

SF max -13775 MT 69% at F81 +Buoyancy
BM max -555910 MT-m 95% at F86 Sagging

Estimated Deflection Amidships = -8cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1613	-	-	16065	-	-	-	-
61	3154	17	19000	118804	19	615000	-	-615000
66	30	-	-	165869	18	940000	-	-940000
71	-4643	23	-20000	107760	9	1221000	-	-1221000
76	-9326	-	-	-68541	-	1221000	6	-1221000
81	-13775	61	-22500	-363549	-	1221000	30	-1221000
86	-1373	-	-	-555910	-	1221000	46	-1221000
91	11155	50	22500	-431967	-	1221000	35	-1221000
96	7268	-	-	-198243	-	1156000	17	-1156000
101	3711	16	22500	-60155	-	826000	7	-826000
106	245	-	-	-15145	-	496000	3	-496000
111	1450	13	11200	-6989	-	167000	4	-167000

SF max -13775 MT 61% at F81 +Buoyancy
BM max -555910 MT-m 46% at F86 Sagging

Estimated Deflection Amidships = -8cm SAGGING

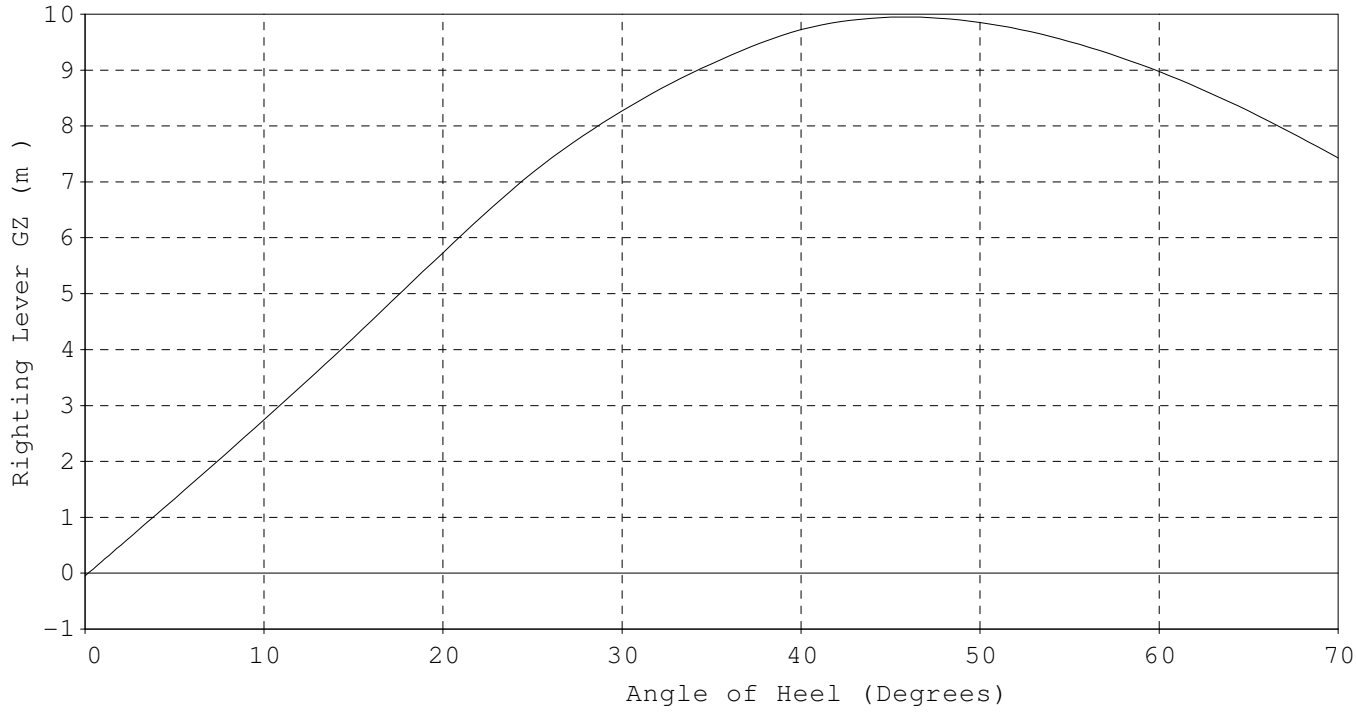
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	0	0.00	0.00	0.00	0
Ballast	125548	12.02	21.99	0.00	67857
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	127336	12.08	20.07	0.08	76566
TOTALS	168838	13.04	12.69	0.05	76566

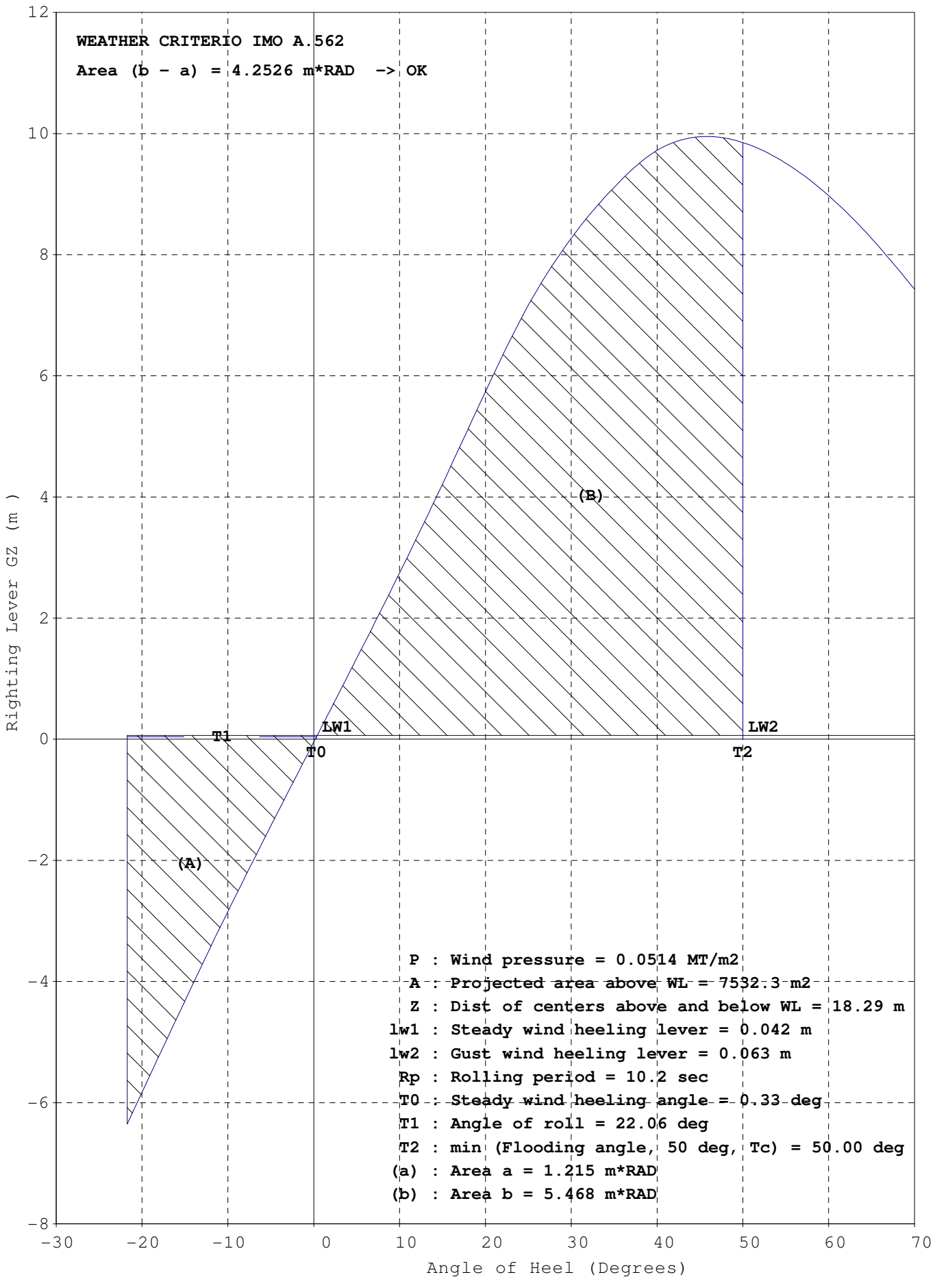
HYDROSTATICS	
Draft FPP	10.41 m
Mk F123	10.43 m
APP	12.94 m
Mk F18	12.82 m
Mid	11.67 m
Mk	11.68 m
LCF	11.58 m
TRIM	2.53 m
HEEL	0.2 Deg
LCF	12.33 m
Prop Imm	120.8 %
Rolling	10 sec
TPC-I	158.63 MT/cm
MCT	3129.0 MT-m/cm
MCH	46502 MT-m/deg
FLood	> 70 Deg
LCB	12.64 m
KM(T)	29.27 m
KG	13.04 m
GM	16.23 m
GGo	0.45 m
GoM	15.78 m
KG(eff)	13.49 m

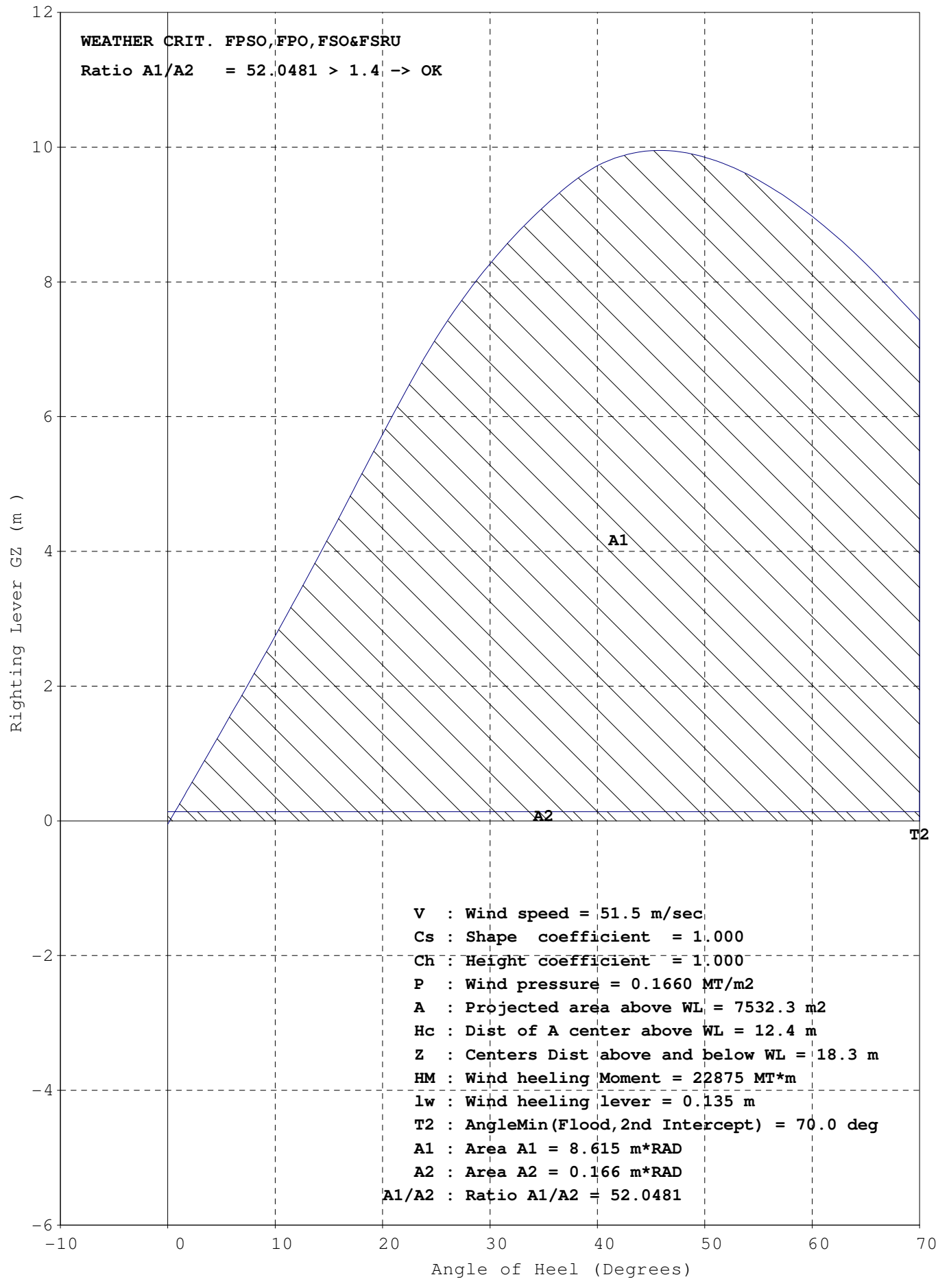
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	2.2113	>= 0.055	**OK**
Area 0-40 deg	m x RAD	3.7956	>= 0.09	**OK**
Area 30-40 deg	m x RAD	1.5843	>= 0.03	**OK**
GZ at/or> 30 deg	m	8.27	>= 0.2	**OK**
Max GZ Angle	Deg	45.828	>= 25.0	**OK**
Maximum GZ	9.95 m			
Initial GM	m	15.781	>= 0.15	**OK**
Weather Area(B-A)	m x RAD	4.2526	>= 0.0	**OK**
Weather Ratio A1/A2	m x RAD	52.0481	>= 1.4	**OK**
Lim KG-Intact	m	13.489	=<29.092	**OK**
Min FPP Draft	m	10.408	>= 7.825	**OK**
SteadyWind Angle	Deg	0.33	=< 16.0	**OK**
Deck Edge Angle	36.97 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.05	0.50	1.33	2.74	4.21	5.74	7.17	8.27	9.11	9.72	9.95	9.85	9.51	8.97	8.27	7.43


WEATHER CRITERIO IMO A.562
Area (b - a) = 4.2526 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 7532.3 m2
Z : Dist of centers above and below WL = 18.29 m
lw1 : Steady wind heeling lever = 0.042 m
lw2 : Gust wind heeling lever = 0.063 m
Rp : Rolling period = 10.2 sec
T0 : Steady wind heeling angle = 0.33 deg
T1 : Angle of roll = 22.06 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 1.215 m*RAD
(b) : Area b = 5.468 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 52.0481 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 7532.3 m2
Hc : Dist of A center above WL = 12.4 m
Z : Centers Dist above and below WL = 18.3 m
HM : Wind heeling Moment = 22875 MT*m
lw : Wind heeling lever = 0.135 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 8.615 m*RAD
A2 : Area A2 = 0.166 m*RAD
A1/A2 : Ratio A1/A2 = 52.0481
Righting Lever GZ (m)
Angle of Heel (Degrees)
12
10
8
6
4
2
0
-2
-4
-6
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME		FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T.	(C)	101	111										
No1 C.O.T.	(P)	101	111										
No1 C.O.T.	(S)	101	111										
No2 C.O.T.	(C)	91	101										
No2 C.O.T.	(P)	91	101										
No2 C.O.T.	(S)	91	101										
No3 C.O.T.	(P)	81	91										
No3 C.O.T.	(S)	81	91										
No4 C.O.T.	(C)	71	81										
No4 C.O.T.	(P)	71	81										
No4 C.O.T.	(S)	71	81										
No5 C.O.T.	(C)	61	71										
No5 C.O.T.	(P)	64	71										
No5 C.O.T.	(S)	64	71										
Slop Tank	(P)	61	64										
Slop Tank	(S)	61	64										
T O T A L S													

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME		FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No3 C.O.T.	(C)	81	91	32411.4	100	33221.7	19.050	17.61	0.00	0
Fore Peak Tank	(C)	111	137	4812.4						
No1 W.B.Tk	(P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	0
No1 W.B.Tk	(S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	0
No2 W.B.Tk	(P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk	(S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk	(P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk	(S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk	(P)	71	81	9514.4	100	9752.3	-31.315	9.64	-21.19	0
No4 W.B.Tk	(S)	71	81	9514.4	100	9752.3	-31.315	9.64	21.19	0
No5 W.B.Tk	(P)	56	71	8009.9	90	7400.0	-82.056	10.23	-19.24	33929_Max
No5 W.B.Tk	(S)	56	71	8009.9	90	7400.0	-82.056	10.23	19.24	33929_Max
Aft Peak Tank	(C)	-8	17	2015.8						
T O T A L S				130894.4		125547.6	21.993	12.02	0.00	67857

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous **Density = .980** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max

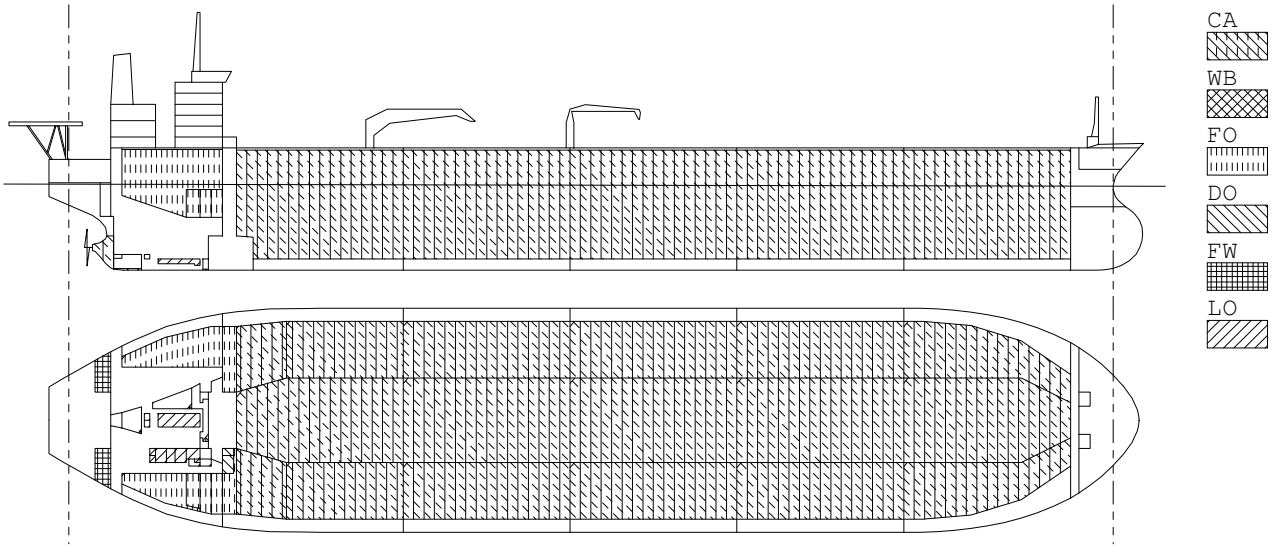
T O T A L S	147.1	129.7	-118.254	2.11	-1.44	1037

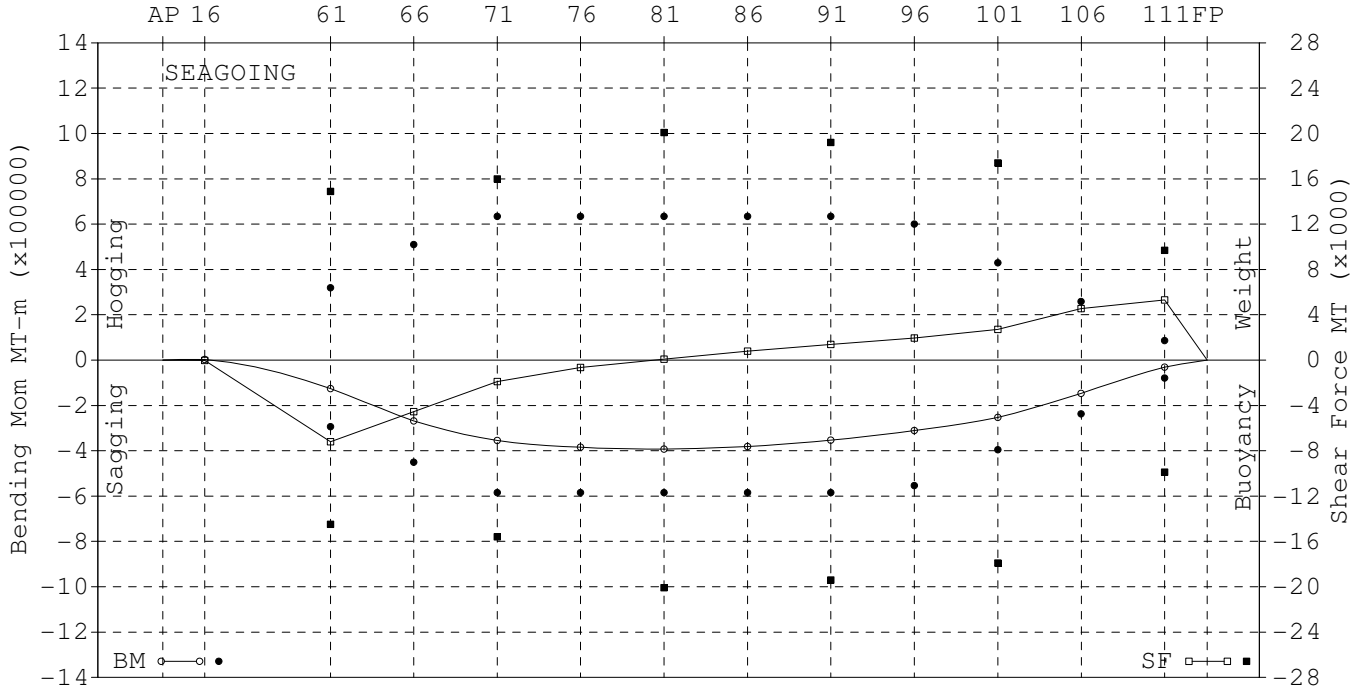
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

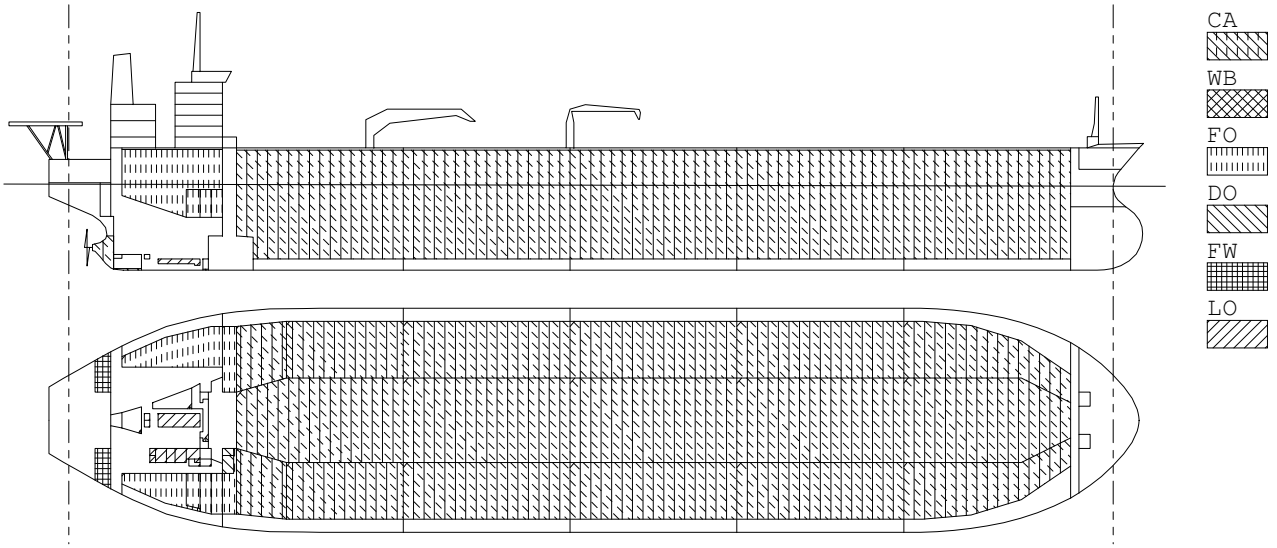


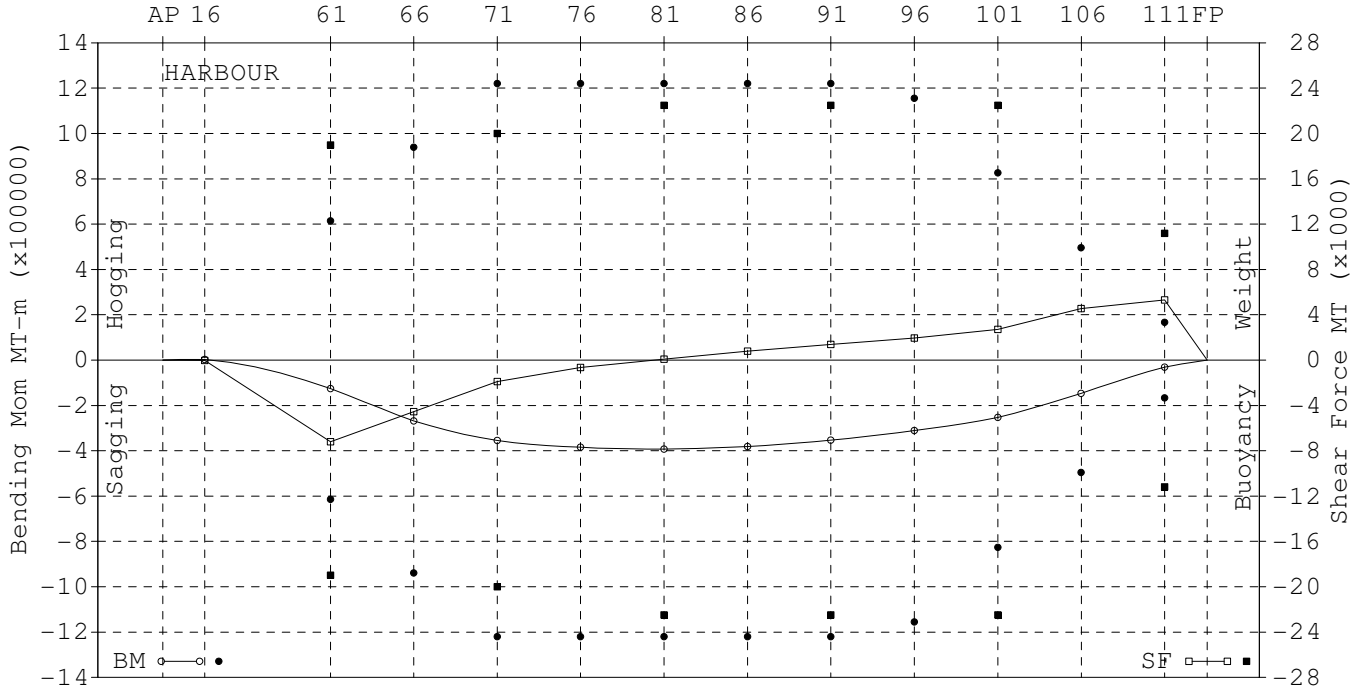


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	-39	-	-	2902	-	-	-	-
61	-7194	50	-14500	-125983	-	319000	43	-294000
66	-4540	-	-	-268411	-	510000	60	-450000
71	-1895	12	-15600	-355067	-	635000	61	-585000
76	-662	-	-	-384902	-	635000	66	-585000
81	71	0	20100	-392435	-	635000	67	-585000
86	785	-	-	-381031	-	635000	65	-585000
91	1391	7	19200	-353191	-	635000	60	-585000
96	1948	-	-	-310811	-	600000	56	-554000
101	2724	16	17400	-252554	-	429000	64	-395000
106	4557	-	-	-146843	-	258000	62	-237000
111	5298	55	9700	-30462	-	86000	39	-79000

SF max -7194 MT 50% at F61 +Buoyancy (5298 MT 55% at F111 +Weight)
BM max -392598 MT-m 67% at F80 Sagging

Estimated Deflection Amidships = -13cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	-39	-	-	2902	-	-	-	-
61	-7194	38	-19000	-125983	-	615000	20	-615000
66	-4540	-	-	-268411	-	940000	29	-940000
71	-1895	9	-20000	-355067	-	1221000	29	-1221000
76	-662	-	-	-384902	-	1221000	32	-1221000
81	71	0	22500	-392435	-	1221000	32	-1221000
86	785	-	-	-381031	-	1221000	31	-1221000
91	1391	6	22500	-353191	-	1221000	29	-1221000
96	1948	-	-	-310811	-	1156000	27	-1156000
101	2724	12	22500	-252554	-	826000	31	-826000
106	4557	-	-	-146843	-	496000	30	-496000
111	5298	47	11200	-30462	-	167000	18	-167000

SF max -7194 MT 38% at F61 +Buoyancy (5298 MT 47% at F111 +Weight)
BM max -392598 MT-m 32% at F80 Sagging

Estimated Deflection Amidships = -13cm SAGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

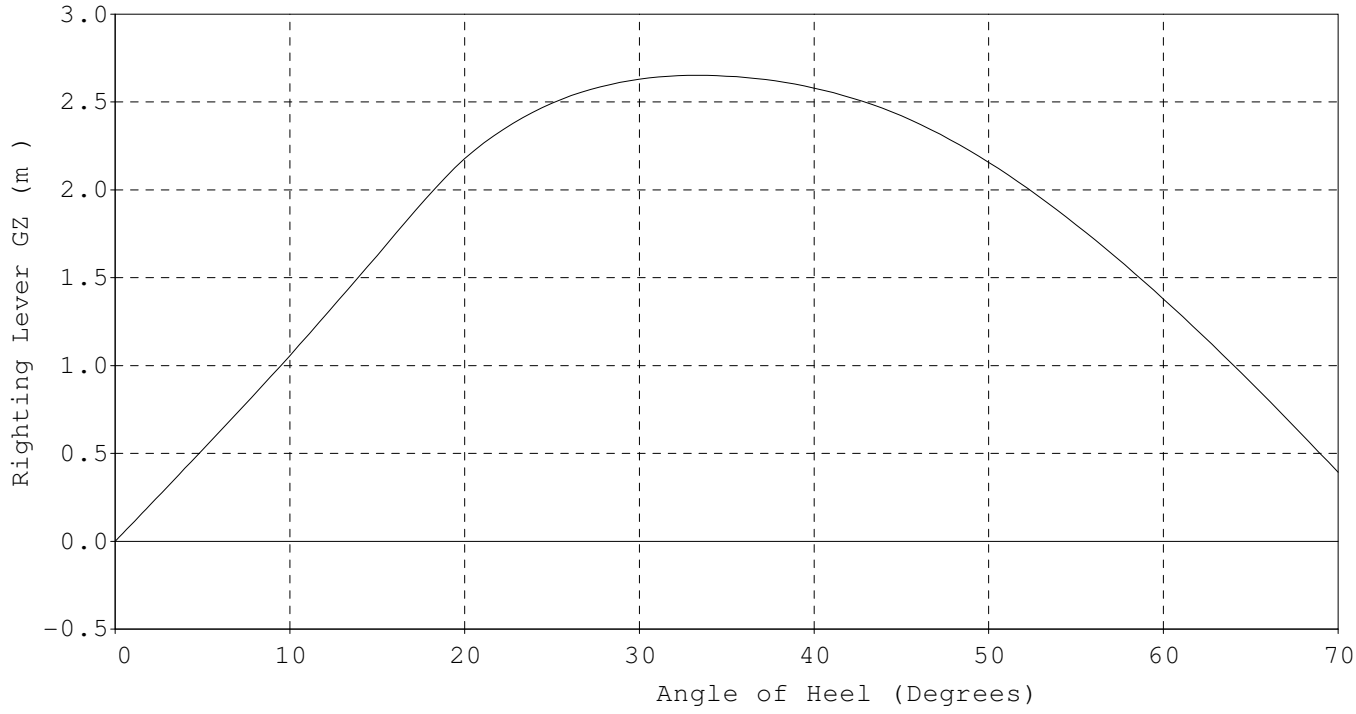
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	299497	17.57	17.61	0.00	246163
Ballast	0	9.12	-145.99	0.00	28476
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	309347	17.77	13.21	0.01	283347
TOTALS	350849	17.55	10.48	0.00	283347

HYDROSTATICS

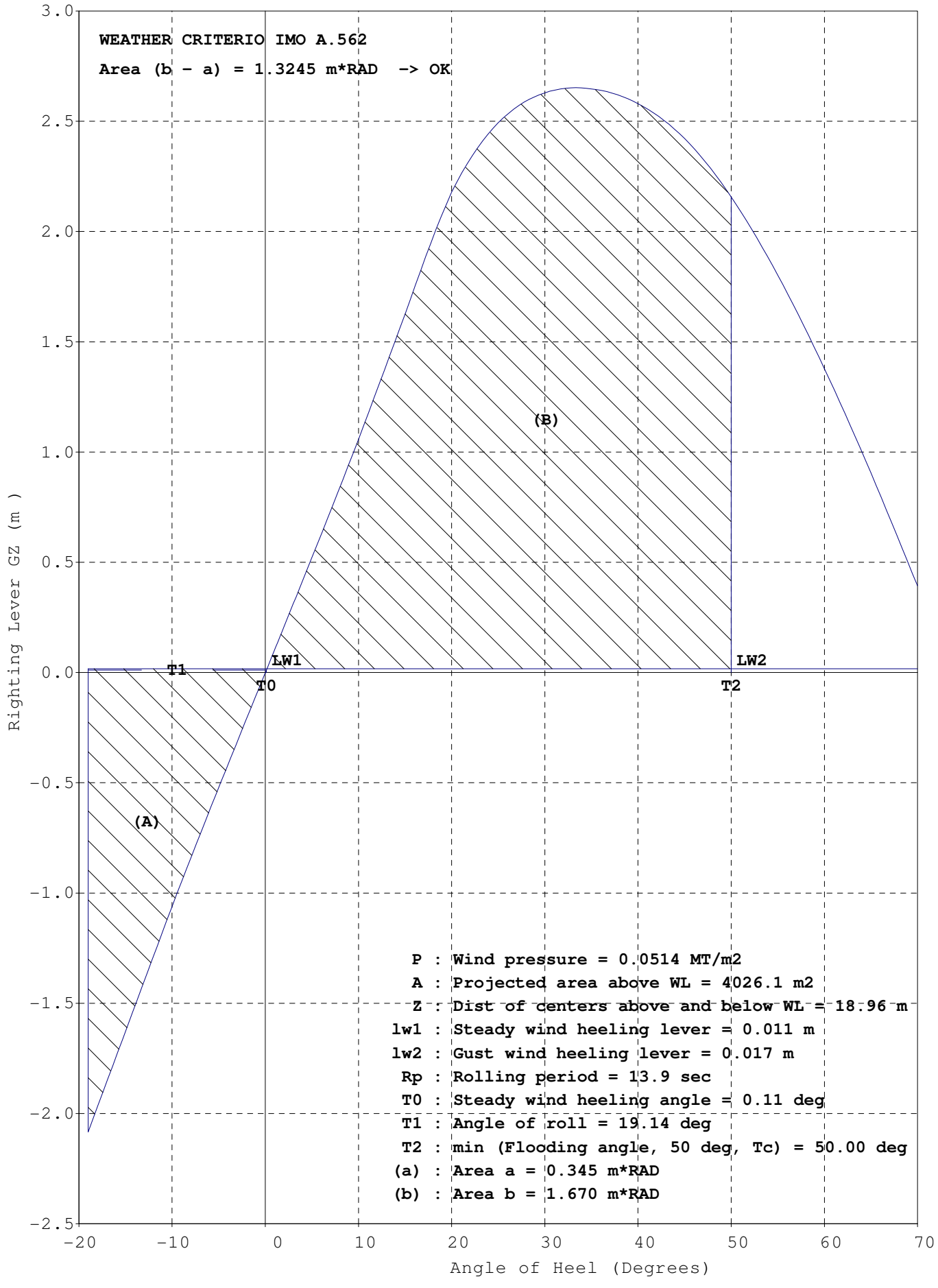
Draft FPP	22.24 m
Mk F123	22.24 m
APP	22.80 m
Mk F18	22.78 m
Mid	22.52 m
Mk	22.52 m
LCF	22.52 m
TRIM	0.57 m
HEEL	0.0 Deg
LCF	-1.25 m
Prop Imm	222.9 %
Rolling	17 sec
TPC-I	173.44 MT/cm
MCT	4012.1 MT-m/cm
MCH	36423 MT-m/deg
FLood	54.3 Deg
LCB	10.46 m
KM(T)	24.31 m
KG	17.55 m
GM	6.76 m
GGo	0.81 m
GoM	5.95 m
KG(eff)	18.36 m

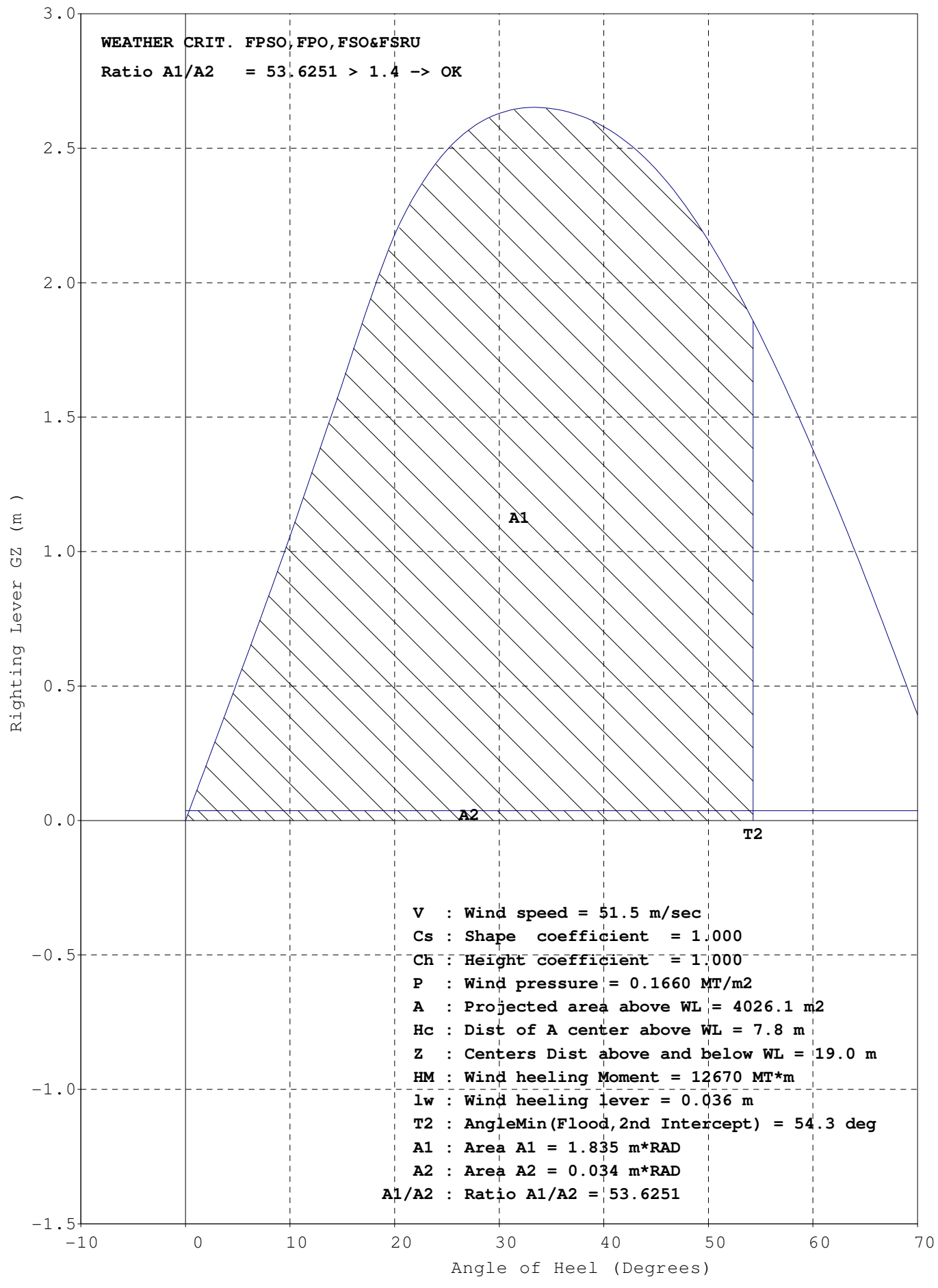
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	0.8051	>= 0.055	OK
Area 0-40 deg	m x RAD	1.2648	>= 0.09	OK
Area 30-40 deg	m x RAD	0.4597	>= 0.03	OK
GZ at/or> 30 deg	m	2.629	>= 0.2	OK
Max GZ Angle	Deg	33.333	>= 25.0	OK
Maximum GZ	2.65 m			
Initial GM	m	5.948	>= 0.15	OK
Weather Area(B-A)	m x RAD	1.3245	>= 0.0	OK
Weather Ratio A1/A2	m x RAD	53.6251	>= 1.4	OK
Lim KG-Intact	m	18.362	=<21.087	OK
Min FPP Draft	m	22.239	>= 7.825	OK
SteadyWind Angle	Deg	0.115	=<13.376	OK
Deck Edge Angle	16.72 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.21	0.52	1.06	1.63	2.18	2.49	2.63	2.65	2.58	2.42	2.16	1.80	1.38	0.90	0.39


WEATHER CRITERIO IMO A.562
Area (b - a) = 1.3245 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 4026.1 m2
Z : Dist of centers above and below WL = 18.96 m
lw1 : Steady wind heeling lever = 0.011 m
lw2 : Gust wind heeling lever = 0.017 m
Rp : Rolling period = 13.9 sec
T0 : Steady wind heeling angle = 0.11 deg
T1 : Angle of roll = 19.14 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.345 m*RAD
(b) : Area b = 1.670 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 53.6251 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 4026.1 m2
Hc : Dist of A center above WL = 7.8 m
Z : Centers Dist above and below WL = 19.0 m
HM : Wind heeling Moment = 12670 MT*m
lw : Wind heeling lever = 0.036 m
T2 : AngleMin(Flood,2nd Intercept) = 54.3 deg
A1 : Area A1 = 1.835 m*RAD
A2 : Area A2 = 0.034 m*RAD
A1/A2 : Ratio A1/A2 = 53.6251
Righting Lever GZ (m)
Angle of Heel (Degrees)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T. (P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T. (S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T. (C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T. (P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T. (S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T. (C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T. (P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T. (S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T. (C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T. (P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T. (S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T. (C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T. (P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T. (S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank (P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank (S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S					343578			299497.0	17.61	17.57	0.00	246163

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	299497	2161041	2161041

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4						
No3 W.B.Tk (S)	81	91	9782.4						
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8	0	0.2	-145.987	9.12	0.00	28476_Max
T O T A L S			98483.0		0.2	-145.987	9.12	0.00	28476

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

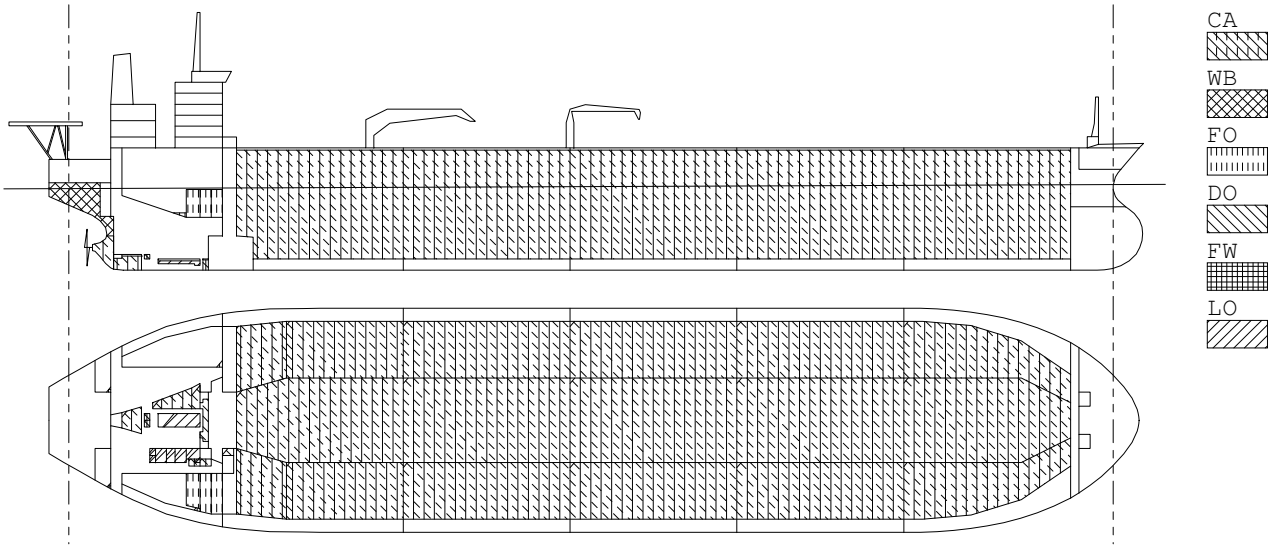
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

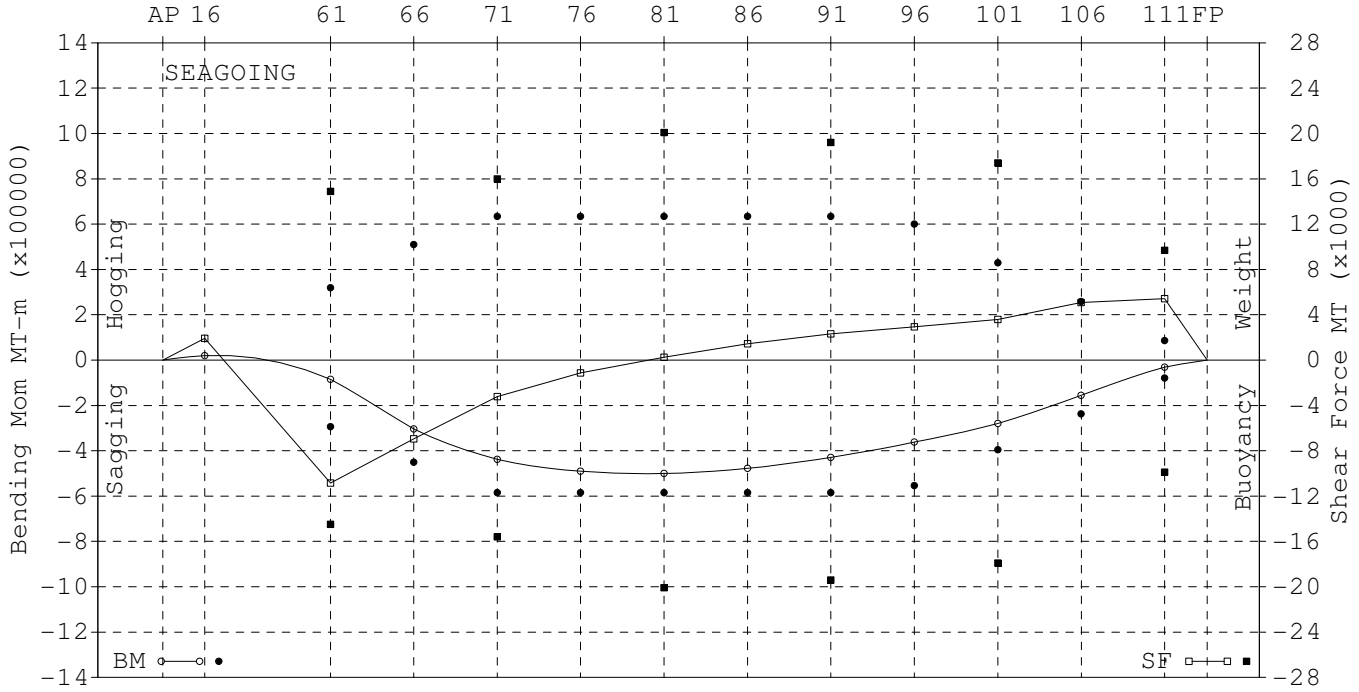
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

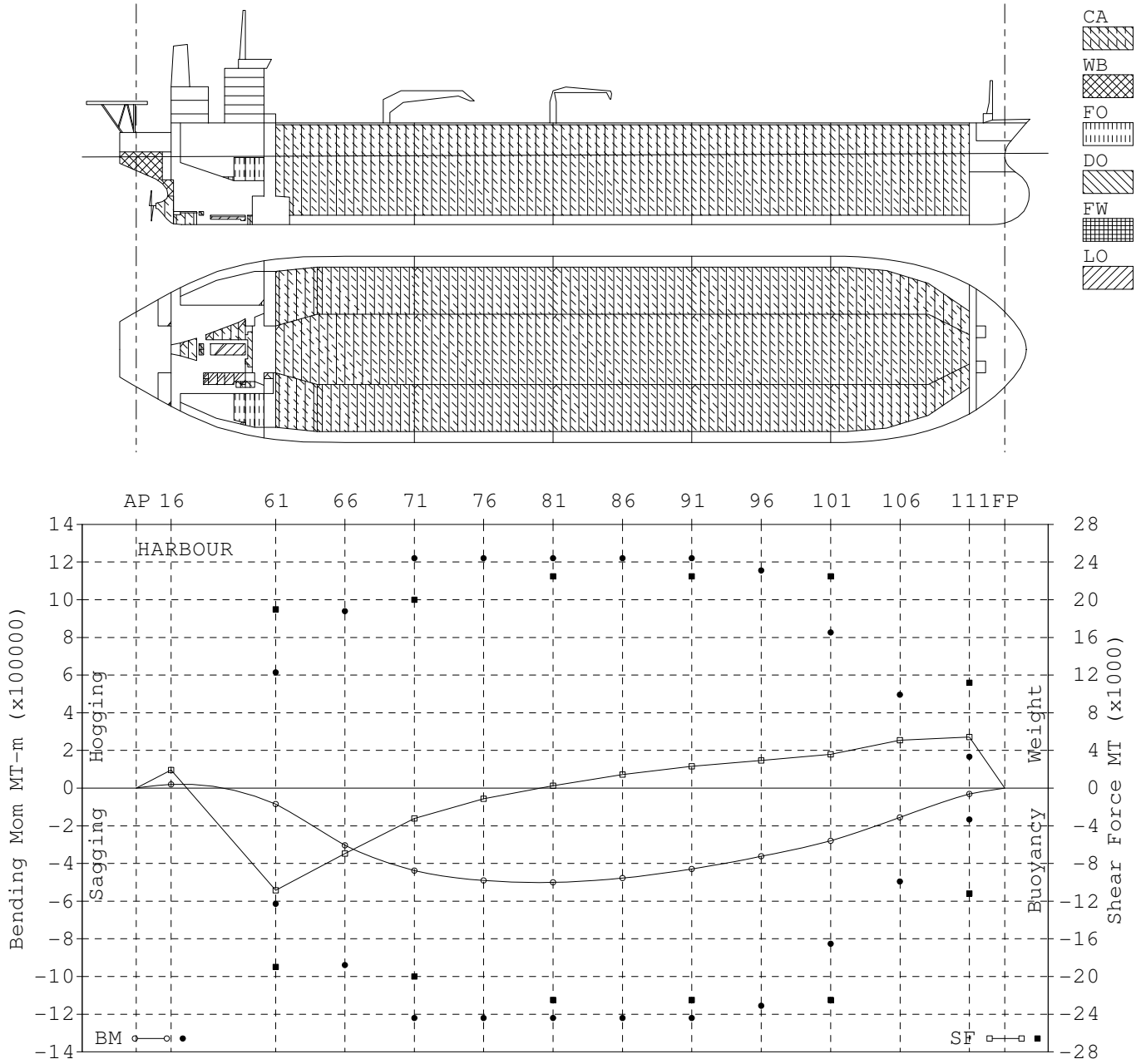




FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1935	–	–	20361	–	–	–	–
61	-10838	75	-14500	-85003	–	319000	29	-294000
66	-6937	–	–	-303830	–	510000	68	-450000
71	-3229	21	-15600	-437443	–	635000	75	-585000
76	-1131	–	–	-489754	–	635000	84	-585000
81	267	1	20100	-500344	–	635000	86	-585000
86	1446	–	–	-477647	–	635000	82	-585000
91	2318	12	19200	-429209	–	635000	73	-585000
96	2942	–	–	-362013	–	600000	65	-554000
101	3586	21	17400	-279771	–	429000	71	-395000
106	5094	–	–	-155914	–	258000	66	-237000
111	5423	56	9700	-31197	–	86000	39	-79000

SF max -10838 MT 75% at F61 +Buoyancy
BM max -501164 MT-m 86% at F80 Sagging

Estimated Deflection Amidships = -16cm SAGGING



FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1935	-	-	20361	-	-	-	-
61	-10838	57	-19000	-85003	-	615000	14	-615000
66	-6937	-	-	-303830	-	940000	32	-940000
71	-3229	16	-20000	-437443	-	1221000	36	-1221000
76	-1131	-	-	-489754	-	1221000	40	-1221000
81	267	1	22500	-500344	-	1221000	41	-1221000
86	1446	-	-	-477647	-	1221000	39	-1221000
91	2318	10	22500	-429209	-	1221000	35	-1221000
96	2942	-	-	-362013	-	1156000	31	-1156000
101	3586	16	22500	-279771	-	826000	34	-826000
106	5094	-	-	-155914	-	496000	31	-496000
111	5423	48	11200	-31197	-	167000	19	-167000

SF max -10838 MT 57% at F61 +Buoyancy
BM max -501164 MT-m 41% at F80 Sagging

Estimated Deflection Amidships = -16cm SAGGING

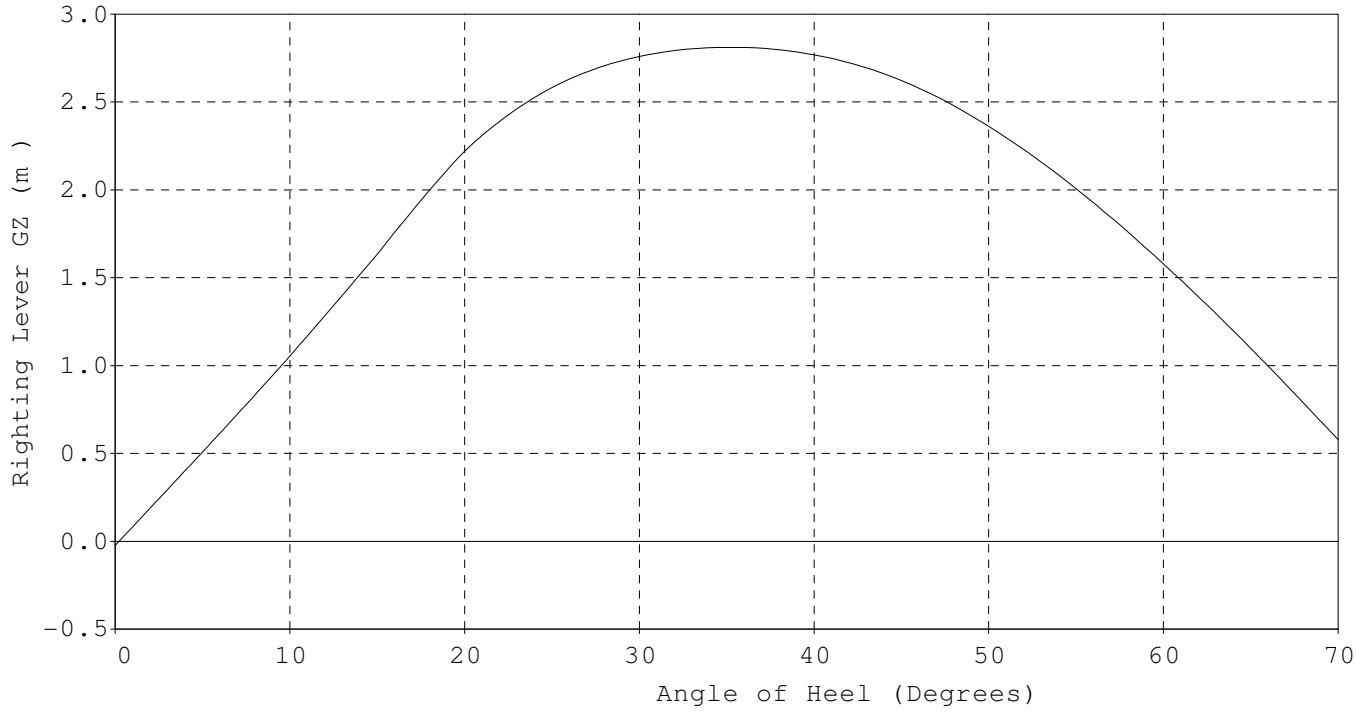
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	299497	17.57	17.61	0.00	246163
Ballast	2066	20.20	-153.07	-0.06	28476
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	303352	17.58	15.66	0.03	283347
TOTALS	344854	17.39	12.58	0.02	283347

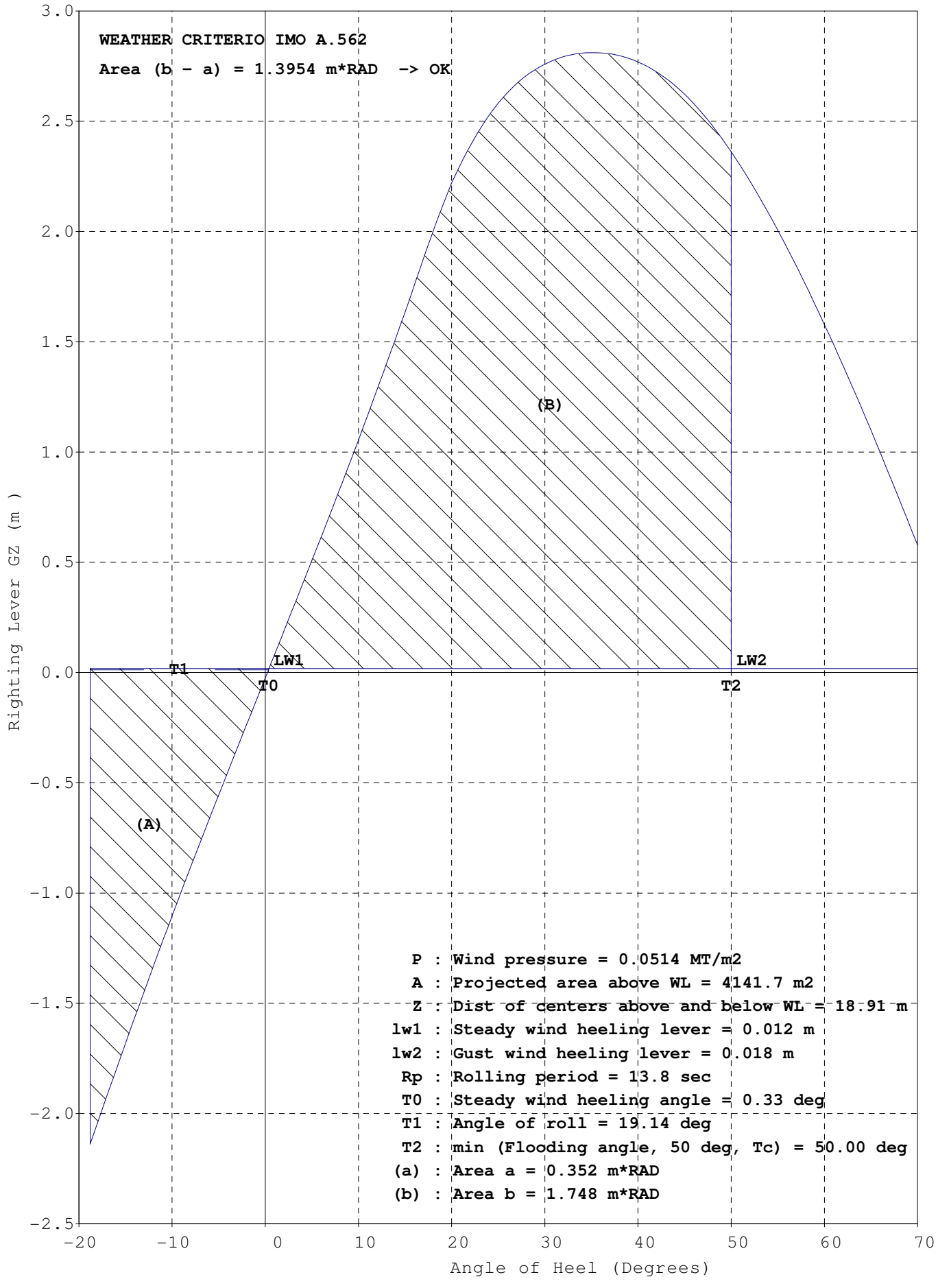
HYDROSTATICS	
Draft FPP	22.74 m
Mk F123	22.73 m
APP	21.62 m
Mk F18	21.67 m
Mid	22.18 m
Mk	22.18 m
LCF	22.18 m
TRIM	-1.12 m
HEEL	0.2 Deg
LCF	-0.62 m
Prop Imm	211.0 %
Rolling	16 sec
TPC-I	172.73 MT/cm
MCT	3965.7 MT-m/cm
MCH	36522 MT-m/deg
FLood	58.3 Deg
LCB	12.61 m
KM(T)	24.28 m
KG	17.39 m
GM	6.89 m
GGo	0.82 m
GoM	6.07 m
KG(eff)	18.21 m

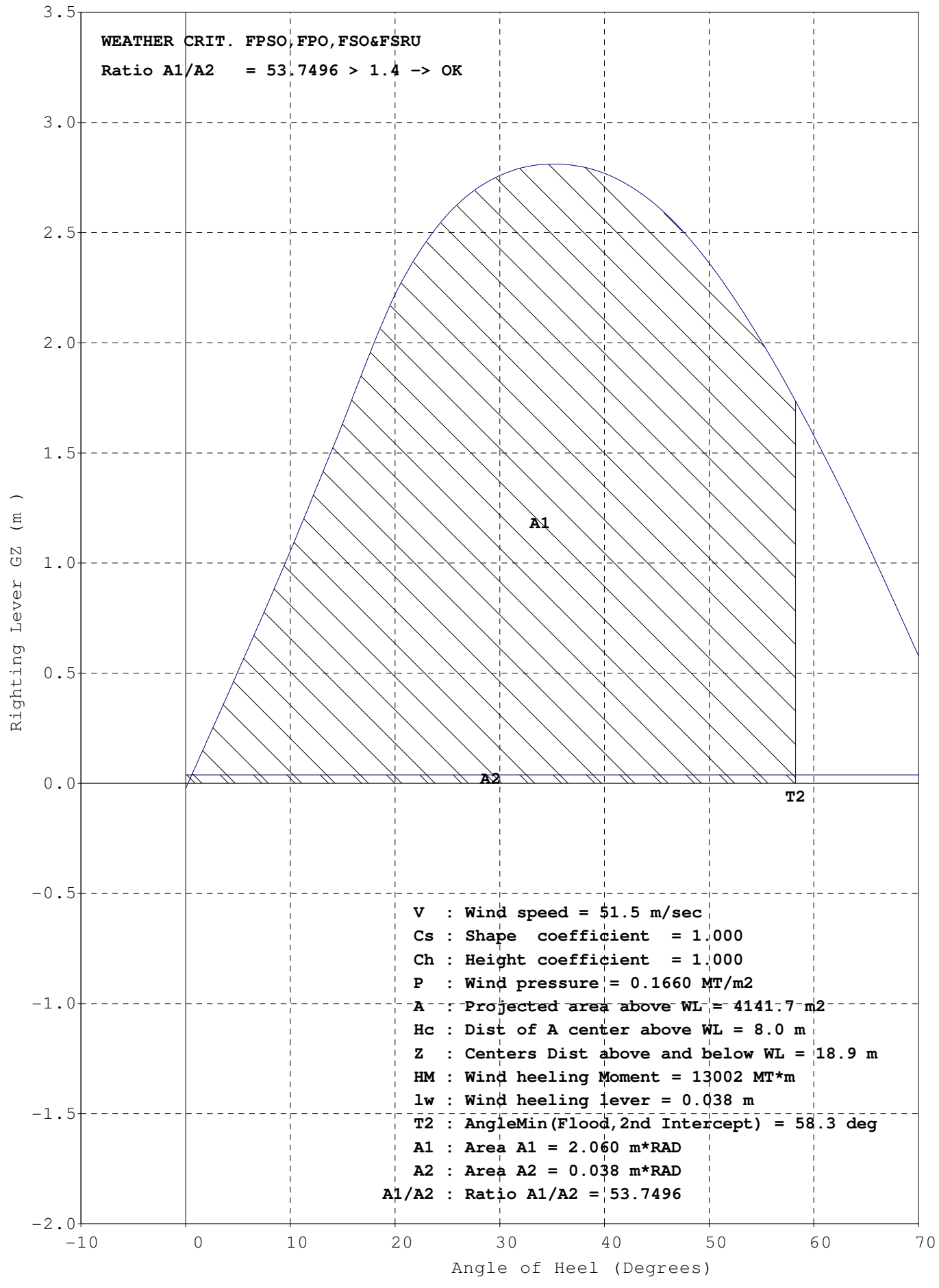
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	0.8204	>= 0.055	**OK**
Area 0-40 deg	m x RAD	1.3084	>= 0.09	**OK**
Area 30-40 deg	m x RAD	0.488	>= 0.03	**OK**
GZ at/or> 30 deg	m	2.759	>= 0.2	**OK**
Max GZ Angle	Deg	35.346	>= 25.0	**OK**
Maximum GZ	2.81 m			
Initial GM	m	6.068	>= 0.15	**OK**
Weather Area(B-A)	m x RAD	1.3954	>= 0.0	**OK**
Weather Ratio A1/A2	m x RAD	53.7496	>= 1.4	**OK**
Lim KG-Intact	m	18.211	=<21.523	**OK**
Min FPP Draft	m	22.739	>= 7.825	**OK**
SteadyWind Angle	Deg	0.334	=<13.337	**OK**
Deck Edge Angle	16.67 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.02	0.19	0.51	1.05	1.63	2.22	2.58	2.76	2.81	2.77	2.62	2.36	2.01	1.58	1.10	0.58


WEATHER CRITERIO IMO A.562
Area (b - a) = 1.3954 m*RAD -> OK
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 4141.7 m2
Z : Dist of centers above and below WL = 18.91 m
lw1 : Steady wind heeling lever = 0.012 m
lw2 : Gust wind heeling lever = 0.018 m
Rp : Rolling period = 13.8 sec
T0 : Steady wind heeling angle = 0.33 deg
T1 : Angle of roll = 19.14 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.352 m*RAD
(b) : Area b = 1.748 m*RAD
Righting Lever GZ (m)
Angle of Heel (Degrees)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-20
-10
0
10
20
30
40
50
60
70


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 53.7496 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 4141.7 m2
Hc : Dist of A center above WL = 8.0 m
Z : Centers Dist above and below WL = 18.9 m
HM : Wind heeling Moment = 13002 MT*m
lw : Wind heeling lever = 0.038 m
T2 : AngleMin(Flood,2nd Intercept) = 58.3 deg
A1 : Area A1 = 2.060 m*RAD
A2 : Area A2 = 0.038 m*RAD
A1/A2 : Ratio A1/A2 = 53.7496
Righting Lever GZ (m)
Angle of Heel (Degrees)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T. (P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T. (S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T. (C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T. (P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T. (S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T. (C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T. (P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T. (S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T. (C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T. (P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T. (S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T. (C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T. (P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T. (S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank (P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank (S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S					343578			299497.0	17.61	17.57	0.00	246163

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	299497	2161041	2161041

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4						
No3 W.B.Tk (S)	81	91	9782.4						
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8	100	2066.2	-153.074	20.20	-0.06	28476_Max
T O T A L S			98483.0		2066.2	-153.074	20.20	-0.06	28476

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

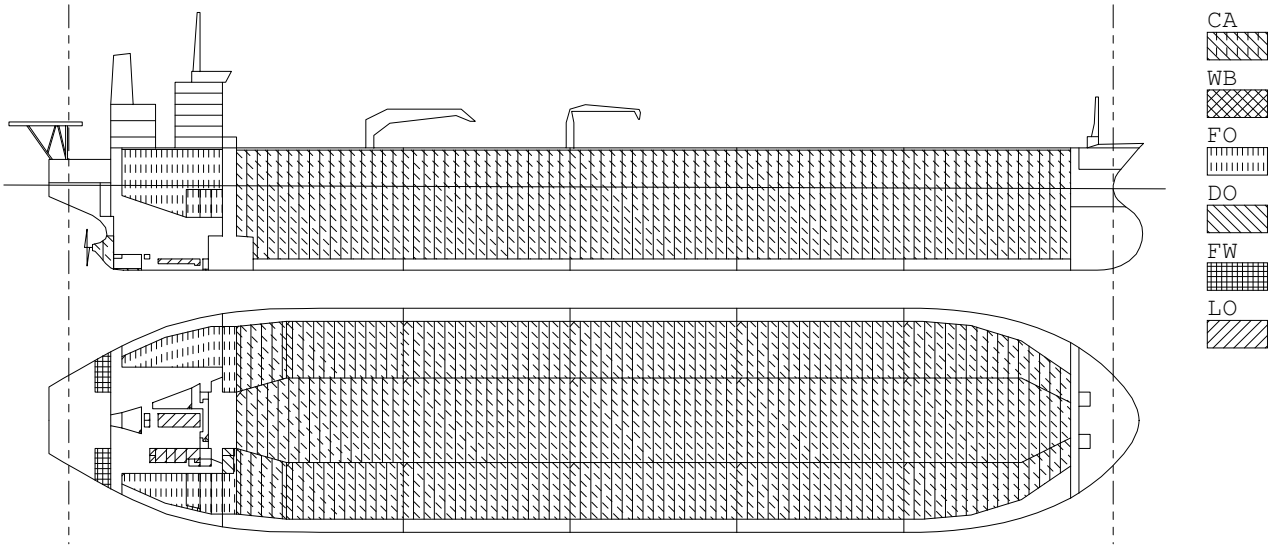
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

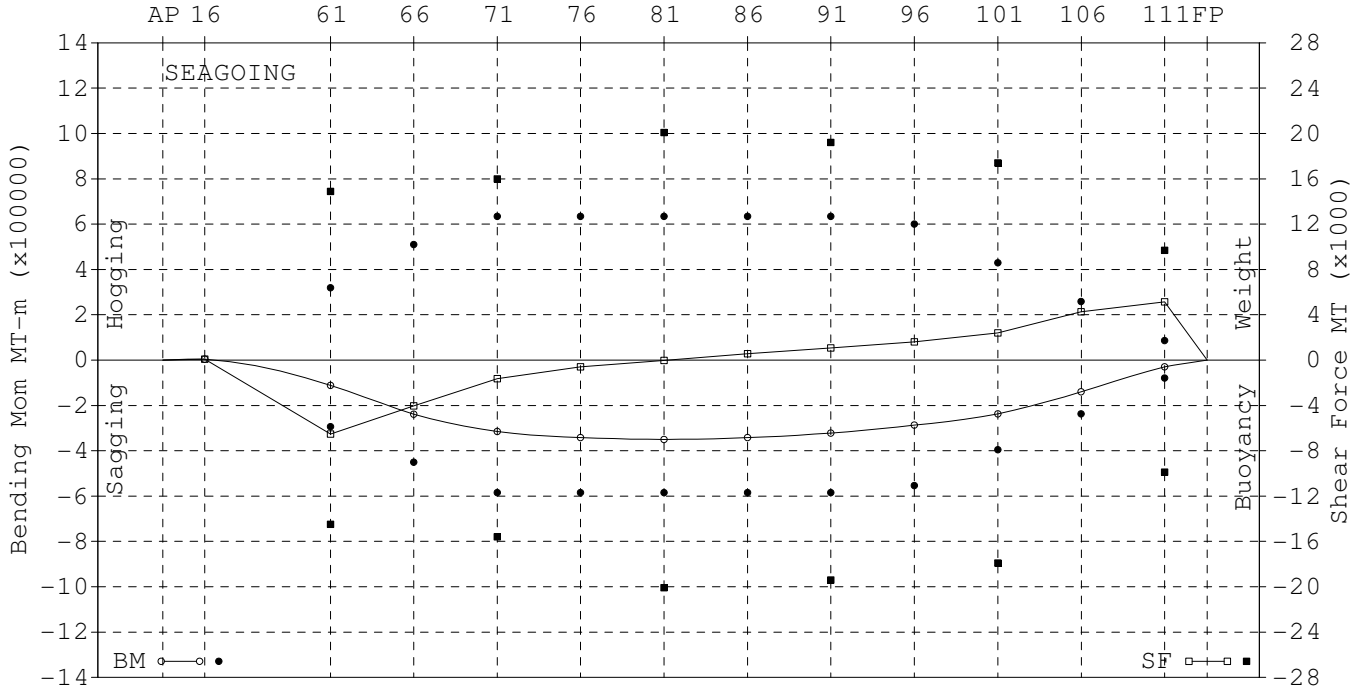
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

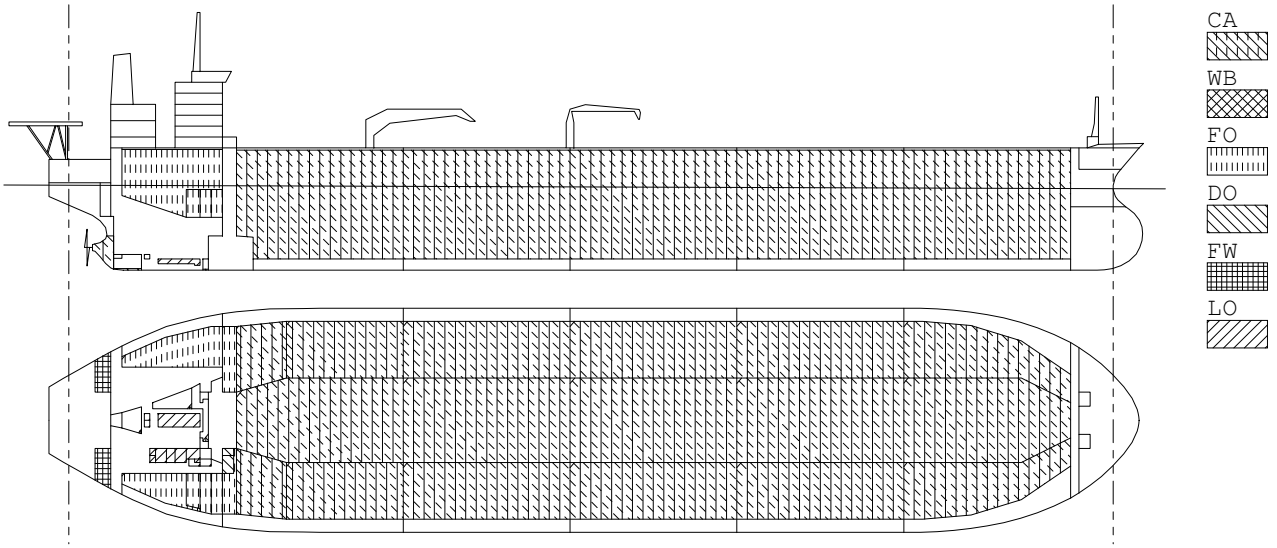


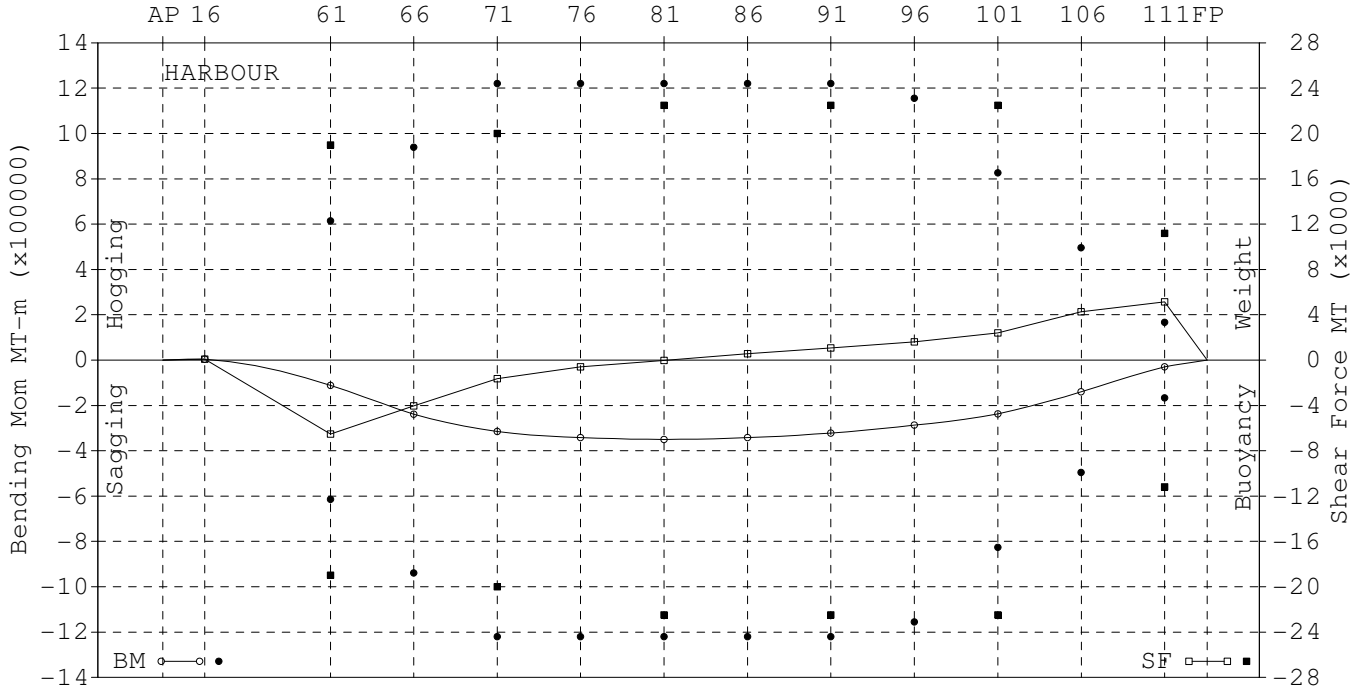


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	84	-	-	3885	-	-	-	-
61	-6530	45	-14500	-110967	-	319000	38	-294000
66	-4045	-	-	-238623	-	510000	53	-450000
71	-1635	10	-15600	-315522	-	635000	54	-585000
76	-606	-	-	-341425	-	635000	58	-585000
81	-35	0	-20100	-349679	-	635000	60	-585000
86	560	-	-	-342580	-	635000	59	-585000
91	1088	6	19200	-321536	-	635000	55	-585000
96	1609	-	-	-287395	-	600000	52	-554000
101	2393	14	17400	-237728	-	429000	60	-395000
106	4264	-	-	-140399	-	258000	59	-237000
111	5130	53	9700	-29722	-	86000	38	-79000

SF max -6530 MT 45% at F61 +Buoyancy (5130 MT 53% at F111 +Weight)
BM max -349683 MT-m 60% at F81 Sagging (-237728 MT-m 60% at F101 Sagging)

Estimated Deflection Amidships = -12cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	84	-	-	3885	-	-	-	-
61	-6530	34	-19000	-110967	-	615000	18	-615000
66	-4045	-	-	-238623	-	940000	25	-940000
71	-1635	8	-20000	-315522	-	1221000	26	-1221000
76	-606	-	-	-341425	-	1221000	28	-1221000
81	-35	0	-22500	-349679	-	1221000	29	-1221000
86	560	-	-	-342580	-	1221000	28	-1221000
91	1088	5	22500	-321536	-	1221000	26	-1221000
96	1609	-	-	-287395	-	1156000	25	-1156000
101	2393	11	22500	-237728	-	826000	29	-826000
106	4264	-	-	-140399	-	496000	28	-496000
111	5130	46	11200	-29722	-	167000	18	-167000

SF max -6530 MT 34% at F61 +Buoyancy (5130 MT 46% at F111 +Weight)
BM max -349683 MT-m 29% at F81 Sagging (-237728 MT-m 29% at F101 Sagging)

Estimated Deflection Amidships = -12cm SAGGING

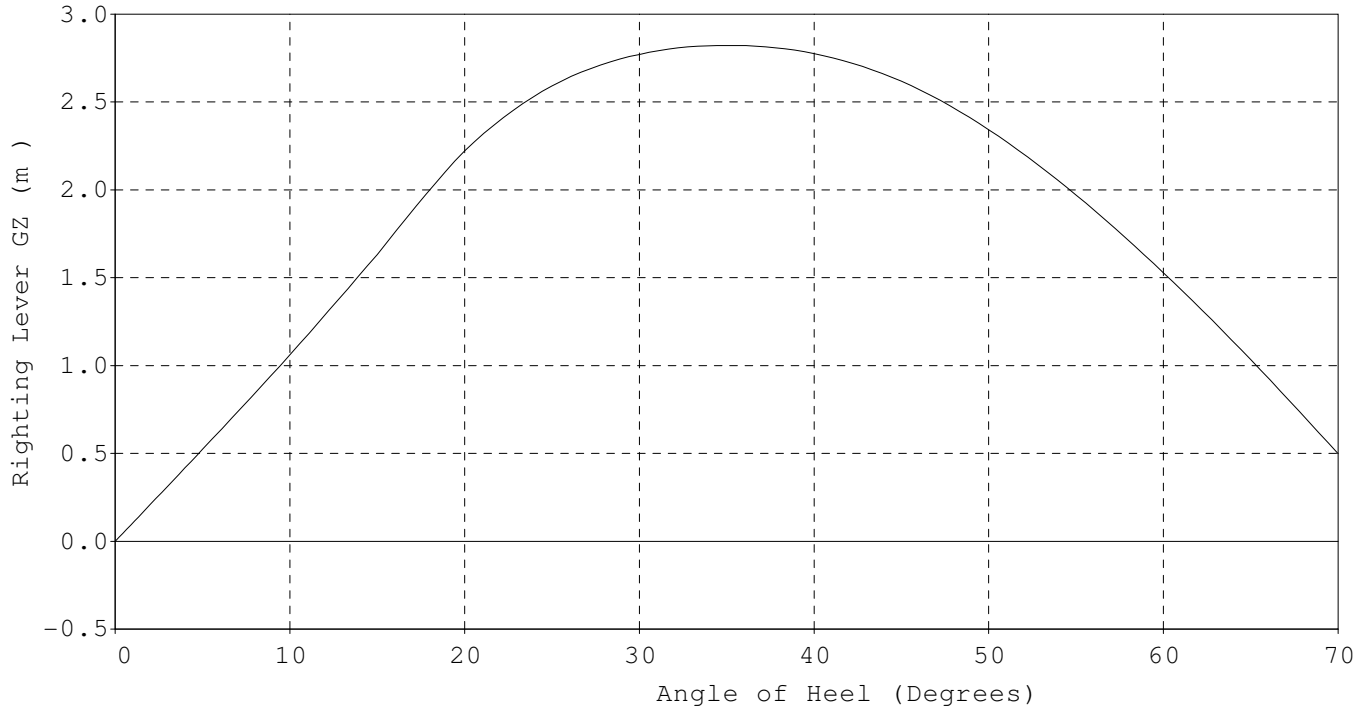
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	292044	17.57	17.61	0.00	239982
Ballast	0	9.12	-145.99	0.00	28476
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	301894	17.77	13.11	0.01	277166
TOTALS	343396	17.55	10.32	0.00	277166

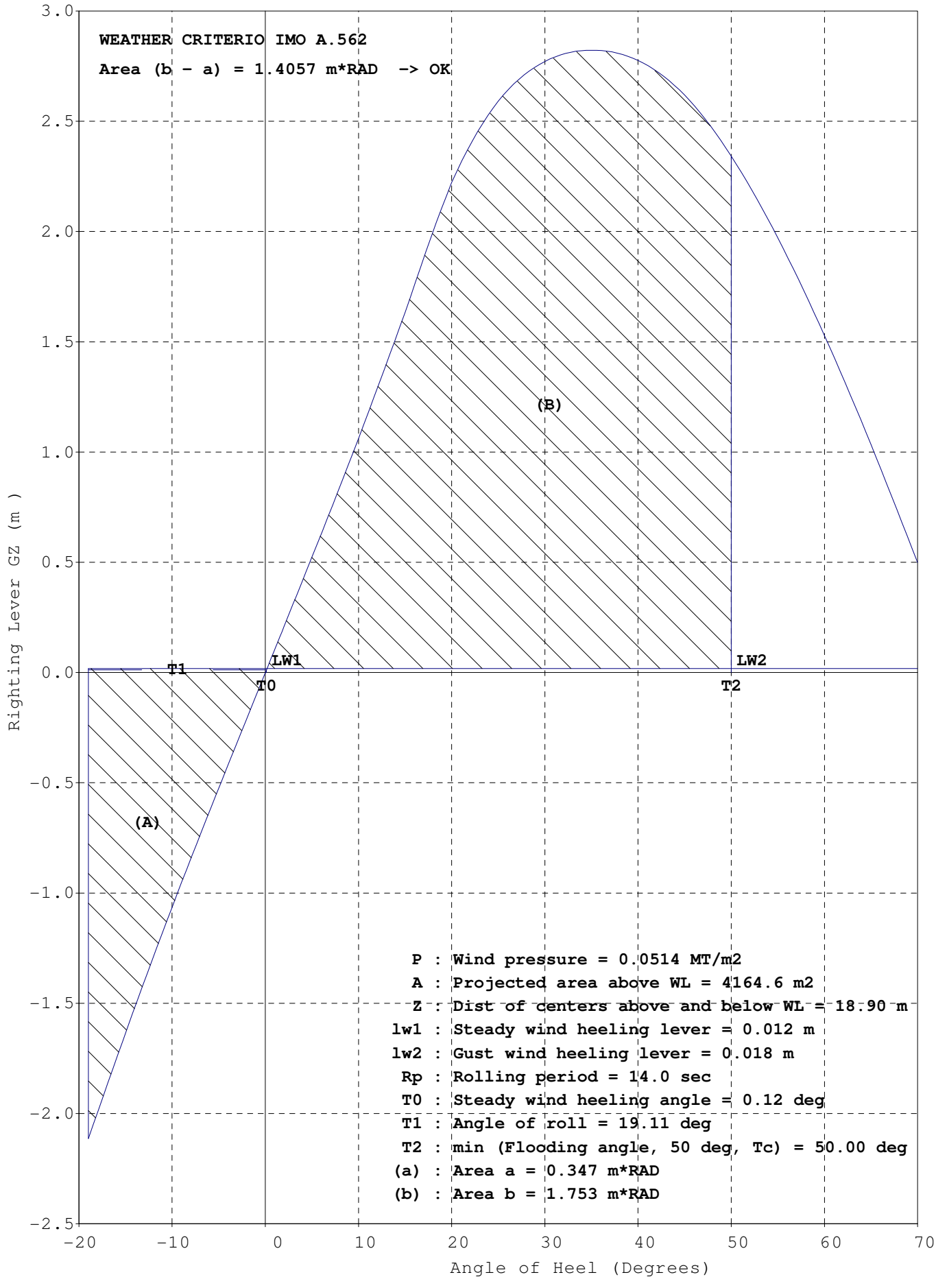
HYDROSTATICS	
Draft FPP	21.63 m
Mk F123	21.64 m
APP	22.55 m
Mk F18	22.51 m
Mid	22.09 m
Mk	22.09 m
LCF	22.09 m
TRIM	0.92 m
HEEL	0.0 Deg
LCF	-1.13 m
Prop Imm	220.2 %
Rolling	17 sec
TPC-I	173.27 MT/cm
MCT	4001.5 MT-m/cm
MCH	35805 MT-m/deg
FLood	55.5 Deg
LCB	10.30 m
KM(T)	24.33 m
KG	17.55 m
GM	6.78 m
GGo	0.81 m
GoM	5.97 m
KG(eff)	18.36 m

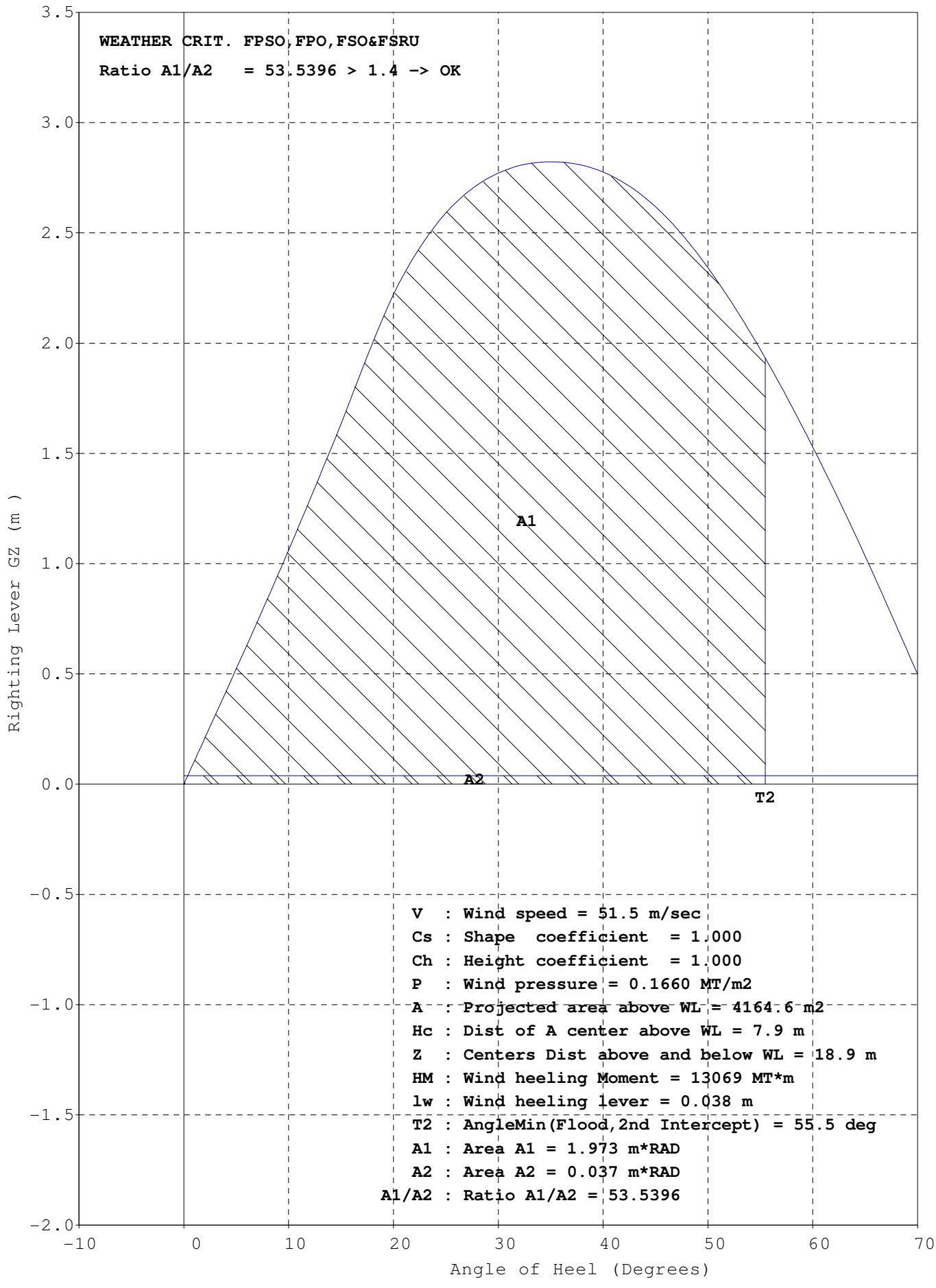
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	0.8246	>=	0.055	OK
Area 0-40 deg	m x RAD	1.3145	>=	0.09	OK
Area 30-40 deg	m x RAD	0.4899	>=	0.03	OK
GZ at/or> 30 deg	m	2.771	>=	0.2	OK
Max GZ Angle	Deg	35.218	>=	25.0	OK
Maximum GZ	2.82 m				
Initial GM	m	5.974	>=	0.15	OK
Weather Area(B-A)	m x RAD	1.4057	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	53.5396	>=	1.4	OK
Lim KG-Intact	m	18.361	=<	21.77	OK
Min FPP Draft	m	21.63	>=	7.825	OK
SteadyWind Angle	Deg	0.12	=<	13.906	OK
Deck Edge Angle	17.38 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.21	0.52	1.06	1.63	2.22	2.59	2.77	2.82	2.78	2.62	2.34	1.97	1.53	1.03	0.50


WEATHER CRITERIO IMO A.562
Area (b - a) = 1.4057 m*RAD -> OK
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 4164.6 m2
Z : Dist of centers above and below WL = 18.90 m
lw1 : Steady wind heeling lever = 0.012 m
lw2 : Gust wind heeling lever = 0.018 m
Rp : Rolling period = 14.0 sec
T0 : Steady wind heeling angle = 0.12 deg
T1 : Angle of roll = 19.11 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.347 m*RAD
(b) : Area b = 1.753 m*RAD
Righting Lever GZ (m)
Angle of Heel (Degrees)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-20
-10
0
10
20
30
40
50
60
70


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 53.5396 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 4164.6 m2
Hc : Dist of A center above WL = 7.9 m
Z : Centers Dist above and below WL = 18.9 m
HM : Wind heeling Moment = 13069 MT*m
lw : Wind heeling lever = 0.038 m
T2 : AngleMin(Flood,2nd Intercept) = 55.5 deg
A1 : Area A1 = 1.973 m*RAD
A2 : Area A2 = 0.037 m*RAD
A1/A2 : Ratio A1/A2 = 53.5396
Righting Lever GZ (m)
Angle of Heel (Degrees)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8500	29032	98	60	24677.0	118.72	17.32	0.00	26523
No1 C.O.T. (P)	101	111	1	0.8500	16321	98	60	13873.0	117.26	17.60	-16.48	8076
No1 C.O.T. (S)	101	111	1	0.8500	16321	98	60	13873.0	117.26	17.60	16.48	8076
No2 C.O.T. (C)	91	101	1	0.8500	31764	98	60	26999.0	69.85	17.31	0.00	31378
No2 C.O.T. (P)	91	101	1	0.8500	20144	98	60	17122.0	69.85	17.47	-18.11	9526
No2 C.O.T. (S)	91	101	1	0.8500	20144	98	60	17122.0	69.85	17.47	18.11	9526
No3 C.O.T. (C)	81	91	1	0.8500	31764	98	60	26999.0	19.05	17.31	0.00	31378
No3 C.O.T. (P)	81	91	1	0.8500	20144	98	60	17122.0	19.05	17.47	-18.11	9526
No3 C.O.T. (S)	81	91	1	0.8500	20144	98	60	17122.0	19.05	17.47	18.11	9526
No4 C.O.T. (C)	71	81	1	0.8500	31764	98	60	26999.0	-31.75	17.31	0.00	31378
No4 C.O.T. (P)	71	81	1	0.8500	20144	98	60	17122.0	-31.75	17.47	-18.11	9526
No4 C.O.T. (S)	71	81	1	0.8500	20144	98	60	17122.0	-31.75	17.47	18.11	9526
No5 C.O.T. (C)	61	71	1	0.8500	29701	98	60	25246.0	-81.09	17.50	0.00	28342
No5 C.O.T. (P)	64	71	1	0.8500	13086	98	60	11123.0	-74.26	18.26	-17.81	6221
No5 C.O.T. (S)	64	71	1	0.8500	13086	98	60	11123.0	-74.26	18.26	17.81	6221
Slop Tank (P)	61	64	1	0.8500	4941	98	60	4200.0	-100.28	20.41	-15.99	2616
Slop Tank (S)	61	64	1	0.8500	4941	98	60	4200.0	-100.28	20.41	16.00	2616
T O T A L S					343581			292044.0	17.61	17.57	0.00	239982

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1 [C]	Crude ASTM-IP	34.6	0.8519	0.8523	0.8500	0.8504	292044	2161061	2161061

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4						
No3 W.B.Tk (S)	81	91	9782.4						
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8	0	0.2	-145.987	9.12	0.00	28476_Max
T O T A L S			98483.0		0.2	-145.987	9.12	0.00	28476

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

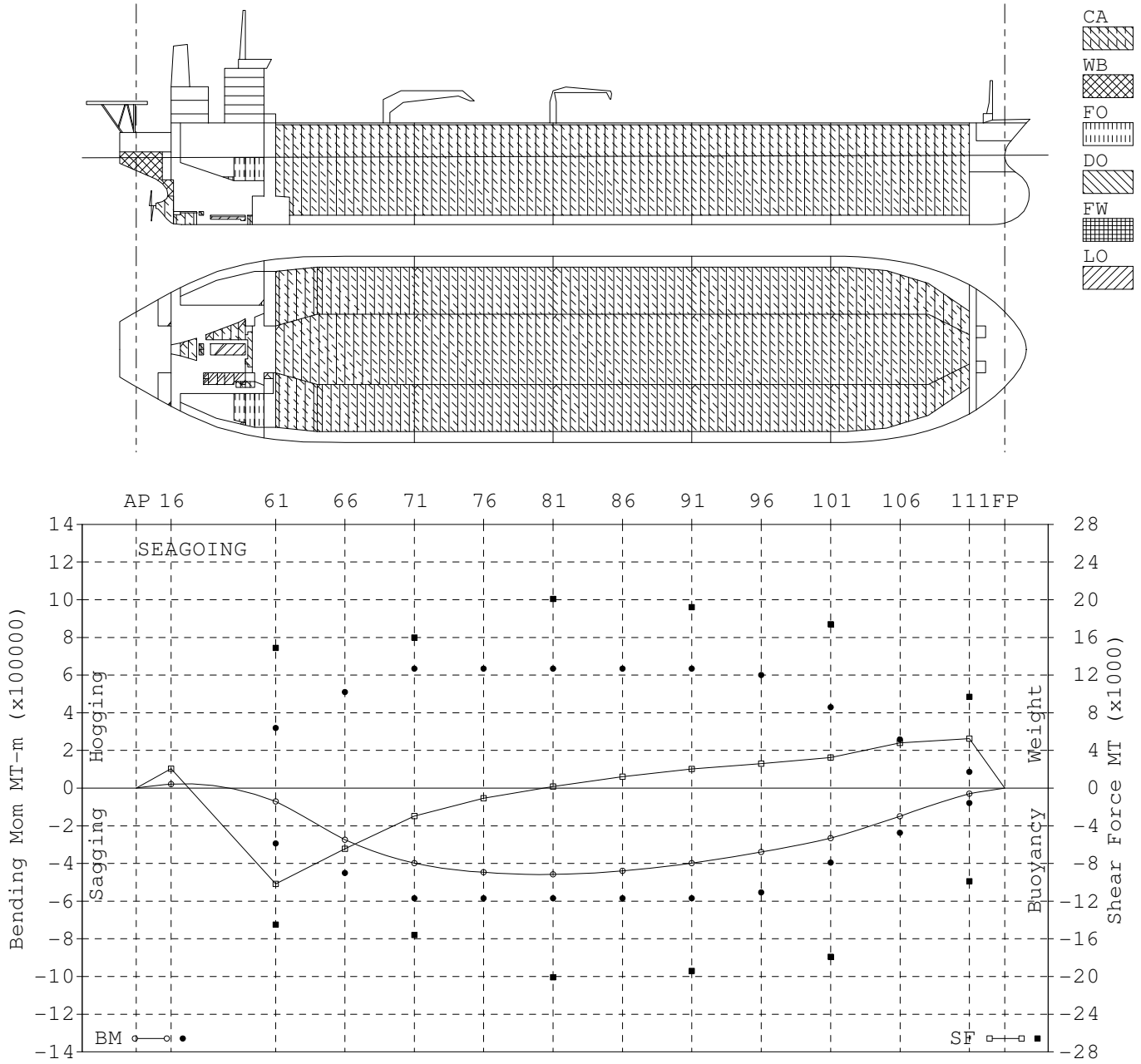
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

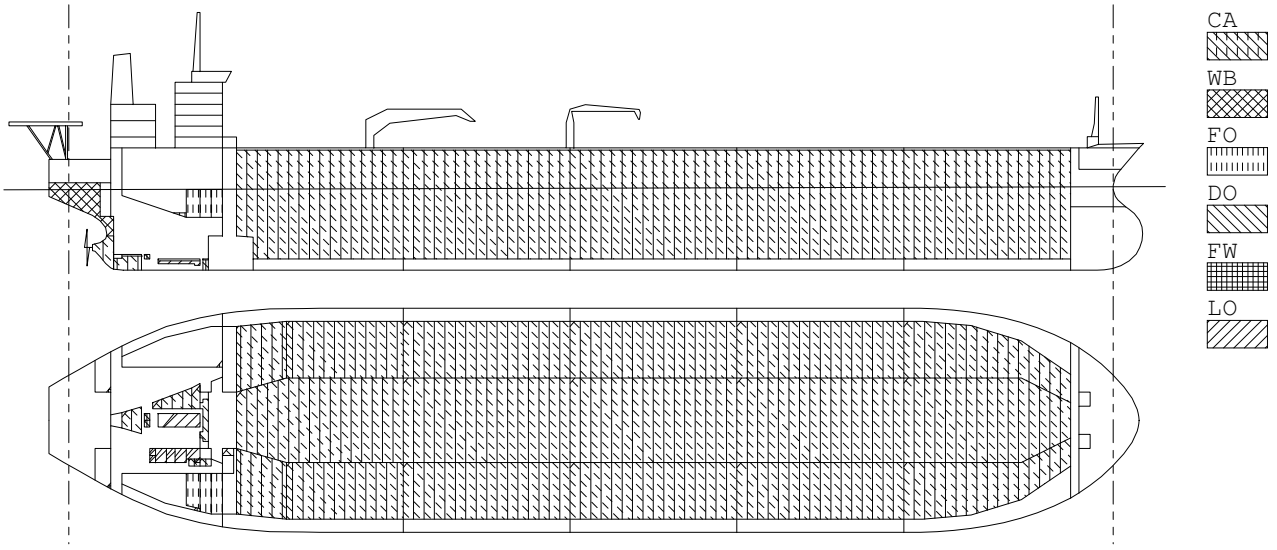
DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

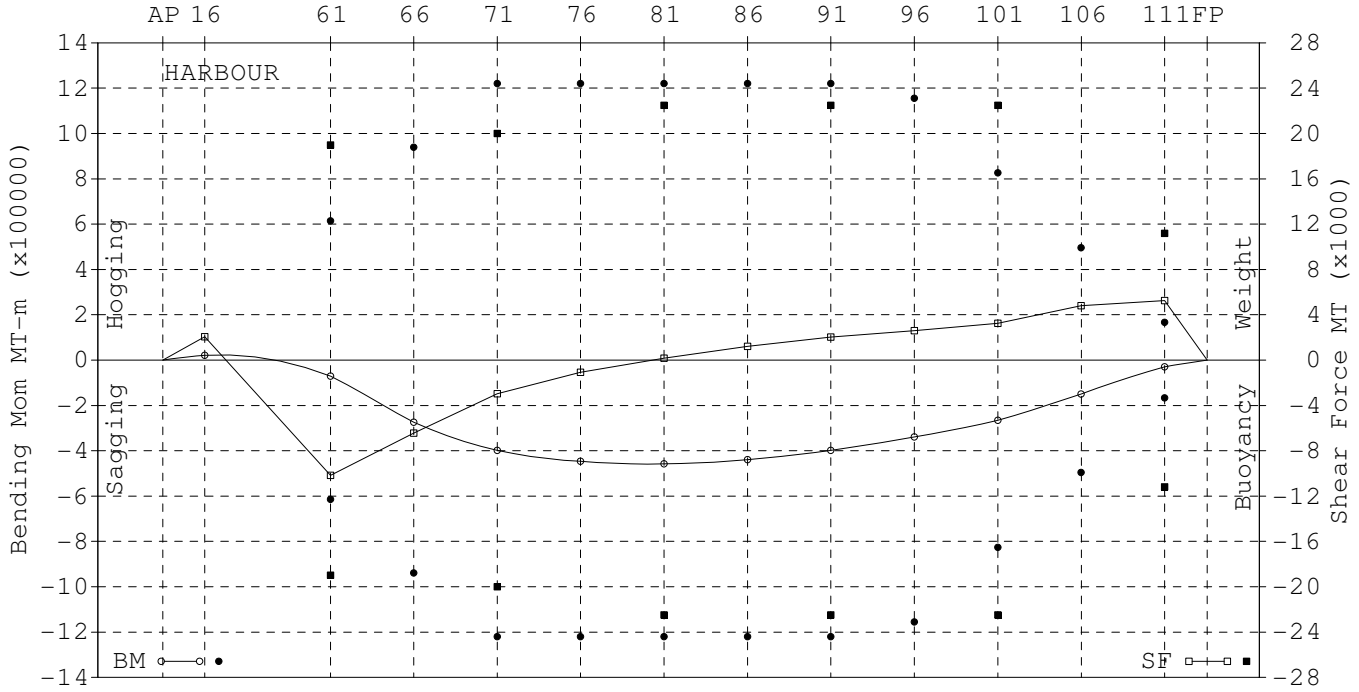


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2049	-	-	21248	-	-	-	-
61	-10182	70	-14500	-70439	-	319000	24	-294000
66	-6448	-	-	-274678	-	510000	61	-450000
71	-2969	19	-15600	-398612	-	635000	68	-585000
76	-1073	-	-	-446974	-	635000	76	-585000
81	165	1	20100	-458199	-	635000	78	-585000
86	1227	-	-	-439664	-	635000	75	-585000
91	2021	11	19200	-397869	-	635000	68	-585000
96	2610	-	-	-338742	-	600000	61	-554000
101	3260	19	17400	-264938	-	429000	67	-395000
106	4804	-	-	-149375	-	258000	63	-237000
111	5255	54	9700	-30300	-	86000	38	-79000

SF max -10182 MT 70% at F61 +Buoyancy
BM max -458595 MT-m 78% at F80 Sagging

Estimated Deflection Amidships = -15cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2049	-	-	21248	-	-	-	-
61	-10182	54	-19000	-70439	-	615000	11	-615000
66	-6448	-	-	-274678	-	940000	29	-940000
71	-2969	15	-20000	-398612	-	1221000	33	-1221000
76	-1073	-	-	-446974	-	1221000	37	-1221000
81	165	1	22500	-458199	-	1221000	38	-1221000
86	1227	-	-	-439664	-	1221000	36	-1221000
91	2021	9	22500	-397869	-	1221000	33	-1221000
96	2610	-	-	-338742	-	1156000	29	-1156000
101	3260	14	22500	-264938	-	826000	32	-826000
106	4804	-	-	-149375	-	496000	30	-496000
111	5255	47	11200	-30300	-	167000	18	-167000

SF max -10182 MT 54% at F61 +Buoyancy
BM max -458595 MT-m 38% at F80 Sagging

Estimated Deflection Amidships = -15cm SAGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

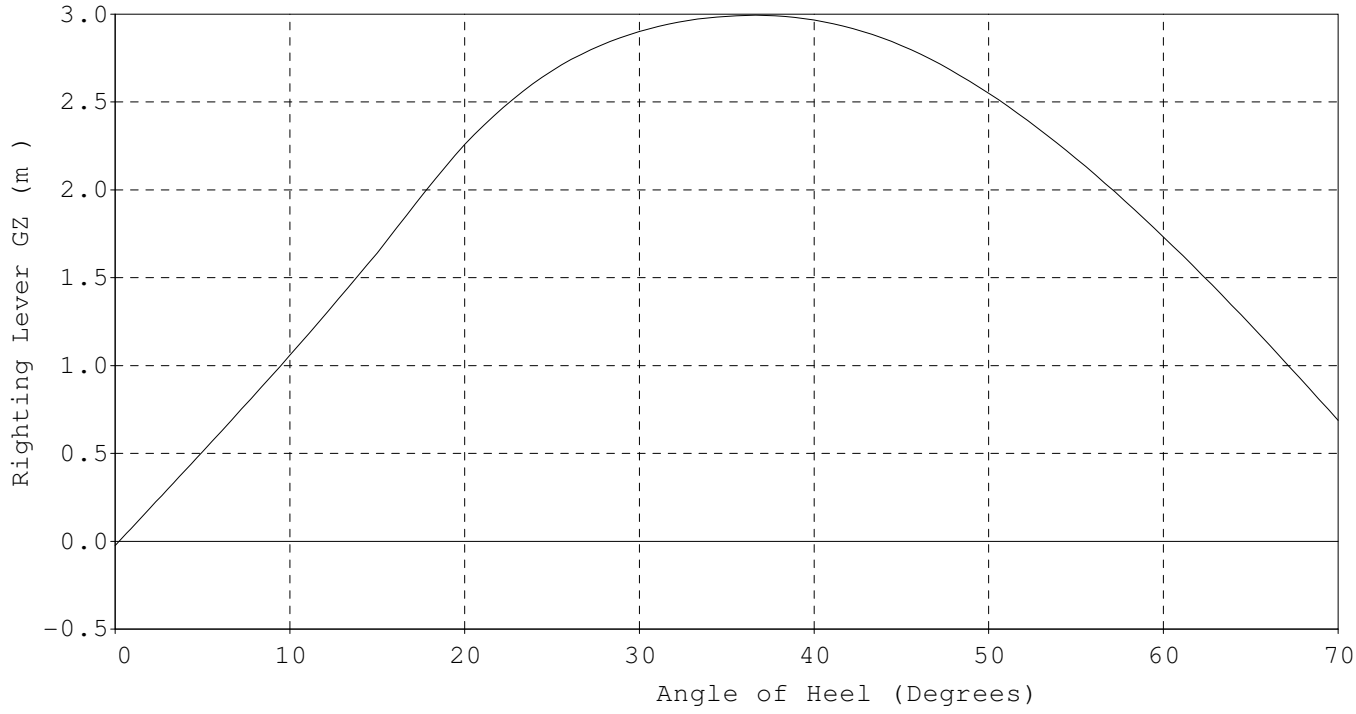
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	292044	17.57	17.61	0.00	239982
Ballast	2066	20.20	-153.07	-0.06	28476
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	295899	17.58	15.61	0.03	277166
TOTALS	337401	17.39	12.47	0.02	277166

HYDROSTATICS

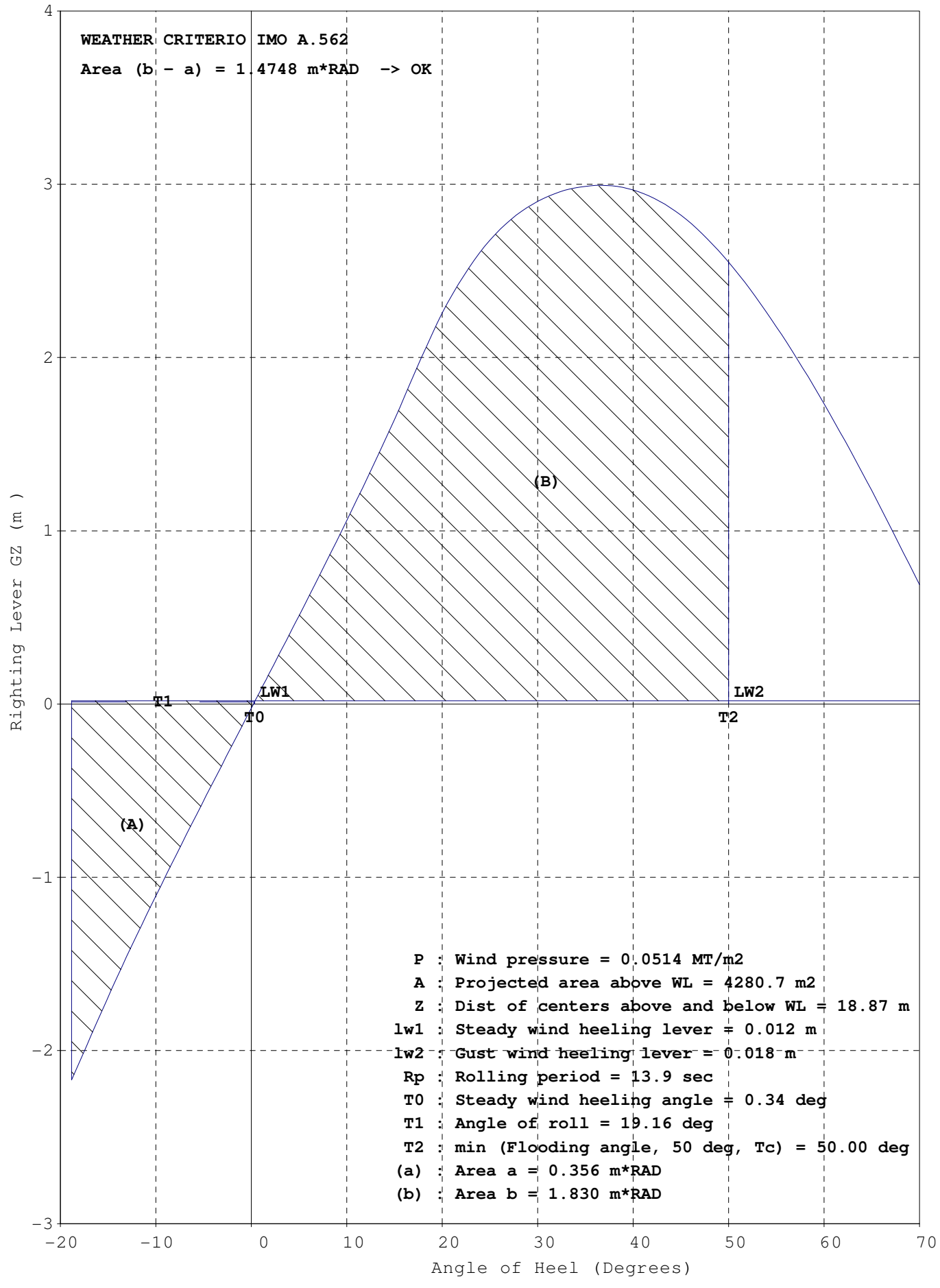
Draft FPP	22.13 m
Mk F123	22.13 m
APP	21.37 m
Mk F18	21.40 m
Mid	21.75 m
Mk	21.75 m
LCF	21.75 m
TRIM	-0.77 m
HEEL	0.2 Deg
LCF	-0.46 m
Prop Imm	208.3 %
Rolling	16 sec
TPC-I	172.47 MT/cm
MCT	3949.3 MT-m/cm
MCH	35909 MT-m/deg
FLood	59.5 Deg
LCB	12.49 m
KM(T)	24.30 m
KG	17.39 m
GM	6.92 m
GGo	0.82 m
GoM	6.10 m
KG(eff)	18.21 m

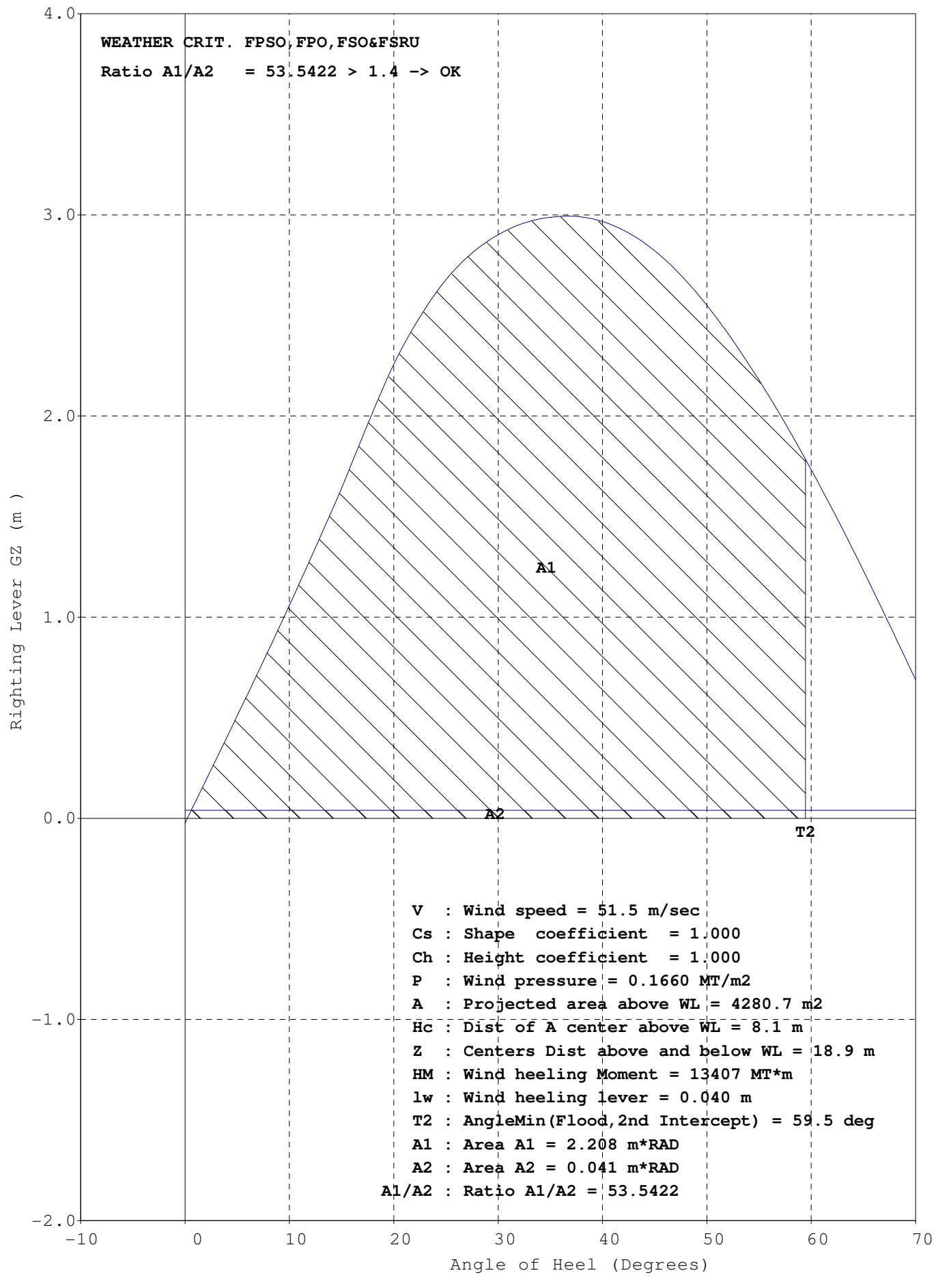
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	0.8392	>= 0.055	**OK**
Area 0-40 deg	m x RAD	1.3577	>= 0.09	**OK**
Area 30-40 deg	m x RAD	0.5185	>= 0.03	**OK**
GZ at/or> 30 deg	m	2.901	>= 0.2	**OK**
Max GZ Angle	Deg	36.623	>= 25.0	**OK**
Maximum GZ	2.99 m			
Initial GM	m	6.098	>= 0.15	**OK**
Weather Area(B-A)	m x RAD	1.4748	>= 0.0	**OK**
Weather Ratio A1/A2	m x RAD	53.5422	>= 1.4	**OK**
Lim KG-Intact	m	18.207	=<22.262	**OK**
Min FPP Draft	m	22.132	>= 7.825	**OK**
SteadyWind Angle	Deg	0.343	=< 14.11	**OK**
Deck Edge Angle	17.64 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.02	0.19	0.51	1.06	1.64	2.26	2.68	2.90	2.99	2.97	2.82	2.55	2.18	1.73	1.23	0.69


WEATHER CRITERIO IMO A.562
Area (b - a) = 1.4748 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
T2
LW2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 4280.7 m2
Z : Dist of centers above and below WL = 18.87 m
lw1 : Steady wind heeling lever = 0.012 m
lw2 : Gust wind heeling lever = 0.018 m
Rp : Rolling period = 13.9 sec
T0 : Steady wind heeling angle = 0.34 deg
T1 : Angle of roll = 19.16 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.356 m*RAD
(b) : Area b = 1.830 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 53.5422 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 4280.7 m2
Hc : Dist of A center above WL = 8.1 m
Z : Centers Dist above and below WL = 18.9 m
HM : Wind heeling Moment = 13407 MT*m
lw : Wind heeling lever = 0.040 m
T2 : AngleMin(Flood,2nd Intercept) = 59.5 deg
A1 : Area A1 = 2.208 m*RAD
A2 : Area A2 = 0.041 m*RAD
A1/A2 : Ratio A1/A2 = 53.5422
Righting Lever GZ (m)
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
-10
0
10
20
30
40
50
60
70
Angle of Heel (Degrees)

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8500	29032	98	60	24677.0	118.72	17.32	0.00	26523
No1 C.O.T. (P)	101	111	1	0.8500	16321	98	60	13873.0	117.26	17.60	-16.48	8076
No1 C.O.T. (S)	101	111	1	0.8500	16321	98	60	13873.0	117.26	17.60	16.48	8076
No2 C.O.T. (C)	91	101	1	0.8500	31764	98	60	26999.0	69.85	17.31	0.00	31378
No2 C.O.T. (P)	91	101	1	0.8500	20144	98	60	17122.0	69.85	17.47	-18.11	9526
No2 C.O.T. (S)	91	101	1	0.8500	20144	98	60	17122.0	69.85	17.47	18.11	9526
No3 C.O.T. (C)	81	91	1	0.8500	31764	98	60	26999.0	19.05	17.31	0.00	31378
No3 C.O.T. (P)	81	91	1	0.8500	20144	98	60	17122.0	19.05	17.47	-18.11	9526
No3 C.O.T. (S)	81	91	1	0.8500	20144	98	60	17122.0	19.05	17.47	18.11	9526
No4 C.O.T. (C)	71	81	1	0.8500	31764	98	60	26999.0	-31.75	17.31	0.00	31378
No4 C.O.T. (P)	71	81	1	0.8500	20144	98	60	17122.0	-31.75	17.47	-18.11	9526
No4 C.O.T. (S)	71	81	1	0.8500	20144	98	60	17122.0	-31.75	17.47	18.11	9526
No5 C.O.T. (C)	61	71	1	0.8500	29701	98	60	25246.0	-81.09	17.50	0.00	28342
No5 C.O.T. (P)	64	71	1	0.8500	13086	98	60	11123.0	-74.26	18.26	-17.81	6221
No5 C.O.T. (S)	64	71	1	0.8500	13086	98	60	11123.0	-74.26	18.26	17.81	6221
Slop Tank (P)	61	64	1	0.8500	4941	98	60	4200.0	-100.28	20.41	-15.99	2616
Slop Tank (S)	61	64	1	0.8500	4941	98	60	4200.0	-100.28	20.41	16.00	2616
T O T A L S					343581			292044.0	17.61	17.57	0.00	239982

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	34.6	0.8519	0.8523	0.8500	0.8504	292044	2161061	2161061

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4						
No3 W.B.Tk (S)	81	91	9782.4						
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8	100	2066.2	-153.074	20.20	-0.06	28476_Max
T O T A L S			98483.0		2066.2	-153.074	20.20	-0.06	28476

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

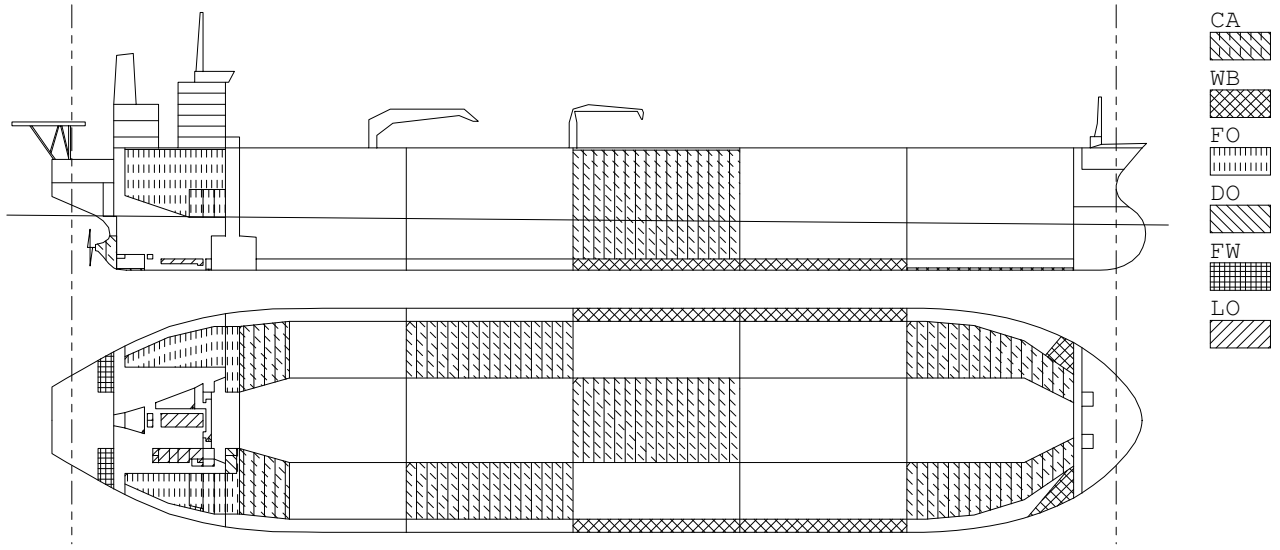
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

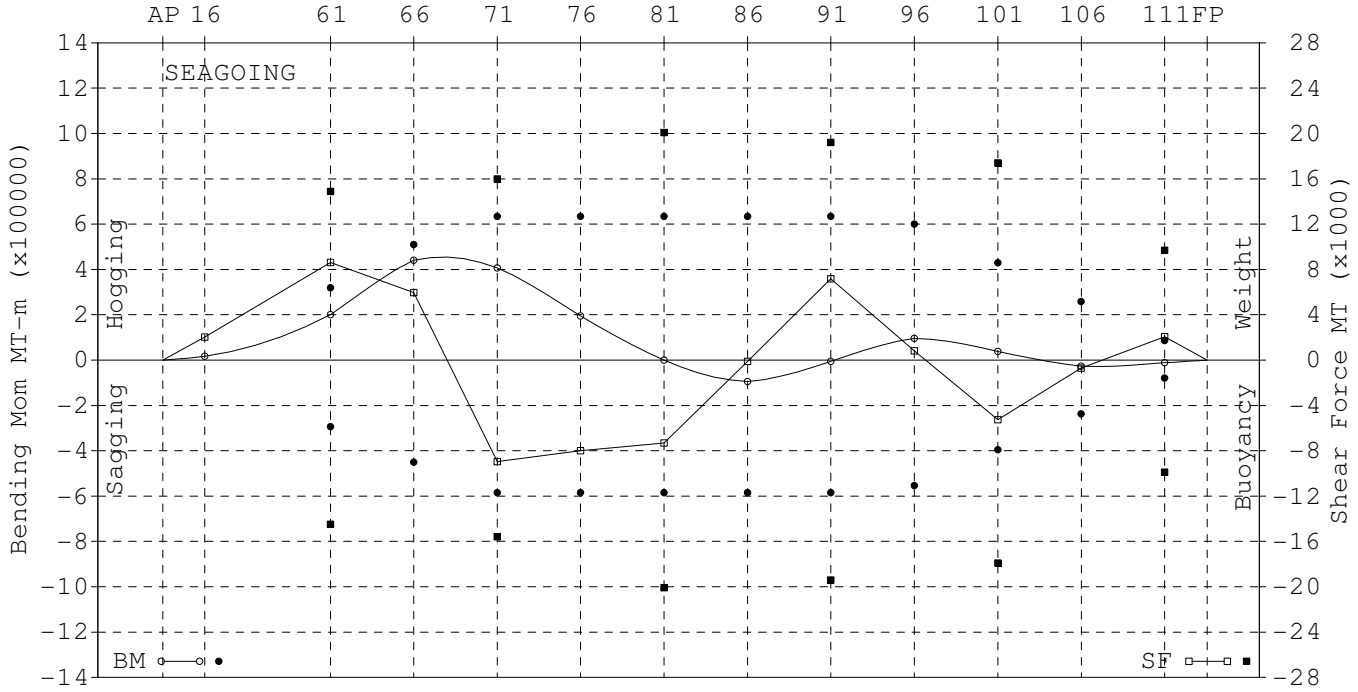
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

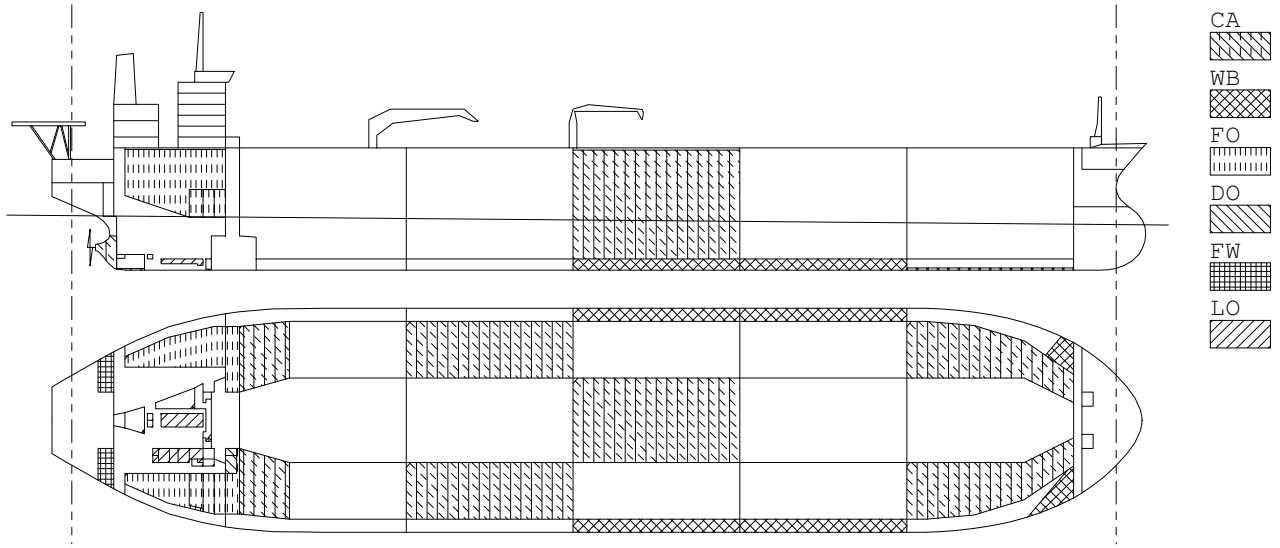


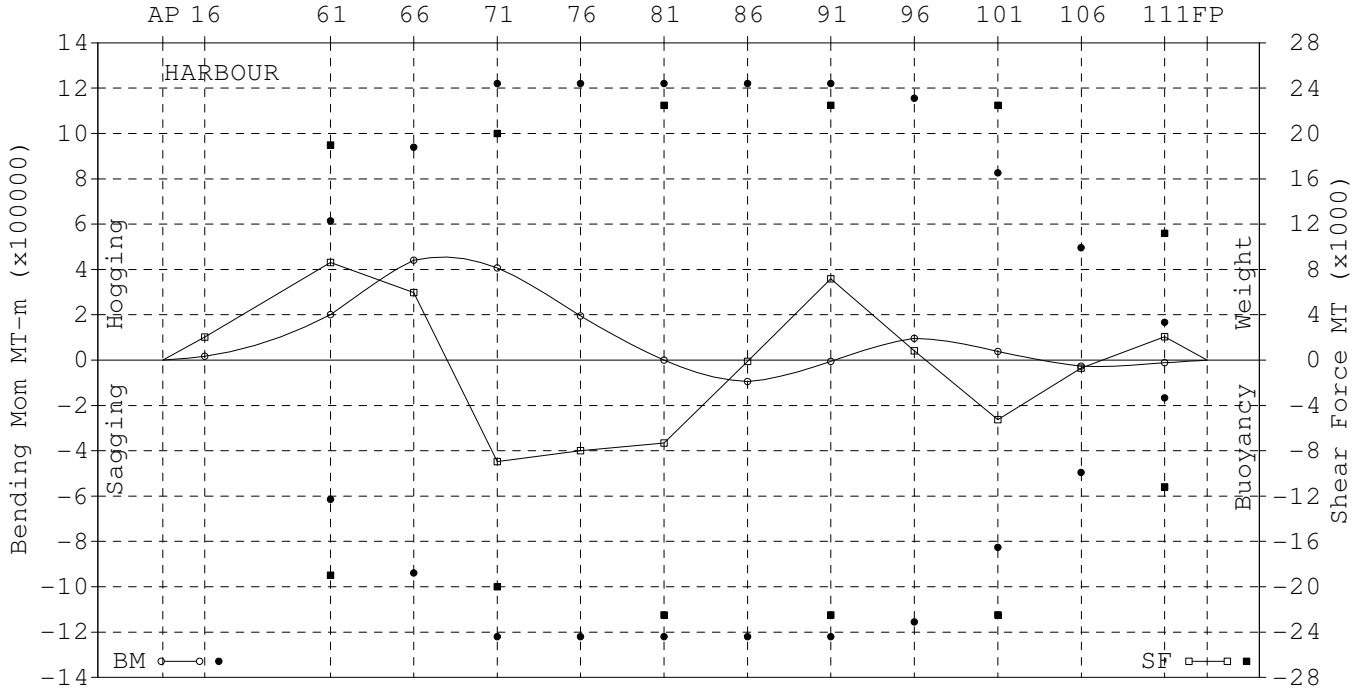


FRAME	SHEAR FORCE			BENDING MOMENT				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2041	-	-	16946	-	-	-	-
61	8621	58	14900	200377	63	319000	-	-294000
66	5970	-	-	440090	86	510000	-	-450000
71	-8945	57	-15600	407221	64	635000	-	-585000
76	-7985	-	-	194399	31	635000	-	-585000
81	-7308	36	-20100	-301	-	635000	0	-585000
86	-120	-	-	-94571	-	635000	16	-585000
91	7176	37	19200	-5209	-	635000	1	-585000
96	807	-	-	95963	16	600000	-	-554000
101	-5250	29	-17900	38225	9	429000	-	-395000
106	-700	-	-	-26780	-	258000	11	-237000
111	2070	21	9700	-11426	-	86000	14	-79000

SF max -8945 MT 57% at F71 +Buoyancy (8621 MT 58% at F61 +Weight)
BM max 454857 MT-m 82% at F68 Hogging (440090 MT-m 86% at F66 Hogging)

Estimated Deflection Amidships = 5cm HOGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2041	–	–	16946	–	–	–	–
61	8621	45	19000	200377	33	615000	–	-615000
66	5970	–	–	440090	47	940000	–	-940000
71	-8945	45	-20000	407221	33	1221000	–	-1221000
76	-7985	–	–	194399	16	1221000	–	-1221000
81	-7308	32	-22500	-301	–	1221000	0	-1221000
86	-120	–	–	-94571	–	1221000	8	-1221000
91	7176	32	22500	-5209	–	1221000	0	-1221000
96	807	–	–	95963	8	1156000	–	-1156000
101	-5250	23	-22500	38225	5	826000	–	-826000
106	-700	–	–	-26780	–	496000	5	-496000
111	2070	18	11200	-11426	–	167000	7	-167000

SF max -8945 MT 45% at F71 +Buoyancy (8621 MT 45% at F61 +Weight)
BM max 454857 MT-m 44% at F68 Hogging (440090 MT-m 47% at F66 Hogging)

Estimated Deflection Amidships = 5cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

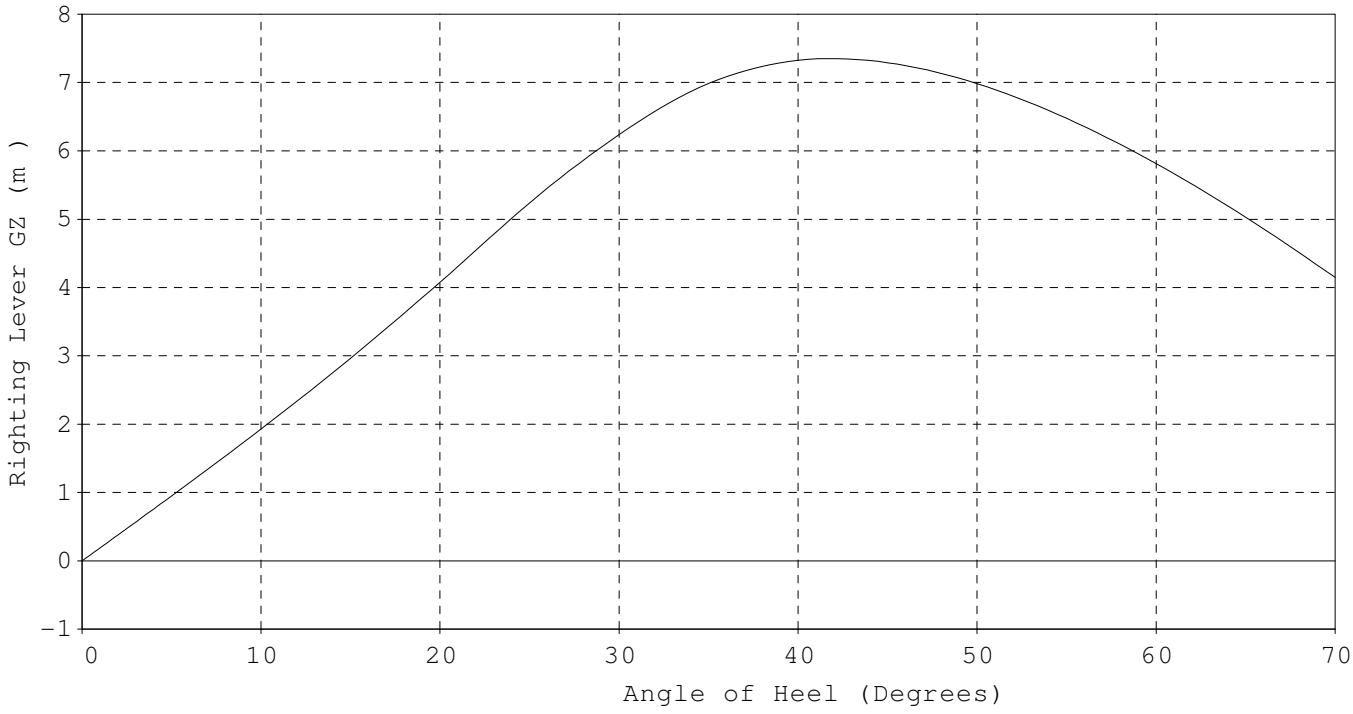
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	99874	17.72	18.88	0.00	73680
Ballast	43603	8.75	50.29	0.00	111866
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	153326	15.55	18.87	0.01	194255
TOTALS	194829	15.64	12.73	0.00	194255

HYDROSTATICS

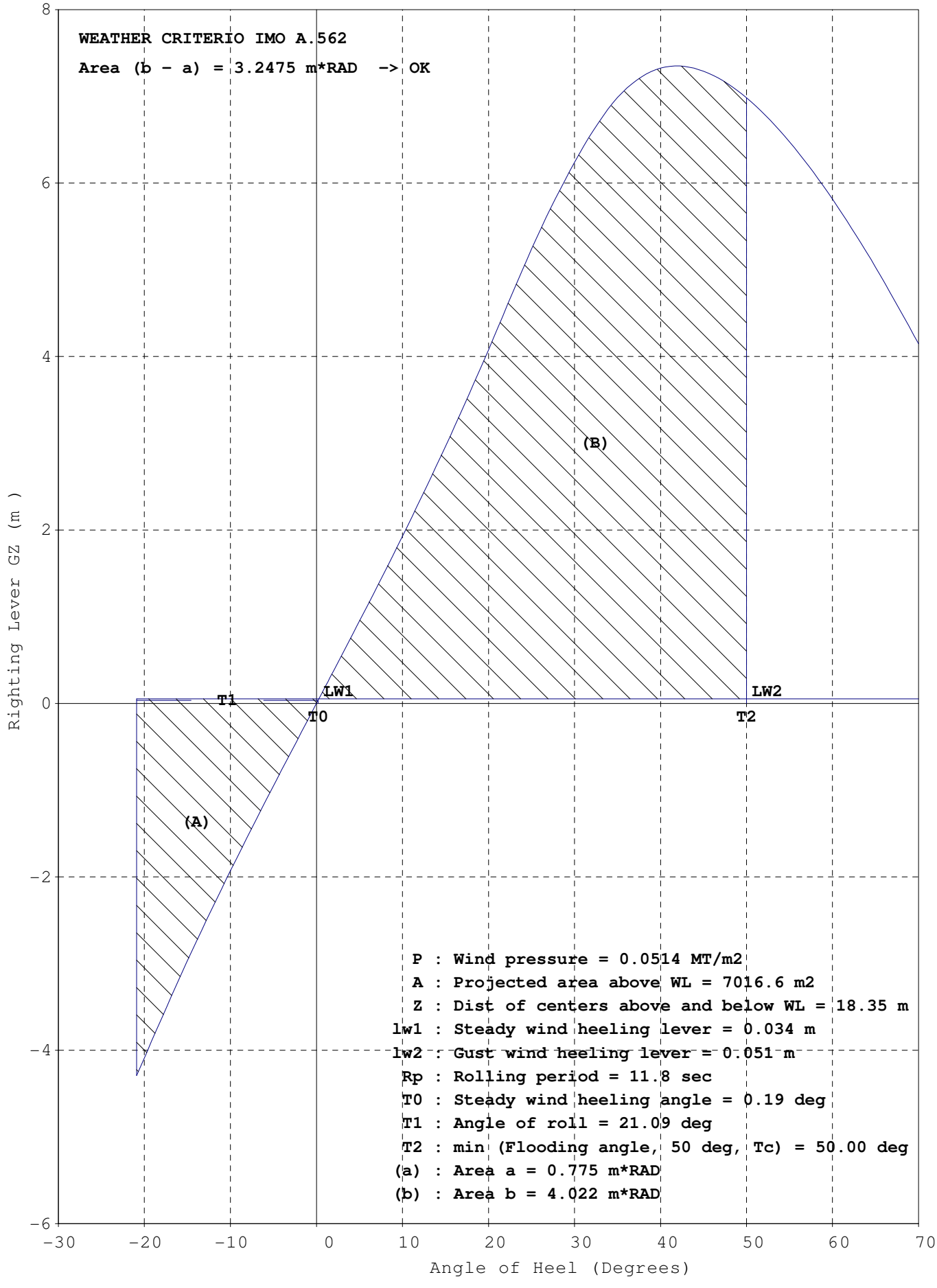
Draft FPP	12.09 m
Mk F123	12.11 m
APP	14.49 m
Mk F18	14.38 m
Mid	13.29 m
Mk	13.30 m
LCF	13.22 m
TRIM	2.40 m
HEEL	0.0 Deg
LCF	10.01 m
Prop Imm	136.8 %
Rolling	12 sec
TPC-I	161.57 MT/cm
MCT	3294.7 MT-m/cm
MCH	36834 MT-m/deg
FLood	> 70 Deg
LCB	12.66 m
KM(T)	27.47 m
KG	15.64 m
GM	11.83 m
GGo	1.00 m
GoM	10.83 m
KG(eff)	16.63 m

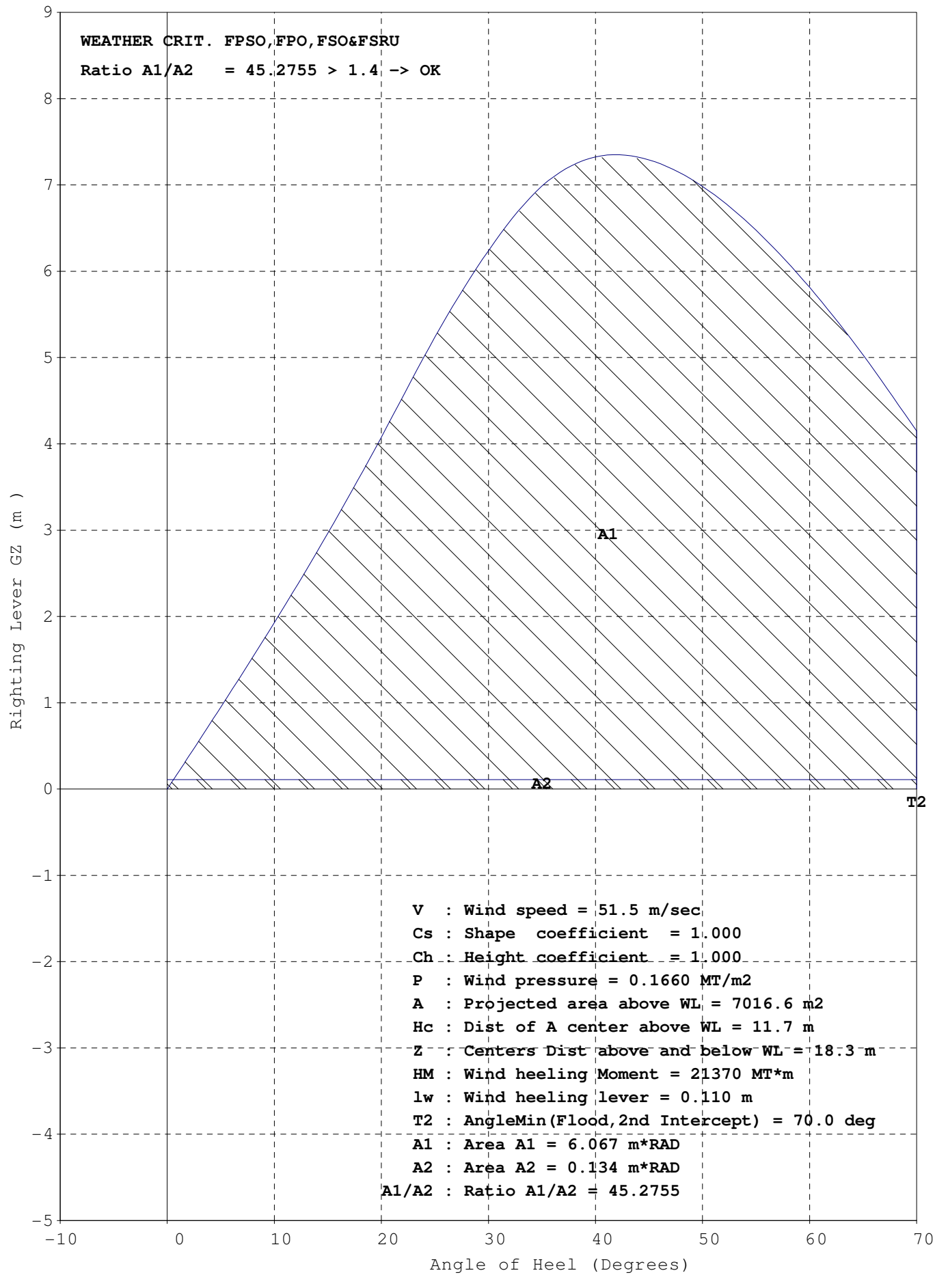
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	1.5952	>=	0.055	OK
Area 0-40 deg	m x RAD	2.8021	>=	0.09	OK
Area 30-40 deg	m x RAD	1.2069	>=	0.03	OK
GZ at/or> 30 deg	m	6.238	>=	0.2	OK
Max GZ Angle	Deg	41.882	>=	25.0	OK
Maximum GZ	7.35 m				
Initial GM	m	10.832	>=	0.15	OK
Weather Area(B-A)	m x RAD	3.2475	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	45.2754	>=	1.4	OK
Lim KG-Intact	m	16.634	=<	27.318	OK
Min FPP Draft	m	12.092	>=	7.825	OK
SteadyWind Angle	Deg	0.187	=<	16.0	OK
Deck Edge Angle	33.40 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.38	0.95	1.93	2.96	4.08	5.24	6.24	6.99	7.33	7.29	6.98	6.48	5.81	5.03	4.15


WEATHER CRITERIO IMO A.562
Area (b - a) = 3.2475 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
8
6
4
2
0
-2
-4
-6
-30
-20
-10
0
10
20
30
40
50
60
70
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 7016.6 m2
Z : Dist of centers above and below WL = 18.35 m
lw1 : Steady wind heeling lever = 0.034 m
lw2 : Gust wind heeling lever = 0.051 m
Rp : Rolling period = 11.8 sec
T0 : Steady wind heeling angle = 0.19 deg
T1 : Angle of roll = 21.09 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.775 m*RAD
(b) : Area b = 4.022 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 45.2755 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 7016.6 m2
Hc : Dist of A center above WL = 11.7 m
Z : Centers Dist above and below WL = 18.3 m
HM : Wind heeling Moment = 21370 MT*m
lw : Wind heeling lever = 0.110 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 6.067 m*RAD
A2 : Area A2 = 0.134 m*RAD
A1/A2 : Ratio A1/A2 = 45.2755
Righting Lever GZ (m)
Angle of Heel (Degrees)
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME		FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T.	(C)	101	111										
No1 C.O.T.	(P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T.	(S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T.	(C)	91	101										
No2 C.O.T.	(P)	91	101										
No2 C.O.T.	(S)	91	101										
No3 C.O.T.	(C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T.	(P)	81	91										
No3 C.O.T.	(S)	81	91										
No4 C.O.T.	(C)	71	81										
No4 C.O.T.	(P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T.	(S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T.	(C)	61	71										
No5 C.O.T.	(P)	64	71										
No5 C.O.T.	(S)	64	71										
Slop Tank	(P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank	(S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S						114574			99874.0	18.88	17.72	0.00	73680

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	99874	720648	720648

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME		FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank	(C)	111	137	4812.4						
No1 W.B.Tk	(P)	101	111	8789.5	20	1800.0	116.541	0.95	-10.42	55933_Max
No1 W.B.Tk	(S)	101	111	8789.5	20	1800.0	116.541	0.95	10.42	55933_Max
No2 W.B.Tk	(P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk	(S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk	(P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk	(S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk	(P)	71	81	9514.4						
No4 W.B.Tk	(S)	71	81	9514.4						
No5 W.B.Tk	(P)	56	71	8009.9						
No5 W.B.Tk	(S)	56	71	8009.9						
Aft Peak Tank	(C)	-8	17	2015.8						
T O T A L S				98483.0		43602.9	50.293	8.75	0.00	111866

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

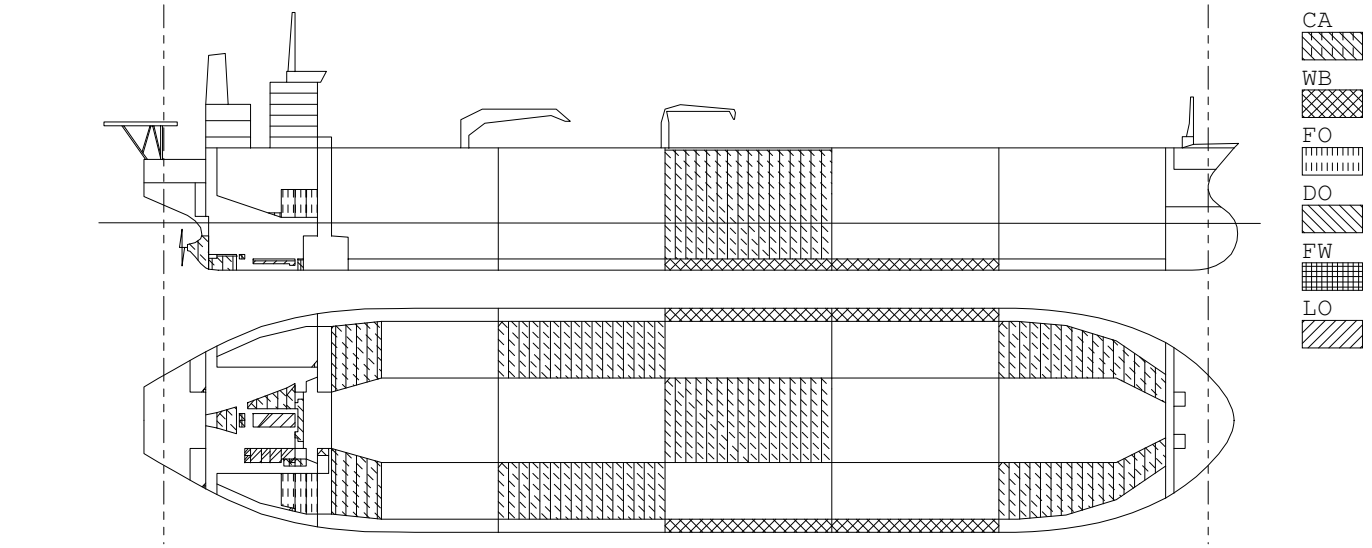
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

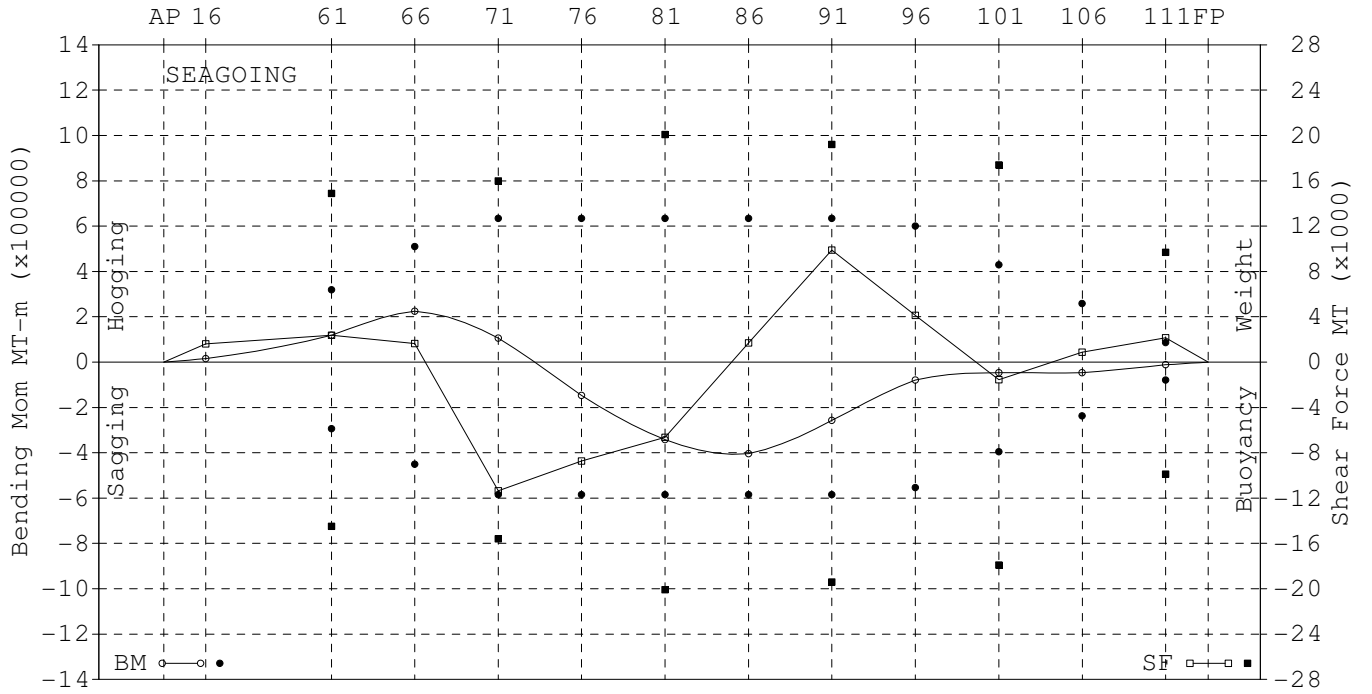
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

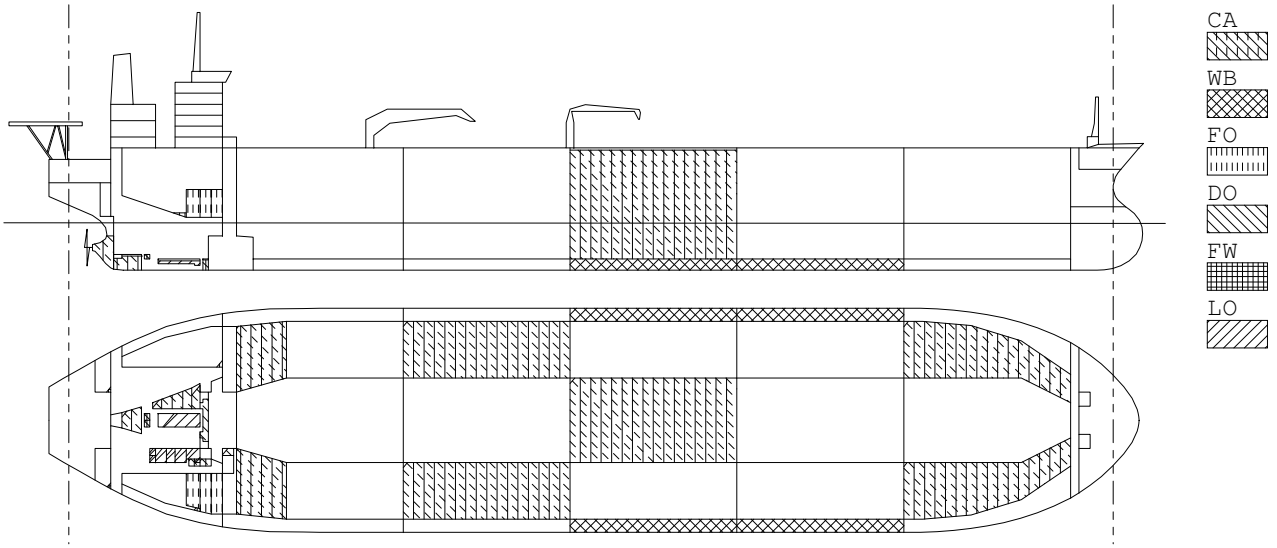


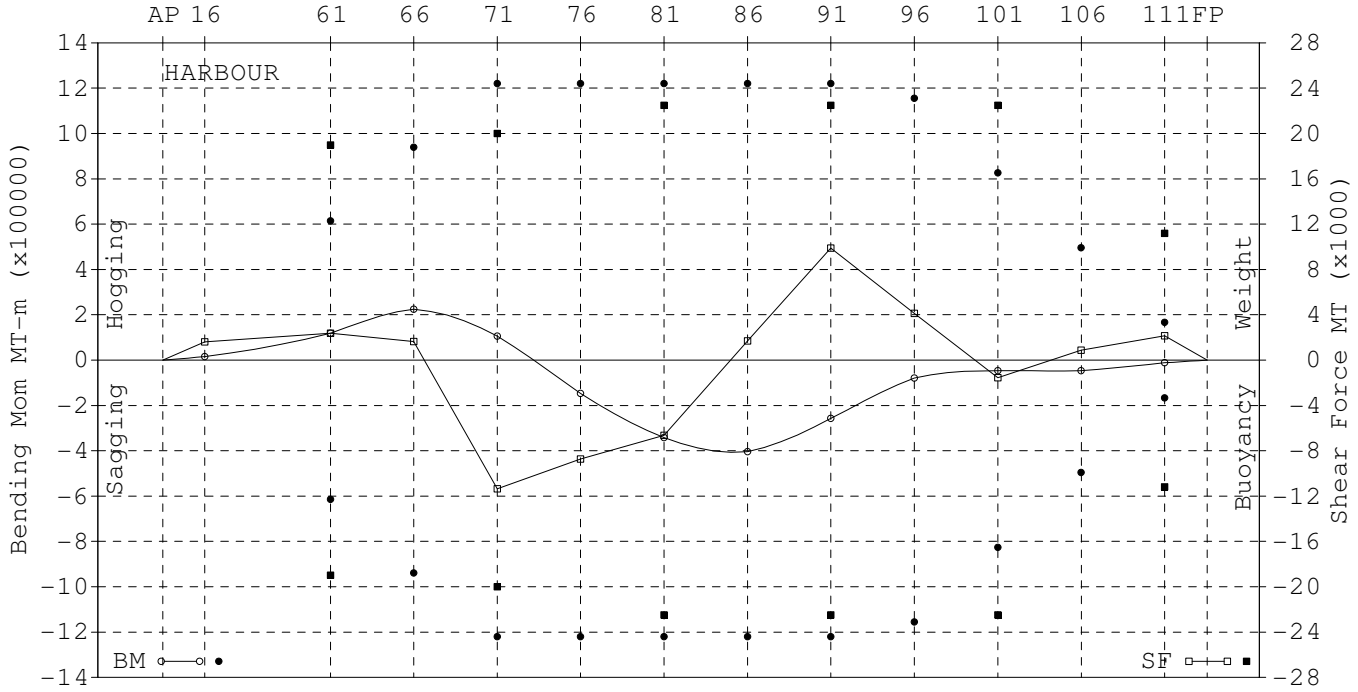


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1617	–	–	16100	–	–	–	–
61	2376	16	14900	118880	37	319000	–	-294000
66	1640	–	–	224004	44	510000	–	-450000
71	-11370	73	-15600	105671	17	635000	–	-585000
76	-8737	–	–	-146955	–	635000	25	-585000
81	-6649	33	-20100	-342293	–	635000	59	-585000
86	1689	–	–	-404662	–	635000	69	-585000
91	9875	51	19200	-257488	–	635000	44	-585000
96	4134	–	–	-79226	–	600000	14	-554000
101	-1555	9	-17900	-47224	–	429000	12	-395000
106	865	–	–	-46961	–	258000	20	-237000
111	2157	22	9700	-11931	–	86000	15	-79000

SF max -11370 MT 73% at F71 +Buoyancy
BM max -406796 MT-m 70% at F85 Sagging

Estimated Deflection Amidships = -6cm SAGGING





FRAME	SHEAR FORCE			BENDING MOMENT				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1617	-	-	16100	-	-	-	-
61	2376	13	19000	118880	19	615000	-	-615000
66	1640	-	-	224004	24	940000	-	-940000
71	-11370	57	-20000	105671	9	1221000	-	-1221000
76	-8737	-	-	-146955	-	1221000	12	-1221000
81	-6649	30	-22500	-342293	-	1221000	28	-1221000
86	1689	-	-	-404662	-	1221000	33	-1221000
91	9875	44	22500	-257488	-	1221000	21	-1221000
96	4134	-	-	-79226	-	1156000	7	-1156000
101	-1555	7	-22500	-47224	-	826000	6	-826000
106	865	-	-	-46961	-	496000	9	-496000
111	2157	19	11200	-11931	-	167000	7	-167000

SF max -11370 MT 57% at F71 +Buoyancy
BM max -406796 MT-m 33% at F85 Sagging

Estimated Deflection Amidships = -6cm SAGGING

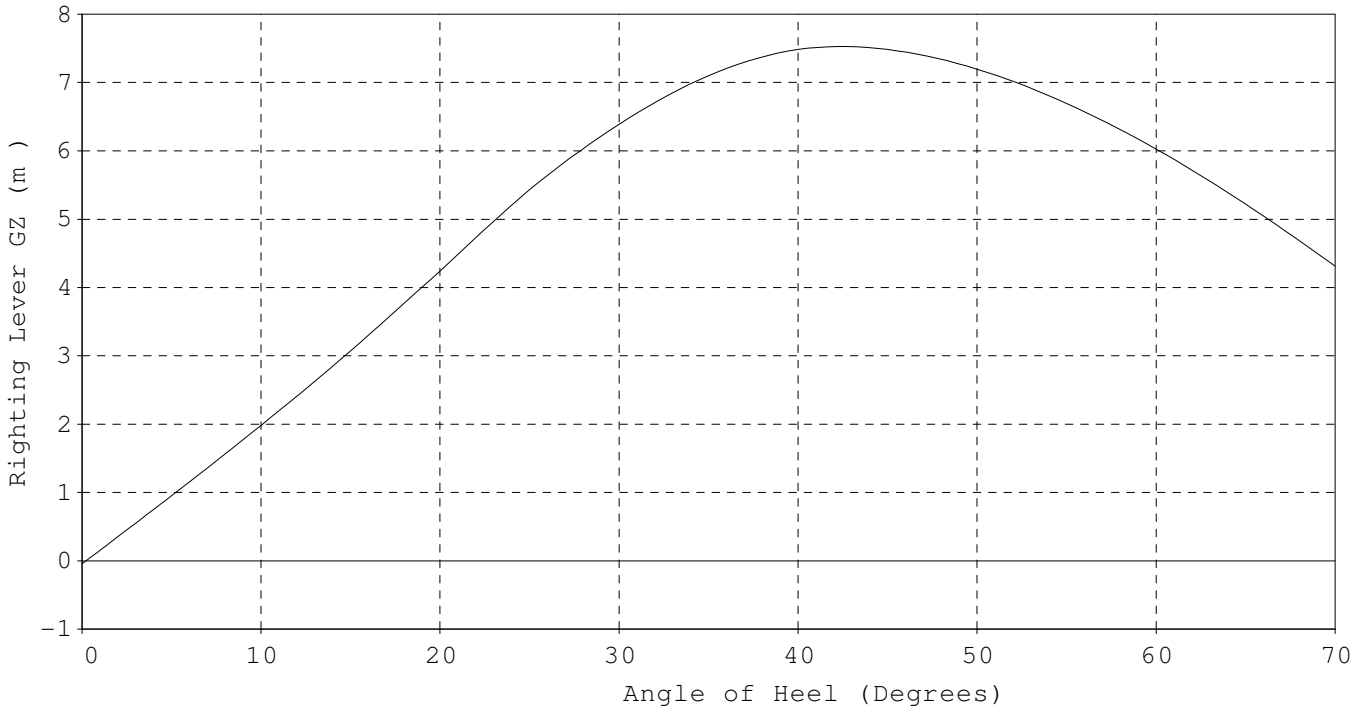
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	99874	17.72	18.88	0.00	73680
Ballast	40003	9.45	44.33	0.00	111866
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	141666	15.37	24.38	0.07	194255
TOTALS	183168	15.50	16.60	0.05	194255

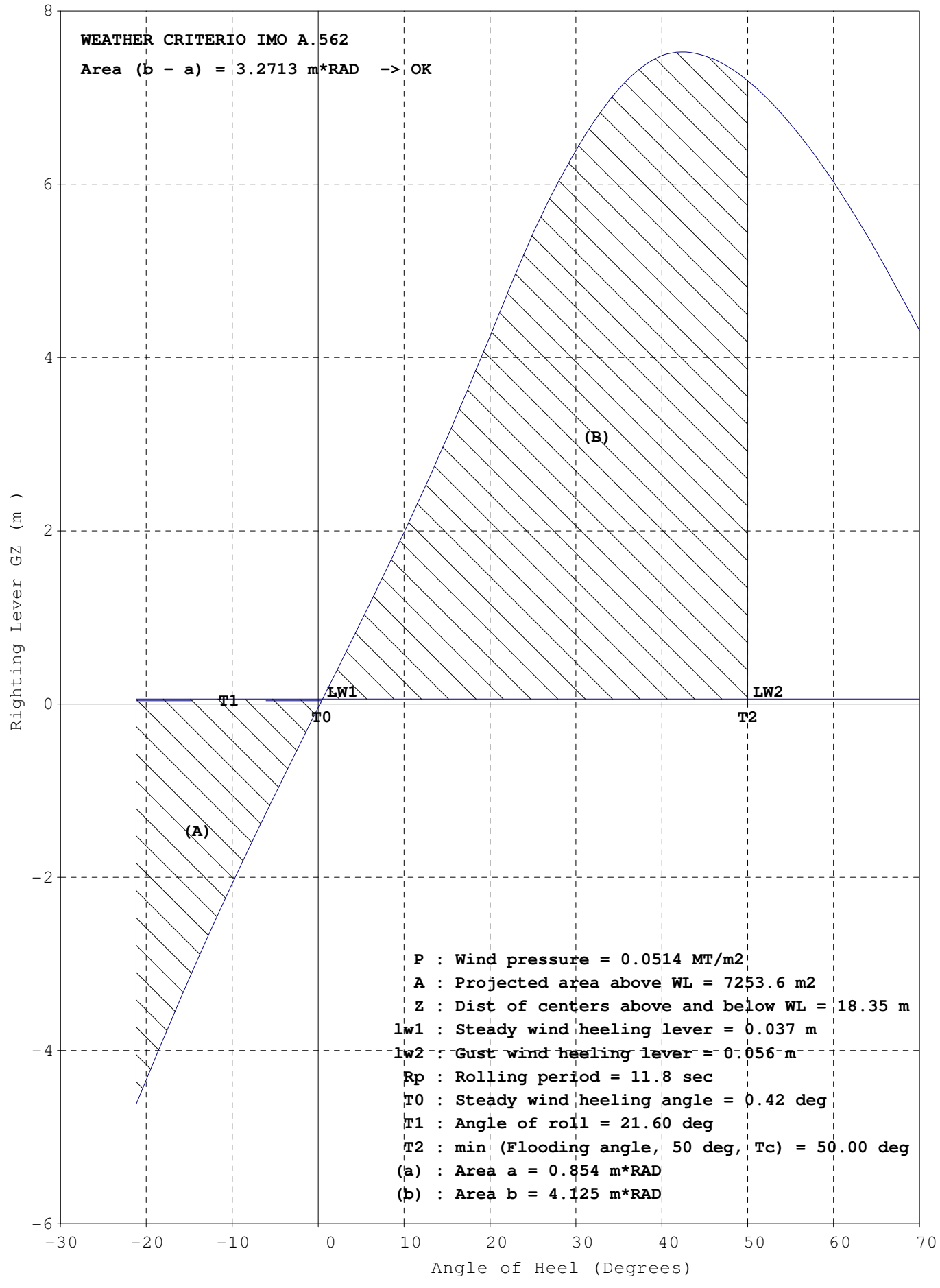
HYDROSTATICS	
Draft FPP	12.39 m
Mk F123	12.39 m
APP	12.58 m
Mk F18	12.57 m
Mid	12.49 m
Mk	12.49 m
LCF	12.48 m
TRIM	0.20 m
HEEL	0.2 Deg
LCF	12.48 m
Prop Imm	117.6 %
Rolling	12 sec
TPC-I	158.61 MT/cm
MCT	3122.9 MT-m/cm
MCH	36356 MT-m/deg
FLood	> 70 Deg
LCB	16.60 m
KM(T)	27.93 m
KG	15.50 m
GM	12.43 m
GGo	1.06 m
GoM	11.37 m
KG(eff)	16.56 m

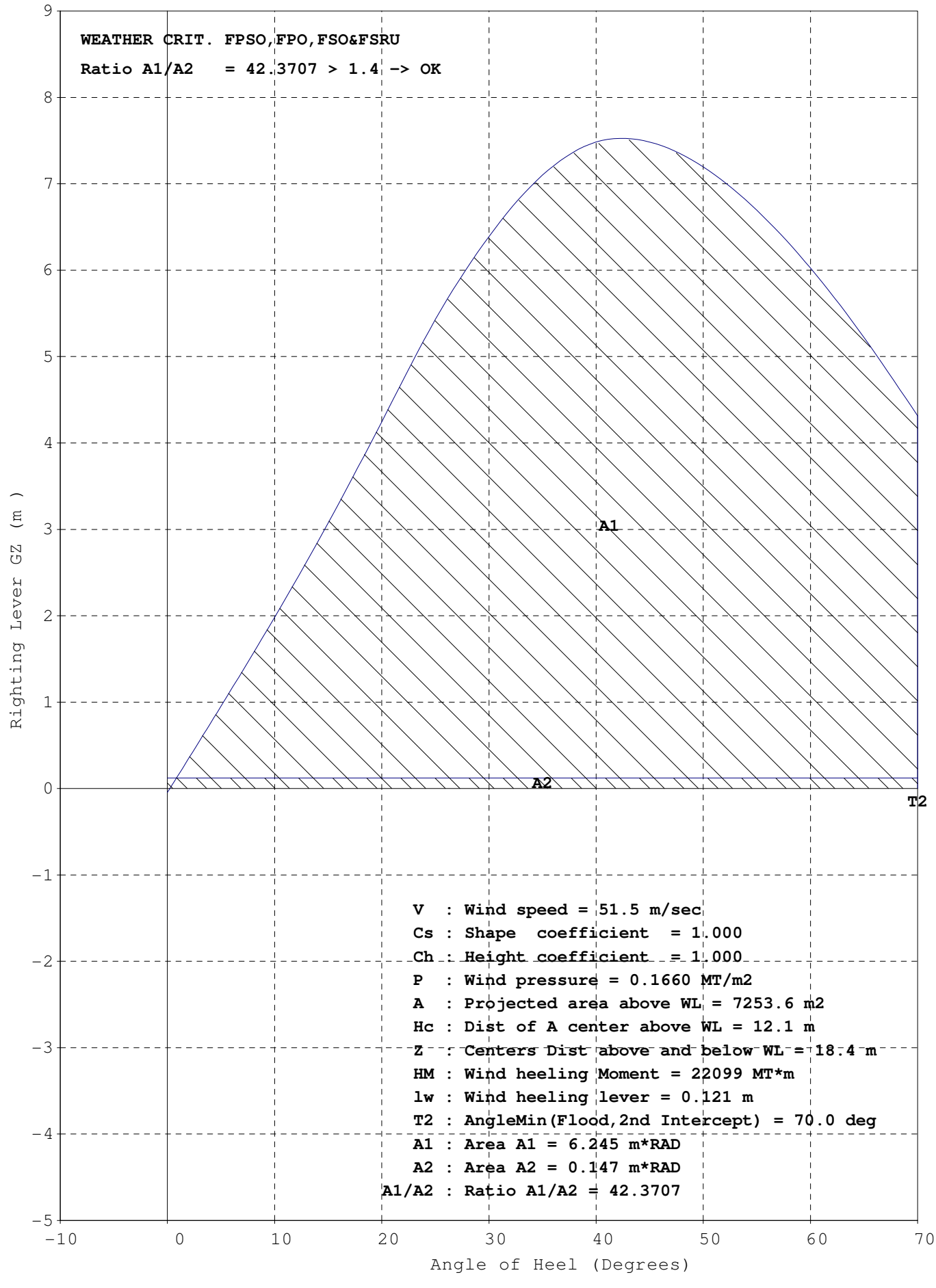
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	1.6465	>= 0.055	OK
Area 0-40 deg	m x RAD	2.8763	>= 0.09	OK
Area 30-40 deg	m x RAD	1.2297	>= 0.03	OK
GZ at/or> 30 deg	m	6.389	>= 0.2	OK
Max GZ Angle	Deg	42.405	>= 25.0	OK
Maximum GZ	7.53 m			
Initial GM	m	11.372	>= 0.15	OK
Weather Area(B-A)	m x RAD	3.2713	>= 0.0	OK
Weather Ratio A1/A2	m x RAD	42.3707	>= 1.4	OK
Lim KG-Intact	m	16.562	=<27.788	OK
Min FPP Draft	m	12.387	>= 7.825	OK
SteadyWind Angle	Deg	0.416	=< 16.0	OK
Deck Edge Angle	33.74 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.05	0.35	0.95	1.98	3.07	4.24	5.43	6.39	7.10	7.48	7.48	7.20	6.69	6.03	5.22	4.31


WEATHER CRITERIO IMO A.562
Area (b - a) = 3.2713 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
8
6
4
2
0
-2
-4
-6
-30
-20
-10
0
10
20
30
40
50
60
70
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 7253.6 m2
Z : Dist of centers above and below WL = 18.35 m
lw1 : Steady wind heeling lever = 0.037 m
lw2 : Gust wind heeling lever = 0.056 m
Rp : Rolling period = 11.8 sec
T0 : Steady wind heeling angle = 0.42 deg
T1 : Angle of roll = 21.60 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.854 m*RAD
(b) : Area b = 4.125 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 42.3707 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 7253.6 m2
Hc : Dist of A center above WL = 12.1 m
Z : Centers Dist above and below WL = 18.4 m
HM : Wind heeling Moment = 22099 MT*m
lw : Wind heeling lever = 0.121 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 6.245 m*RAD
A2 : Area A2 = 0.147 m*RAD
A1/A2 : Ratio A1/A2 = 42.3707
Righting Lever GZ (m)
Angle of Heel (Degrees)
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T. (S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T. (S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank (S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S					114574			99874.0	18.88	17.72	0.00	73680

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1 [C]	Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	99874	720648	720648

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5	0	0.2	116.116	0.00	-9.97	55933_Max
No1 W.B.Tk (S)	101	111	8789.5	0	0.2	116.116	0.00	9.97	55933_Max
No2 W.B.Tk (P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk (S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		40003.3	44.332	9.45	0.00	111866

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

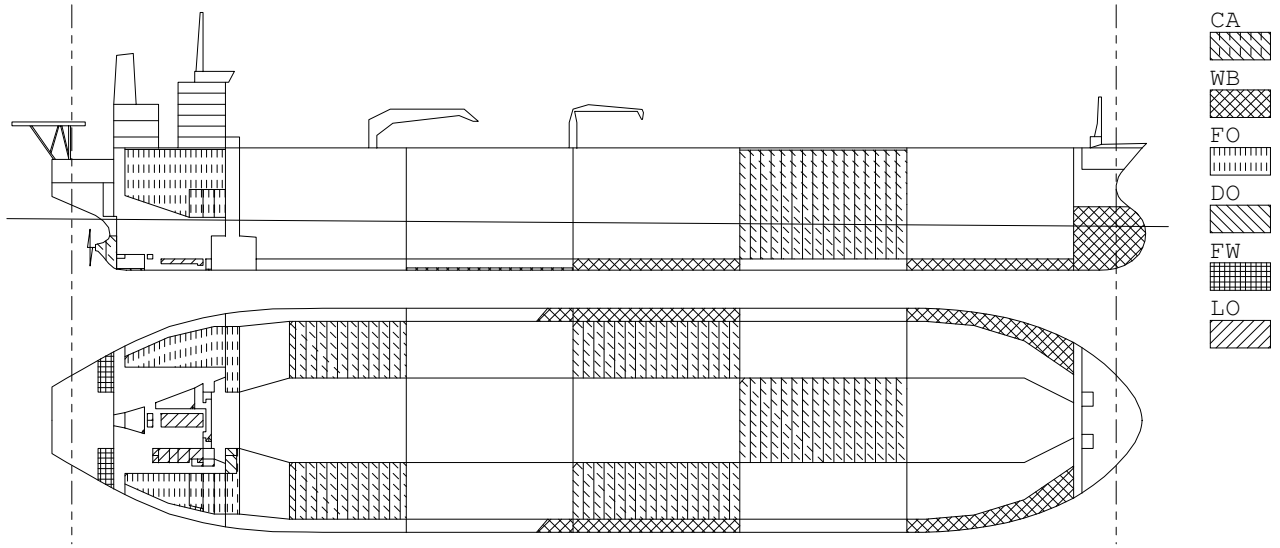
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

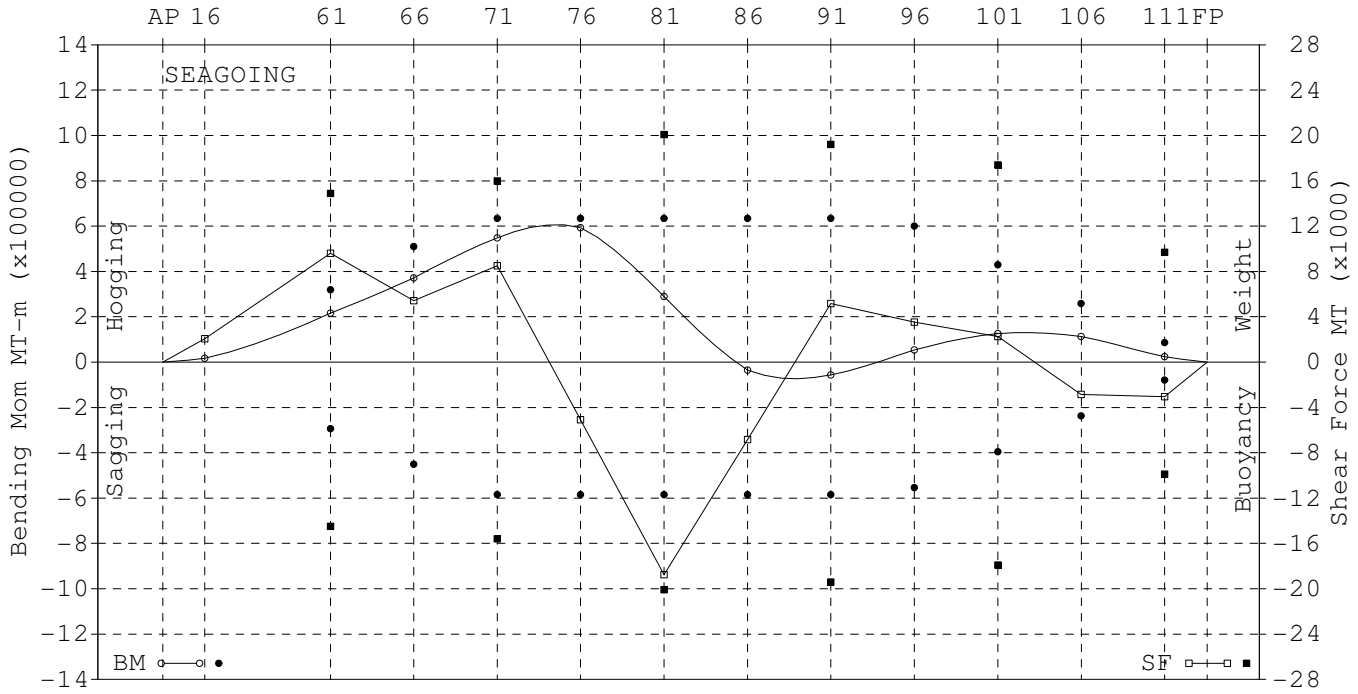
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

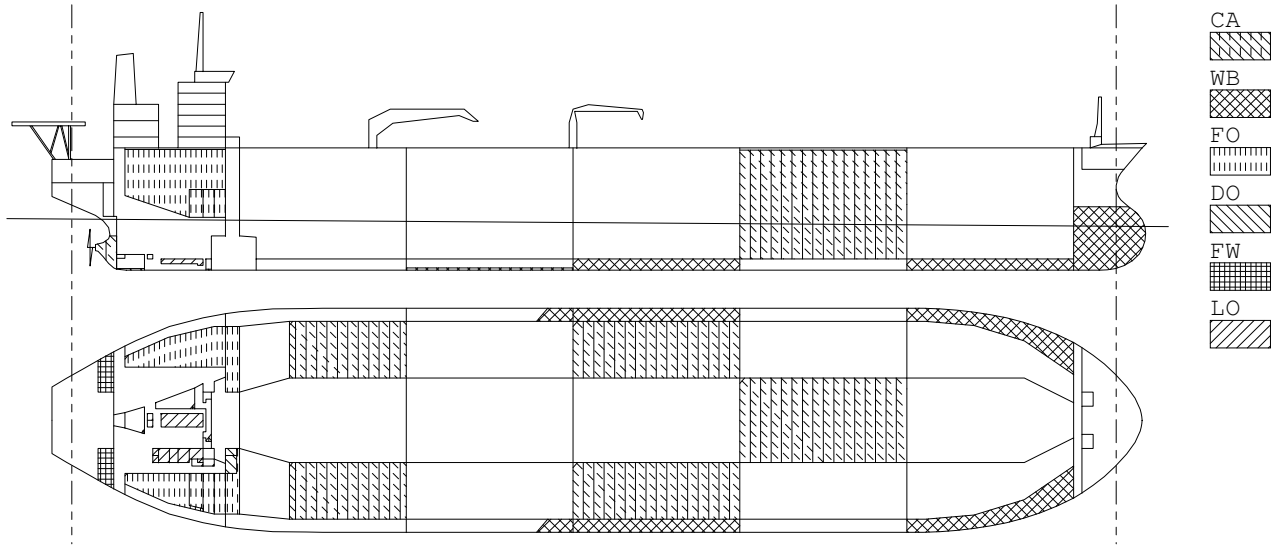


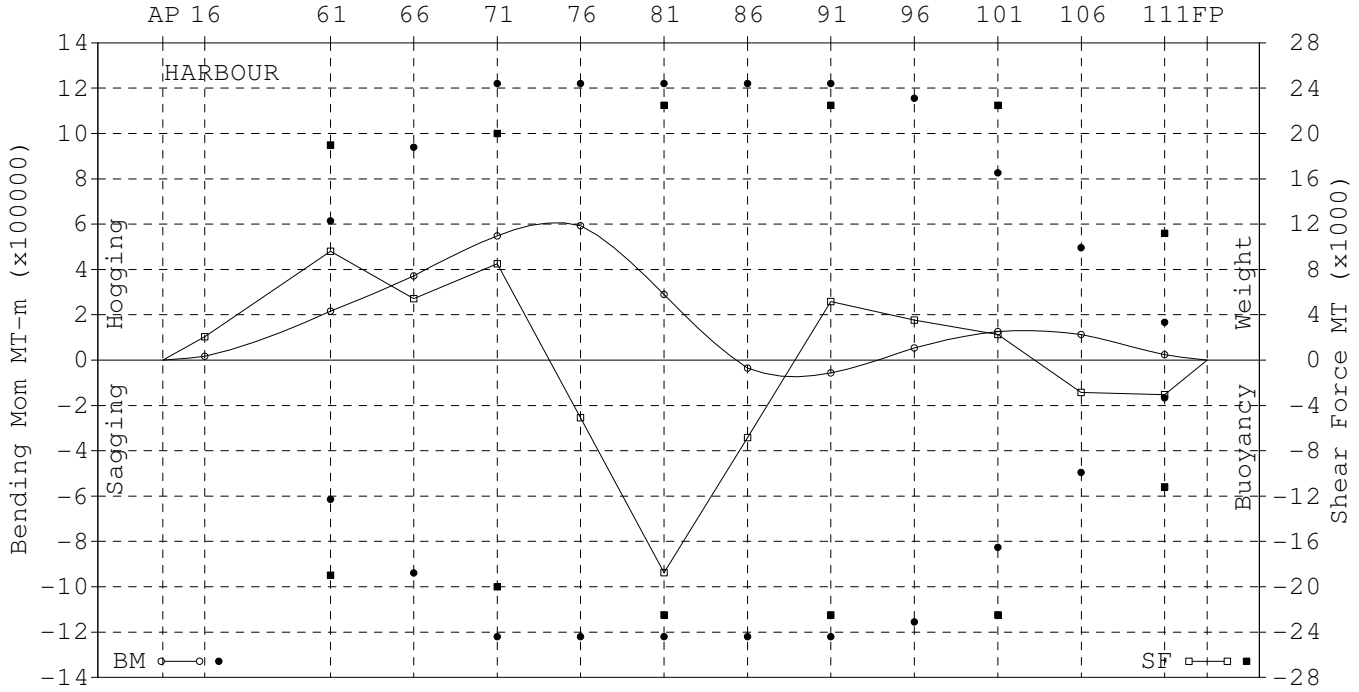


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2064	–	–	17060	–	–	–	–
61	9616	65	14900	216015	68	319000	–	-294000
66	5438	–	–	371937	73	510000	–	-450000
71	8508	53	16000	548286	86	635000	–	-585000
76	-5073	–	–	593736	94	635000	–	-585000
81	-18760	93	-20100	290166	46	635000	–	-585000
86	-6830	–	–	-34654	–	635000	6	-585000
91	5158	27	19200	-56028	–	635000	10	-585000
96	3519	–	–	53796	9	600000	–	-554000
101	2266	13	17400	125856	29	429000	–	-395000
106	-2862	–	–	112957	44	258000	–	-237000
111	-3040	31	-9900	23401	27	86000	–	-79000

SF max -18760 MT 93% at F81 +Buoyancy
BM max 606832 MT-m 96% at F75 Hogging

Estimated Deflection Amidships = 9cm HOGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	2064	-	-	17060	-	-	-	-
61	9616	51	19000	216015	35	615000	-	-615000
66	5438	-	-	371937	40	940000	-	-940000
71	8508	43	20000	548286	45	1221000	-	-1221000
76	-5073	-	-	593736	49	1221000	-	-1221000
81	-18760	83	-22500	290166	24	1221000	-	-1221000
86	-6830	-	-	-34654	-	1221000	3	-1221000
91	5158	23	22500	-56028	-	1221000	5	-1221000
96	3519	-	-	53796	5	1156000	-	-1156000
101	2266	10	22500	125856	15	826000	-	-826000
106	-2862	-	-	112957	23	496000	-	-496000
111	-3040	27	-11200	23401	14	167000	-	-167000

SF max -18760 MT 83% at F81 +Buoyancy
BM max 606832 MT-m 50% at F75 Hogging

Estimated Deflection Amidships = 9cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

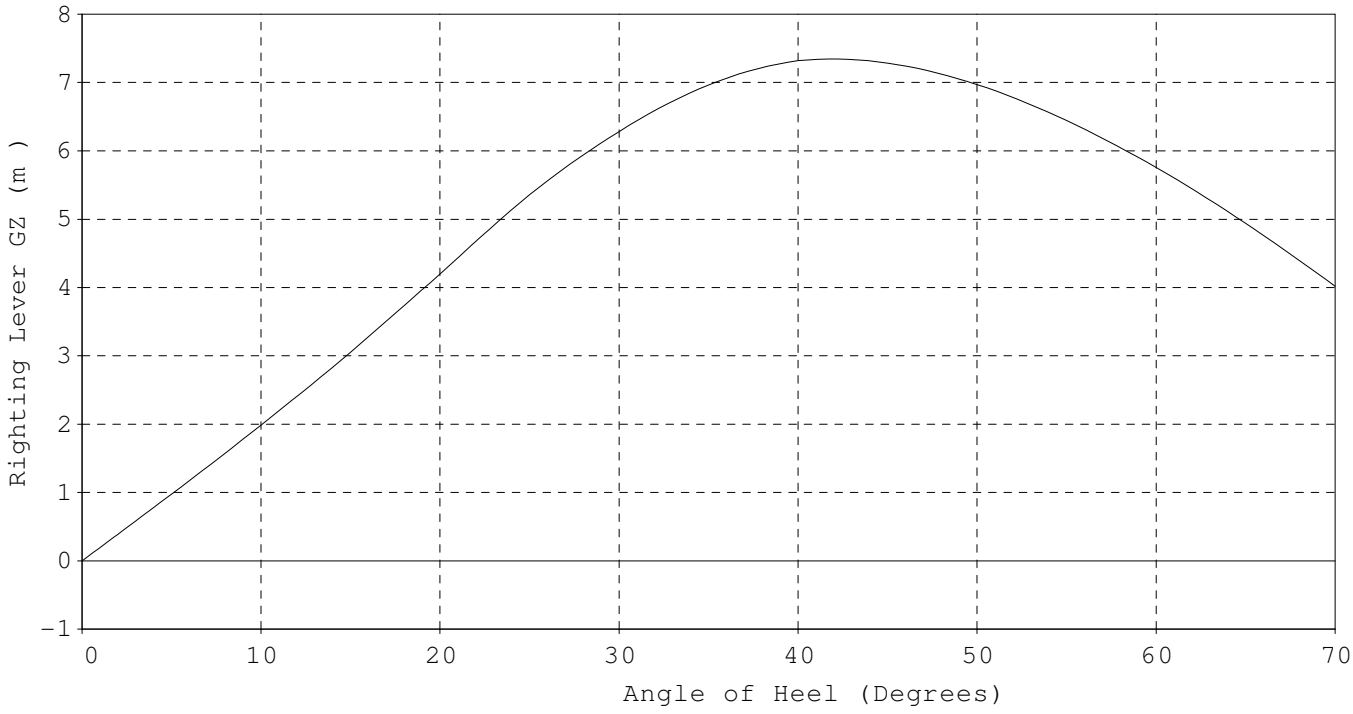
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	85620	17.63	10.61	0.00	64486
Ballast	47005	9.48	67.93	0.00	188886
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	142475	15.36	20.47	0.01	262081
TOTALS	183977	15.49	13.61	0.00	262081

HYDROSTATICS

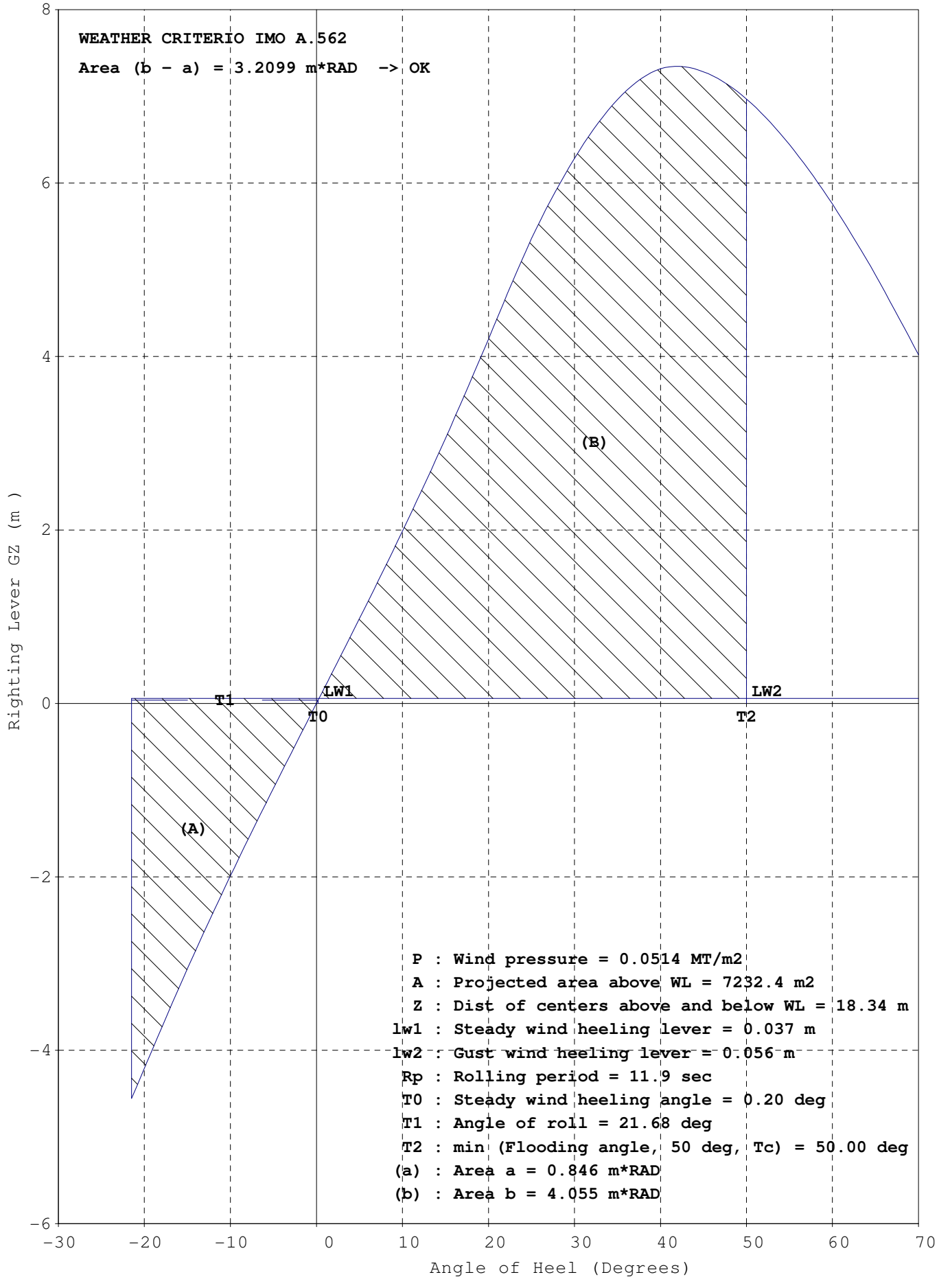
Draft FPP	11.62 m
Mk F123	11.64 m
APP	13.58 m
Mk F18	13.49 m
Mid	12.60 m
Mk	12.61 m
LCF	12.53 m
TRIM	1.96 m
HEEL	0.0 Deg
LCF	11.35 m
Prop Imm	127.5 %
Rolling	12 sec
TPC-I	159.96 MT/cm
MCT	3201.6 MT-m/cm
MCH	35818 MT-m/deg
FLood	> 70 Deg
LCB	13.55 m
KM(T)	28.07 m
KG	15.49 m
GM	12.58 m
GGo	1.42 m
GoM	11.15 m
KG(eff)	16.92 m

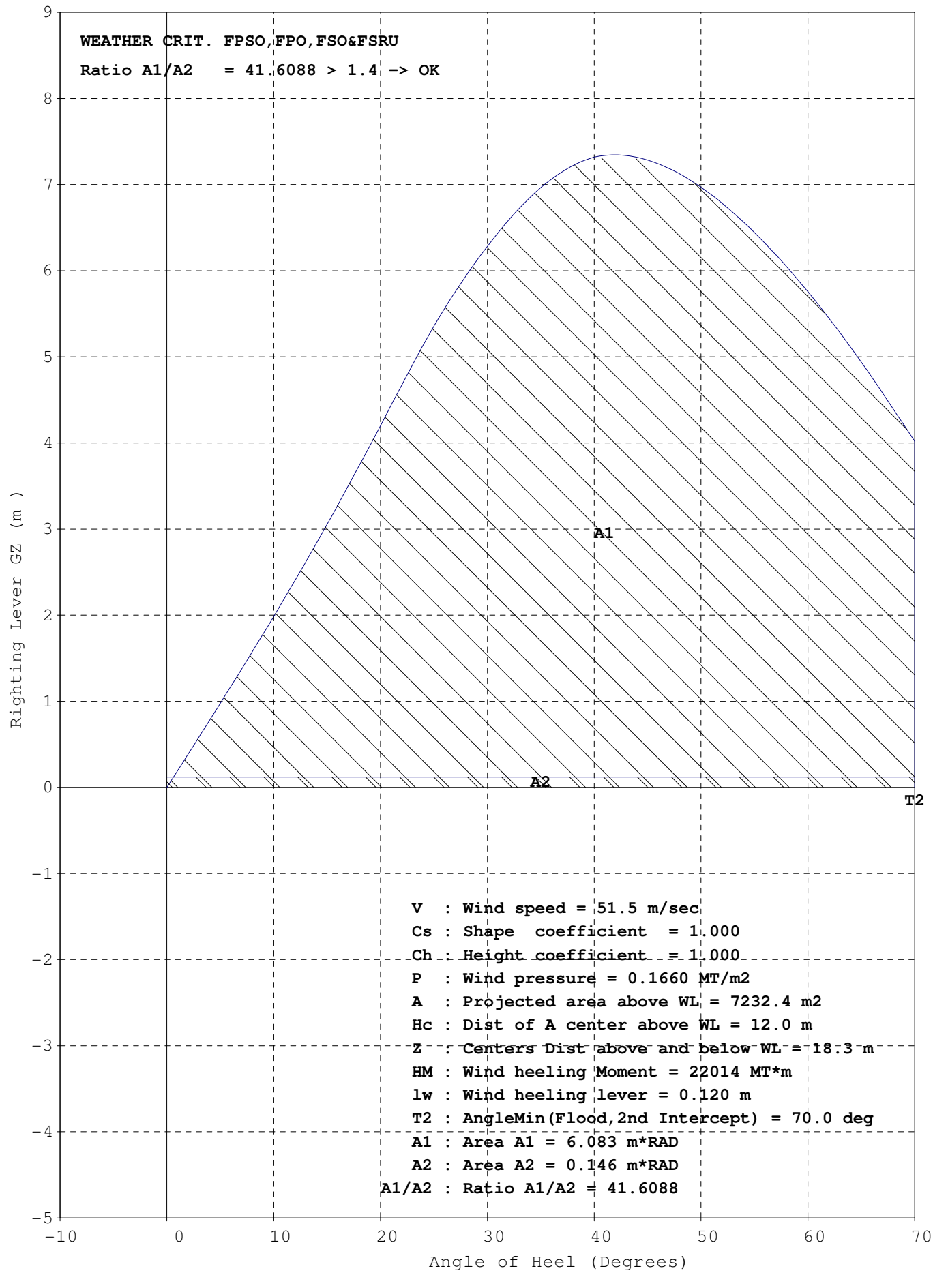
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	1.6346	>=	0.055	OK
Area 0-40 deg	m x RAD	2.8405	>=	0.09	OK
Area 30-40 deg	m x RAD	1.2059	>=	0.03	OK
GZ at/or> 30 deg	m	6.283	>=	0.2	OK
Max GZ Angle	Deg	41.933	>=	25.0	OK
Maximum GZ	7.35 m				
Initial GM	m	11.155	>=	0.15	OK
Weather Area(B-A)	m x RAD	3.2099	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	41.6088	>=	1.4	OK
Lim KG-Intact	m	16.918	=<	27.926	OK
Min FPP Draft	m	11.621	>=	7.825	OK
SteadyWind Angle	Deg	0.198	=<	16.0	OK
Deck Edge Angle	34.55 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.39	0.98	1.99	3.05	4.20	5.36	6.28	6.96	7.32	7.28	6.97	6.44	5.76	4.94	4.02


WEATHER CRITERIO IMO A.562
Area (b - a) = 3.2099 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
8
6
4
2
0
-2
-4
-6
-30
-20
-10
0
10
20
30
40
50
60
70
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 7232.4 m2
Z : Dist of centers above and below WL = 18.34 m
lw1 : Steady wind heeling lever = 0.037 m
lw2 : Gust wind heeling lever = 0.056 m
Rp : Rolling period = 11.9 sec
T0 : Steady wind heeling angle = 0.20 deg
T1 : Angle of roll = 21.68 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.846 m*RAD
(b) : Area b = 4.055 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 41.6088 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 7232.4 m2
Hc : Dist of A center above WL = 12.0 m
Z : Centers Dist above and below WL = 18.3 m
HM : Wind heeling Moment = 22014 MT*m
lw : Wind heeling lever = 0.120 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 6.083 m*RAD
A2 : Area A2 = 0.146 m*RAD
A1/A2 : Ratio A1/A2 = 41.6088
Righting Lever GZ (m)
Angle of Heel (Degrees)
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME		FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T.	(C)	101	111										
No1 C.O.T.	(P)	101	111										
No1 C.O.T.	(S)	101	111										
No2 C.O.T.	(C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T.	(P)	91	101										
No2 C.O.T.	(S)	91	101										
No3 C.O.T.	(C)	81	91										
No3 C.O.T.	(P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T.	(S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T.	(C)	71	81										
No4 C.O.T.	(P)	71	81										
No4 C.O.T.	(S)	71	81										
No5 C.O.T.	(C)	61	71										
No5 C.O.T.	(P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T.	(S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank	(P)	61	64										
Slop Tank	(S)	61	64										
T O T A L S						98222			85620.0	10.61	17.63	0.00	64486

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	85620	617797	617797

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME		FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank	(C)	111	137	4812.4	100	4932.7	152.867	9.48	0.00	0
No1 W.B.Tk	(P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	0
No1 W.B.Tk	(S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	0
No2 W.B.Tk	(P)	91	101	9731.2						
No2 W.B.Tk	(S)	91	101	9731.2						
No3 W.B.Tk	(P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk	(S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk	(P)	71	81	9514.4	21	2000.0	-30.777	0.75	-13.24	94443_Max
No4 W.B.Tk	(S)	71	81	9514.4	21	2000.0	-30.777	0.75	13.24	94443_Max
No5 W.B.Tk	(P)	56	71	8009.9						
No5 W.B.Tk	(S)	56	71	8009.9						
Aft Peak Tank	(C)	-8	17	2015.8						
T O T A L S				98483.0		47005.1	67.930	9.48	0.00	188886

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water Density = 1.000 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous Density = 1.000 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous Density = .900 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous Density = .950 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

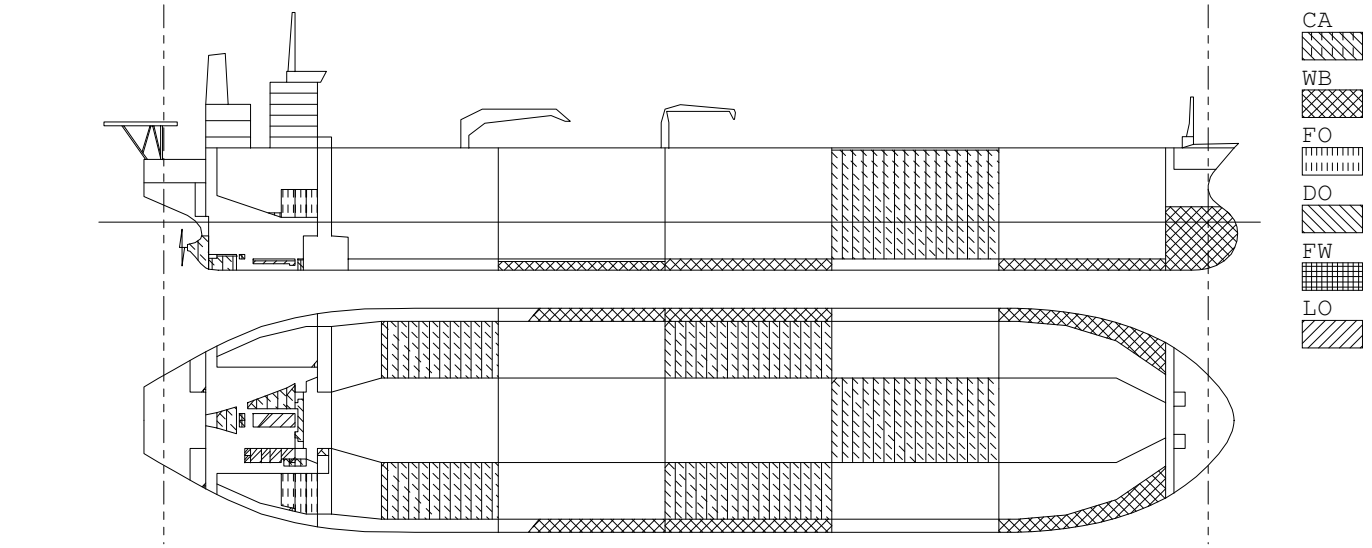
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

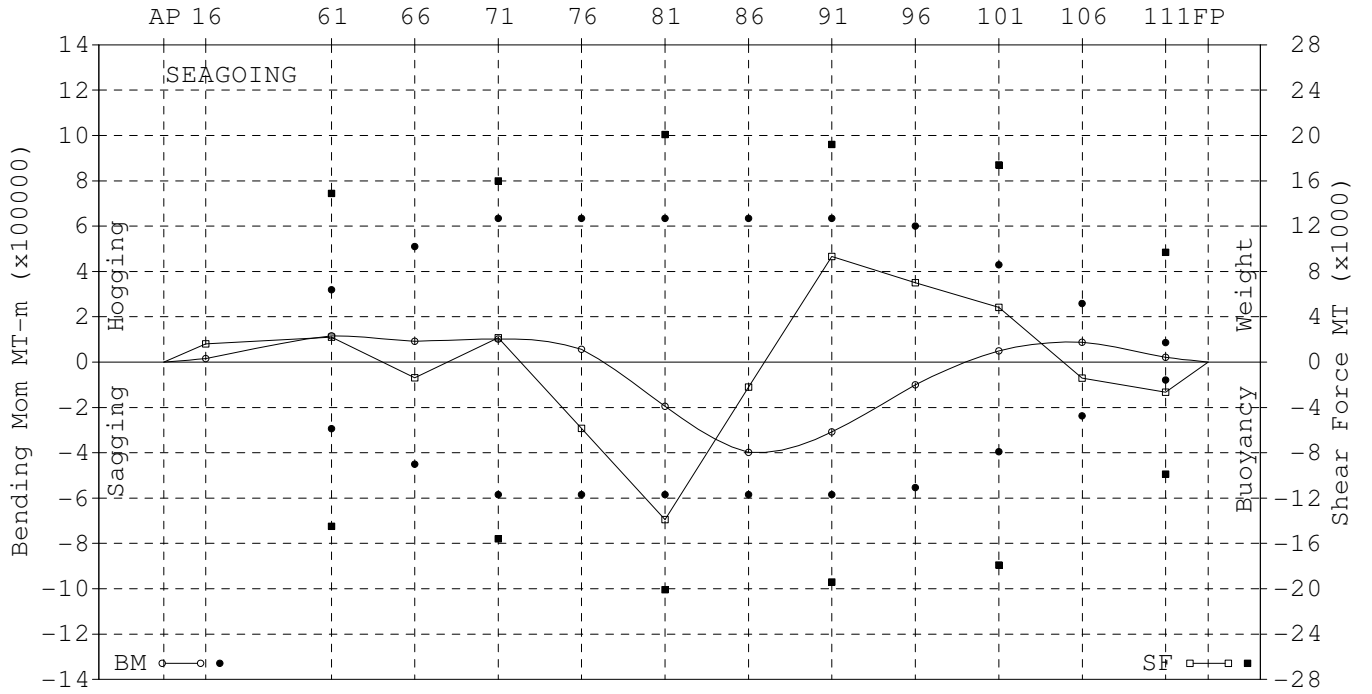
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

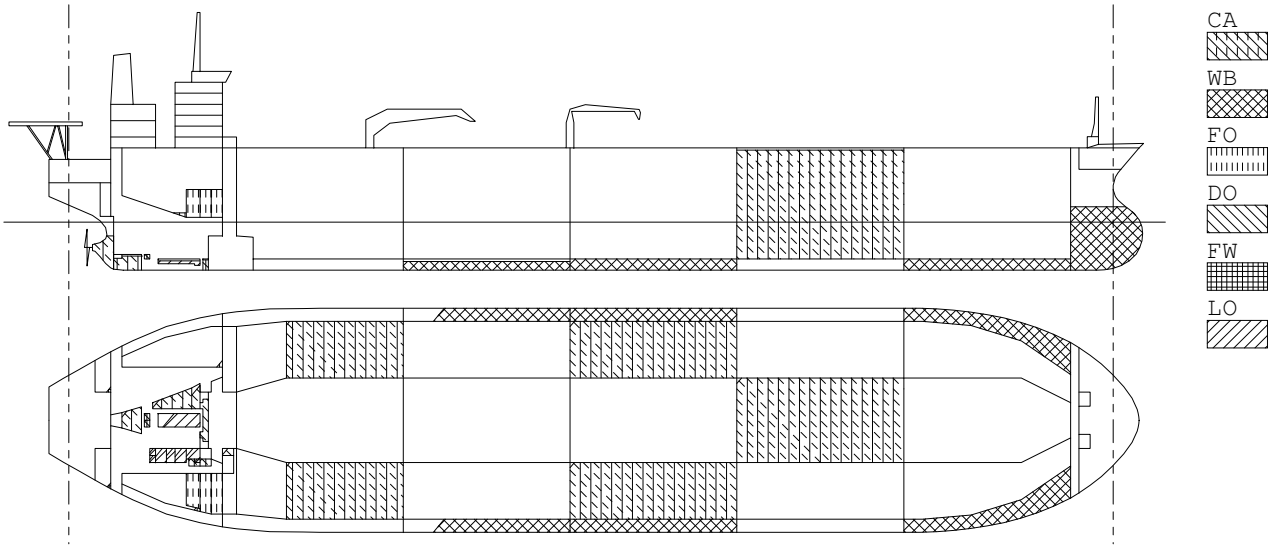


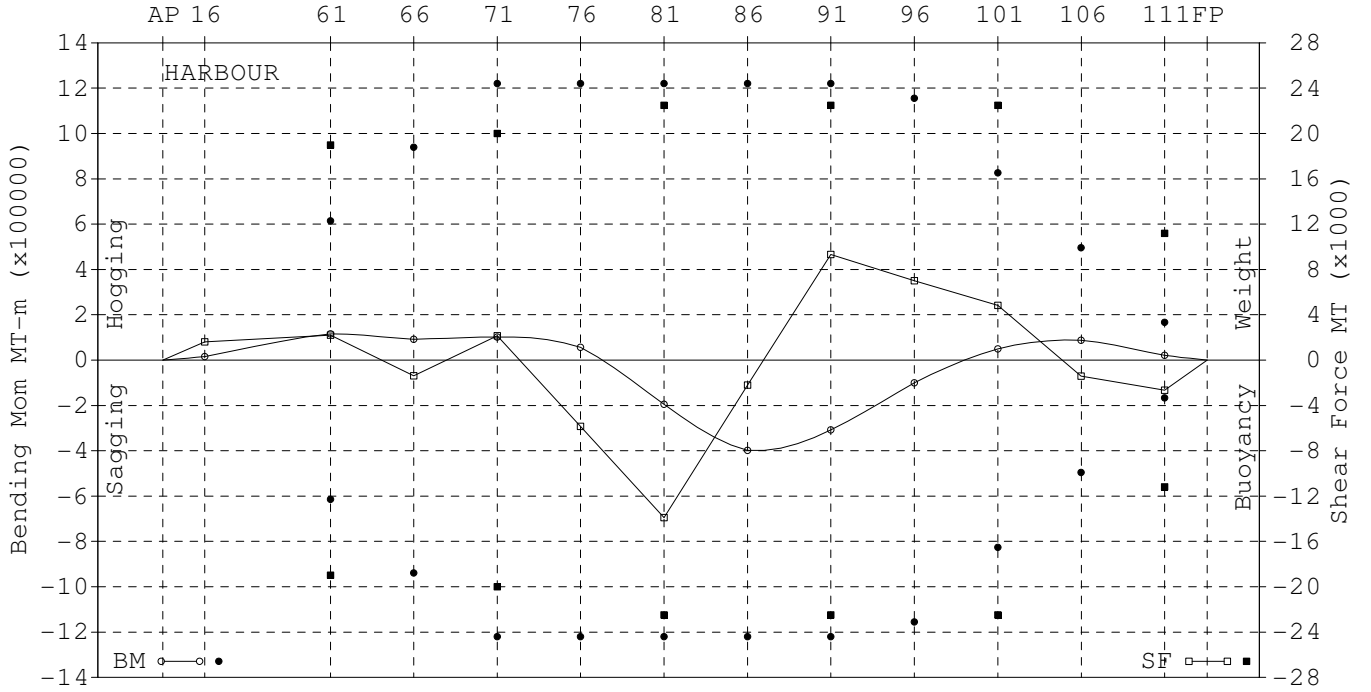


FRAME	SHEAR FORCE			BENDING MOMENT				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1615	–	–	16085	–	–	–	–
61	2210	15	14900	116538	37	319000	–	-294000
66	-1375	–	–	92038	18	510000	–	-450000
71	2145	13	16000	101463	16	635000	–	-585000
76	-5842	–	–	56250	9	635000	–	-585000
81	-13894	69	-20100	-195393	–	635000	33	-585000
86	-2193	–	–	-399042	–	635000	68	-585000
91	9336	49	19200	-307977	–	635000	53	-585000
96	7010	–	–	-100265	–	600000	18	-554000
101	4841	28	17400	49309	11	429000	–	-395000
106	-1410	–	–	87858	34	258000	–	-237000
111	-2663	27	-9900	20893	24	86000	–	-79000

SF max -13894 MT 69% at F81 +Buoyancy
BM max -400267 MT-m 68% at F86 Sagging

Estimated Deflection Amidships = -4cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1615	-	-	16085	-	-	-	-
61	2210	12	19000	116538	19	615000	-	-615000
66	-1375	-	-	92038	10	940000	-	-940000
71	2145	11	20000	101463	8	1221000	-	-1221000
76	-5842	-	-	56250	5	1221000	-	-1221000
81	-13894	62	-22500	-195393	-	1221000	16	-1221000
86	-2193	-	-	-399042	-	1221000	33	-1221000
91	9336	41	22500	-307977	-	1221000	25	-1221000
96	7010	-	-	-100265	-	1156000	9	-1156000
101	4841	22	22500	49309	6	826000	-	-826000
106	-1410	-	-	87858	18	496000	-	-496000
111	-2663	24	-11200	20893	13	167000	-	-167000

SF max -13894 MT 62% at F81 +Buoyancy
BM max -400267 MT-m 33% at F86 Sagging

Estimated Deflection Amidships = -4cm SAGGING

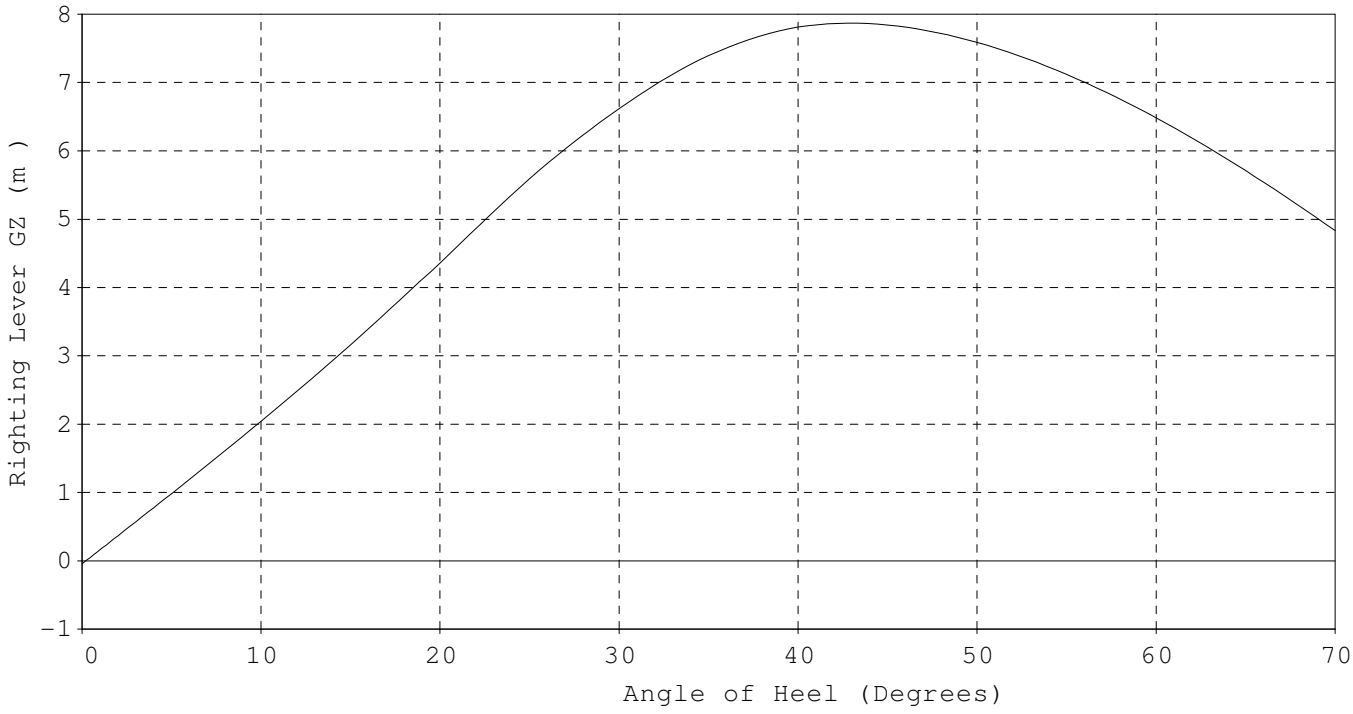
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	85620	17.63	10.61	0.00	64486
Ballast	58005	8.94	49.11	0.00	188886
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	145414	14.15	24.43	0.07	262081
TOTALS	186916	14.55	16.80	0.04	262081

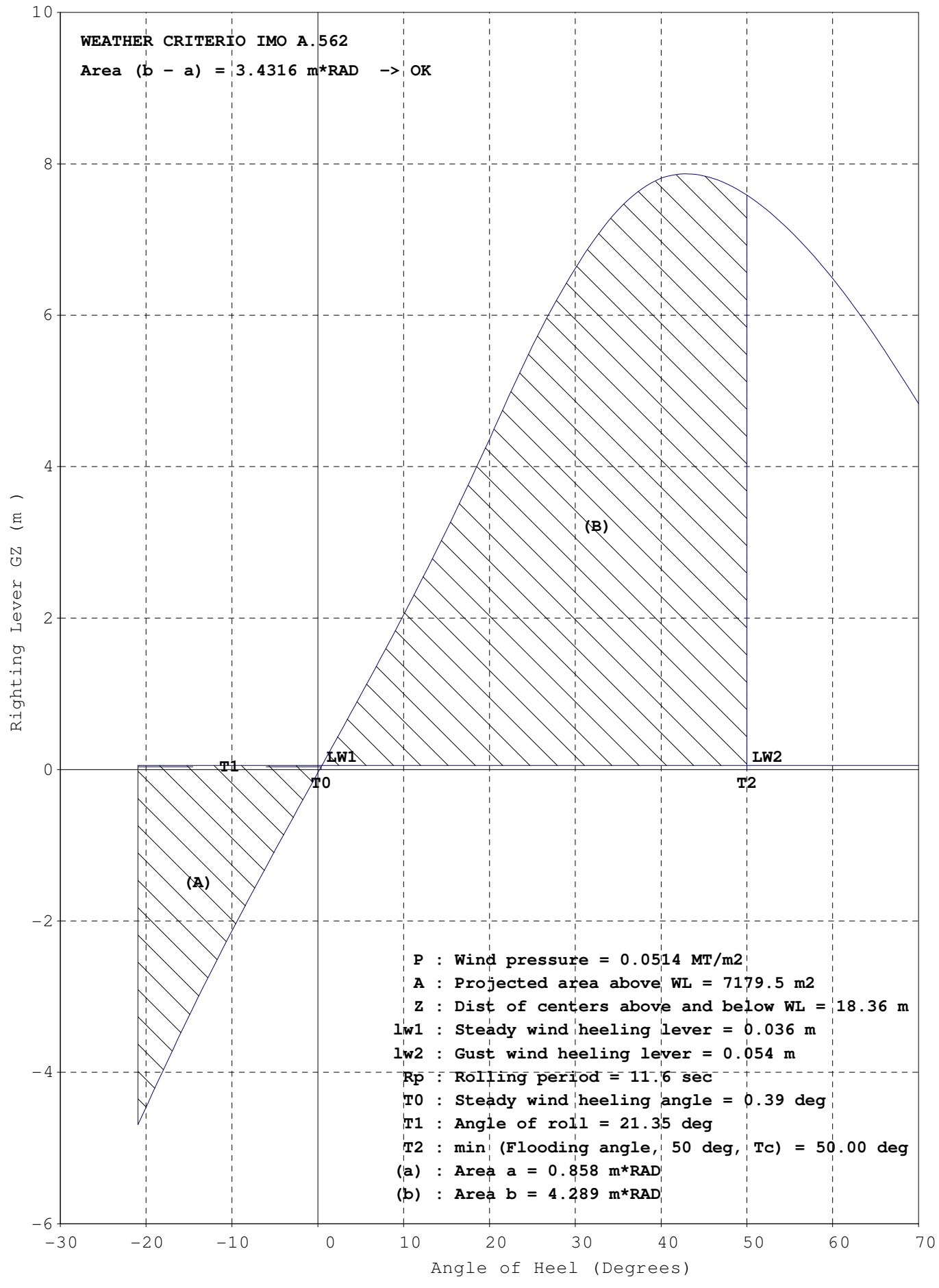
HYDROSTATICS	
Draft FPP	12.70 m
Mk F123	12.70 m
APP	12.73 m
Mk F18	12.73 m
Mid	12.71 m
Mk	12.71 m
LCF	12.71 m
TRIM	0.03 m
HEEL	0.2 Deg
LCF	12.23 m
Prop Imm	119.1 %
Rolling	12 sec
TPC-I	158.87 MT/cm
MCT	3136.4 MT-m/cm
MCH	38238 MT-m/deg
FLood	> 70 Deg
LCB	16.79 m
KM(T)	27.68 m
KG	14.55 m
GM	13.12 m
GGo	1.40 m
GoM	11.72 m
KG(eff)	15.95 m

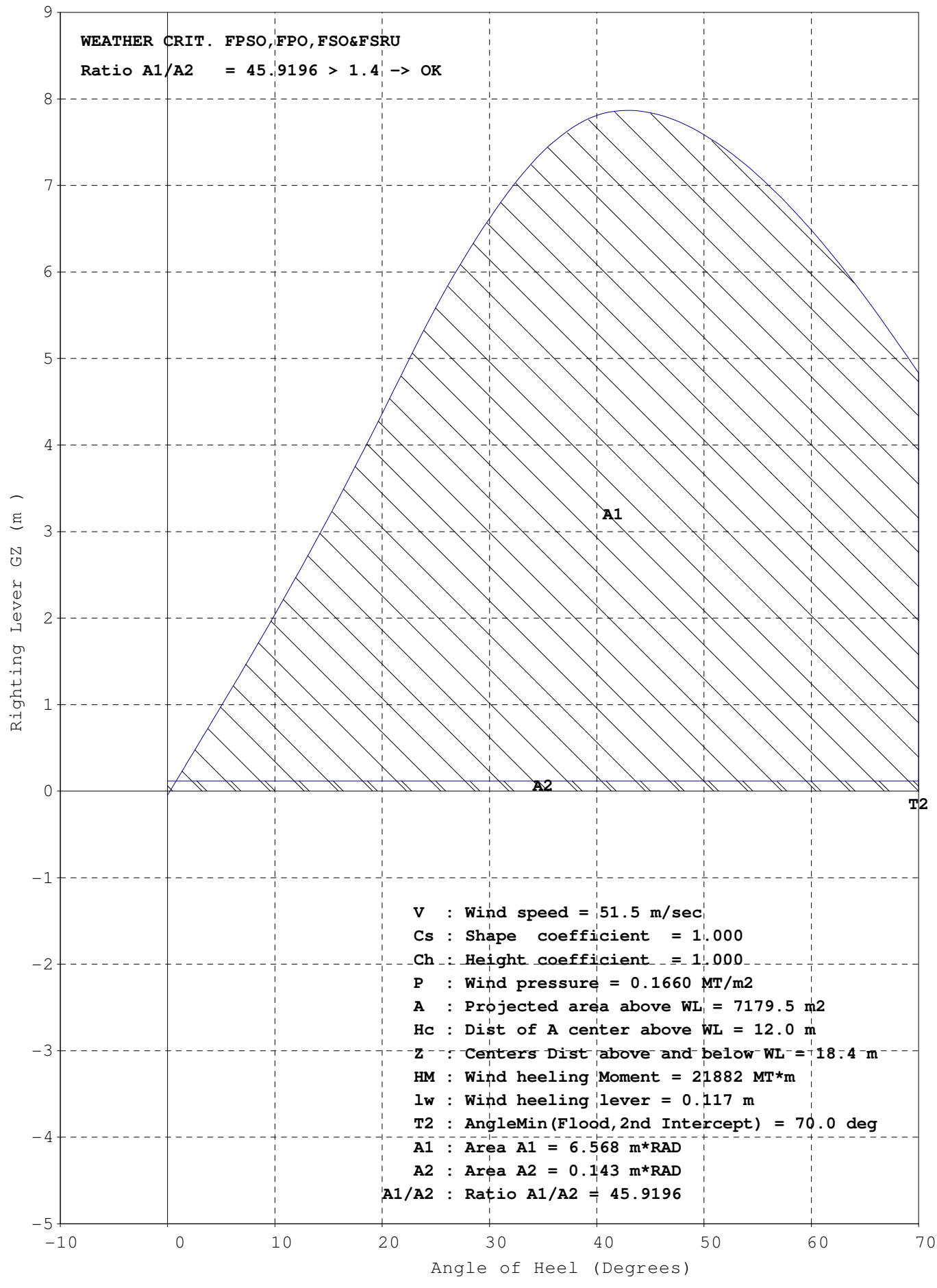
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	1.6965	>=	0.055	OK
Area 0-40 deg	m x RAD	2.9763	>=	0.09	OK
Area 30-40 deg	m x RAD	1.2797	>=	0.03	OK
GZ at/or> 30 deg	m	6.618	>=	0.2	OK
Max GZ Angle	Deg	42.89	>=	25.0	OK
Maximum GZ	7.87 m				
Initial GM	m	11.721	>=	0.15	OK
Weather Area(B-A)	m x RAD	3.4316	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	45.9196	>=	1.4	OK
Lim KG-Intact	m	15.954	=<	27.528	OK
Min FPP Draft	m	12.701	>=	7.825	OK
SteadyWind Angle	Deg	0.394	=<	16.0	OK
Deck Edge Angle	33.18 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.04	0.37	0.98	2.04	3.16	4.36	5.59	6.62	7.39	7.81	7.84	7.59	7.12	6.48	5.71	4.83


WEATHER CRITERIO IMO A.562
Area (b - a) = 3.4316 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 7179.5 m2
Z : Dist of centers above and below WL = 18.36 m
lw1 : Steady wind heeling lever = 0.036 m
lw2 : Gust wind heeling lever = 0.054 m
Rp : Rolling period = 11.6 sec
T0 : Steady wind heeling angle = 0.39 deg
T1 : Angle of roll = 21.35 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.858 m*RAD
(b) : Area b = 4.289 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 45.9196 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 7179.5 m2
Hc : Dist of A center above WL = 12.0 m
Z : Centers Dist above and below WL = 18.4 m
HM : Wind heeling Moment = 21882 MT*m
lw : Wind heeling lever = 0.117 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 6.568 m*RAD
A2 : Area A2 = 0.143 m*RAD
A1/A2 : Ratio A1/A2 = 45.9196
Righting Lever GZ (m)
Angle of Heel (Degrees)
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91										
No3 C.O.T. (P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T. (S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T. (S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S					98222			85620.0	10.61	17.63	0.00	64486

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1 [C]	Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	85620	617797	617797

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4	100	4932.7	152.867	9.48	0.00	0
No1 W.B.Tk (P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	0
No1 W.B.Tk (S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	0
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4	77	7500.0	-31.185	5.08	-19.35	94443_Max
No4 W.B.Tk (S)	71	81	9514.4	77	7500.0	-31.185	5.08	19.36	94443_Max
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		58005.1	49.106	8.94	0.00	188886

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

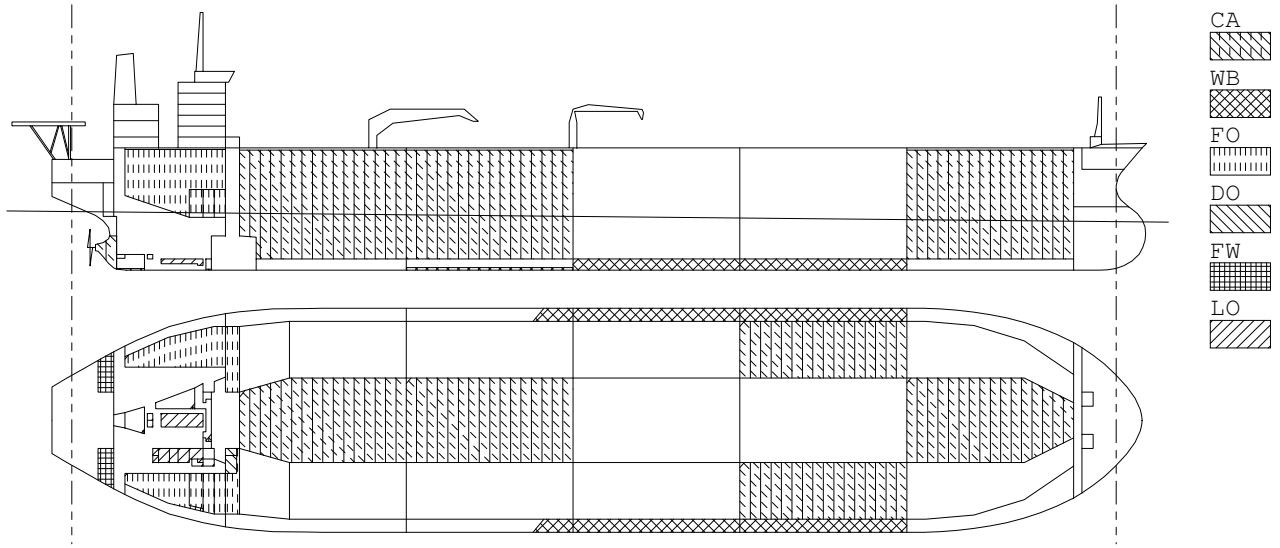
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

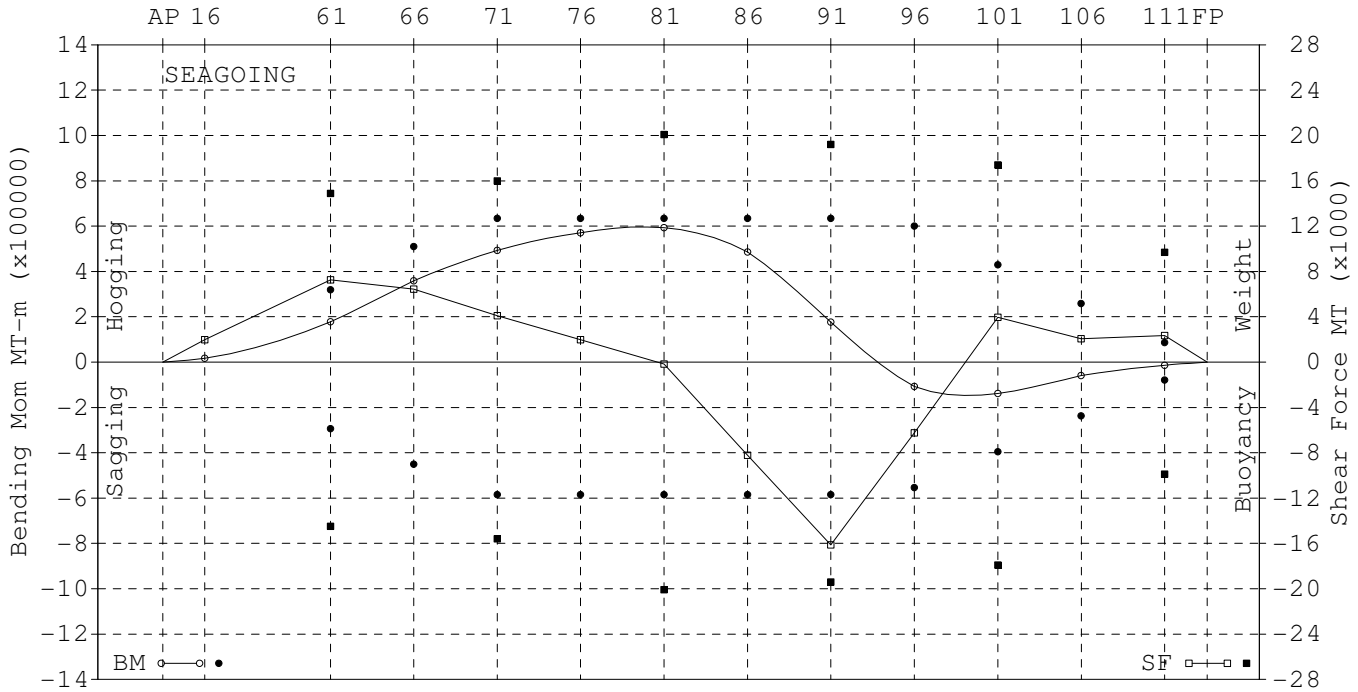
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

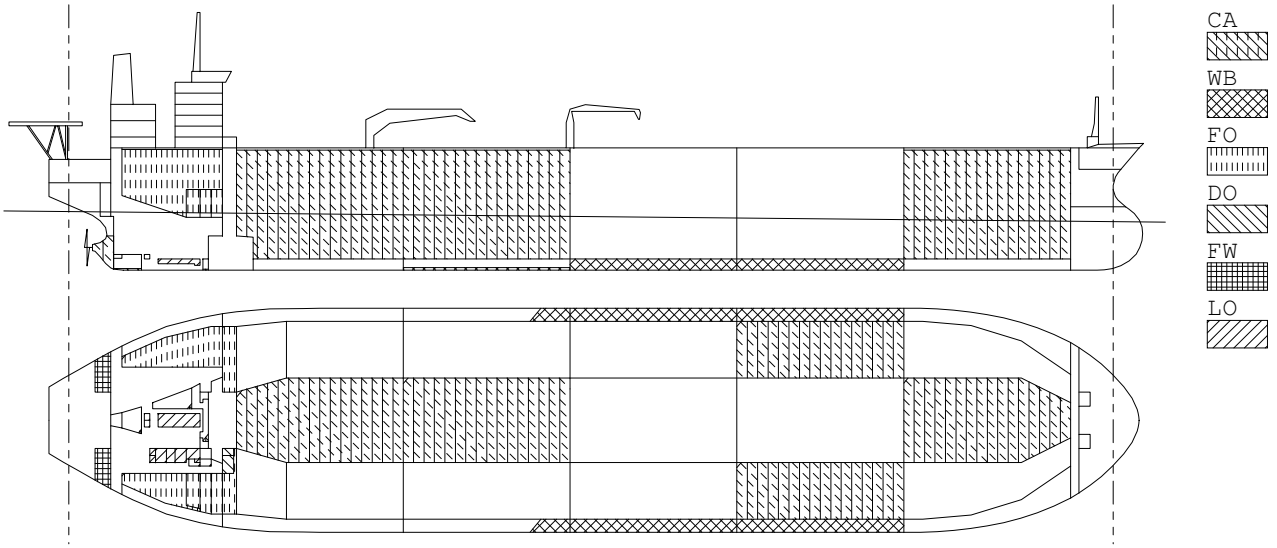


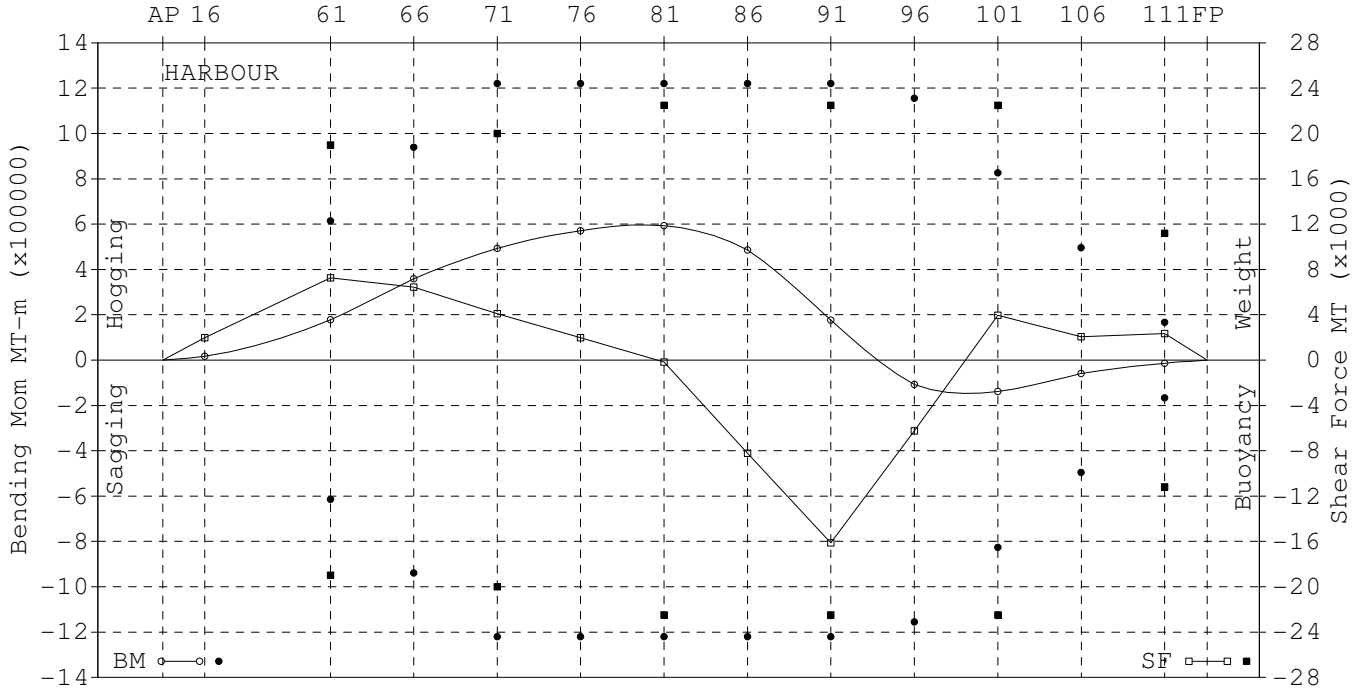


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1990	-	-	16738	-	-	-	-
61	7257	49	14900	177617	56	319000	-	-294000
66	6443	-	-	358557	70	510000	-	-450000
71	4106	26	16000	492524	78	635000	-	-585000
76	1967	-	-	571245	90	635000	-	-585000
81	-174	1	-20100	592910	93	635000	-	-585000
86	-8220	-	-	486295	77	635000	-	-585000
91	-16123	83	-19400	176808	28	635000	-	-585000
96	-6253	-	-	-107663	-	600000	19	-554000
101	3964	23	17400	-138109	-	429000	35	-395000
106	2074	-	-	-60026	-	258000	25	-237000
111	2357	24	9700	-13471	-	86000	17	-79000

SF max -16123 MT 83% at F91 +Buoyancy
BM max 596741 MT-m 94% at F80 Hogging

Estimated Deflection Amidships = 14cm HOGGING





FRAME No	SHEAR FORCE Actual (MT)	Percent %	Limit (MT)	BENDING MOMENT Actual (MT-m)	HOGGING Percent %	Limit (MT-m)	SAGGING Percent %	HARBOUR Limit (MT-m)
16	1990	–	–	16738	–	–	–	–
61	7257	38	19000	177617	29	615000	–	-615000
66	6443	–	–	358557	38	940000	–	-940000
71	4106	21	20000	492524	40	1221000	–	-1221000
76	1967	–	–	571245	47	1221000	–	-1221000
81	-174	1	-22500	592910	49	1221000	–	-1221000
86	-8220	–	–	486295	40	1221000	–	-1221000
91	-16123	72	-22500	176808	14	1221000	–	-1221000
96	-6253	–	–	-107663	–	1156000	9	-1156000
101	3964	18	22500	-138109	–	826000	17	-826000
106	2074	–	–	-60026	–	496000	12	-496000
111	2357	21	11200	-13471	–	167000	8	-167000

SF max -16123 MT 72% at F91 +Buoyancy
BM max 596741 MT-m 49% at F80 Hogging

Estimated Deflection Amidships = 14cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

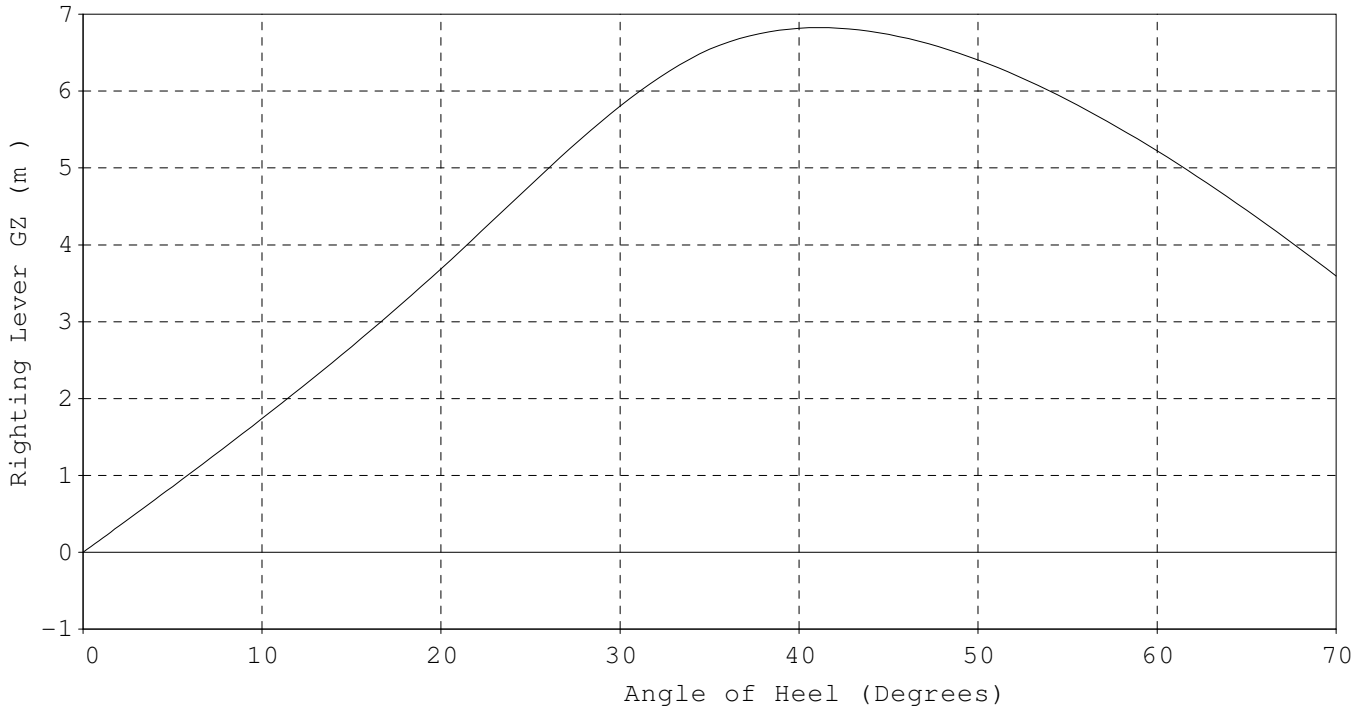
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	114003	17.41	21.75	0.00	107997
Ballast	44403	8.60	36.89	0.00	188886
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	168255	15.45	17.42	0.01	305592
TOTALS	209758	15.55	12.01	0.00	305592

HYDROSTATICS

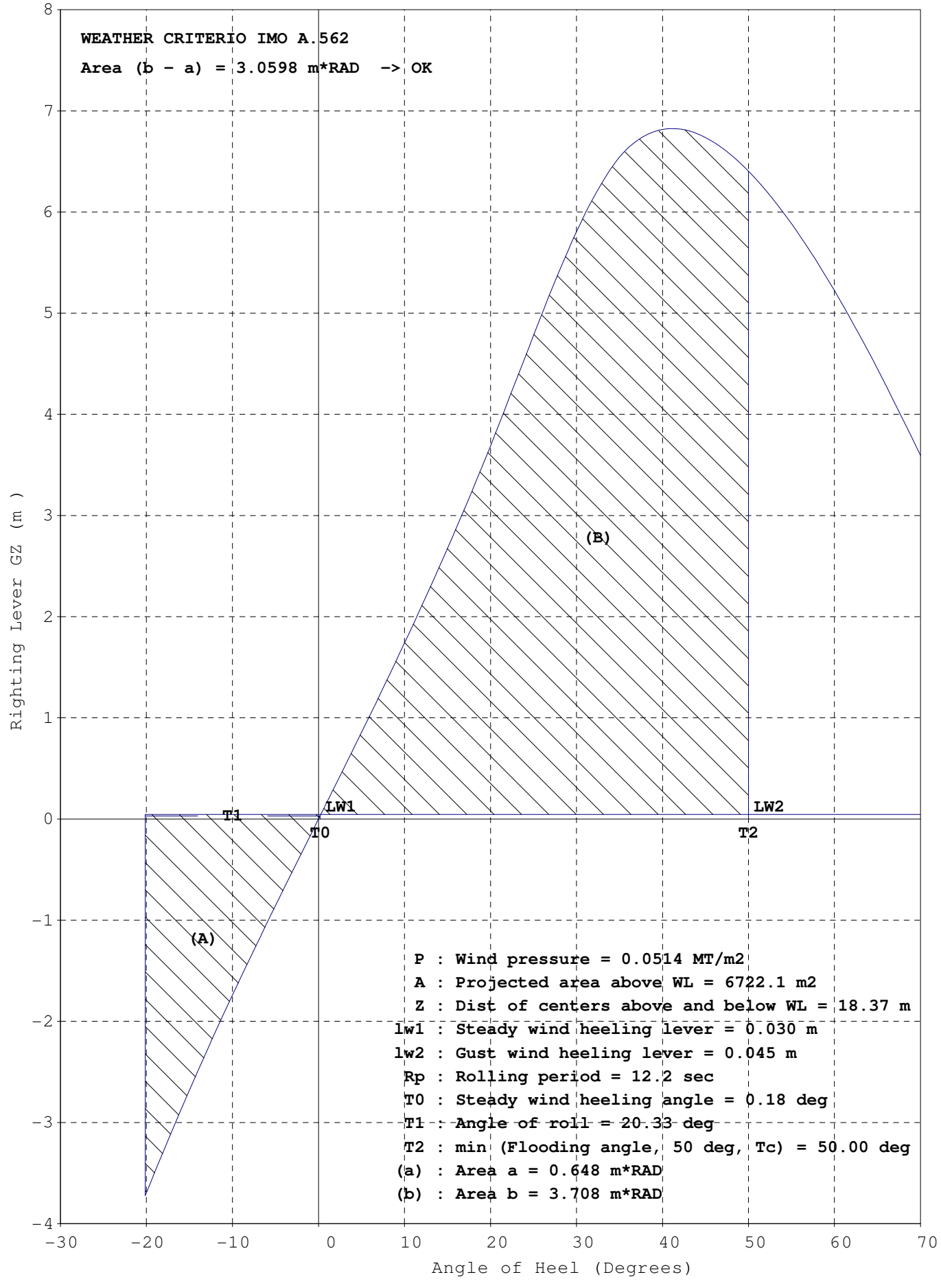
Draft FPP	12.87 m
Mk F123	12.89 m
APP	15.57 m
Mk F18	15.44 m
Mid	14.22 m
Mk	14.23 m
LCF	14.15 m
TRIM	2.70 m
HEEL	0.0 Deg
LCF	8.24 m
Prop Imm	147.8 %
Rolling	13 sec
TPC-I	163.62 MT/cm
MCT	3415.3 MT-m/cm
MCH	35736 MT-m/deg
FLood	> 70 Deg
LCB	11.93 m
KM(T)	26.77 m
KG	15.55 m
GM	11.22 m
GGo	1.46 m
GoM	9.76 m
KG(eff)	17.01 m

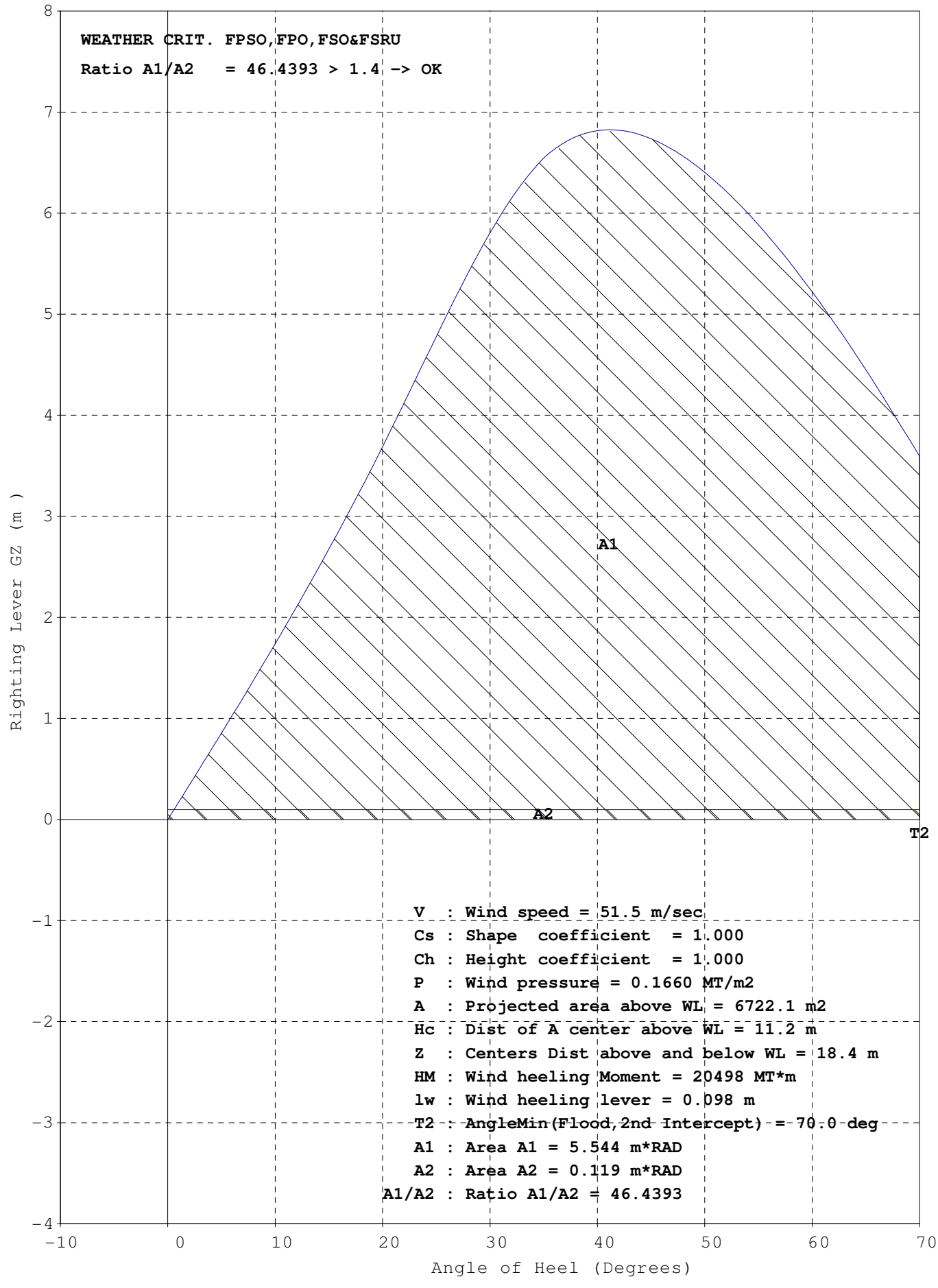
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	1.4515	>= 0.055	OK
Area 0-40 deg	m x RAD	2.5791	>= 0.09	OK
Area 30-40 deg	m x RAD	1.1276	>= 0.03	OK
GZ at/or> 30 deg	m	5.805	>= 0.2	OK
Max GZ Angle	Deg	41.163	>= 25.0	OK
Maximum GZ	6.83 m			
Initial GM	m	9.761	>= 0.15	OK
Weather Area(B-A)	m x RAD	3.0598	>= 0.0	OK
Weather Ratio A1/A2	m x RAD	46.4393	>= 1.4	OK
Lim KG-Intact	m	17.006	=<26.619	OK
Min FPP Draft	m	12.868	>= 7.825	OK
SteadyWind Angle	Deg	0.185	=< 16.0	OK
Deck Edge Angle	31.68 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.34	0.86	1.74	2.67	3.69	4.78	5.80	6.55	6.82	6.74	6.40	5.88	5.22	4.45	3.60


WEATHER CRITERIO IMO A.562
Area (b - a) = 3.0598 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 6722.1 m2
Z : Dist of centers above and below WL = 18.37 m
lw1 : Steady wind heeling lever = 0.030 m
lw2 : Gust wind heeling lever = 0.045 m
Rp : Rolling period = 12.2 sec
T0 : Steady wind heeling angle = 0.18 deg
T1 : Angle of roll = 20.33 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.648 m*RAD
(b) : Area b = 3.708 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 46.4393 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 6722.1 m2
Hc : Dist of A center above WL = 11.2 m
Z : Centers Dist above and below WL = 18.4 m
HM : Wind heeling Moment = 20498 MT*m
lw : Wind heeling lever = 0.098 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 5.544 m*RAD
A2 : Area A2 = 0.119 m*RAD
A1/A2 : Ratio A1/A2 = 46.4393
Righting Lever GZ (m)
Angle of Heel (Degrees)
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T. (P)	101	111										
No1 C.O.T. (S)	101	111										
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T. (S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T. (C)	81	91										
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T. (P)	71	81										
No4 C.O.T. (S)	71	81										
No5 C.O.T. (C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S					130782			114003.0	21.75	17.41	0.00	107997

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	114003	822597	822596

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk (S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4	23	2200.0	-30.799	0.82	-13.29	94443_Max
No4 W.B.Tk (S)	71	81	9514.4	23	2200.0	-30.799	0.82	13.29	94443_Max
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		44402.9	36.887	8.60	0.00	188886

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

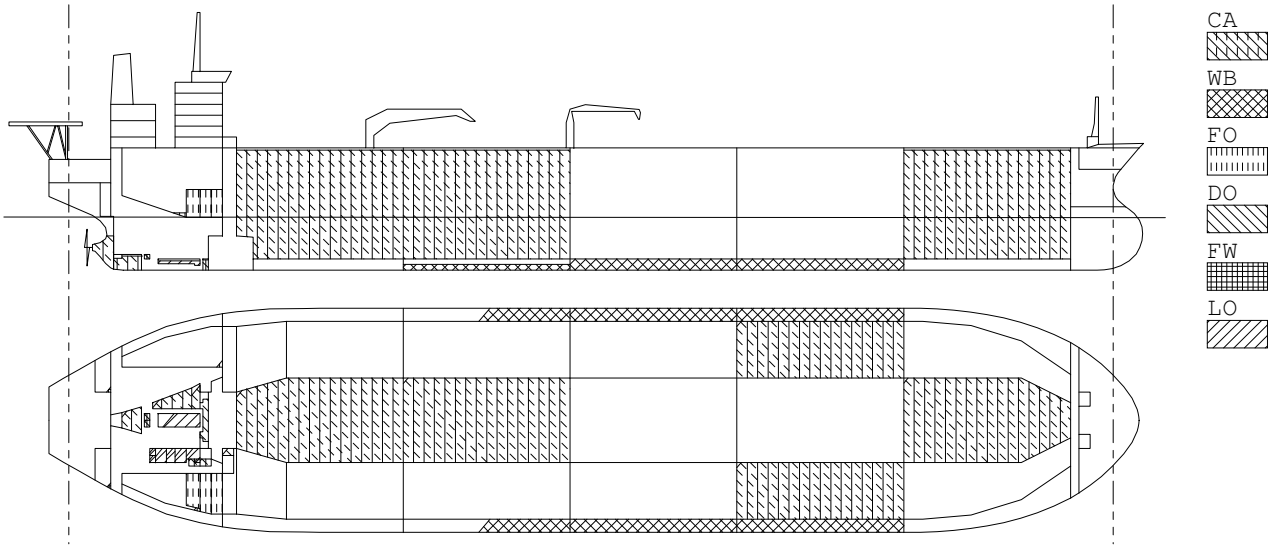
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

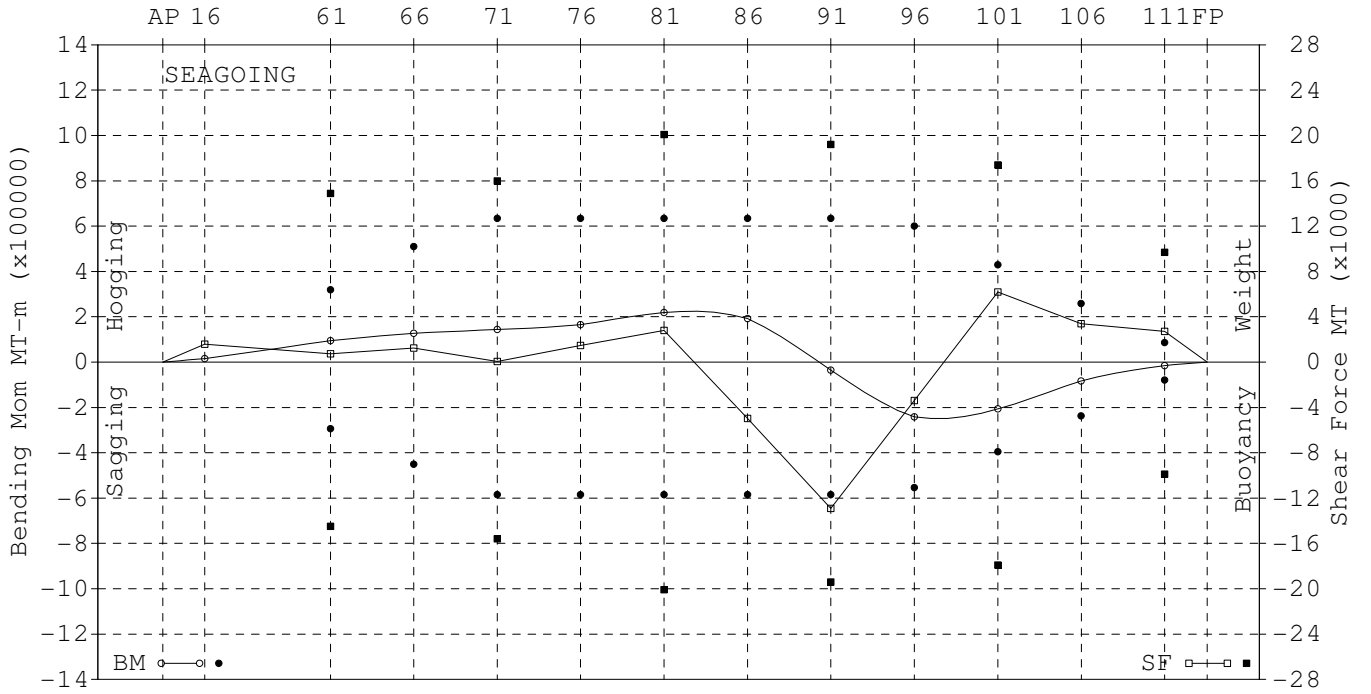
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

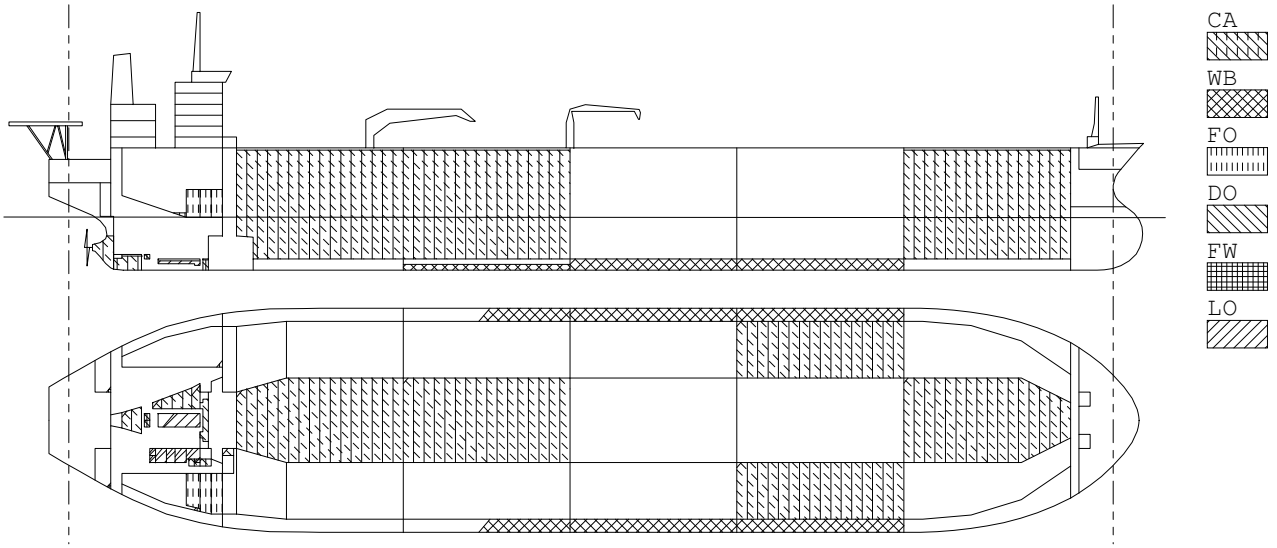


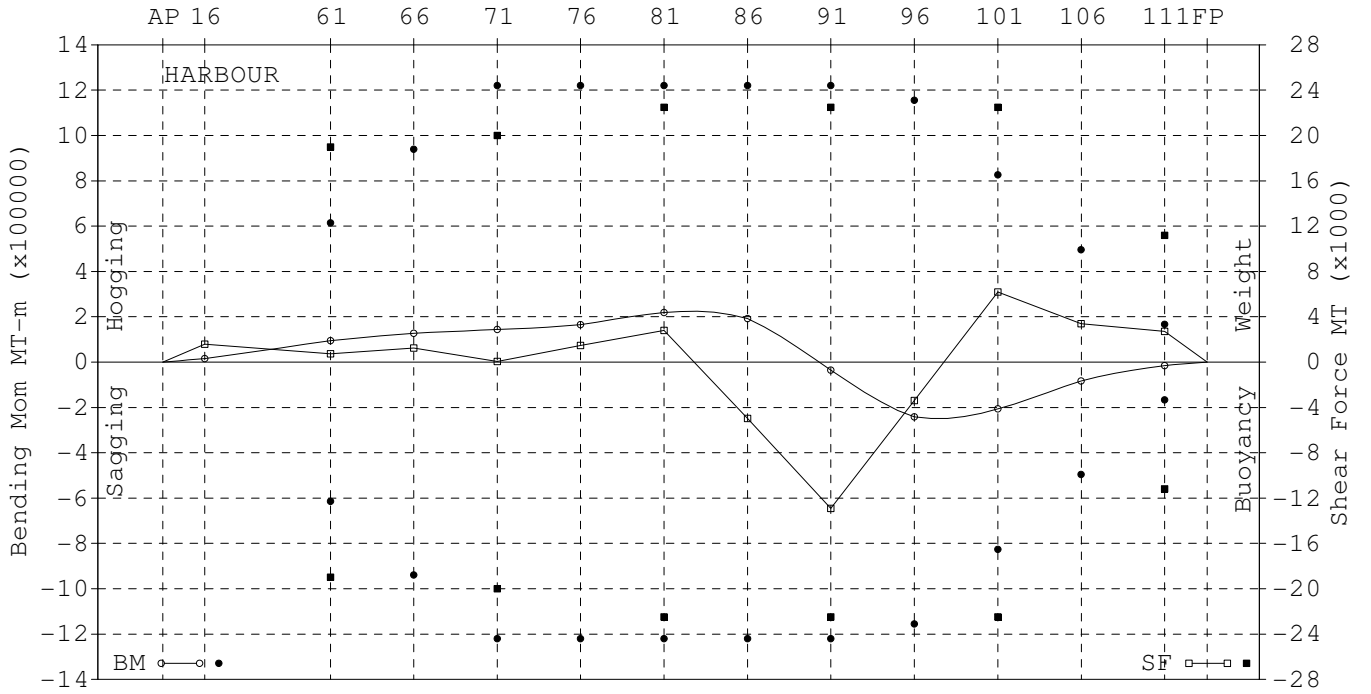


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1590	-	-	15933	-	-	-	-
61	745	5	14900	94436	30	319000	-	-294000
66	1247	-	-	126816	25	510000	-	-450000
71	62	0	16000	143967	23	635000	-	-585000
76	1473	-	-	165230	26	635000	-	-585000
81	2809	14	20100	218650	34	635000	-	-585000
86	-4974	-	-	191777	30	635000	-	-585000
91	-12914	67	-19400	-35096	-	635000	6	-585000
96	-3382	-	-	-241710	-	600000	44	-554000
101	6199	36	17400	-206677	-	429000	52	-395000
106	3390	-	-	-83013	-	258000	35	-237000
111	2708	28	9700	-15704	-	86000	20	-79000

SF max -12914 MT 67% at F91 +Buoyancy
BM max -249683 MT-m 49% at F97 Sagging (-206677 MT-m 52% at F101 Sagging)

Estimated Deflection Amidships = 3cm HOGGING





FRAME	SHEAR FORCE			BENDING MOMENT				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1590	-	-	15933	-	-	-	-
61	745	4	19000	94436	15	615000	-	-615000
66	1247	-	-	126816	13	940000	-	-940000
71	62	0	20000	143967	12	1221000	-	-1221000
76	1473	-	-	165230	14	1221000	-	-1221000
81	2809	12	22500	218650	18	1221000	-	-1221000
86	-4974	-	-	191777	16	1221000	-	-1221000
91	-12914	57	-22500	-35096	-	1221000	3	-1221000
96	-3382	-	-	-241710	-	1156000	21	-1156000
101	6199	28	22500	-206677	-	826000	25	-826000
106	3390	-	-	-83013	-	496000	17	-496000
111	2708	24	11200	-15704	-	167000	9	-167000

SF max -12914 MT 57% at F91 +Buoyancy
BM max -249683 MT-m 23% at F97 Sagging (-206677 MT-m 25% at F101 Sagging)

Estimated Deflection Amidships = 3cm HOGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

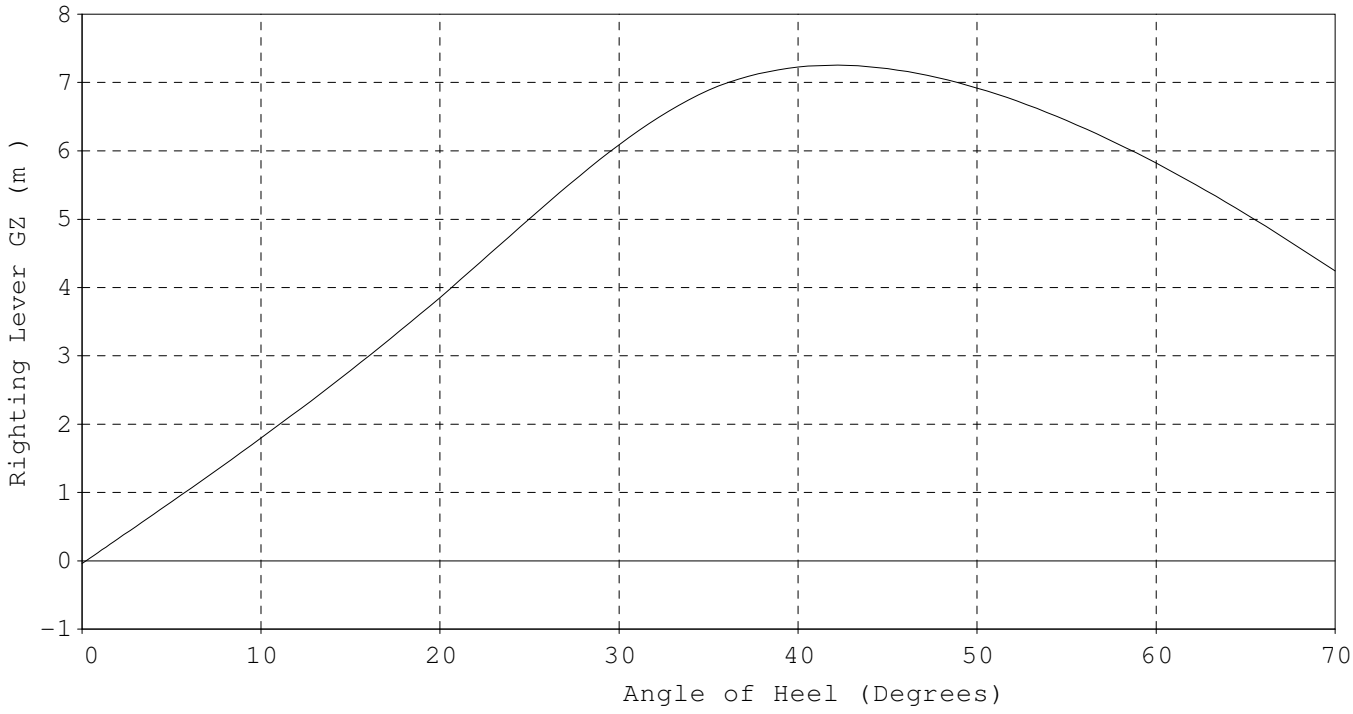
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	114003	17.41	21.75	0.00	107997
Ballast	50003	7.95	29.28	0.00	188886
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	165794	14.54	22.54	0.06	305592
TOTALS	207296	14.83	16.04	0.04	305592

HYDROSTATICS

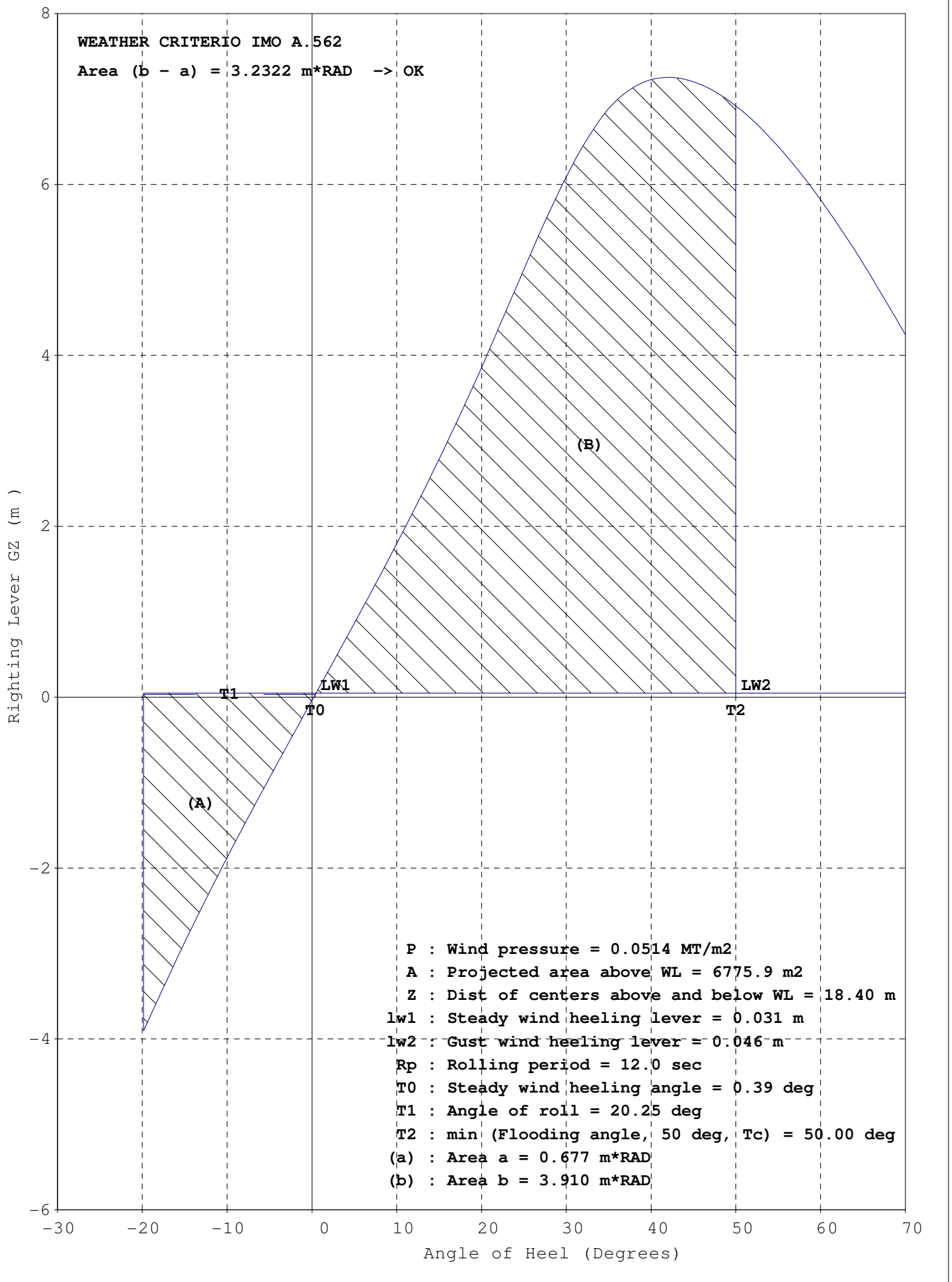
Draft FPP	13.91 m
Mk F123	13.91 m
APP	14.07 m
Mk F18	14.07 m
Mid	13.99 m
Mk	13.99 m
LCF	13.99 m
TRIM	0.16 m
HEEL	0.2 Deg
LCF	10.21 m
Prop Imm	132.9 %
Rolling	13 sec
TPC-I	161.16 MT/cm
MCT	3264.5 MT-m/cm
MCH	37263 MT-m/deg
FLood	> 70 Deg
LCB	16.04 m
KM(T)	26.60 m
KG	14.83 m
GM	11.77 m
GGo	1.47 m
GoM	10.30 m
KG(eff)	16.30 m

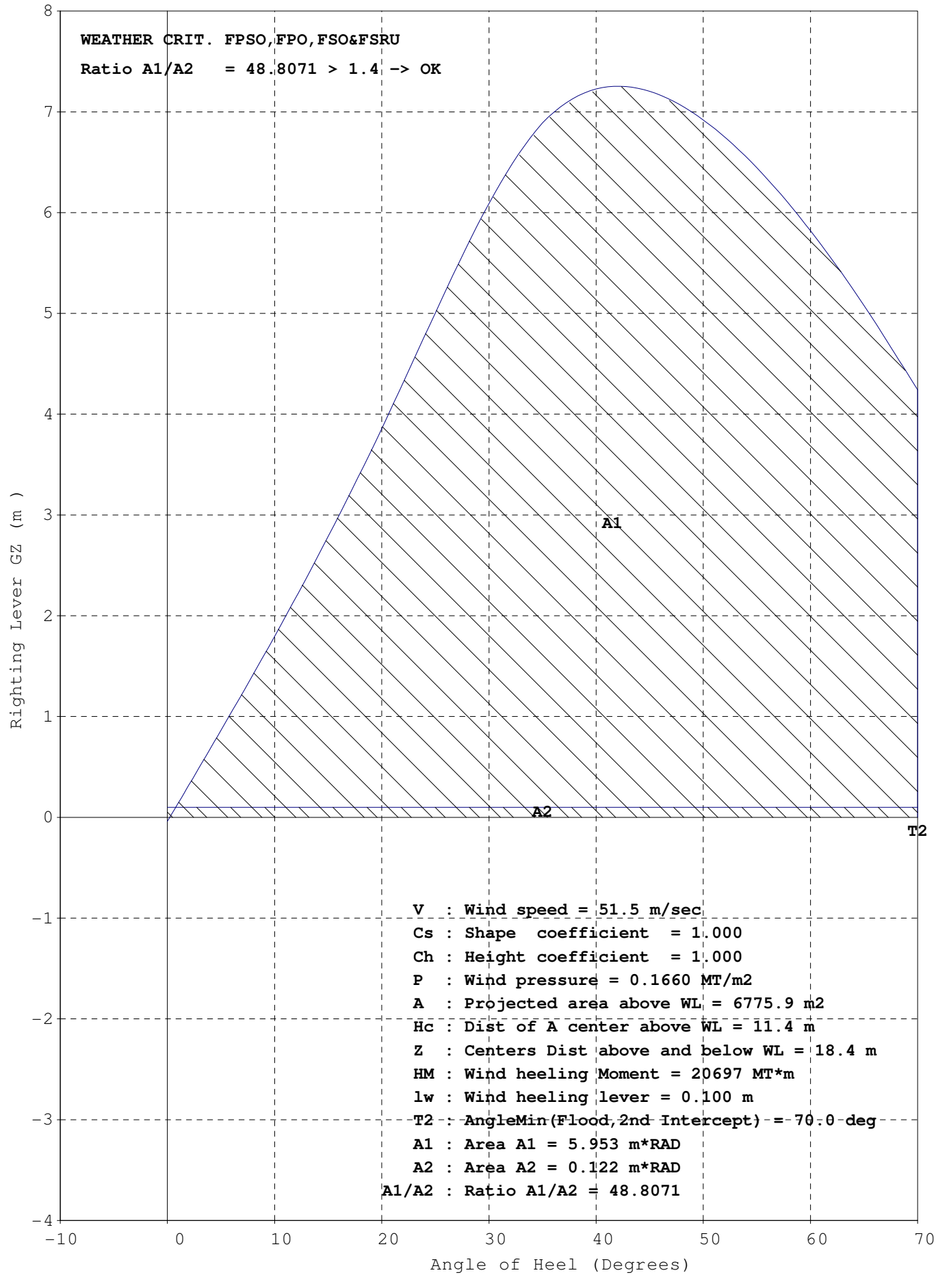
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	1.5123	>=	0.055	OK
Area 0-40 deg	m x RAD	2.7003	>=	0.09	OK
Area 30-40 deg	m x RAD	1.188	>=	0.03	OK
GZ at/or> 30 deg	m	6.09	>=	0.2	OK
Max GZ Angle	Deg	42.056	>=	25.0	OK
Maximum GZ	7.25 m				
Initial GM	m	10.299	>=	0.15	OK
Weather Area(B-A)	m x RAD	3.2322	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	48.8071	>=	1.4	OK
Lim KG-Intact	m	16.302	=<	26.453	OK
Min FPP Draft	m	13.91	>=	7.825	OK
SteadyWind Angle	Deg	0.394	=<	16.0	OK
Deck Edge Angle	30.84 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.04	0.32	0.86	1.80	2.79	3.86	5.01	6.09	6.89	7.23	7.20	6.92	6.44	5.82	5.08	4.24


WEATHER CRITERIO IMO A.562
Area (b - a) = 3.2322 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
8
6
4
2
0
-2
-4
-6
-30
-20
-10
0
10
20
30
40
50
60
70
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 6775.9 m2
Z : Dist of centers above and below WL = 18.40 m
lw1 : Steady wind heeling lever = 0.031 m
lw2 : Gust wind heeling lever = 0.046 m
Rp : Rolling period = 12.0 sec
T0 : Steady wind heeling angle = 0.39 deg
T1 : Angle of roll = 20.25 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.677 m*RAD
(b) : Area b = 3.910 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 48.8071 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 6775.9 m2
Hc : Dist of A center above WL = 11.4 m
Z : Centers Dist above and below WL = 18.4 m
HM : Wind heeling Moment = 20697 MT*m
lw : Wind heeling lever = 0.100 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 5.953 m*RAD
A2 : Area A2 = 0.122 m*RAD
A1/A2 : Ratio A1/A2 = 48.8071
Righting Lever GZ (m)
Angle of Heel (Degrees)
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME		FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T.	(C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T.	(P)	101	111										
No1 C.O.T.	(S)	101	111										
No2 C.O.T.	(C)	91	101										
No2 C.O.T.	(P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T.	(S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T.	(C)	81	91										
No3 C.O.T.	(P)	81	91										
No3 C.O.T.	(S)	81	91										
No4 C.O.T.	(C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T.	(P)	71	81										
No4 C.O.T.	(S)	71	81										
No5 C.O.T.	(C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T.	(P)	64	71										
No5 C.O.T.	(S)	64	71										
Slop Tank	(P)	61	64										
Slop Tank	(S)	61	64										
T O T A L S						130782			114003.0	21.75	17.41	0.00	107997

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	114003	822597	822596

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME		FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank	(C)	111	137	4812.4						
No1 W.B.Tk	(P)	101	111	8789.5						
No1 W.B.Tk	(S)	101	111	8789.5						
No2 W.B.Tk	(P)	91	101	9731.2	100	9974.5	69.746	9.48	-21.32	0
No2 W.B.Tk	(S)	91	101	9731.2	100	9974.5	69.746	9.48	21.32	0
No3 W.B.Tk	(P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk	(S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk	(P)	71	81	9514.4	51	5000.0	-30.948	1.95	-15.50	94443_Max
No4 W.B.Tk	(S)	71	81	9514.4	51	5000.0	-30.948	1.95	15.50	94443_Max
No5 W.B.Tk	(P)	56	71	8009.9						
No5 W.B.Tk	(S)	56	71	8009.9						
Aft Peak Tank	(C)	-8	17	2015.8						
T O T A L S				98483.0		50002.9	29.276	7.95	0.00	188886

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

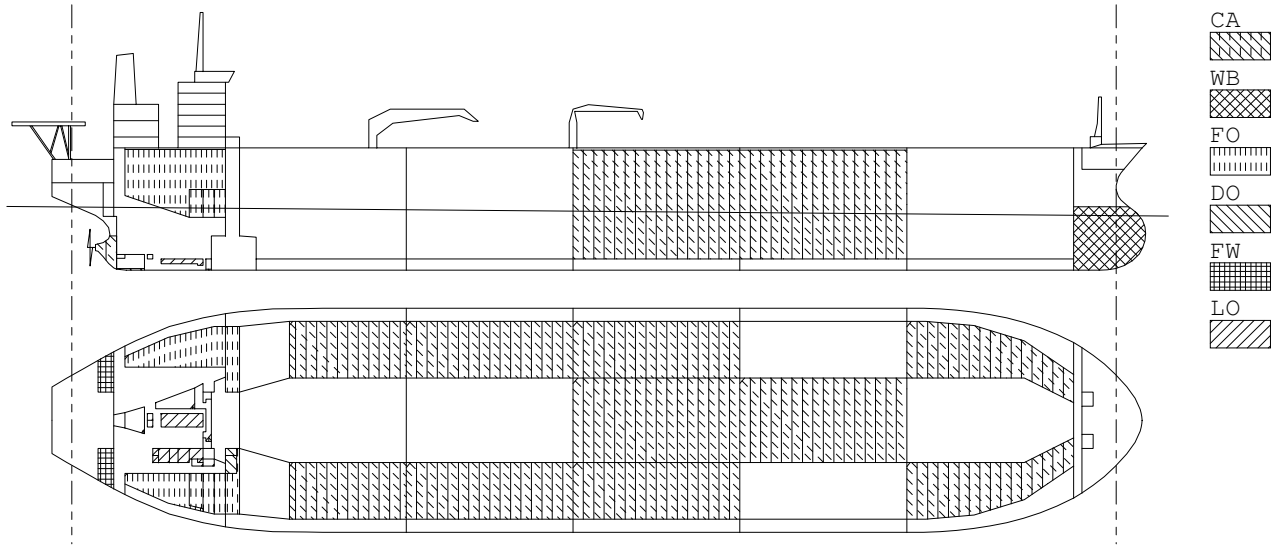
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

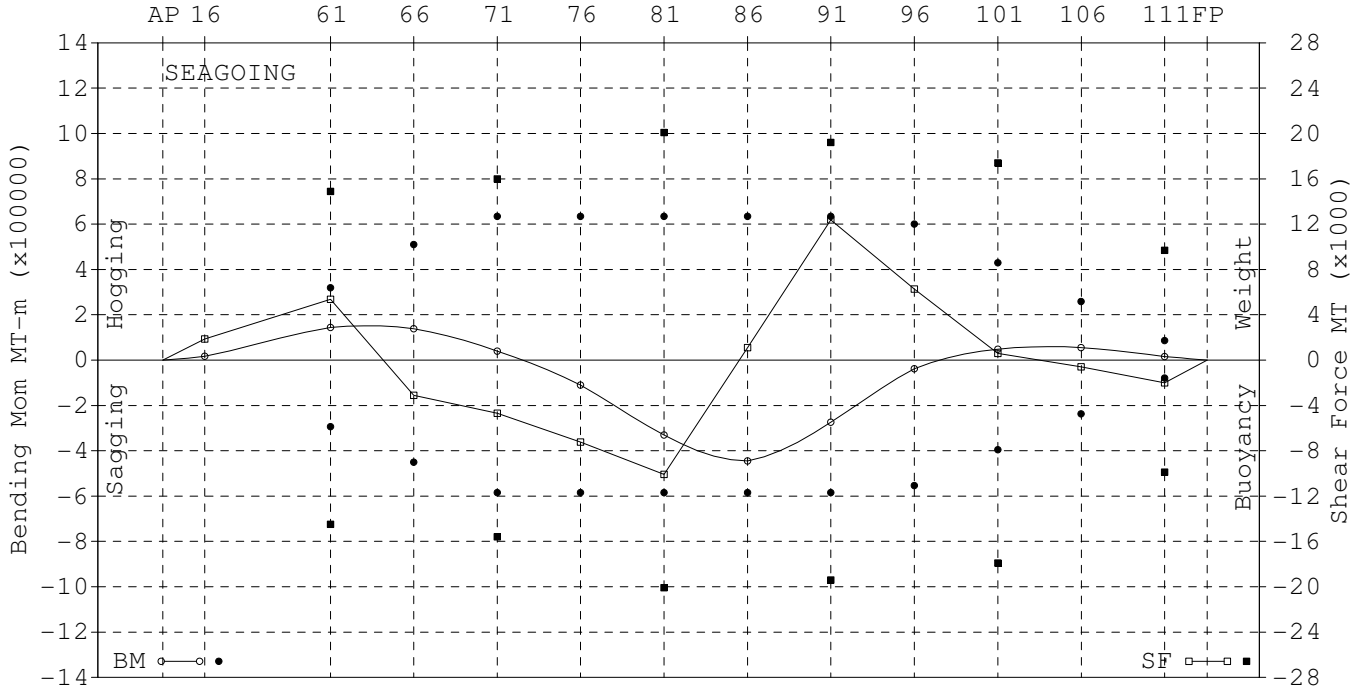
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

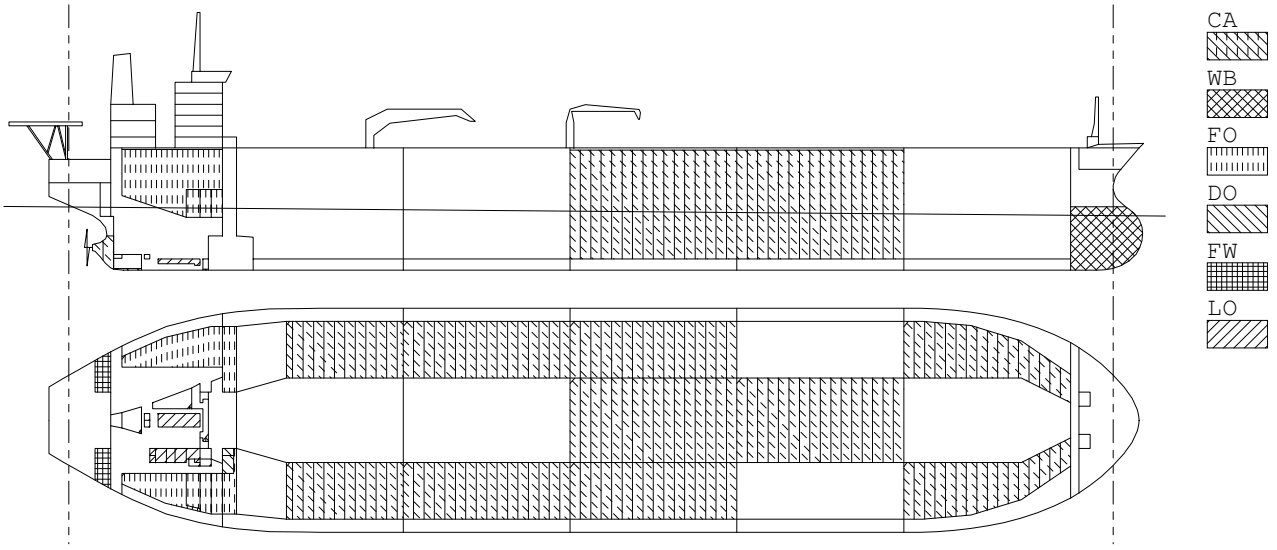


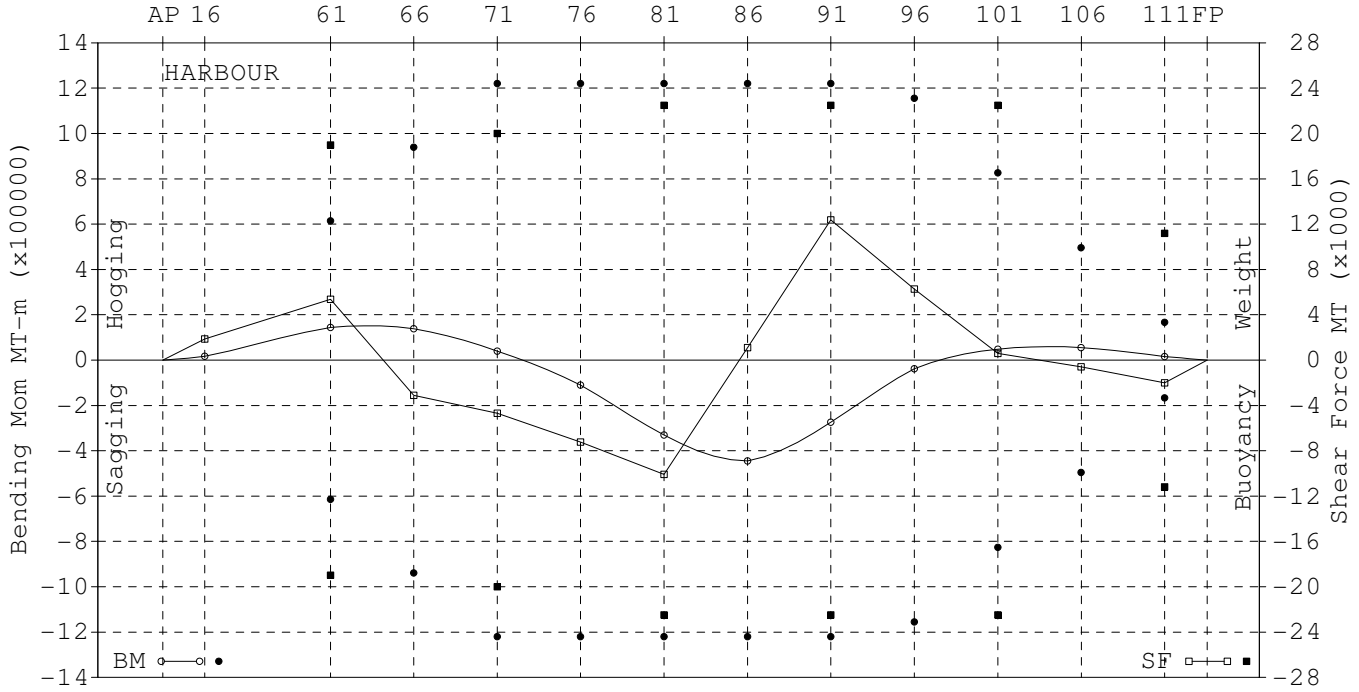


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1878	–	–	16327	–	–	–	–
61	5358	36	14900	144031	45	319000	–	-294000
66	-3104	–	–	138667	27	510000	–	-450000
71	-4686	30	-15600	39216	6	635000	–	-585000
76	-7243	–	–	-110073	–	635000	19	-585000
81	-10091	50	-20100	-330685	–	635000	57	-585000
86	1094	–	–	-444867	–	635000	76	-585000
91	12380	64	19200	-273972	–	635000	47	-585000
96	6267	–	–	-37615	–	600000	7	-554000
101	583	3	17400	47858	11	429000	–	-395000
106	-600	–	–	55628	22	258000	–	-237000
111	-2009	20	-9900	16187	19	86000	–	-79000

SF max 12380 MT 64% at F91 +Weight
BM max -444867 MT-m 76% at F86 Sagging

Estimated Deflection Amidships = -6cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1878	-	-	16327	-	-	-	-
61	5358	28	19000	144031	23	615000	-	-615000
66	-3104	-	-	138667	15	940000	-	-940000
71	-4686	23	-20000	39216	3	1221000	-	-1221000
76	-7243	-	-	-110073	-	1221000	9	-1221000
81	-10091	45	-22500	-330685	-	1221000	27	-1221000
86	1094	-	-	-444867	-	1221000	36	-1221000
91	12380	55	22500	-273972	-	1221000	22	-1221000
96	6267	-	-	-37615	-	1156000	3	-1156000
101	583	3	22500	47858	6	826000	-	-826000
106	-600	-	-	55628	11	496000	-	-496000
111	-2009	18	-11200	16187	10	167000	-	-167000

SF max 12380 MT 55% at F91 +Weight
BM max -444867 MT-m 36% at F86 Sagging

Estimated Deflection Amidships = -6cm SAGGING

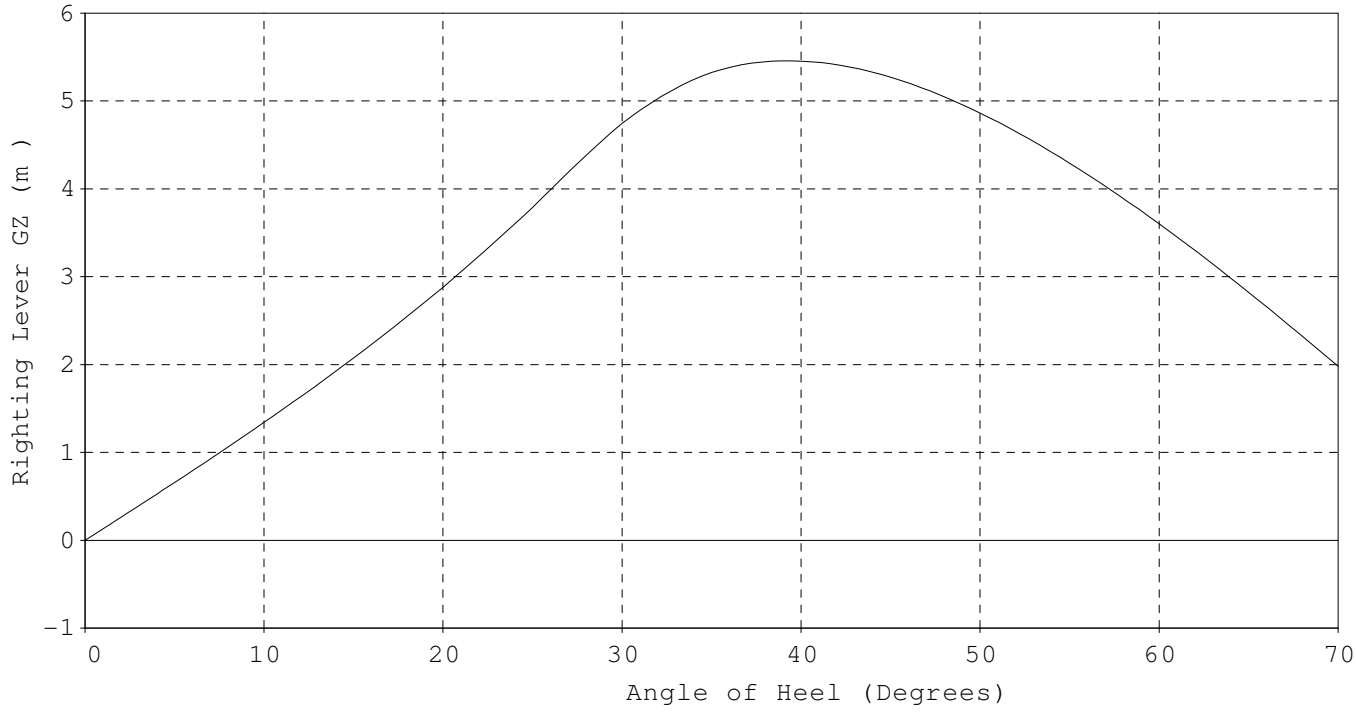
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	176880	17.54	20.68	0.00	132786
Ballast	4933	9.48	152.84	0.00	96333
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	191663	17.65	16.83	0.01	237828
TOTALS	233165	17.35	12.07	0.00	237828

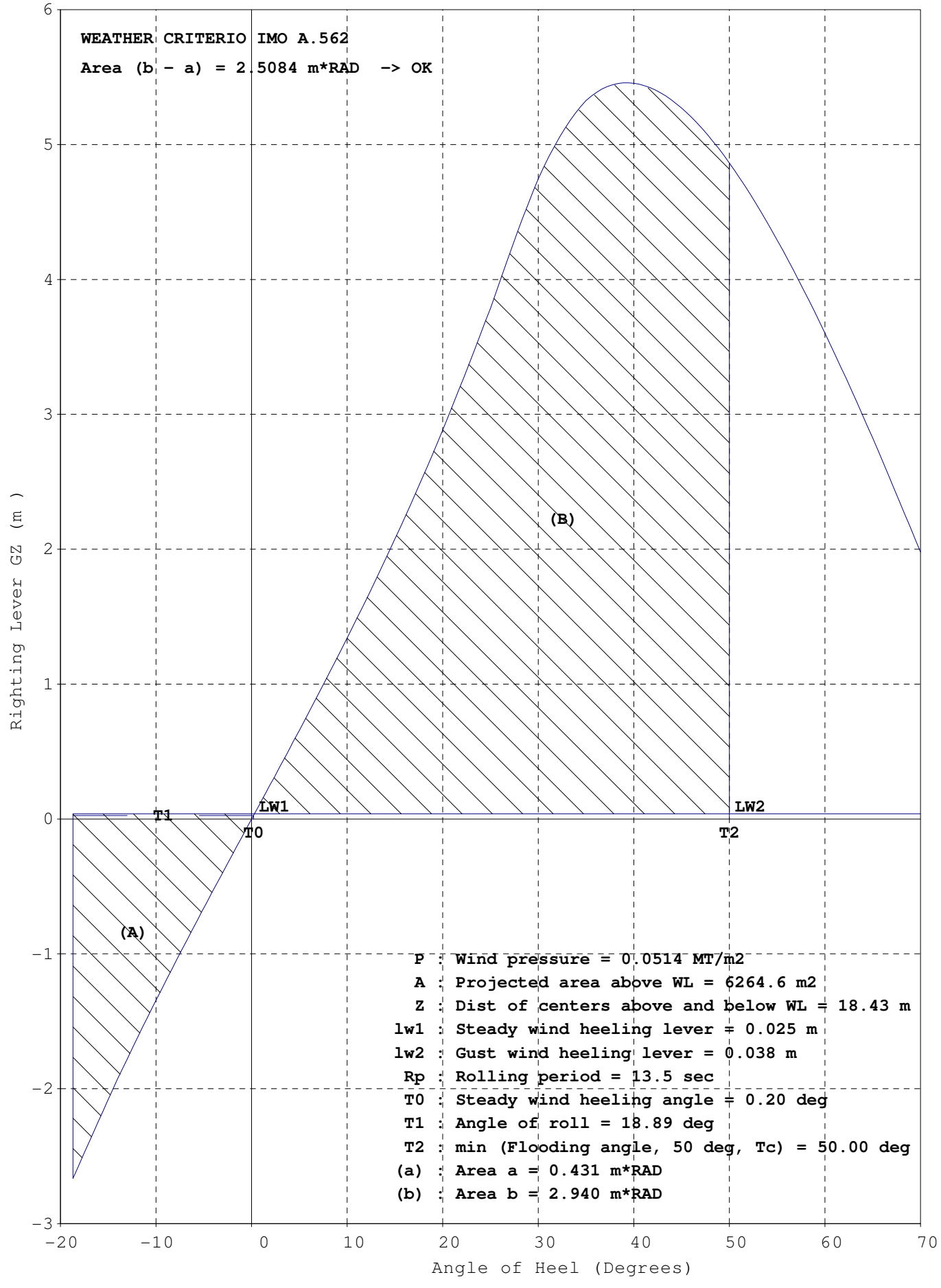
HYDROSTATICS		
Draft FPP	14.46	m
Mk F123	14.48	m
APP	16.80	m
Mk F18	16.69	m
Mid	15.63	m
Mk	15.64	m
LCF	15.58	m
TRIM	2.34	m
HEEL	0.0	Deg
LCF	6.18	m
Prop Imm	160.6	%
Rolling	15	sec
TPC-I	165.90	MT/cm
MCT	3548.9	MT-m/cm
MCH	30549	MT-m/deg
FLood	> 70	Deg
LCB	11.99	m
KM(T)	25.88	m
KG	17.35	m
GM	8.53	m
GGo	1.02	m
GoM	7.51	m
KG(eff)	18.37	m

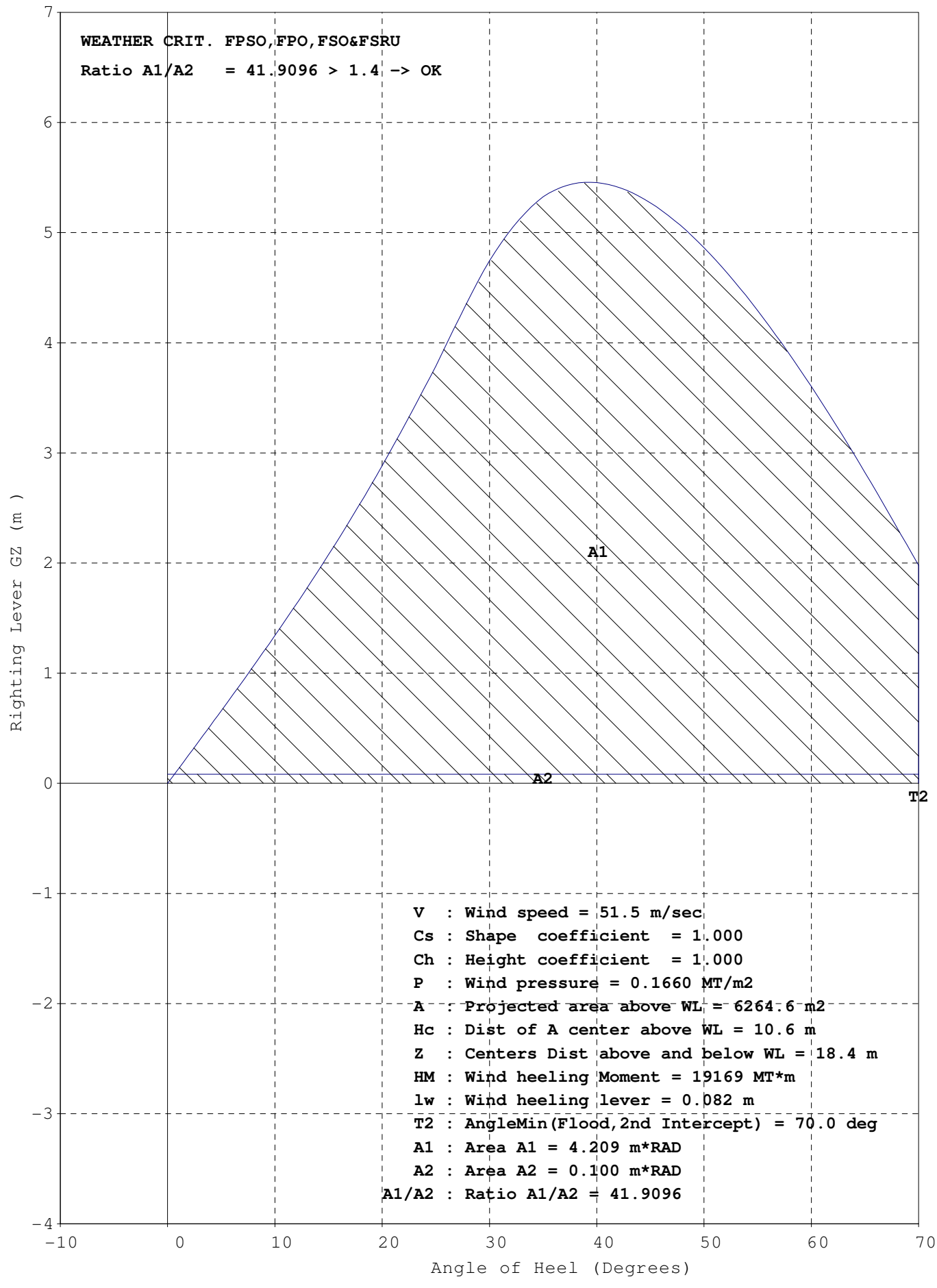
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	1.1439	>= 0.055	OK
Area 0-40 deg	m x RAD	2.0595	>= 0.09	OK
Area 30-40 deg	m x RAD	0.9156	>= 0.03	OK
GZ at/or> 30 deg	m	4.746	>= 0.2	OK
Max GZ Angle	Deg	39.221	>= 25.0	OK
Maximum GZ	5.46 m			
Initial GM	m	7.507	>= 0.15	OK
Weather Area(B-A)	m x RAD	2.5084	>= 0.0	OK
Weather Ratio A1/A2	m x RAD	41.9096	>= 1.4	OK
Lim KG-Intact	m	18.37	=<25.729	OK
Min FPP Draft	m	14.46	>= 7.825	OK
SteadyWind Angle	Deg	0.203	=< 16.0	OK
Deck Edge Angle	29.12 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.26	0.66	1.34	2.07	2.88	3.79	4.75	5.33	5.45	5.27	4.86	4.29	3.60	2.82	1.98


WEATHER CRITERIO IMO A.562
Area (b - a) = 2.5084 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
T2
LW2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 6264.6 m2
Z : Dist of centers above and below WL = 18.43 m
lw1 : Steady wind heeling lever = 0.025 m
lw2 : Gust wind heeling lever = 0.038 m
Rp : Rolling period = 13.5 sec
T0 : Steady wind heeling angle = 0.20 deg
T1 : Angle of roll = 18.89 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.431 m*RAD
(b) : Area b = 2.940 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 41.9096 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 6264.6 m2
Hc : Dist of A center above WL = 10.6 m
Z : Centers Dist above and below WL = 18.4 m
HM : Wind heeling Moment = 19169 MT*m
lw : Wind heeling lever = 0.082 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 4.209 m*RAD
A2 : Area A2 = 0.100 m*RAD
A1/A2 : Ratio A1/A2 = 41.9096
Righting Lever GZ (m)
Angle of Heel (Degrees)
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T. (S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T. (C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T. (P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T. (S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T. (S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T. (S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S					202914			176880.0	20.68	17.54	0.00	132786

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	176880	1276290	1276290

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4	100	4932.7	152.867	9.48	0.00	0
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4						
No3 W.B.Tk (S)	81	91	9782.4						
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9	0	0.2	-77.248	0.00	-8.48	33929_Max
No5 W.B.Tk (S)	56	71	8009.9	0	0.2	-77.248	0.00	8.48	33929_Max
Aft Peak Tank (C)	-8	17	2015.8	0	0.2	-145.987	9.12	0.00	28476_Max
T O T A L S			98483.0		4933.3	152.836	9.48	0.00	96333

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

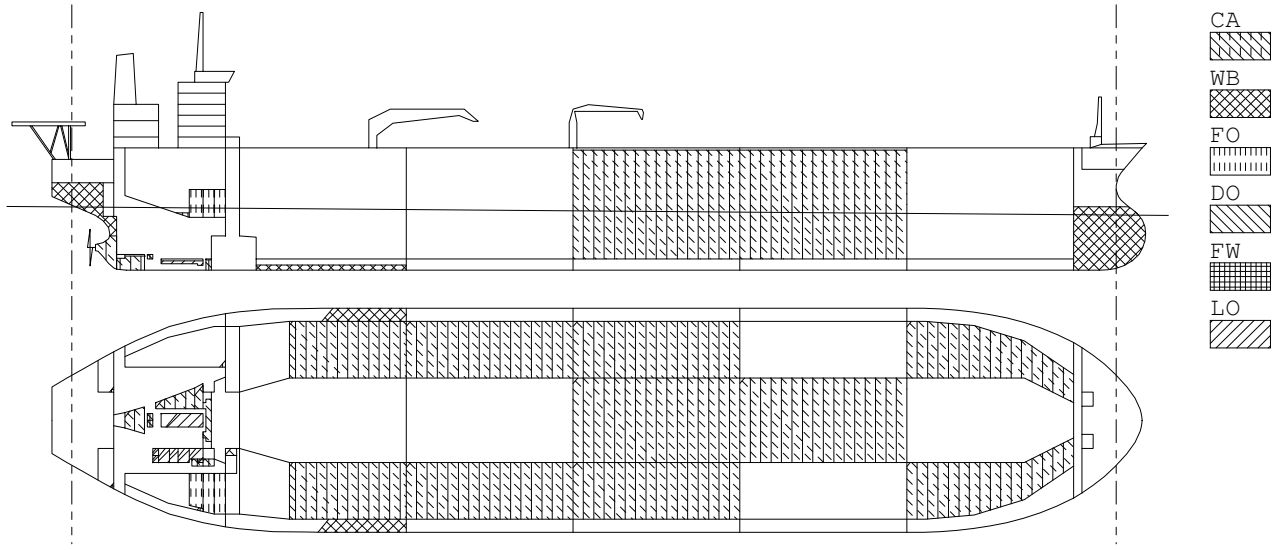
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

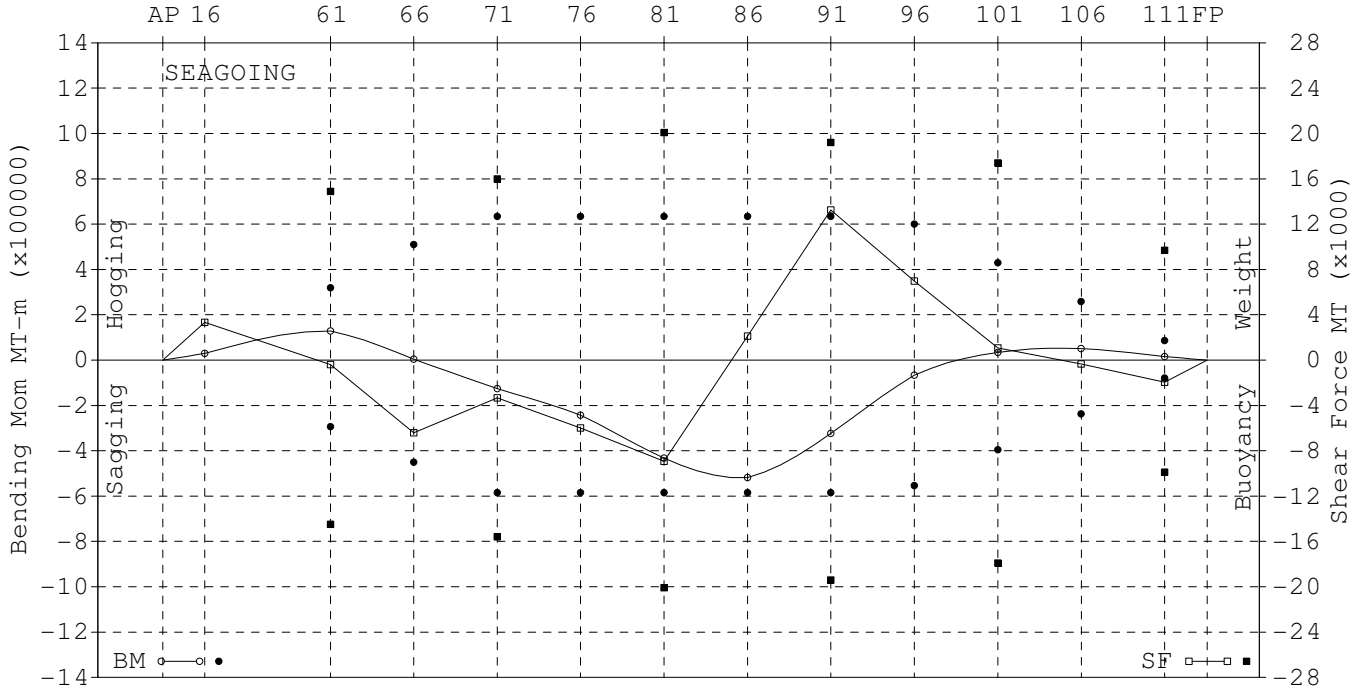
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

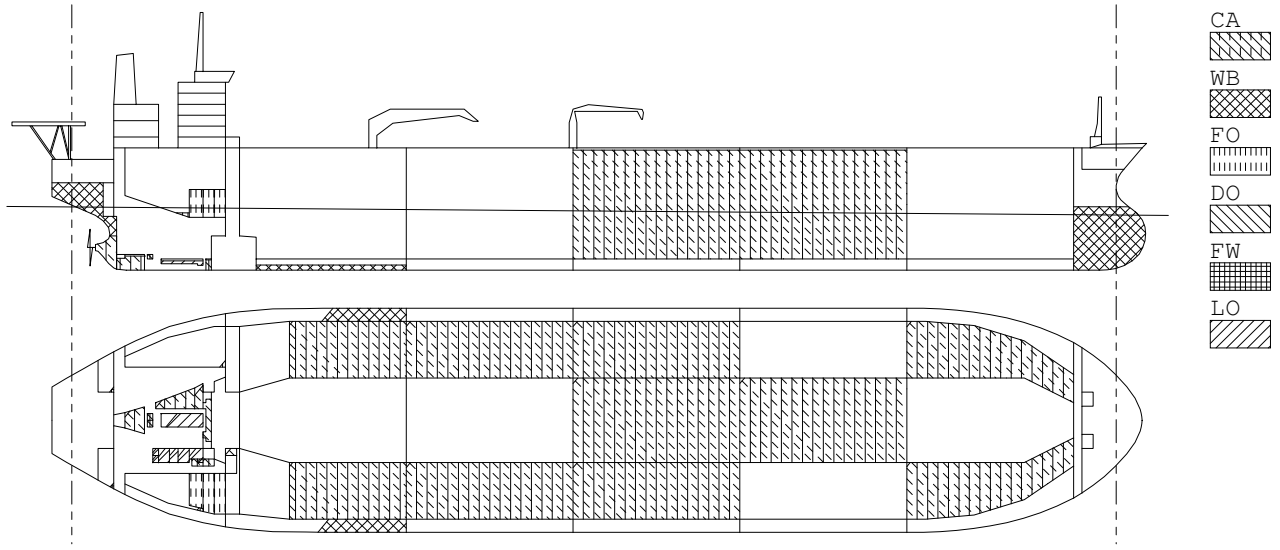


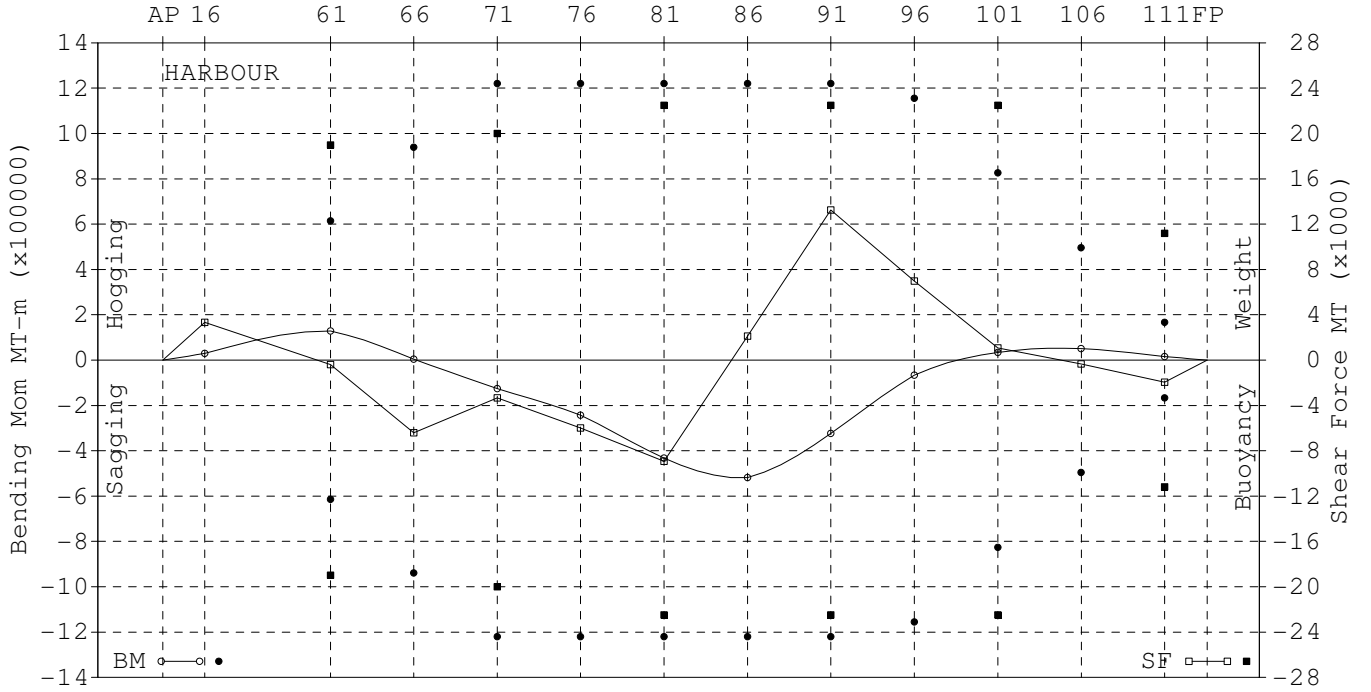


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	3333	-	-	29545	-	-	-	-
61	-387	3	-14500	128212	40	319000	-	-294000
66	-6420	-	-	3835	1	510000	-	-450000
71	-3347	21	-15600	-126230	-	635000	22	-585000
76	-5980	-	-	-242433	-	635000	41	-585000
81	-8931	44	-20100	-432227	-	635000	74	-585000
86	2126	-	-	-518515	-	635000	89	-585000
91	13258	69	19200	-323305	-	635000	55	-585000
96	6966	-	-	-66875	-	600000	12	-554000
101	1076	6	17400	33795	8	429000	-	-395000
106	-333	-	-	51233	20	258000	-	-237000
111	-1944	20	-9900	15852	18	86000	-	-79000

SF max 13258 MT 69% at F91 +Weight
BM max -519628 MT-m 89% at F86 Sagging

Estimated Deflection Amidships = -9cm SAGGING





FRAME	SHEAR FORCE			BENDING MOMENT				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	3333	-	-	29545	-	-	-	-
61	-387	2	-19000	128212	21	615000	-	-615000
66	-6420	-	-	3835	0	940000	-	-940000
71	-3347	17	-20000	-126230	-	1221000	10	-1221000
76	-5980	-	-	-242433	-	1221000	20	-1221000
81	-8931	40	-22500	-432227	-	1221000	35	-1221000
86	2126	-	-	-518515	-	1221000	42	-1221000
91	13258	59	22500	-323305	-	1221000	26	-1221000
96	6966	-	-	-66875	-	1156000	6	-1156000
101	1076	5	22500	33795	4	826000	-	-826000
106	-333	-	-	51233	10	496000	-	-496000
111	-1944	17	-11200	15852	9	167000	-	-167000

SF max 13258 MT 59% at F91 +Weight
BM max -519628 MT-m 43% at F86 Sagging

Estimated Deflection Amidships = -9cm SAGGING

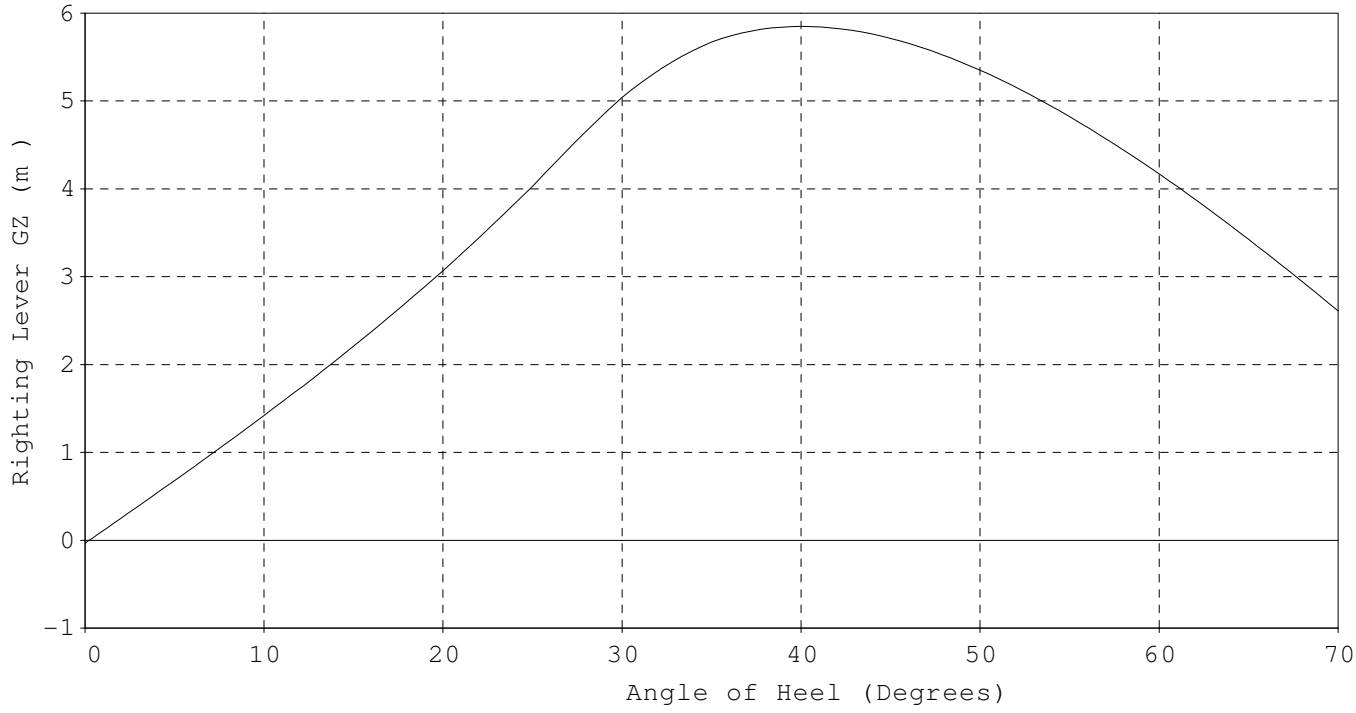
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	176880	17.54	20.68	0.00	132786
Ballast	14399	7.64	-9.83	-0.01	96333
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	193067	16.79	17.15	0.05	237828
TOTALS	234569	16.65	12.36	0.03	237828

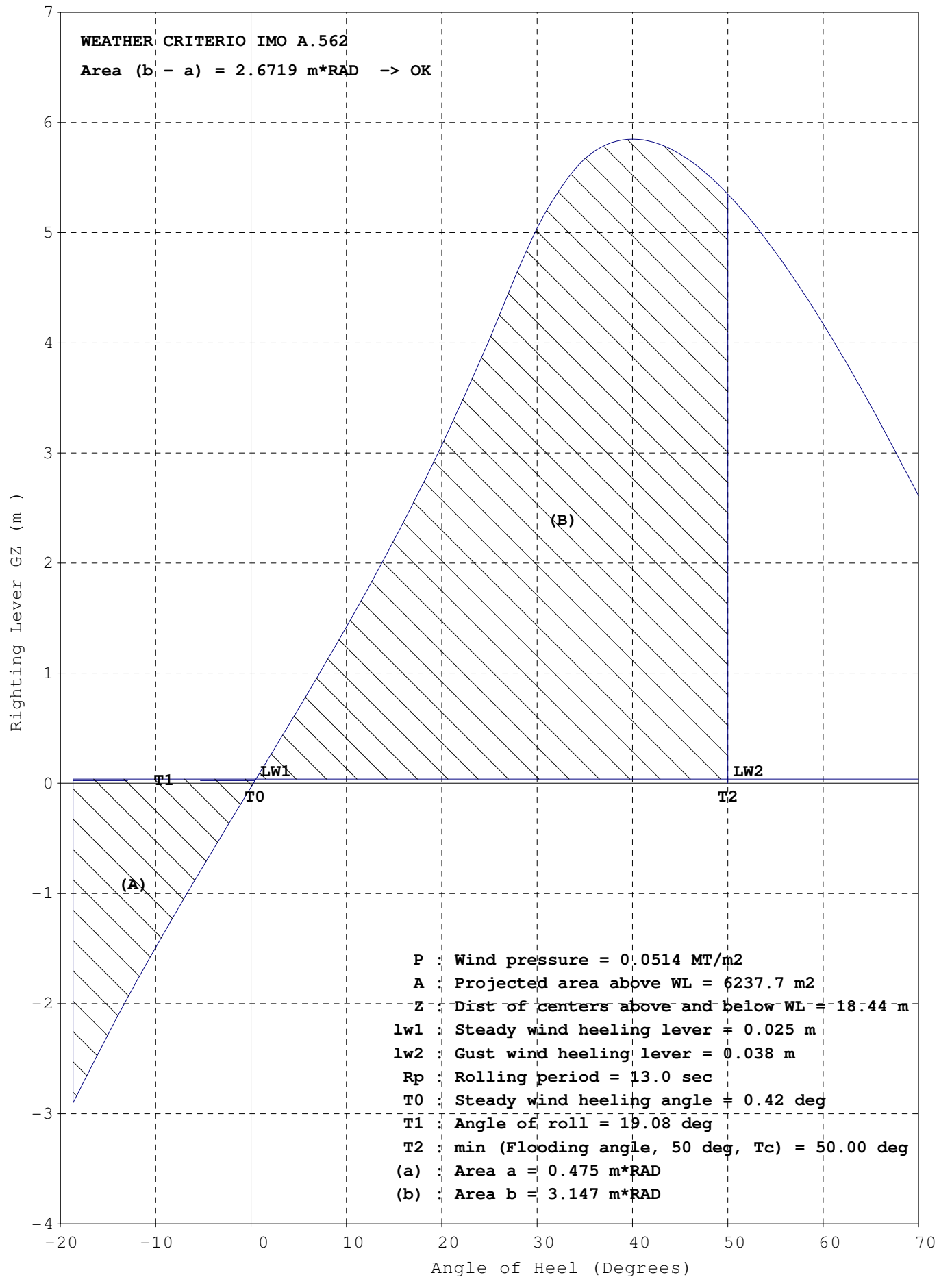
HYDROSTATICS	
Draft FPP	14.65 m
Mk F123	14.67 m
APP	16.76 m
Mk F18	16.67 m
Mid	15.71 m
Mk	15.72 m
LCF	15.67 m
TRIM	2.11 m
HEEL	0.2 Deg
LCF	6.18 m
Prop Imm	160.3 %
Rolling	14 sec
TPC-I	165.85 MT/cm
MCT	3545.2 MT-m/cm
MCH	33373 MT-m/deg
FLood	> 70 Deg
LCB	12.29 m
KM(T)	25.81 m
KG	16.65 m
GM	9.17 m
GGo	1.01 m
GoM	8.15 m
KG(eff)	17.66 m

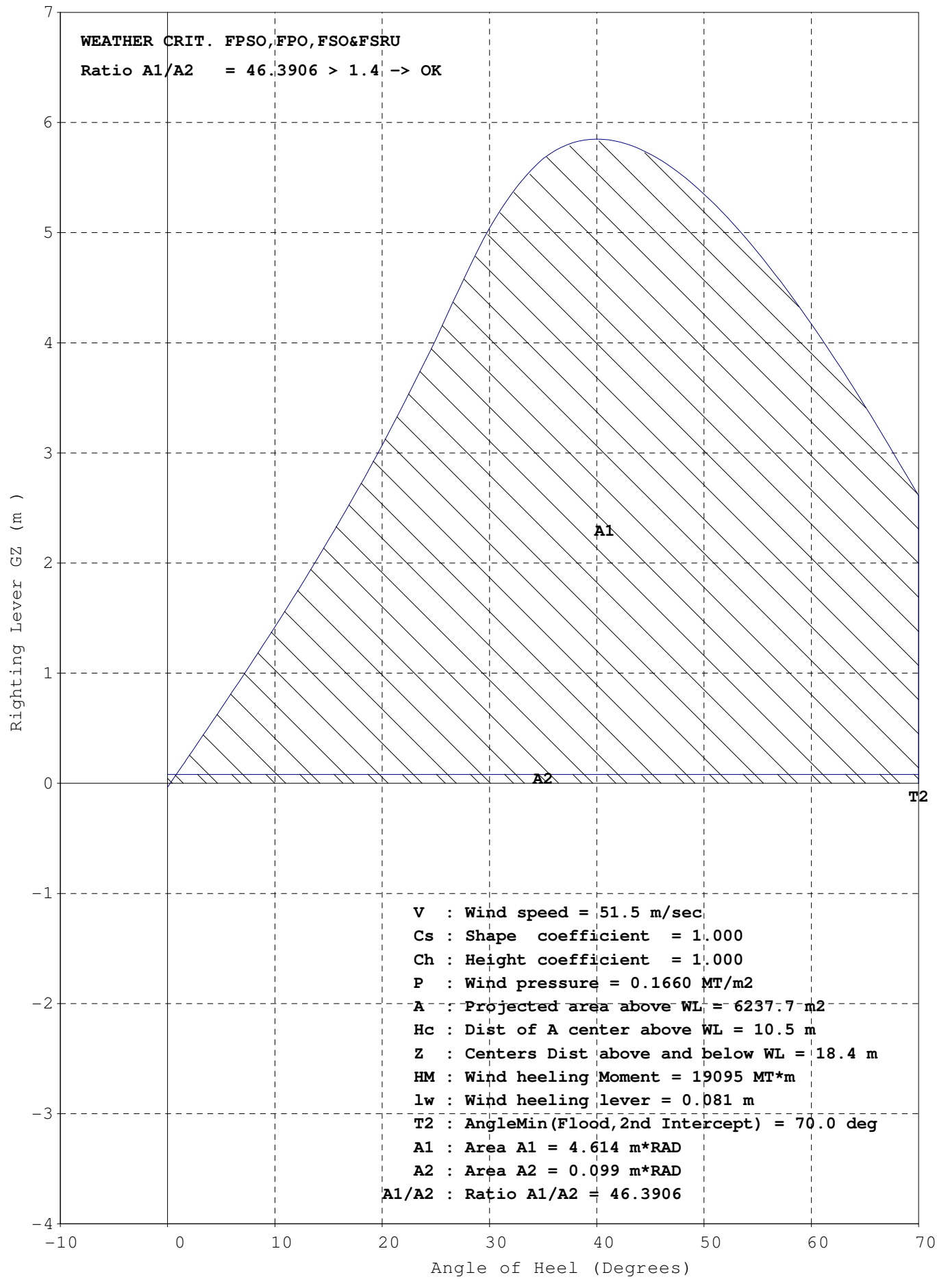
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	1.2135	>=	0.055	OK
Area 0-40 deg	m x RAD	2.1895	>=	0.09	OK
Area 30-40 deg	m x RAD	0.976	>=	0.03	OK
GZ at/or> 30 deg	m	5.043	>=	0.2	OK
Max GZ Angle	Deg	40.091	>=	25.0	OK
Maximum GZ	5.85 m				
Initial GM	m	8.152	>=	0.15	OK
Weather Area(B-A)	m x RAD	2.6719	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	46.3906	>=	1.4	OK
Lim KG-Intact	m	17.661	=<	25.663	OK
Min FPP Draft	m	14.651	>=	7.825	OK
SteadyWind Angle	Deg	0.422	=<	16.0	OK
Deck Edge Angle	28.95 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.03	0.25	0.68	1.42	2.21	3.07	4.03	5.04	5.67	5.85	5.71	5.35	4.82	4.17	3.43	2.61


WEATHER CRITERIO IMO A.562
Area (b - a) = 2.6719 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 6237.7 m2
Z : Dist of centers above and below WL = 18.44 m
lw1 : Steady wind heeling lever = 0.025 m
lw2 : Gust wind heeling lever = 0.038 m
Rp : Rolling period = 13.0 sec
T0 : Steady wind heeling angle = 0.42 deg
T1 : Angle of roll = 19.08 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.475 m*RAD
(b) : Area b = 3.147 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 46.3906 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 6237.7 m2
Hc : Dist of A center above WL = 10.5 m
Z : Centers Dist above and below WL = 18.4 m
HM : Wind heeling Moment = 19095 MT*m
lw : Wind heeling lever = 0.081 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 4.614 m*RAD
A2 : Area A2 = 0.099 m*RAD
A1/A2 : Ratio A1/A2 = 46.3906
Righting Lever GZ (m)
Angle of Heel (Degrees)
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111										
No1 C.O.T. (P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T. (S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T. (C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T. (P)	91	101										
No2 C.O.T. (S)	91	101										
No3 C.O.T. (C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T. (P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T. (S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T. (C)	71	81										
No4 C.O.T. (P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T. (S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T. (C)	61	71										
No5 C.O.T. (P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T. (S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank (P)	61	64										
Slop Tank (S)	61	64										
T O T A L S					202914			176880.0	20.68	17.54	0.00	132786

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	176880	1276290	1276290

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4	100	4932.7	152.867	9.48	0.00	0
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2						
No2 W.B.Tk (S)	91	101	9731.2						
No3 W.B.Tk (P)	81	91	9782.4						
No3 W.B.Tk (S)	81	91	9782.4						
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9	45	3700.0	-78.292	2.89	-13.12	33929_Max
No5 W.B.Tk (S)	56	71	8009.9	45	3700.0	-78.292	2.89	13.12	33929_Max
Aft Peak Tank (C)	-8	17	2015.8	100	2066.2	-153.074	20.20	-0.06	28476_Max
T O T A L S			98483.0		14398.9	-9.834	7.64	-0.01	96333

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

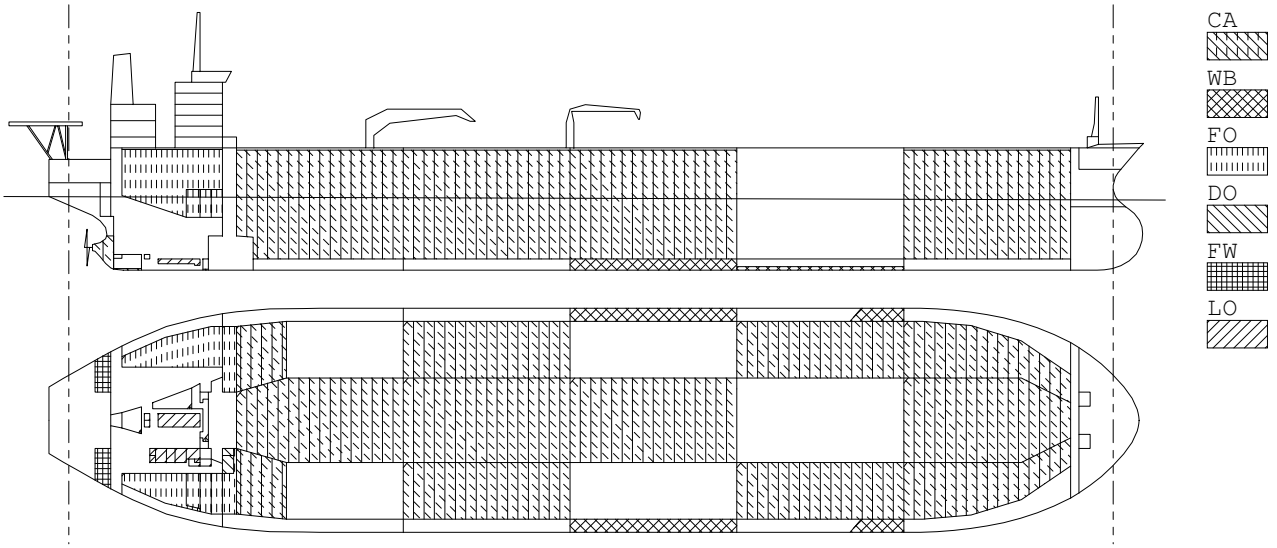
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

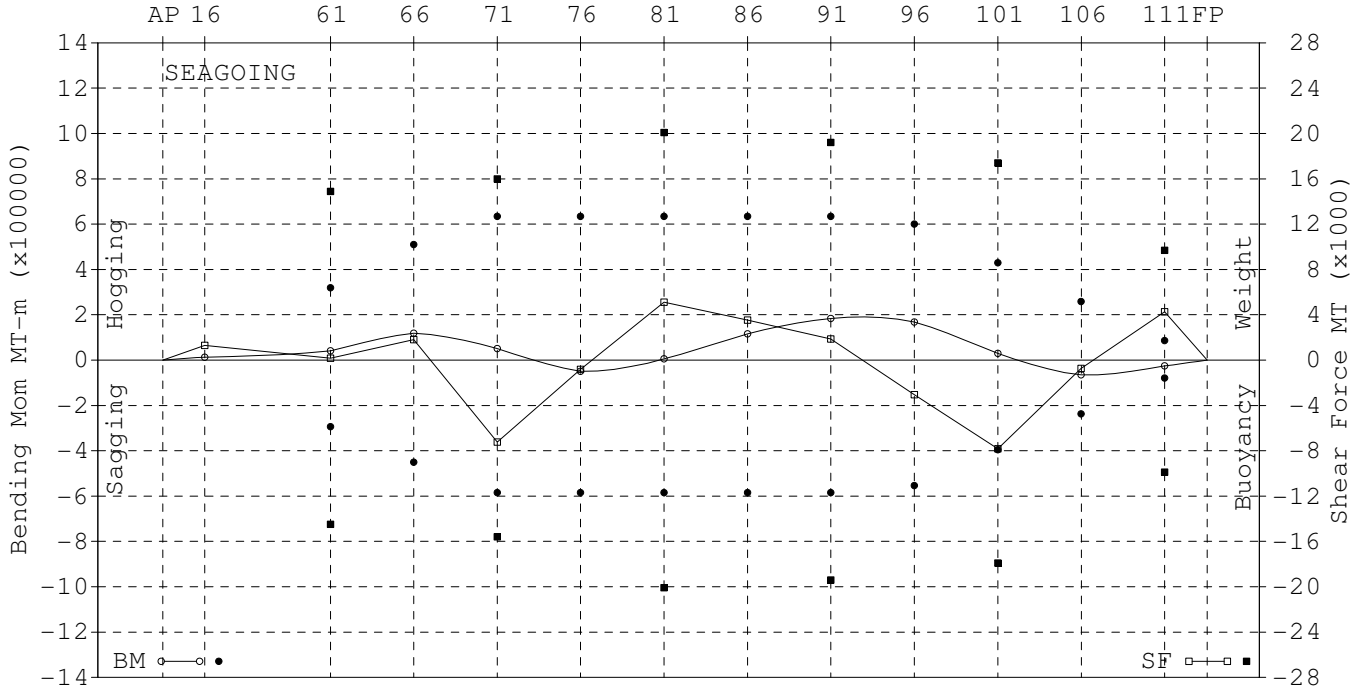
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

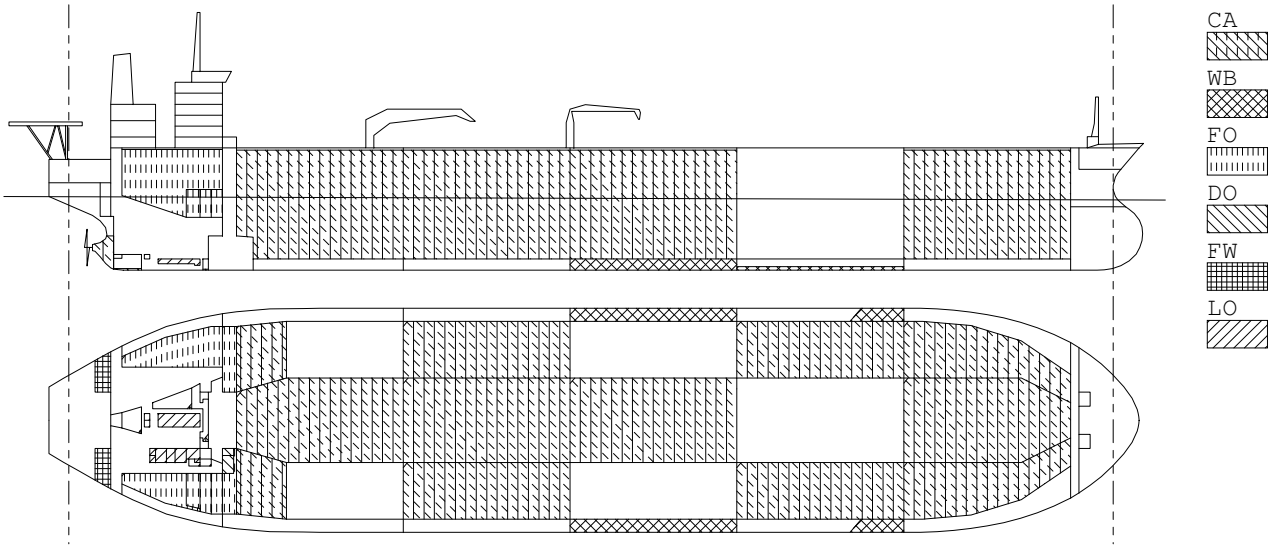


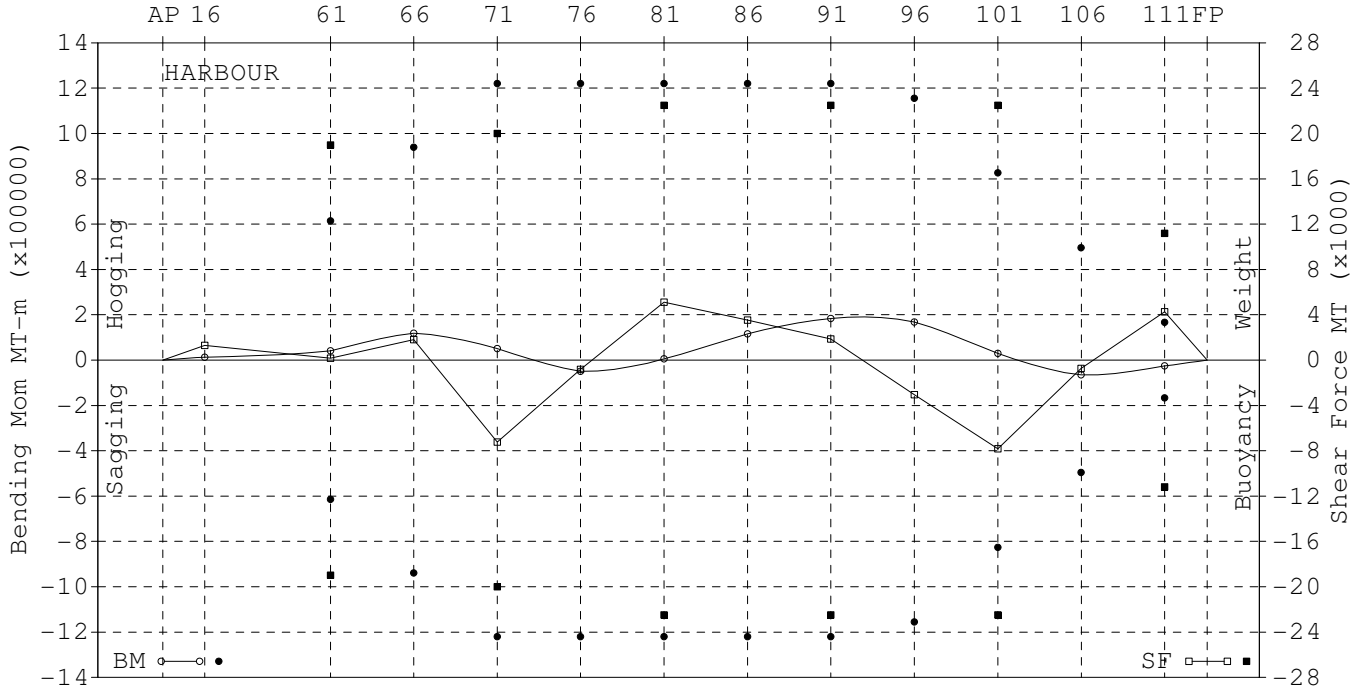


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1303	–	–	13181	–	–	–	–
61	164	1	14900	41065	13	319000	–	-294000
66	1820	–	–	118319	23	510000	–	-450000
71	-7223	46	-15600	50364	8	635000	–	-585000
76	-824	–	–	-49270	–	635000	8	-585000
81	5109	25	20100	5036	1	635000	–	-585000
86	3526	–	–	115149	18	635000	–	-585000
91	1871	10	19200	183832	29	635000	–	-585000
96	-3063	–	–	168795	28	600000	–	-554000
101	-7836	44	-17900	29413	7	429000	–	-395000
106	-735	–	–	-65493	–	258000	28	-237000
111	4268	44	9700	-25459	–	86000	32	-79000

SF max -7836 MT 44% at F101 +Buoyancy (-7223 MT 46% at F71 +Buoyancy)
BM max 190188 MT-m 31% at F93 Hogging (-25459 MT-m 32% at F111 Sagging)

Estimated Deflection Amidships = 3cm HOGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1303	-	-	13181	-	-	-	-
61	164	1	19000	41065	7	615000	-	-615000
66	1820	-	-	118319	13	940000	-	-940000
71	-7223	36	-20000	50364	4	1221000	-	-1221000
76	-824	-	-	-49270	-	1221000	4	-1221000
81	5109	23	22500	5036	0	1221000	-	-1221000
86	3526	-	-	115149	9	1221000	-	-1221000
91	1871	8	22500	183832	15	1221000	-	-1221000
96	-3063	-	-	168795	15	1156000	-	-1156000
101	-7836	35	-22500	29413	4	826000	-	-826000
106	-735	-	-	-65493	-	496000	13	-496000
111	4268	38	11200	-25459	-	167000	15	-167000

SF max -7836 MT 35% at F101 +Buoyancy (4268 MT 38% at F111 +Weight)
BM max 190188 MT-m 16% at F93 Hogging

Estimated Deflection Amidships = 3cm HOGGING

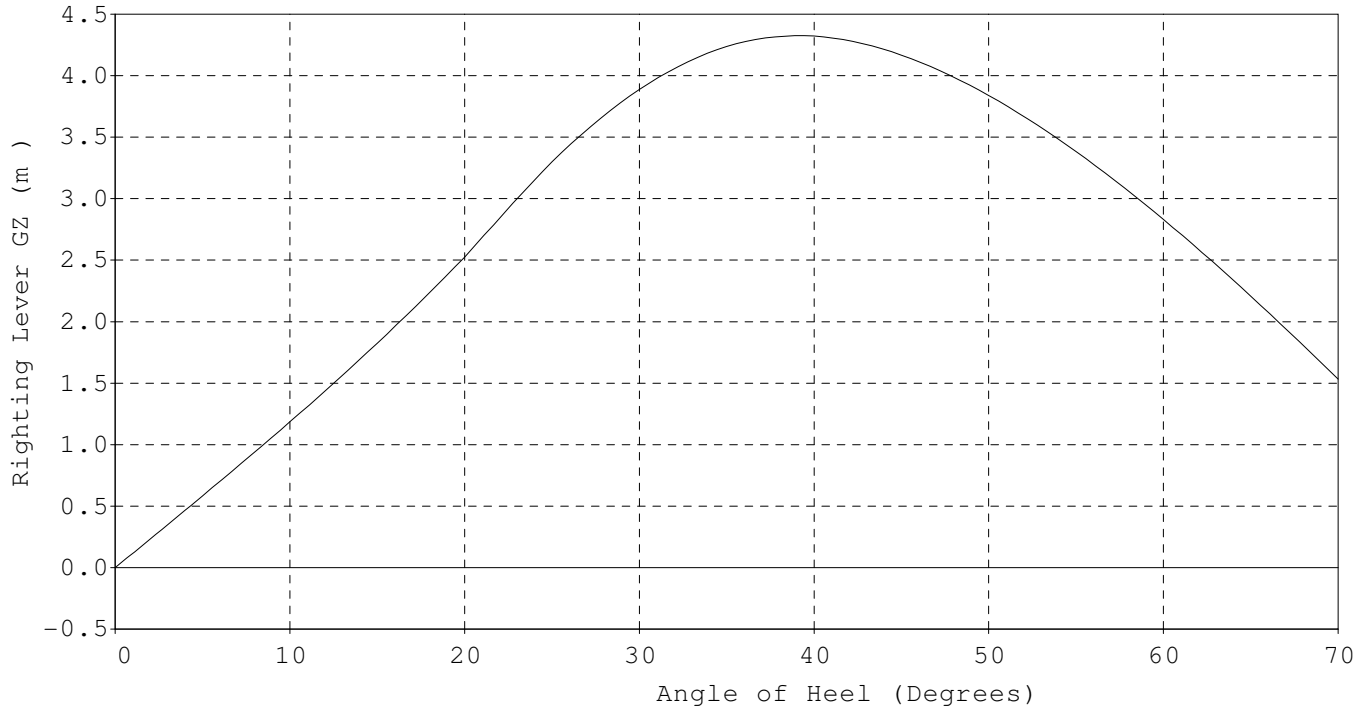
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	213877	17.55	20.41	0.00	181677
Ballast	26054	7.50	30.69	0.00	205351
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	249780	16.74	15.93	0.01	395737
TOTALS	291283	16.63	12.24	0.00	395737

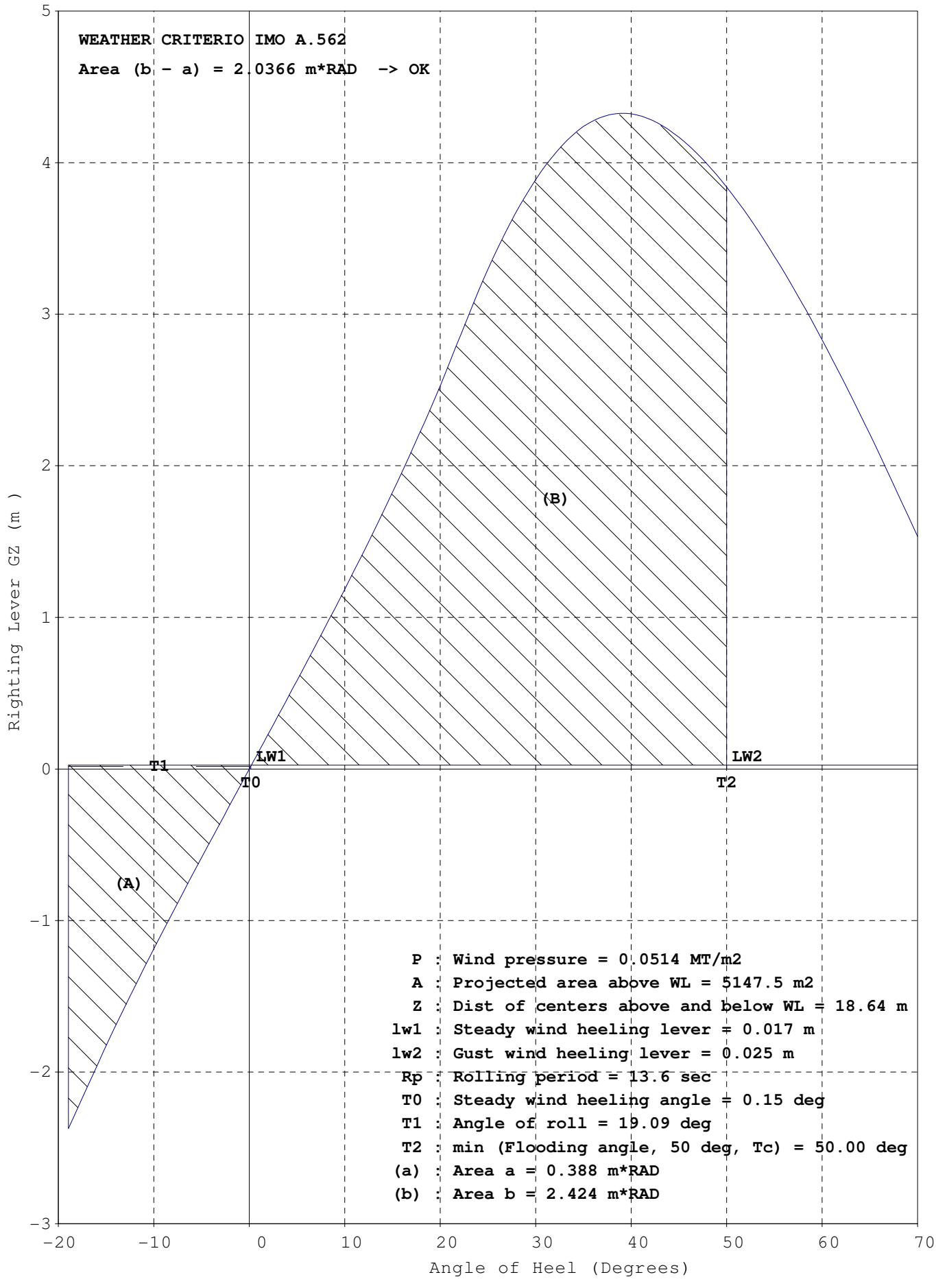
HYDROSTATICS		
Draft FPP	18.63	m
Mk F123	18.64	m
APP	19.50	m
Mk F18	19.46	m
Mid	19.06	m
Mk	19.07	m
LCF	19.06	m
TRIM	0.86	m
HEEL	0.0	Deg
LCF	1.64	m
Prop Imm	188.7	%
Rolling	16	sec
TPC-I	170.22	MT/cm
MCT	3809.8	MT-m/cm
MCH	33913	MT-m/deg
FLood	68.0	Deg
LCB	12.22	m
KM(T)	24.66	m
KG	16.63	m
GM	8.03	m
GGo	1.36	m
GoM	6.67	m
KG(eff)	17.99	m

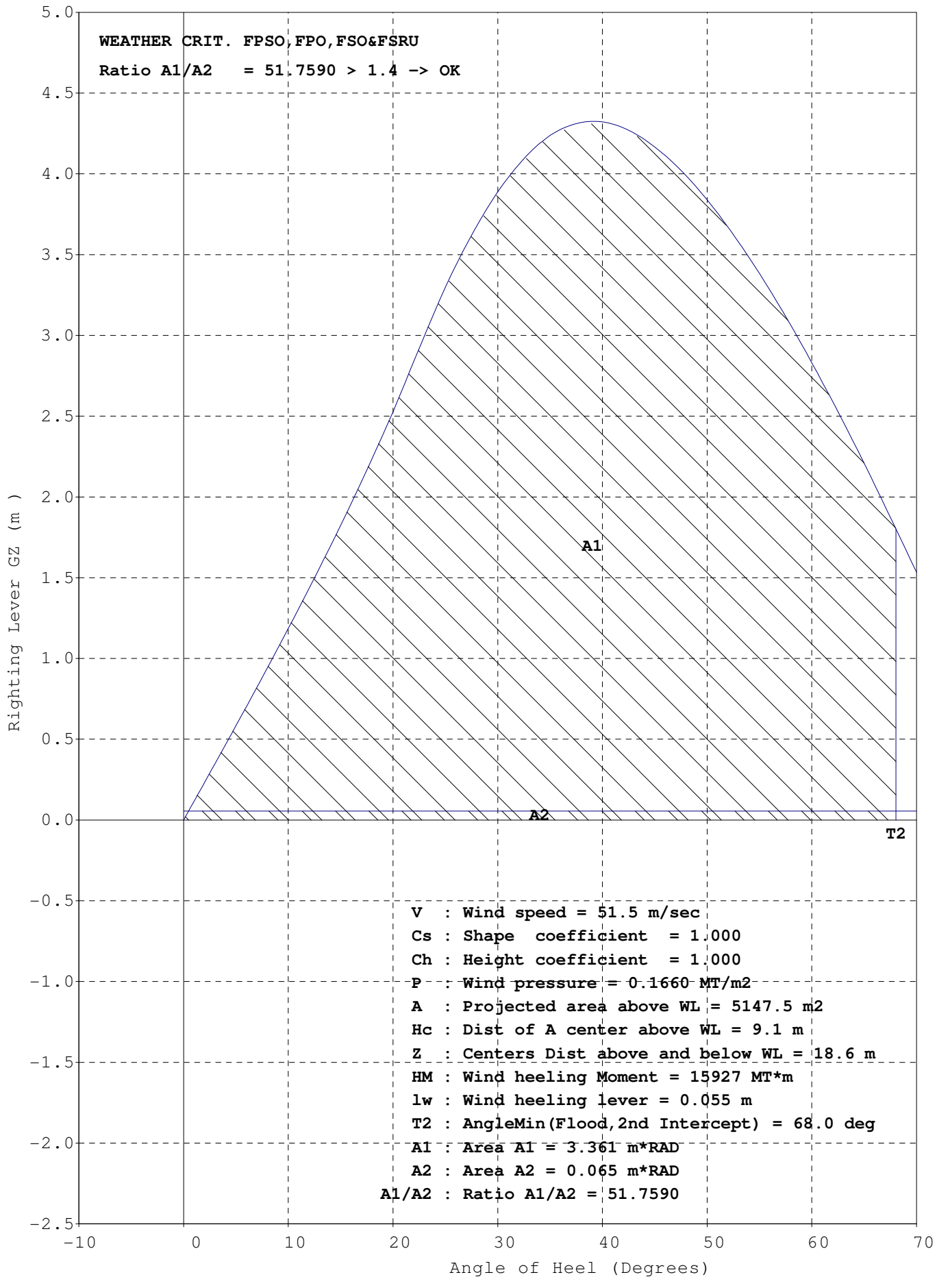
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	0.9924	>= 0.055	OK
Area 0-40 deg	m x RAD	1.724	>= 0.09	OK
Area 30-40 deg	m x RAD	0.7317	>= 0.03	OK
GZ at/or> 30 deg	m	3.888	>= 0.2	OK
Max GZ Angle	Deg	39.169	>= 25.0	OK
Maximum GZ	4.33 m			
Initial GM	m	6.671	>= 0.15	OK
Weather Area(B-A)	m x RAD	2.0366	>= 0.0	OK
Weather Ratio A1/A2	m x RAD	51.759	>= 1.4	OK
Lim KG-Intact	m	17.991	=<24.513	OK
Min FPP Draft	m	18.631	>= 7.825	OK
SteadyWind Angle	Deg	0.153	=< 16.0	OK
Deck Edge Angle	23.02 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.23	0.58	1.19	1.82	2.53	3.30	3.89	4.24	4.32	4.17	3.84	3.38	2.83	2.21	1.53


WEATHER CRITERIO IMO A.562
Area (b - a) = 2.0366 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
T2
LW1
LW2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 5147.5 m2
Z : Dist of centers above and below WL = 18.64 m
lw1 : Steady wind heeling lever = 0.017 m
lw2 : Gust wind heeling lever = 0.025 m
Rp : Rolling period = 13.6 sec
T0 : Steady wind heeling angle = 0.15 deg
T1 : Angle of roll = 19.09 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.388 m*RAD
(b) : Area b = 2.424 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 51.7590 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 5147.5 m2
Hc : Dist of A center above WL = 9.1 m
Z : Centers Dist above and below WL = 18.6 m
HM : Wind heeling Moment = 15927 MT*m
lw : Wind heeling lever = 0.055 m
T2 : AngleMin(Flood,2nd Intercept) = 68.0 deg
A1 : Area A1 = 3.361 m*RAD
A2 : Area A2 = 0.065 m*RAD
A1/A2 : Ratio A1/A2 = 51.7590
Righting Lever GZ (m)
Angle of Heel (Degrees)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T. (P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T. (S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T. (S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T. (C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T. (P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T. (S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T. (C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank (S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S					245356			213877.0	20.41	17.55	0.00	181677

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	213877	1543244	1543244

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2	30	3000.0	69.586	1.05	-14.00	102675_Max
No2 W.B.Tk (S)	91	101	9731.2	30	3000.0	69.586	1.05	14.00	102675_Max
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		26053.9	30.688	7.50	0.00	205351

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

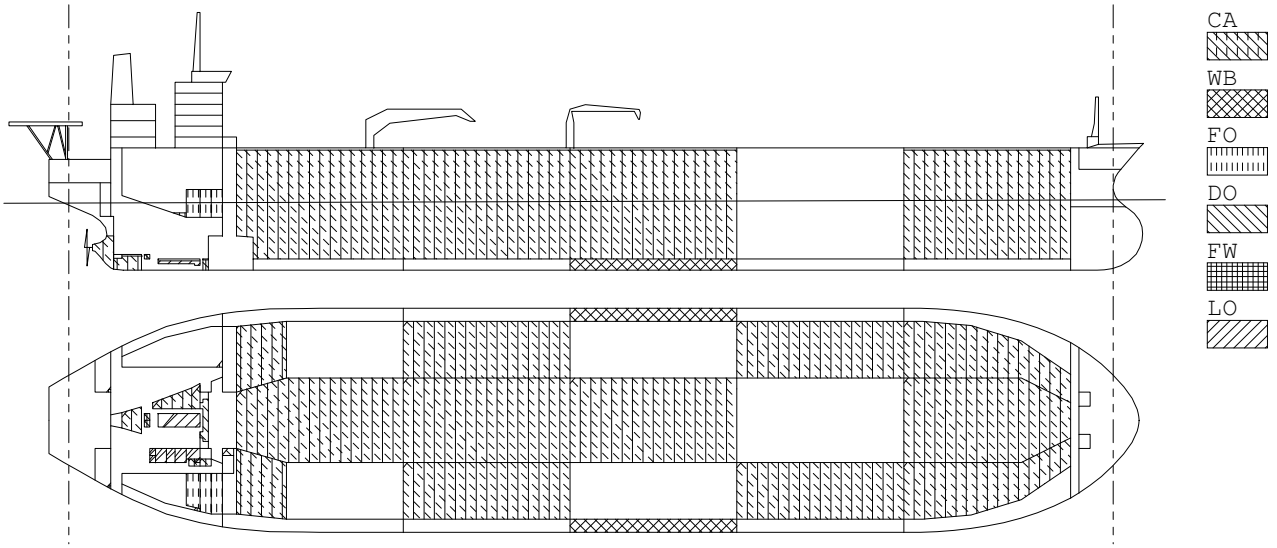
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

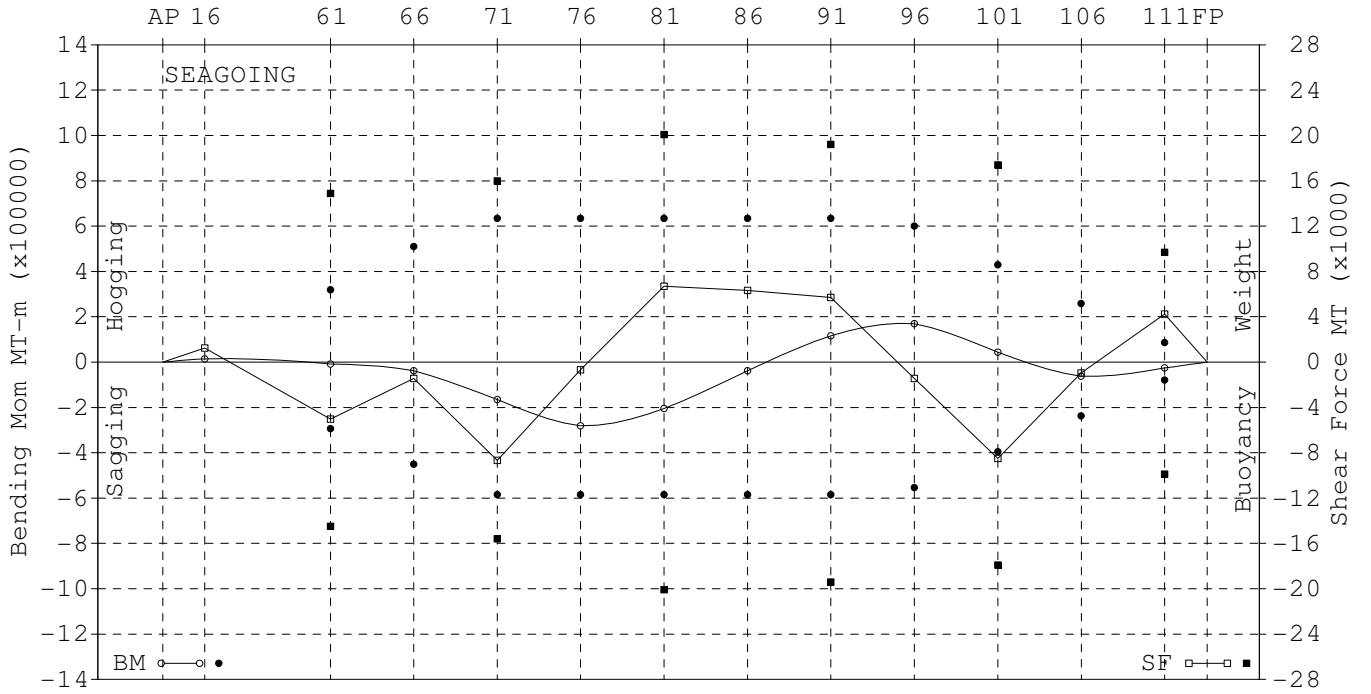
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

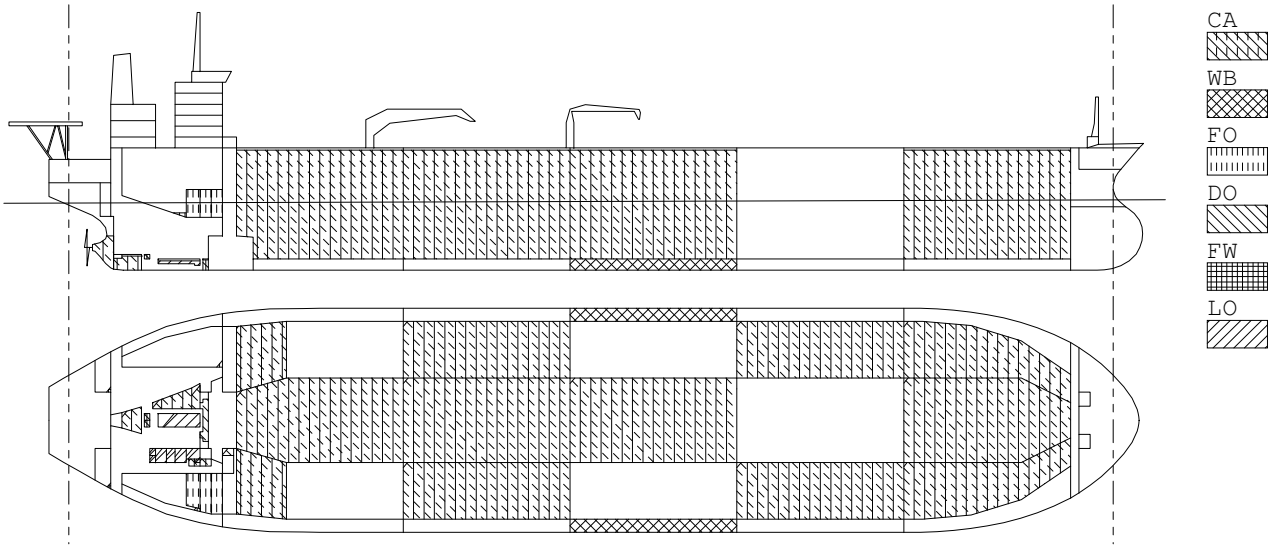


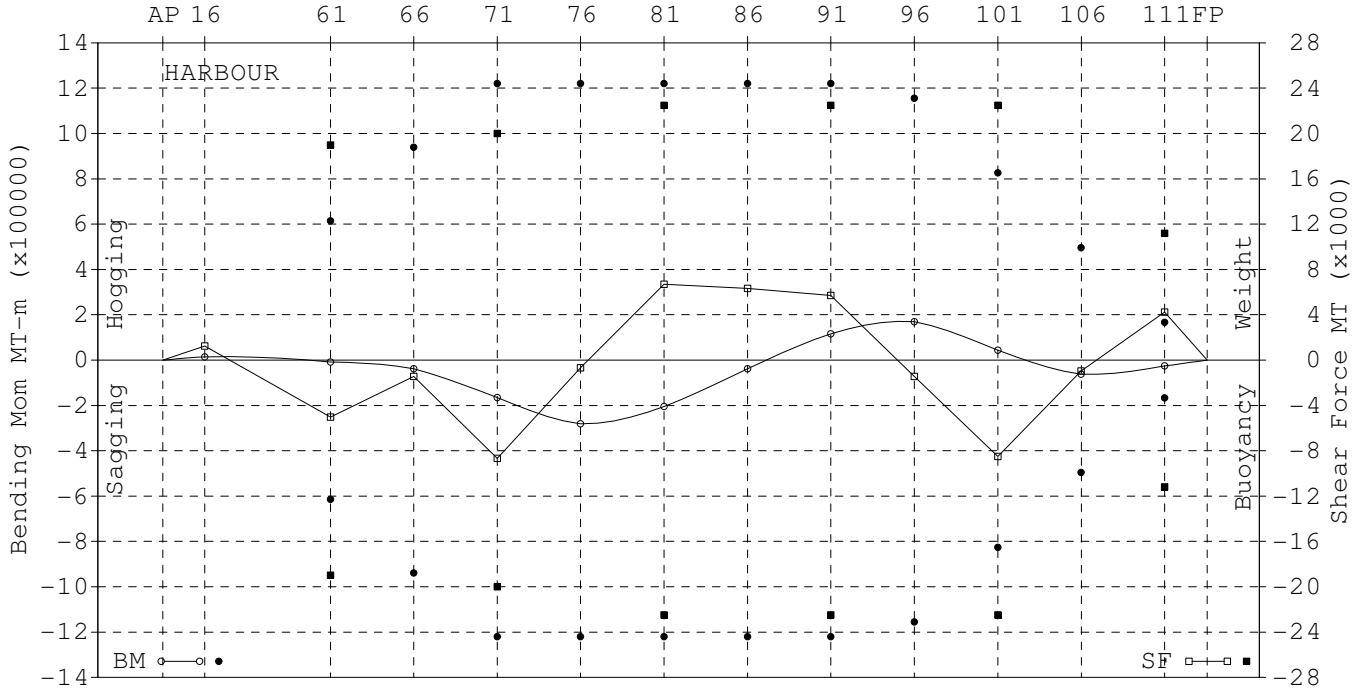


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1241	-	-	14482	-	-	-	-
61	-5033	35	-14500	-7823	-	319000	3	-294000
66	-1447	-	-	-37998	-	510000	8	-450000
71	-8681	56	-15600	-165580	-	635000	28	-585000
76	-666	-	-	-281305	-	635000	48	-585000
81	6690	33	20100	-204488	-	635000	35	-585000
86	6336	-	-	-38202	-	635000	7	-585000
91	5714	30	19200	115378	18	635000	-	-585000
96	-1428	-	-	170132	28	600000	-	-554000
101	-8508	48	-17900	43197	10	429000	-	-395000
106	-965	-	-	-62706	-	258000	26	-237000
111	4245	44	9700	-25377	-	86000	32	-79000

SF max -8681 MT 56% at F71 +Buoyancy
BM max -281318 MT-m 48% at F76 Sagging

Estimated Deflection Amidships = -3cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1241	-	-	14482	-	-	-	-
61	-5033	26	-19000	-7823	-	615000	1	-615000
66	-1447	-	-	-37998	-	940000	4	-940000
71	-8681	43	-20000	-165580	-	1221000	14	-1221000
76	-666	-	-	-281305	-	1221000	23	-1221000
81	6690	30	22500	-204488	-	1221000	17	-1221000
86	6336	-	-	-38202	-	1221000	3	-1221000
91	5714	25	22500	115378	9	1221000	-	-1221000
96	-1428	-	-	170132	15	1156000	-	-1156000
101	-8508	38	-22500	43197	5	826000	-	-826000
106	-965	-	-	-62706	-	496000	13	-496000
111	4245	38	11200	-25377	-	167000	15	-167000

SF max -8681 MT 43% at F71 +Buoyancy
BM max -281318 MT-m 23% at F76 Sagging

Estimated Deflection Amidships = -3cm SAGGING

INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

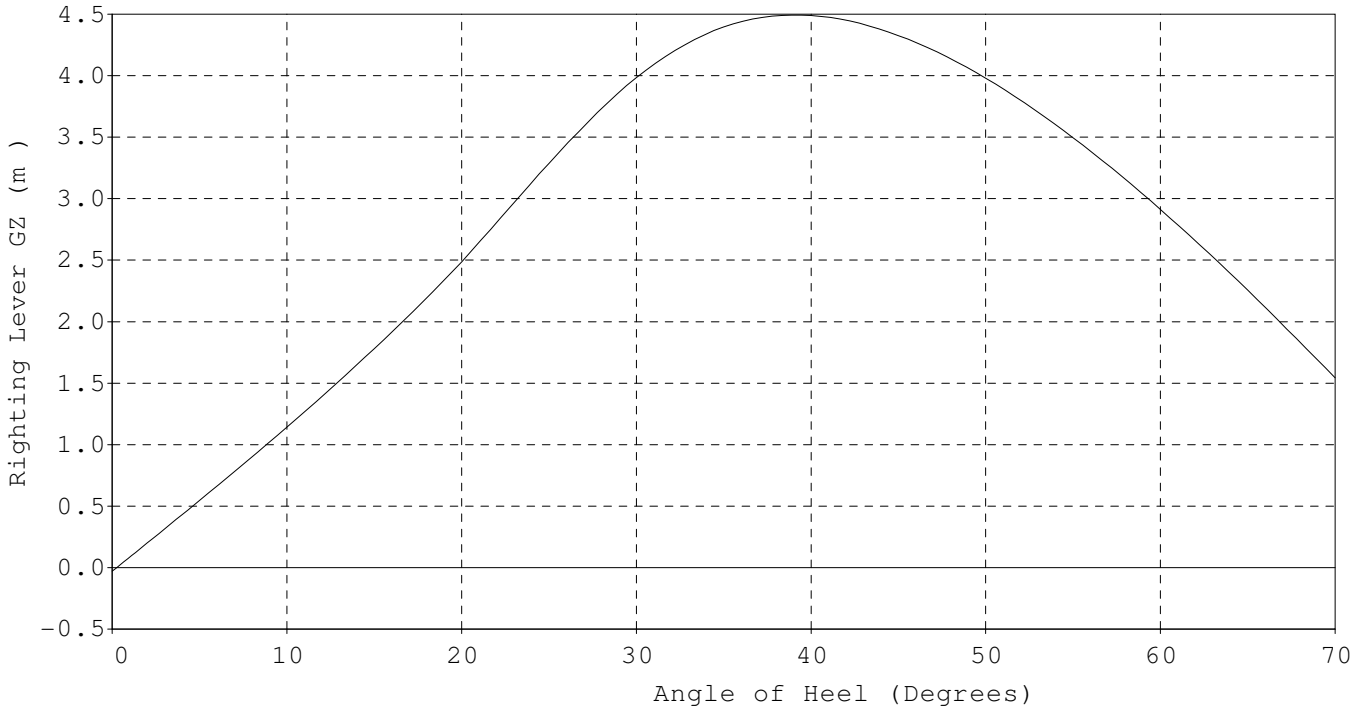
ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	213877	17.55	20.41	0.00	181677
Ballast	20054	9.42	19.05	0.00	205351
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	235720	16.85	19.26	0.04	395737
TOTALS	277222	16.72	14.89	0.03	395737

HYDROSTATICS

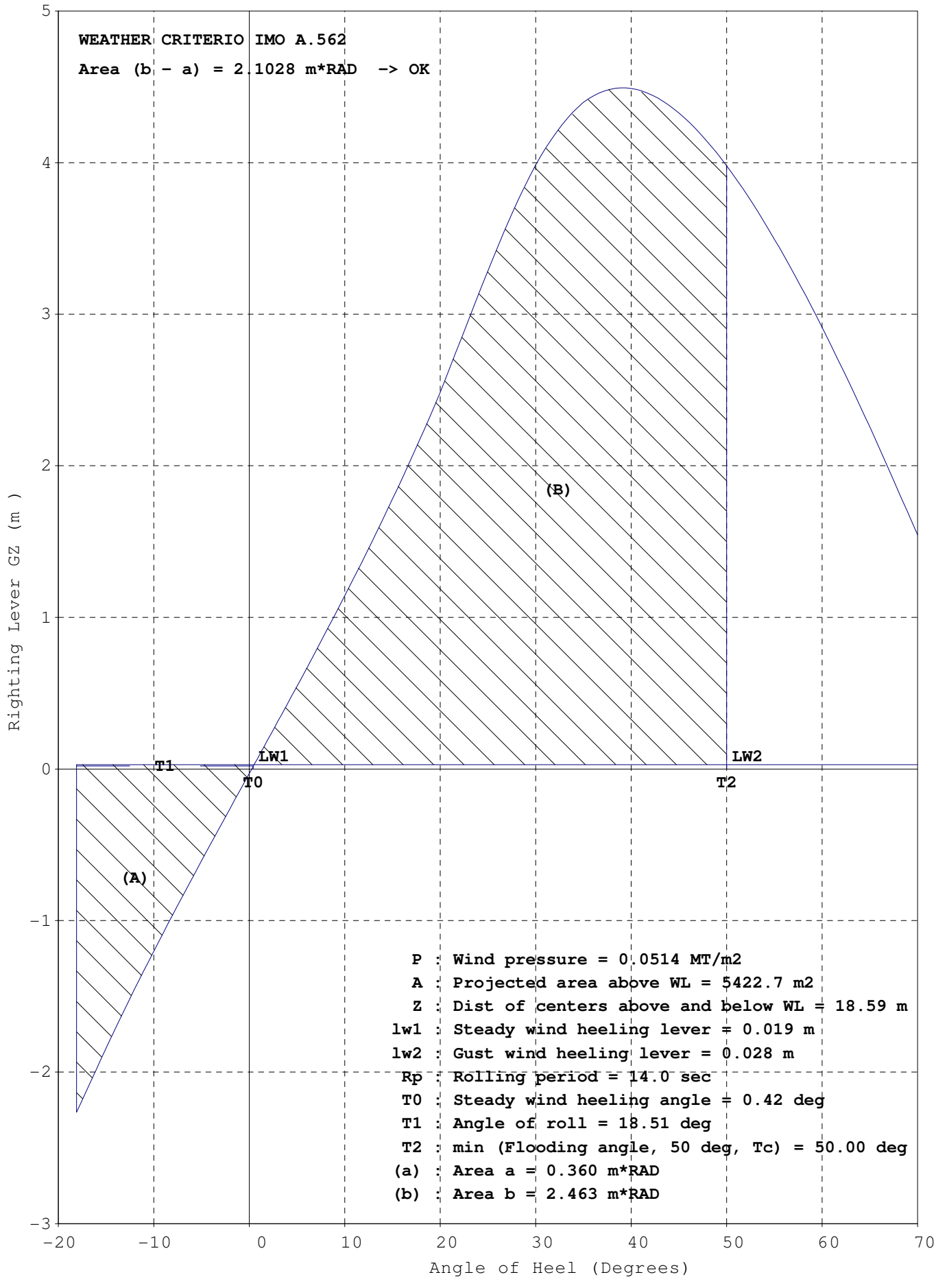
Draft FPP	18.61 m
Mk F123	18.60 m
APP	17.83 m
Mk F18	17.86 m
Mid	18.22 m
Mk	18.21 m
LCF	18.23 m
TRIM	-0.78 m
HEEL	0.3 Deg
LCF	3.79 m
Prop Imm	171.8 %
Rolling	16 sec
TPC-I	167.67 MT/cm
MCT	3644.9 MT-m/cm
MCH	31767 MT-m/deg
FLood	> 70 Deg
LCB	14.92 m
KM(T)	24.71 m
KG	16.72 m
GM	7.99 m
GGo	1.43 m
GoM	6.57 m
KG(eff)	18.15 m

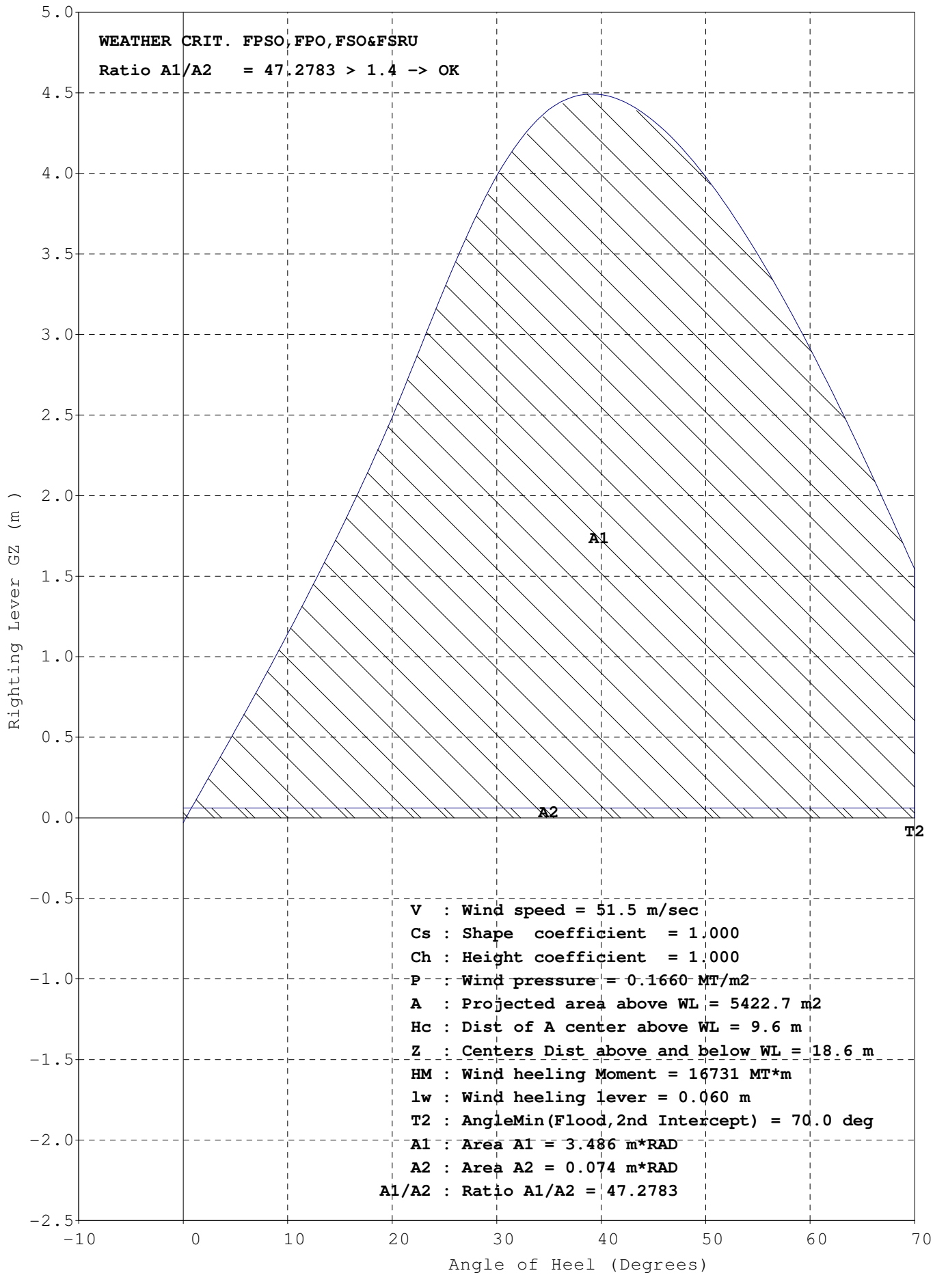
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	0.9793	>=	0.055	OK
Area 0-40 deg	m x RAD	1.737	>=	0.09	OK
Area 30-40 deg	m x RAD	0.7577	>=	0.03	OK
GZ at/or> 30 deg	m	3.985	>=	0.2	OK
Max GZ Angle	Deg	39.129	>=	25.0	OK
Maximum GZ	4.49 m				
Initial GM	m	6.565	>=	0.15	OK
Weather Area(B-A)	m x RAD	2.1028	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	47.2783	>=	1.4	OK
Lim KG-Intact	m	18.146	=<	24.561	OK
Min FPP Draft	m	18.607	>=	7.825	OK
SteadyWind Angle	Deg	0.424	=<	16.0	OK
Deck Edge Angle	23.54 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.03	0.20	0.55	1.14	1.78	2.48	3.29	3.99	4.40	4.49	4.33	3.98	3.50	2.91	2.26	1.54


WEATHER CRITERIO IMO A.562
Area (b - a) = 2.1028 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
T2
LW1
LW2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 5422.7 m2
Z : Dist of centers above and below WL = 18.59 m
lw1 : Steady wind heeling lever = 0.019 m
lw2 : Gust wind heeling lever = 0.028 m
Rp : Rolling period = 14.0 sec
T0 : Steady wind heeling angle = 0.42 deg
T1 : Angle of roll = 18.51 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.360 m*RAD
(b) : Area b = 2.463 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 47.2783 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 5422.7 m2
Hc : Dist of A center above WL = 9.6 m
Z : Centers Dist above and below WL = 18.6 m
HM : Wind heeling Moment = 16731 MT*m
lw : Wind heeling lever = 0.060 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 3.486 m*RAD
A2 : Area A2 = 0.074 m*RAD
A1/A2 : Ratio A1/A2 = 47.2783
Righting Lever GZ (m)
Angle of Heel (Degrees)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T. (P)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	-16.48	8287
No1 C.O.T. (S)	101	111	1	0.8717	16321	98	60	14227.0	117.26	17.60	16.48	8287
No2 C.O.T. (C)	91	101										
No2 C.O.T. (P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T. (S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T. (C)	81	91	1	0.8717	31763	98	60	27688.0	19.05	17.31	0.00	32182
No3 C.O.T. (P)	81	91										
No3 C.O.T. (S)	81	91										
No4 C.O.T. (C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T. (P)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	-18.11	9772
No4 C.O.T. (S)	71	81	1	0.8717	20143	98	60	17559.0	-31.75	17.47	18.11	9772
No5 C.O.T. (C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T. (P)	64	71										
No5 C.O.T. (S)	64	71										
Slop Tank (P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank (S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S					245356			213877.0	20.41	17.55	0.00	181677

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	213877	1543244	1543244

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4						
No1 W.B.Tk (P)	101	111	8789.5						
No1 W.B.Tk (S)	101	111	8789.5						
No2 W.B.Tk (P)	91	101	9731.2	0	0.2	69.525	0.00	-13.74	102675_Max
No2 W.B.Tk (S)	91	101	9731.2	0	0.2	69.525	0.00	13.74	102675_Max
No3 W.B.Tk (P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk (S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk (P)	71	81	9514.4						
No4 W.B.Tk (S)	71	81	9514.4						
No5 W.B.Tk (P)	56	71	8009.9						
No5 W.B.Tk (S)	56	71	8009.9						
Aft Peak Tank (C)	-8	17	2015.8						
T O T A L S			98483.0		20054.3	19.051	9.42	0.00	205351

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

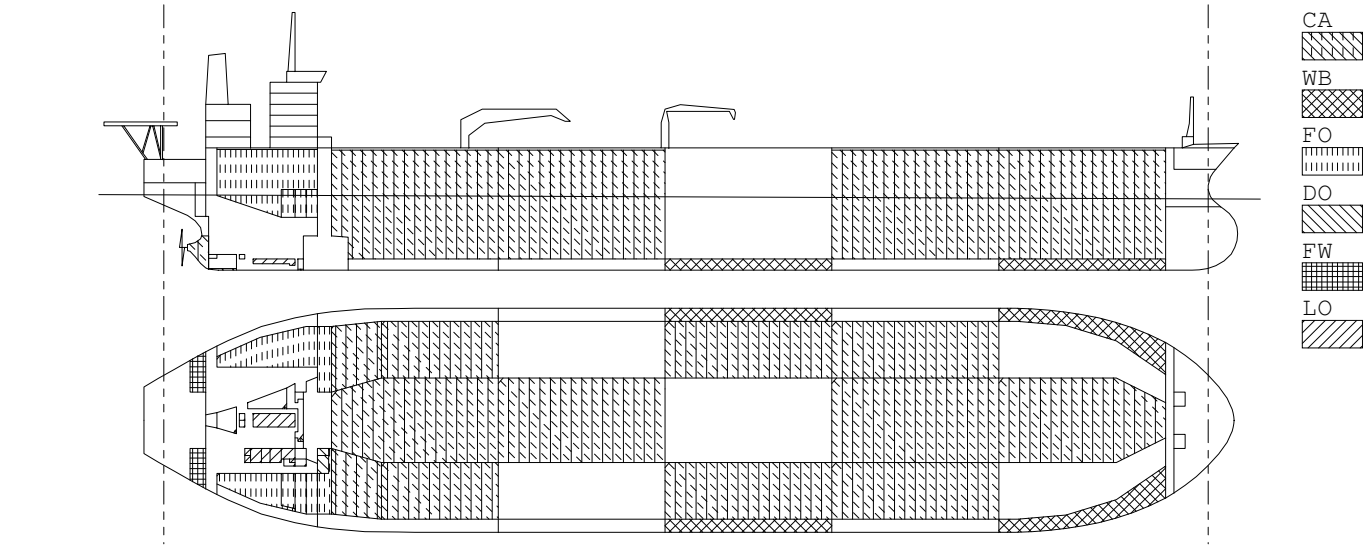
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

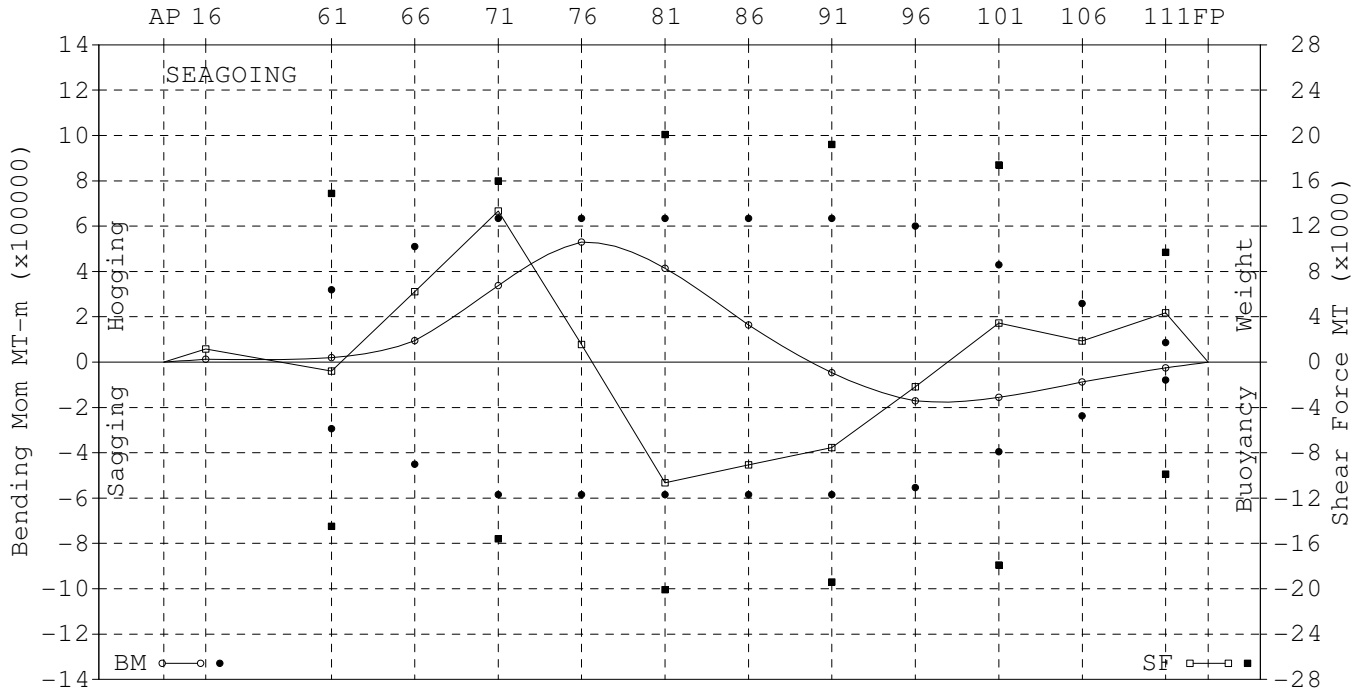
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

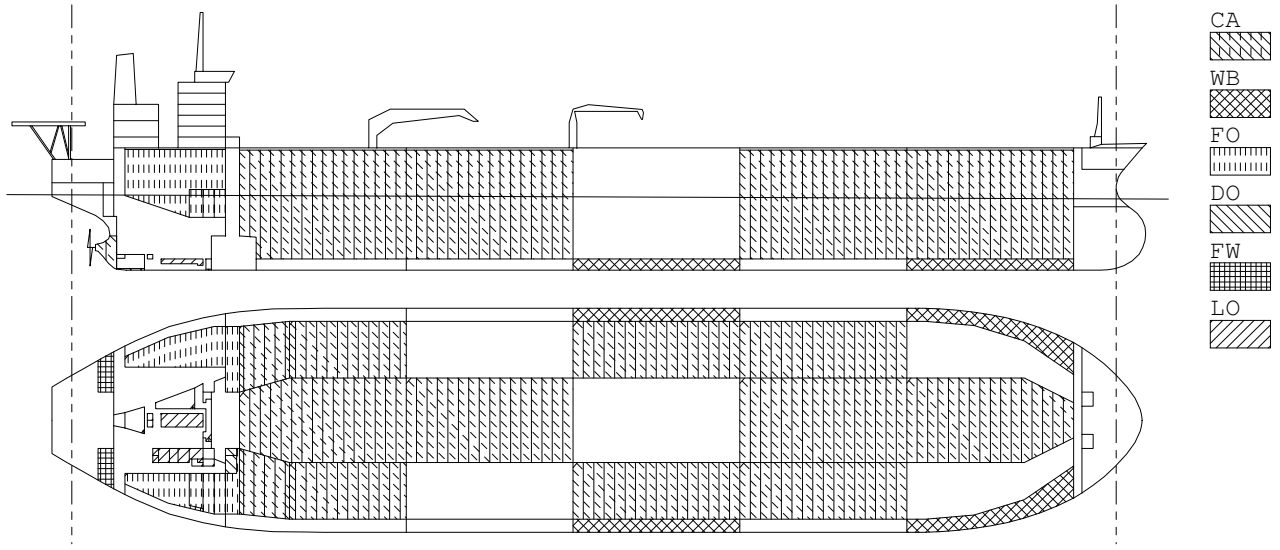


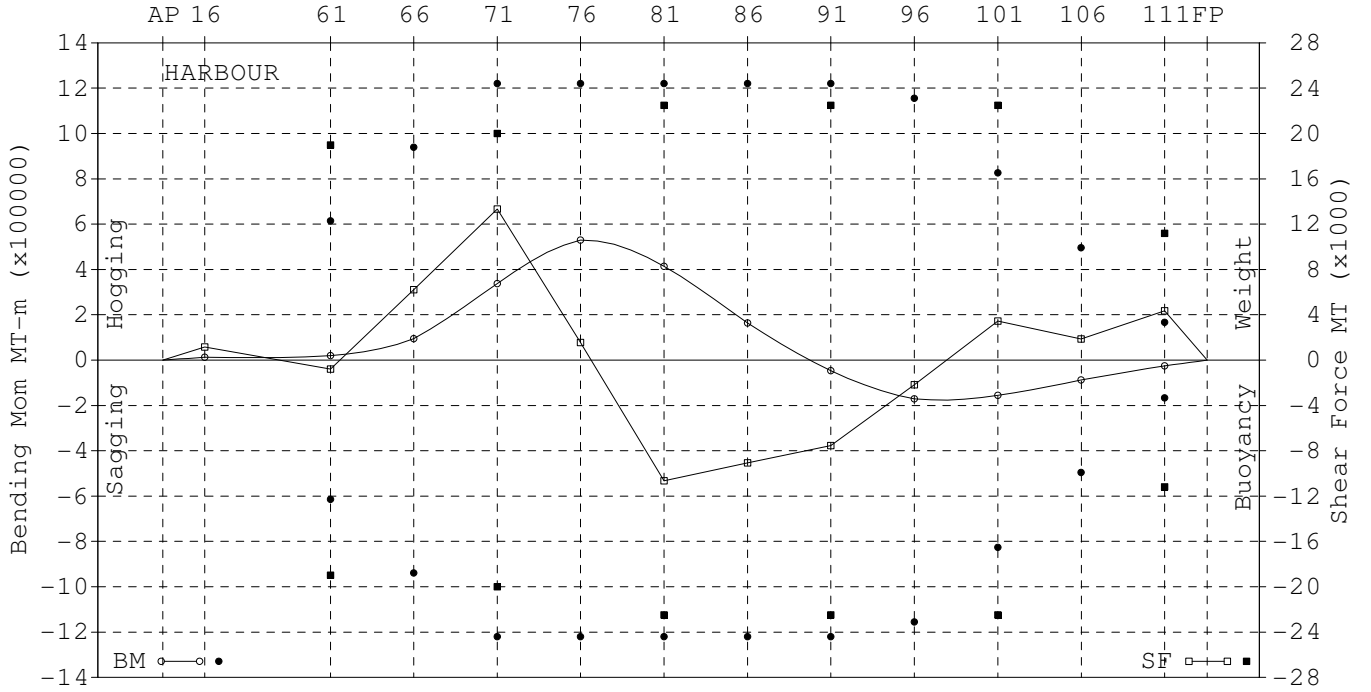


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1146	-	-	12101	-	-	-	-
61	-796	5	-14500	19866	6	319000	-	-294000
66	6209	-	-	94658	19	510000	-	-450000
71	13342	83	16000	337893	53	635000	-	-585000
76	1568	-	-	529761	83	635000	-	-585000
81	-10644	53	-20100	414330	65	635000	-	-585000
86	-9071	-	-	164340	26	635000	-	-585000
91	-7544	39	-19400	-46585	-	635000	8	-585000
96	-2185	-	-	-170296	-	600000	31	-554000
101	3455	20	17400	-155376	-	429000	39	-395000
106	1868	-	-	-87978	-	258000	37	-237000
111	4347	45	9700	-25829	-	86000	33	-79000

SF max 13342 MT 83% at F71 +Weight
BM max 529906 MT-m 83% at F76 Hogging

Estimated Deflection Amidships = 7cm HOGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T			HARBOUR	
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1146	–	–	12101	–	–	–	–
61	-796	4	-19000	19866	3	615000	–	-615000
66	6209	–	–	94658	10	940000	–	-940000
71	13342	67	20000	337893	28	1221000	–	-1221000
76	1568	–	–	529761	43	1221000	–	-1221000
81	-10644	47	-22500	414330	34	1221000	–	-1221000
86	-9071	–	–	164340	13	1221000	–	-1221000
91	-7544	34	-22500	-46585	–	1221000	4	-1221000
96	-2185	–	–	-170296	–	1156000	15	-1156000
101	3455	15	22500	-155376	–	826000	19	-826000
106	1868	–	–	-87978	–	496000	18	-496000
111	4347	39	11200	-25829	–	167000	15	-167000

SF max 13342 MT 67% at F71 +Weight
BM max 529906 MT-m 43% at F76 Hogging

Estimated Deflection Amidships = 7cm HOGGING

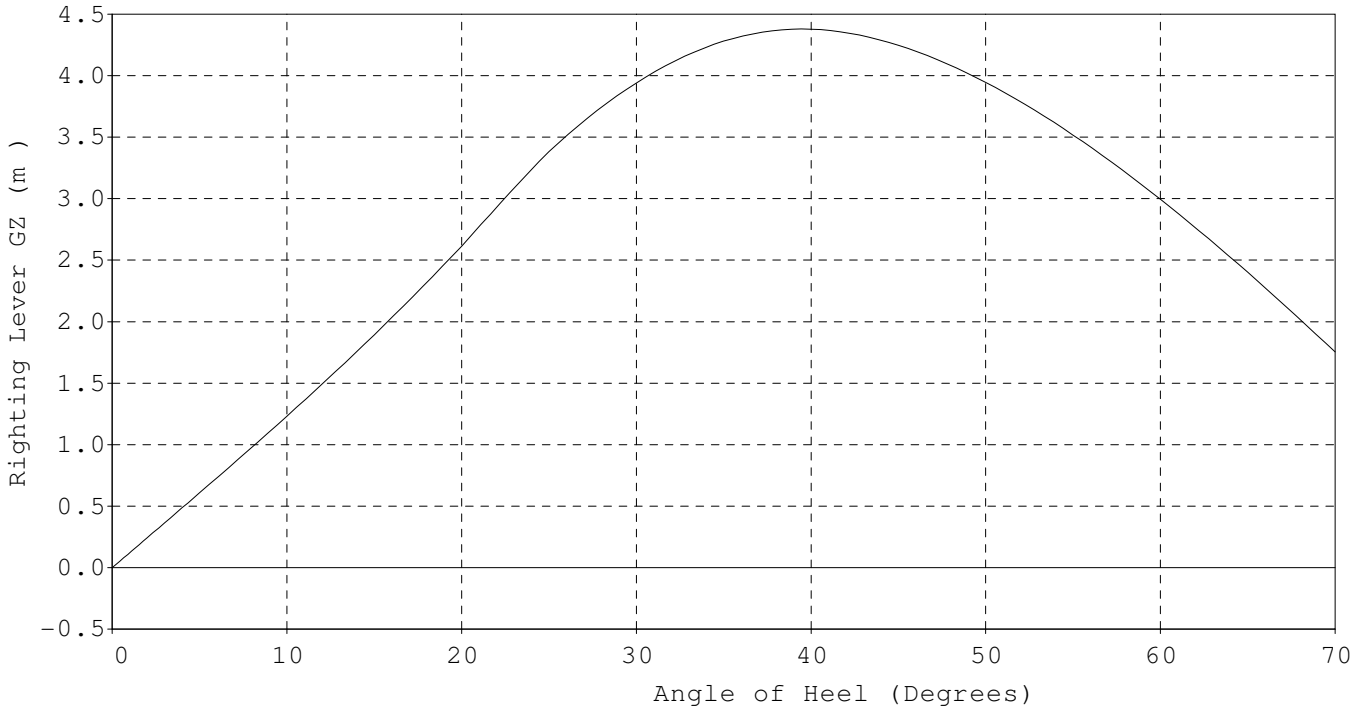
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	208237	17.62	12.12	0.00	177862
Ballast	38072	10.39	67.30	0.00	111866
Fresh Water	513	26.11	-148.51	0.00	659
Fuel Oil	8327	23.72	-120.42	-0.51	6698
Diesel Oil	329	22.86	-110.49	10.45	66
LO & Misc	416	18.09	-128.51	6.16	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	256159	16.78	15.23	0.01	298437
TOTALS	297661	16.67	11.72	0.00	298437

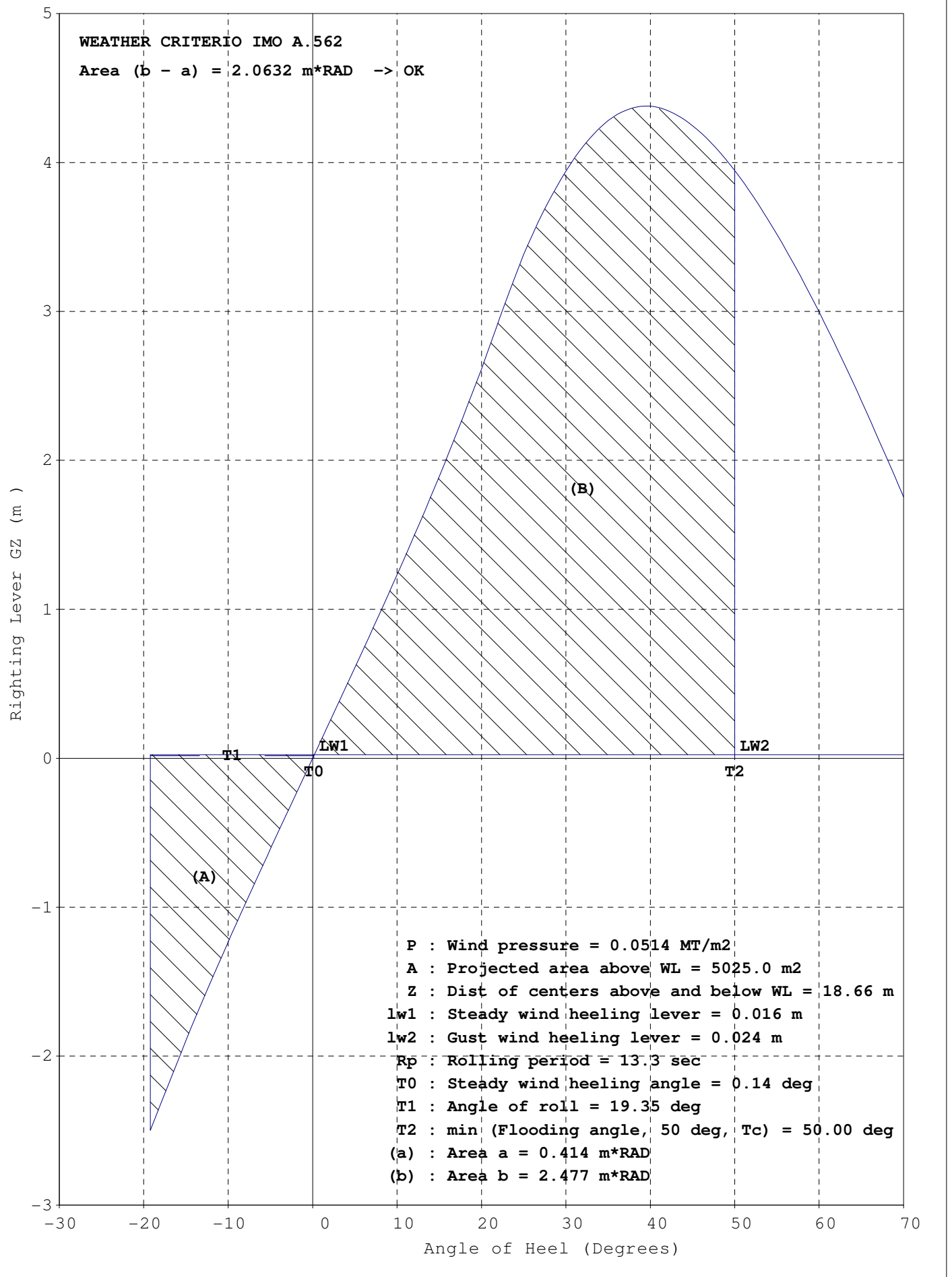
HYDROSTATICS		
Draft FPP	18.89	m
Mk F123	18.90	m
APP	19.98	m
Mk F18	19.93	m
Mid	19.44	m
Mk	19.44	m
LCF	19.43	m
TRIM	1.09	m
HEEL	0.0	Deg
LCF	1.02	m
Prop Imm	193.7	%
Rolling	15	sec
TPC-I	170.89	MT/cm
MCT	3852.4	MT-m/cm
MCH	36088	MT-m/deg
FLood	66.1	Deg
LCB	11.69	m
KM(T)	24.62	m
KG	16.67	m
GM	7.95	m
GGo	1.00	m
GoM	6.95	m
KG(eff)	17.67	m

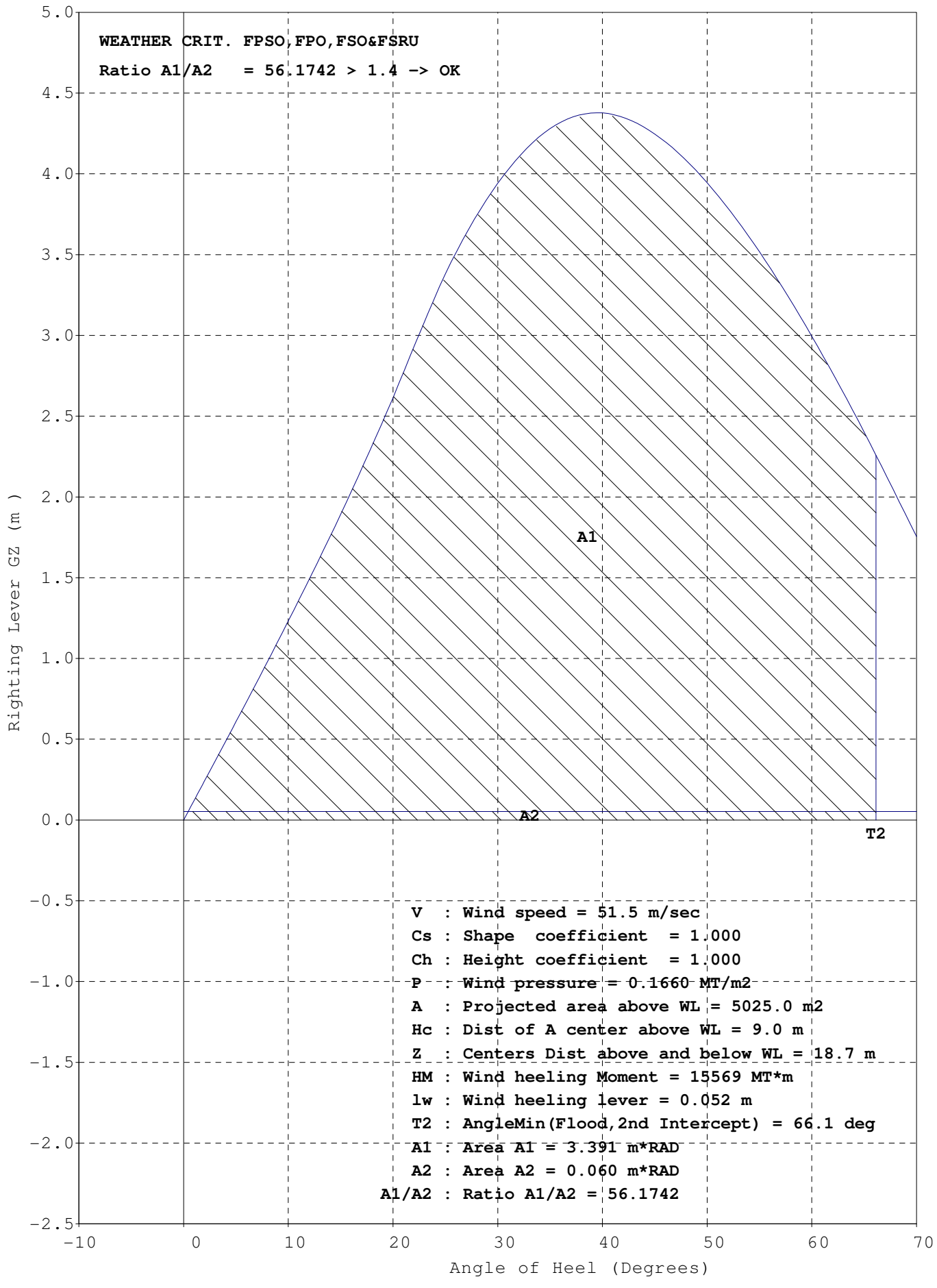
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	1.0218	>= 0.055	**OK**
Area 0-40 deg	m x RAD	1.7618	>= 0.09	**OK**
Area 30-40 deg	m x RAD	0.7399	>= 0.03	**OK**
GZ at/or> 30 deg	m	3.941	>= 0.2	**OK**
Max GZ Angle	Deg	39.587	>= 25.0	**OK**
Maximum GZ	4.38 m			
Initial GM	m	6.947	>= 0.15	**OK**
Weather Area(B-A)	m x RAD	2.0632	>= 0.0	**OK**
Weather Ratio A1/A2	m x RAD	56.1742	>= 1.4	**OK**
Lim KG-Intact	m	17.669	=<24.466	**OK**
Min FPP Draft	m	18.891	>= 7.825	**OK**
SteadyWind Angle	Deg	0.141	=< 16.0	**OK**
Deck Edge Angle	22.47 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.24	0.61	1.23	1.89	2.61	3.38	3.94	4.28	4.38	4.25	3.95	3.52	2.99	2.40	1.76


WEATHER CRITERIO IMO A.562
Area (b - a) = 2.0632 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 5025.0 m2
Z : Dist of centers above and below WL = 18.66 m
lw1 : Steady wind heeling lever = 0.016 m
lw2 : Gust wind heeling lever = 0.024 m
Rp : Rolling period = 13.3 sec
T0 : Steady wind heeling angle = 0.14 deg
T1 : Angle of roll = 19.35 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.414 m*RAD
(b) : Area b = 2.477 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 56.1742 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 5025.0 m2
Hc : Dist of A center above WL = 9.0 m
Z : Centers Dist above and below WL = 18.7 m
HM : Wind heeling Moment = 15569 MT*m
lw : Wind heeling lever = 0.052 m
T2 : AngleMin(Flood,2nd Intercept) = 66.1 deg
A1 : Area A1 = 3.391 m*RAD
A2 : Area A2 = 0.060 m*RAD
A1/A2 : Ratio A1/A2 = 56.1742
Righting Lever GZ (m)
Angle of Heel (Degrees)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME		FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T.	(C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T.	(P)	101	111										
No1 C.O.T.	(S)	101	111										
No2 C.O.T.	(C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T.	(P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T.	(S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T.	(C)	81	91										
No3 C.O.T.	(P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T.	(S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T.	(C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T.	(P)	71	81										
No4 C.O.T.	(S)	71	81										
No5 C.O.T.	(C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T.	(P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T.	(S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank	(P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank	(S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S						238886			208237.0	12.12	17.62	0.00	177862

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	208237	1502548	1502548

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME		FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank	(C)	111	137	4812.4						
No1 W.B.Tk	(P)	101	111	8789.5	100	9009.2	120.992	11.48	-18.53	55933_Max
No1 W.B.Tk	(S)	101	111	8789.5	100	9009.2	120.992	11.48	18.53	55933_Max
No2 W.B.Tk	(P)	91	101	9731.2						
No2 W.B.Tk	(S)	91	101	9731.2						
No3 W.B.Tk	(P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk	(S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk	(P)	71	81	9514.4						
No4 W.B.Tk	(S)	71	81	9514.4						
No5 W.B.Tk	(P)	56	71	8009.9						
No5 W.B.Tk	(S)	56	71	8009.9						
Aft Peak Tank	(C)	-8	17	2015.8						
T O T A L S				98483.0		38072.4	67.296	10.39	0.00	111866

Fuel Density = .980 MT/m3

COMPARTMENT NAME		FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk	(P)	56	61	1300.2	98	1248.7	-110.075	22.02	-14.77	1696_Max
No1 HFO Stor Tk	(S)	56	61	920.3	98	883.8	-109.898	21.75	16.52	826_Max
No2 HFO Stor Tk	(P)	20	56	3239.6	98	3111.3	-123.960	24.27	-17.65	1671_Max
No2 HFO Stor Tk	(S)	20	56	2688.3	98	2581.9	-125.384	25.59	17.72	1671_Max
No1 HFO Sett.Tk	(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk	(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk	(S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S				8670.4		8327.0	-120.423	23.72	-0.51	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	98	281.8	-110.569	23.71	10.82	64_Max
DO Service Tank(S)	56	61	53.3	98	47.0	-110.051	17.77	8.24	2_Max
T O T A L S			372.8		328.8	-110.495	22.86	10.45	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	98	50.3	-125.150	2.31	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	98	73.2	-121.273	25.18	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	98	65.1	-124.945	25.17	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	98	8.1	-119.850	25.19	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	98	64.9	-130.900	25.19	9.15	13_Max
MELO Settling T(S)	36	39	55.2	98	48.6	-127.925	25.19	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	98	12.2	-133.237	25.20	8.24	1_Max
GELO Settling T(S)	30	32	13.8	98	12.2	-133.238	25.20	10.07	1_Max
T O T A L S			379.5		334.6	-126.242	21.74	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	100	256.5	-148.505	26.11	-11.91	330_Max
Fresh Water Tk (S)	10	16	256.5	100	256.5	-148.505	26.11	11.91	330_Max
T O T A L S			513.0		513.0	-148.505	26.11	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	10	0.3	-135.150	3.06	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	10	0.3	-135.150	3.06	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	10	0.4	-120.700	13.56	10.57	2_Max
T O T A L S			11.1		1.0	-129.370	7.26	4.23	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

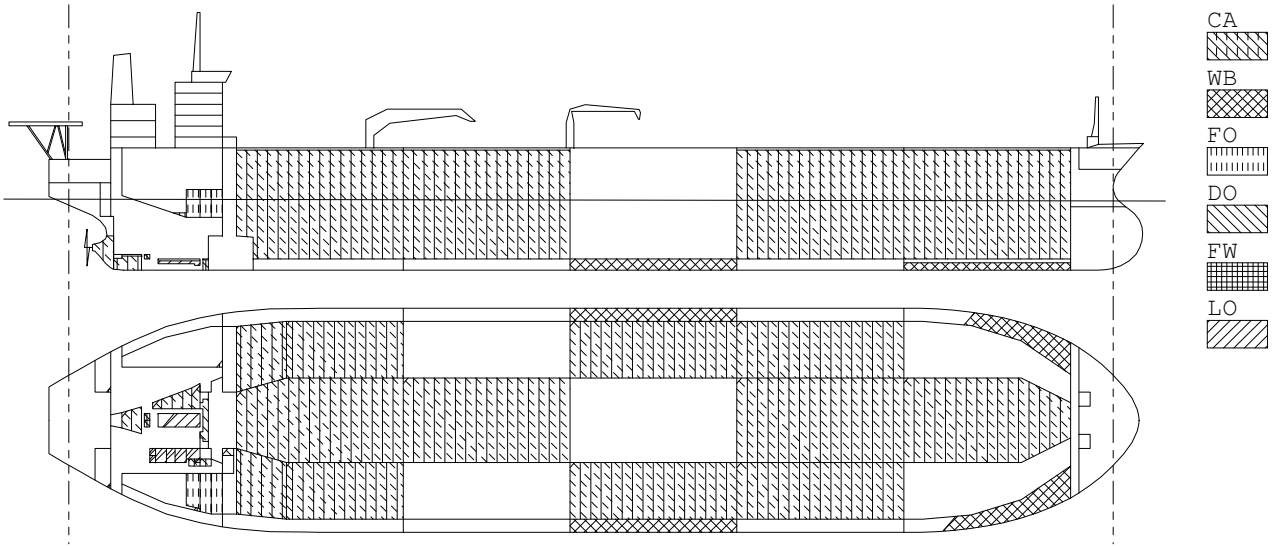
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	9	0.4	-117.300	13.55	10.55	2_Max
T O T A L S			147.1		14.4	-117.933	0.66	-0.35	1037

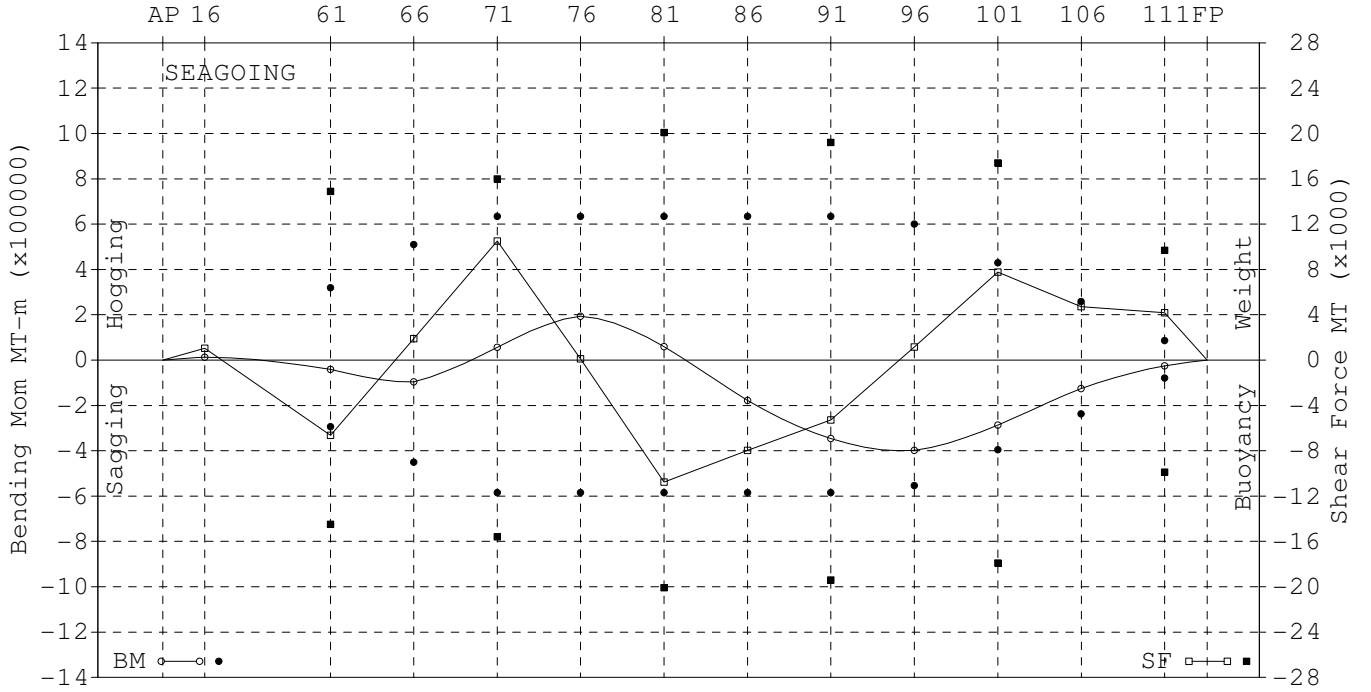
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

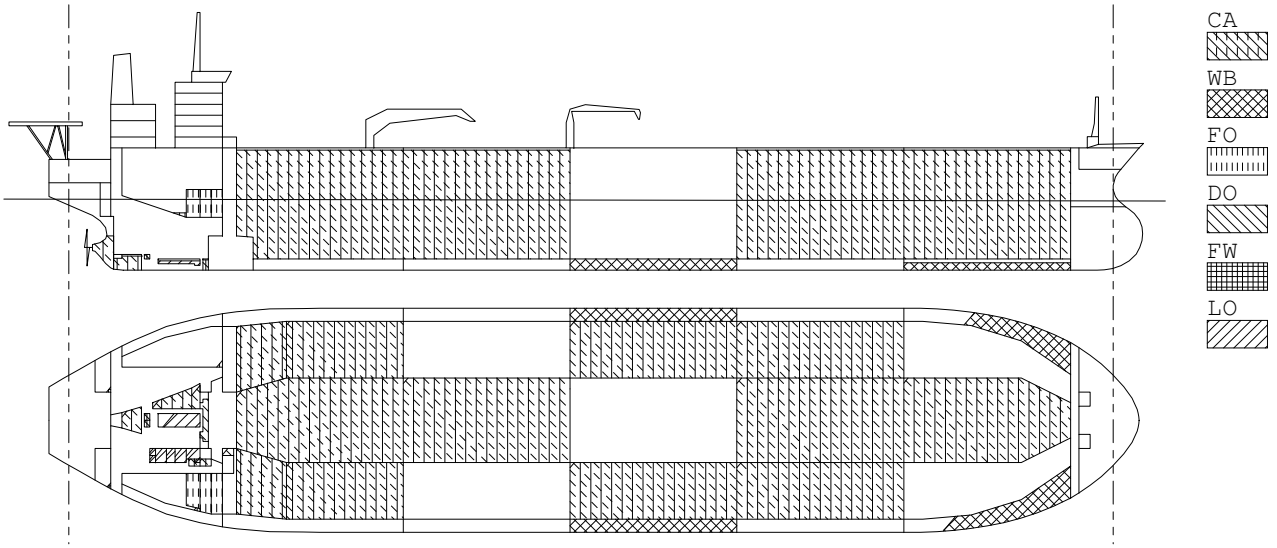


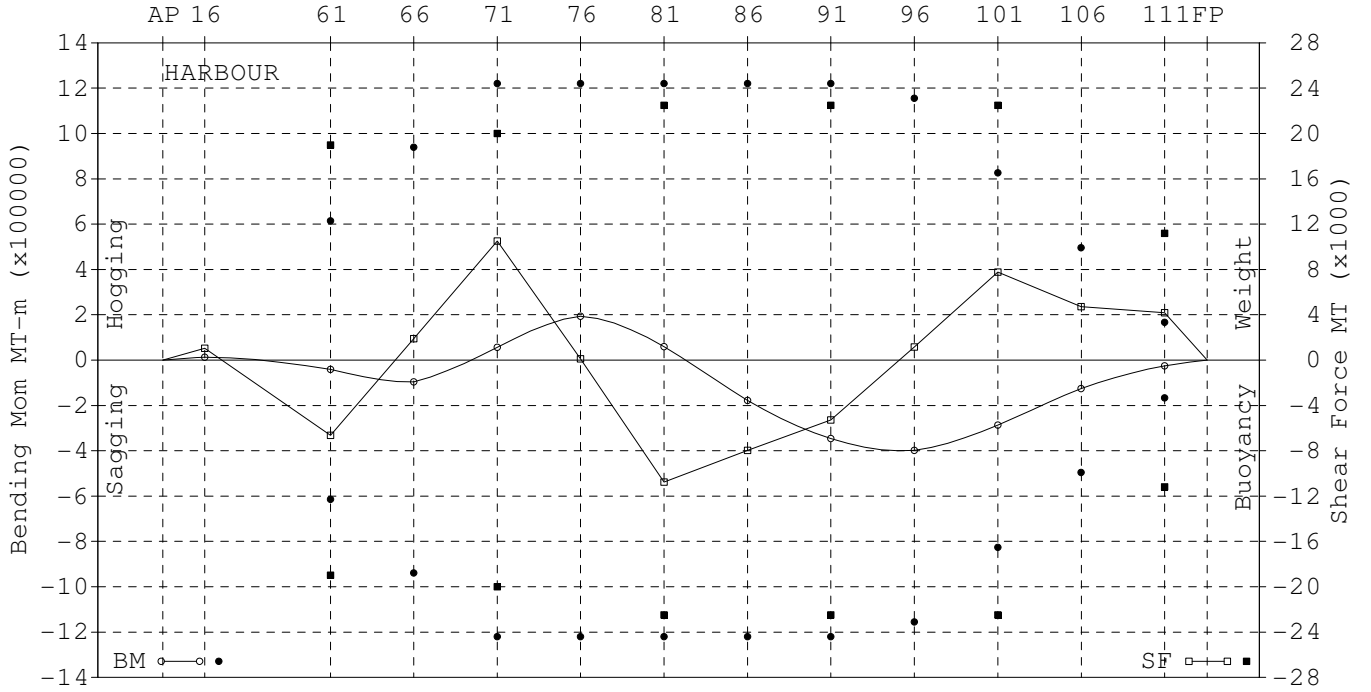


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1031	-	-	13317	-	-	-	-
61	-6631	46	-14500	-41443	-	319000	14	-294000
66	1887	-	-	-95711	-	510000	21	-450000
71	10498	66	16000	56667	9	635000	-	-585000
76	122	-	-	194225	31	635000	-	-585000
81	-10773	54	-20100	58967	9	635000	-	-585000
86	-7965	-	-	-178442	-	635000	31	-585000
91	-5284	27	-19400	-346452	-	635000	59	-585000
96	1146	-	-	-398984	-	600000	72	-554000
101	7777	45	17400	-286691	-	429000	73	-395000
106	4719	-	-	-125111	-	258000	53	-237000
111	4195	43	9700	-25268	-	86000	32	-79000

SF max -10773 MT 54% at F81 +Buoyancy (10498 MT 66% at F71 +Weight)
BM max -400426 MT-m 72% at F95 Sagging (-286691 MT-m 73% at F101 Sagging)

Estimated Deflection Amidships = -4cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	1031	-	-	13317	-	-	-	-
61	-6631	35	-19000	-41443	-	615000	7	-615000
66	1887	-	-	-95711	-	940000	10	-940000
71	10498	52	20000	56667	5	1221000	-	-1221000
76	122	-	-	194225	16	1221000	-	-1221000
81	-10773	48	-22500	58967	5	1221000	-	-1221000
86	-7965	-	-	-178442	-	1221000	15	-1221000
91	-5284	23	-22500	-346452	-	1221000	28	-1221000
96	1146	-	-	-398984	-	1156000	35	-1156000
101	7777	35	22500	-286691	-	826000	35	-826000
106	4719	-	-	-125111	-	496000	25	-496000
111	4195	37	11200	-25268	-	167000	15	-167000

SF max -10773 MT 48% at F81 +Buoyancy (10498 MT 52% at F71 +Weight)
BM max -400426 MT-m 34% at F95 Sagging (-286691 MT-m 35% at F101 Sagging)

Estimated Deflection Amidships = -4cm SAGGING

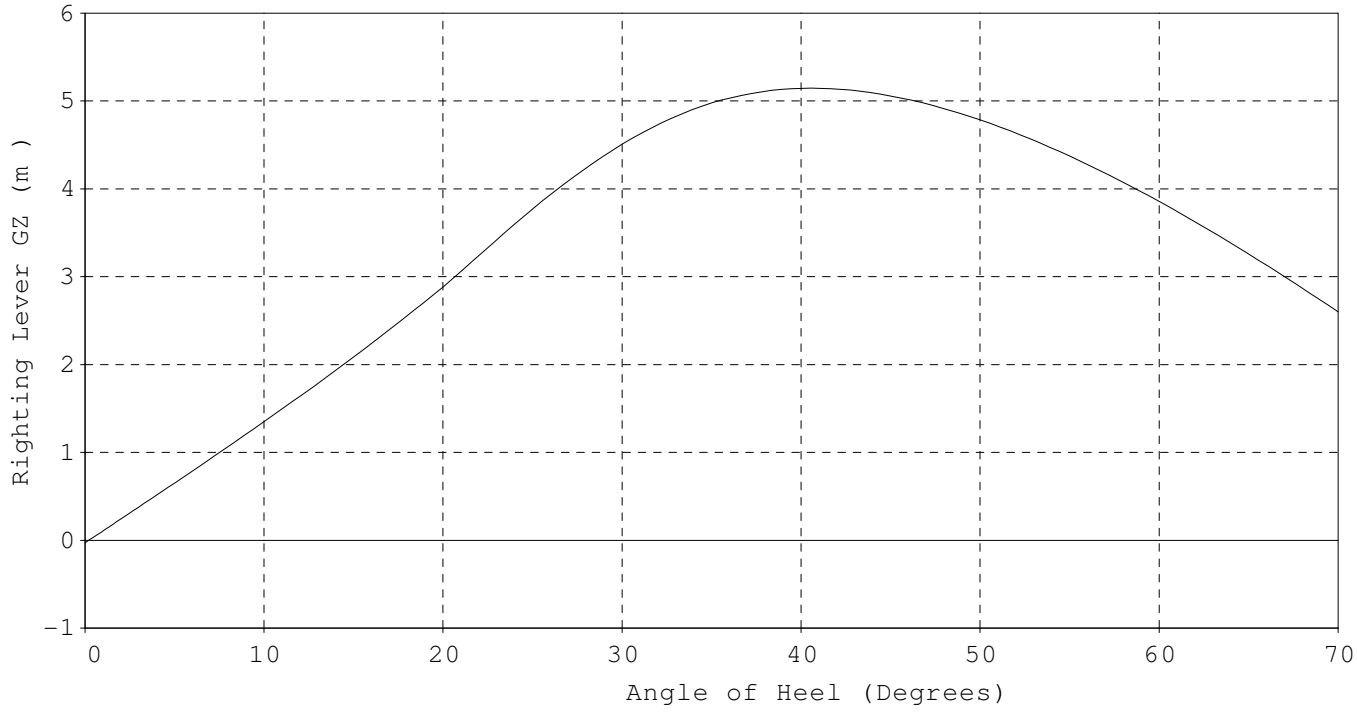
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	208237	17.62	12.12	0.00	177862
Ballast	32054	7.82	56.59	0.00	7051
Fresh Water	51	23.46	-148.50	0.00	659
Fuel Oil	833	17.74	-119.52	10.45	6698
Diesel Oil	33	16.72	-110.04	8.25	66
LO & Misc	616	9.80	-128.34	2.10	1285
Stores	5	33.45	-122.82	0.00	0
Deadweight	242079	16.31	17.07	0.04	193621
TOTALS	283581	16.26	13.12	0.03	193621

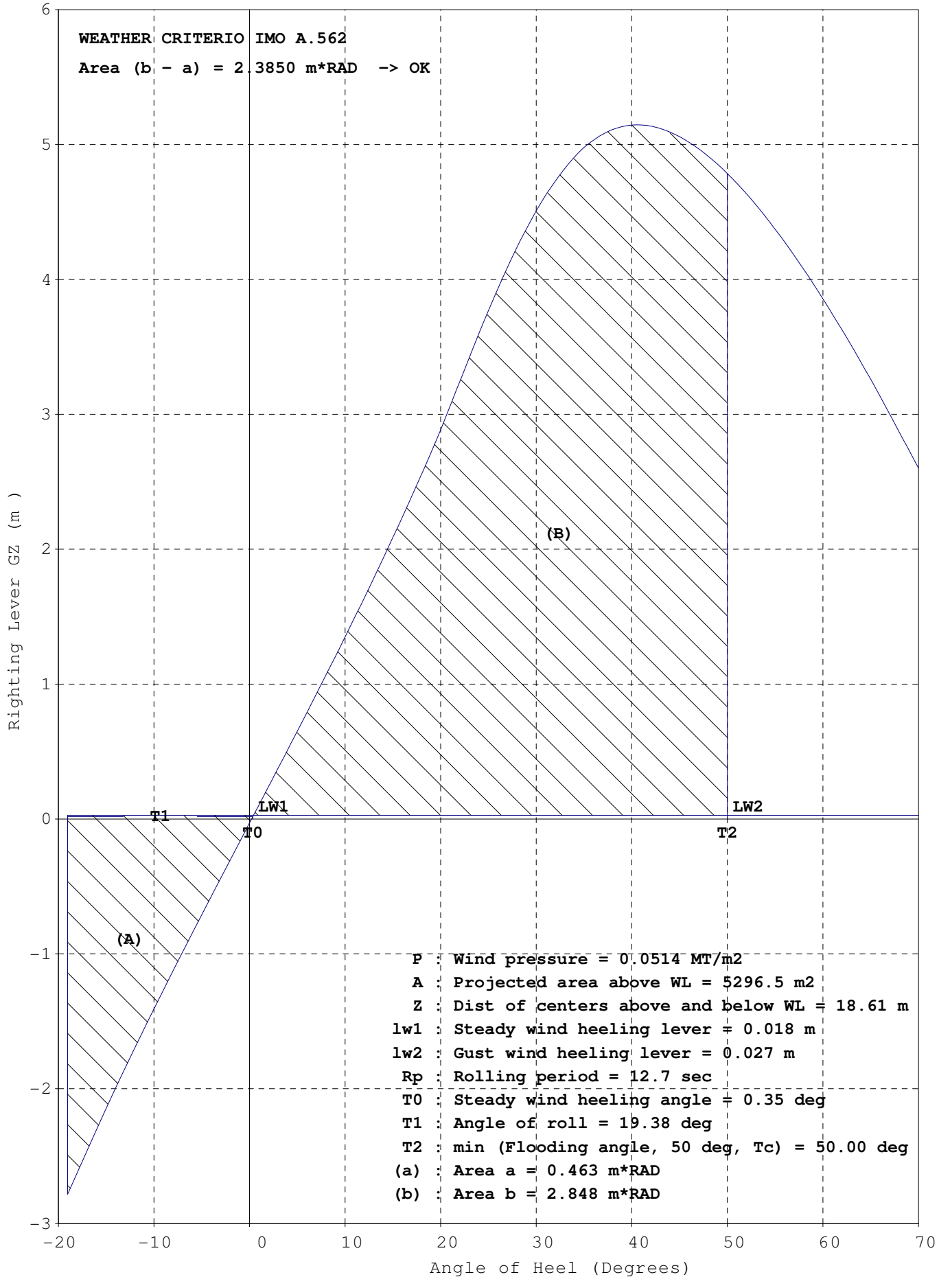
HYDROSTATICS	
Draft FPP	18.40 m
Mk F123	18.41 m
APP	18.81 m
Mk F18	18.79 m
Mid	18.61 m
Mk	18.61 m
LCF	18.60 m
TRIM	0.40 m
HEEL	0.2 Deg
LCF	2.54 m
Prop Imm	181.7 %
Rolling	15 sec
TPC-I	169.20 MT/cm
MCT	3743.6 MT-m/cm
MCH	38453 MT-m/deg
FLood	> 70 Deg
LCB	13.11 m
KM(T)	24.72 m
KG	16.26 m
GM	8.45 m
GGo	0.68 m
GoM	7.77 m
KG(eff)	16.95 m

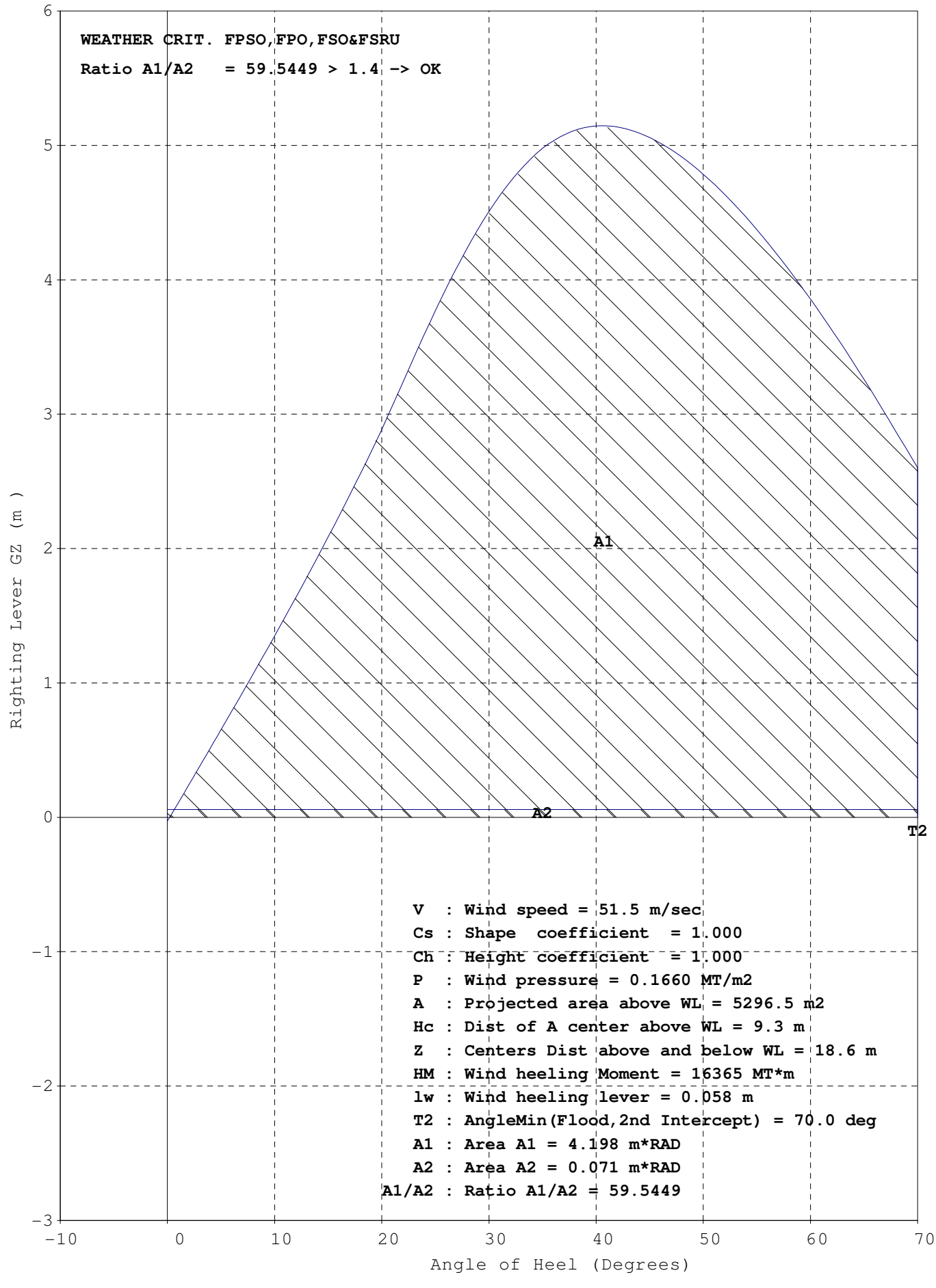
STABILITY CRITERIA

Criterion		Actual	Limit	
Area 0-30 deg	m x RAD	1.1337	>= 0.055	**OK**
Area 0-40 deg	m x RAD	1.9934	>= 0.09	**OK**
Area 30-40 deg	m x RAD	0.8598	>= 0.03	**OK**
GZ at/or> 30 deg	m	4.509	>= 0.2	**OK**
Max GZ Angle	Deg	40.569	>= 25.0	**OK**
Maximum GZ	5.15 m			
Initial GM	m	7.769	>= 0.15	**OK**
Weather Area(B-A)	m x RAD	2.385	>= 0.0	**OK**
Weather Ratio A1/A2	m x RAD	59.5449	>= 1.4	**OK**
Lim KG-Intact	m	16.946	=<24.566	**OK**
Min FPP Draft	m	18.405	>= 7.825	**OK**
SteadyWind Angle	Deg	0.347	=< 16.0	**OK**
Deck Edge Angle	23.53 Deg			



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	-0.03	0.24	0.65	1.35	2.09	2.88	3.77	4.51	4.98	5.15	5.06	4.78	4.37	3.86	3.26	2.60


WEATHER CRITERIO IMO A.562
Area (b - a) = 2.3850 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
(A)
(B)
T1
T0
T2
LW1
LW2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 5296.5 m2
Z : Dist of centers above and below WL = 18.61 m
lw1 : Steady wind heeling lever = 0.018 m
lw2 : Gust wind heeling lever = 0.027 m
Rp : Rolling period = 12.7 sec
T0 : Steady wind heeling angle = 0.35 deg
T1 : Angle of roll = 19.38 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.463 m*RAD
(b) : Area b = 2.848 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 59.5449 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 5296.5 m2
Hc : Dist of A center above WL = 9.3 m
Z : Centers Dist above and below WL = 18.6 m
HM : Wind heeling Moment = 16365 MT*m
lw : Wind heeling lever = 0.058 m
T2 : AngleMin(Flood,2nd Intercept) = 70.0 deg
A1 : Area A1 = 4.198 m*RAD
A2 : Area A2 = 0.071 m*RAD
A1/A2 : Ratio A1/A2 = 59.5449
Righting Lever GZ (m)
Angle of Heel (Degrees)
6
5
4
3
2
1
0
-1
-2
-3
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME		FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T.	(C)	101	111	1	0.8717	29032	98	60	25307.0	118.72	17.32	0.00	27200
No1 C.O.T.	(P)	101	111										
No1 C.O.T.	(S)	101	111										
No2 C.O.T.	(C)	91	101	1	0.8717	31763	98	60	27688.0	69.85	17.31	0.00	32182
No2 C.O.T.	(P)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	-18.11	9772
No2 C.O.T.	(S)	91	101	1	0.8717	20143	98	60	17559.0	69.85	17.47	18.11	9772
No3 C.O.T.	(C)	81	91										
No3 C.O.T.	(P)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	-18.11	9772
No3 C.O.T.	(S)	81	91	1	0.8717	20143	98	60	17559.0	19.05	17.47	18.11	9772
No4 C.O.T.	(C)	71	81	1	0.8717	31763	98	60	27688.0	-31.75	17.31	0.00	32182
No4 C.O.T.	(P)	71	81										
No4 C.O.T.	(S)	71	81										
No5 C.O.T.	(C)	61	71	1	0.8717	29701	98	60	25890.0	-81.09	17.50	0.00	29070
No5 C.O.T.	(P)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	-17.81	6379
No5 C.O.T.	(S)	64	71	1	0.8717	13086	98	60	11407.0	-74.26	18.26	17.81	6379
Slop Tank	(P)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	-15.99	2690
Slop Tank	(S)	61	64	1	0.8717	4941	98	60	4307.0	-100.28	20.41	16.00	2690
T O T A L S						238886			208237.0	12.12	17.62	0.00	177862

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.5	0.8737	0.8741	0.8717	0.8721	208237	1502548	1502548

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME		FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank	(C)	111	137	4812.4						
No1 W.B.Tk	(P)	101	111	8789.5	67	6000.0	119.338	5.14	-16.39	3525
No1 W.B.Tk	(S)	101	111	8789.5	67	6000.0	119.338	5.14	16.39	3525
No2 W.B.Tk	(P)	91	101	9731.2						
No2 W.B.Tk	(S)	91	101	9731.2						
No3 W.B.Tk	(P)	81	91	9782.4	100	10027.0	19.050	9.42	-21.35	0
No3 W.B.Tk	(S)	81	91	9782.4	100	10027.0	19.050	9.42	21.35	0
No4 W.B.Tk	(P)	71	81	9514.4						
No4 W.B.Tk	(S)	71	81	9514.4						
No5 W.B.Tk	(P)	56	71	8009.9						
No5 W.B.Tk	(S)	56	71	8009.9						
Aft Peak Tank	(C)	-8	17	2015.8						
T O T A L S				98483.0		32053.9	56.595	7.82	0.00	7051

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	0	0.2	-110.075	9.07	-10.52	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	0	0.2	-110.075	9.07	10.52	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	5	165.8	-117.212	15.32	-16.04	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	6	165.7	-128.699	18.51	15.89	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	98	176.8	-113.900	18.17	17.74	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	98	169.4	-117.274	18.19	17.59	292_Max
HFO Service Tk (S)	43	48	161.5	98	155.1	-121.047	18.57	16.88	222_Max
T O T A L S			8670.4		833.2	-119.517	17.74	10.45	6698

Diesel **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	0	0.2	-110.575	14.26	11.44	64_Max
DO Service Tank(S)	56	61	53.3	69	32.9	-110.041	16.74	8.24	2_Max
T O T A L S			372.8		33.1	-110.045	16.72	8.25	66

Lub Oil **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	70	35.9	-125.059	2.12	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	70	52.5	-121.275	24.34	9.01	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	70	46.5	-124.942	24.33	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	70	5.8	-119.850	24.35	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	70	46.3	-130.900	24.35	9.15	13_Max
MELO Settling T(S)	36	39	55.2	70	34.8	-127.925	24.35	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	70	8.7	-133.238	24.35	8.24	1_Max
GELO Settling T(S)	30	32	13.8	70	8.7	-133.238	24.35	10.07	1_Max
T O T A L S			379.5		239.2	-126.221	21.01	7.78	86

Fresh Water **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	10	25.7	-148.497	23.46	-11.77	330_Max
Fresh Water Tk (S)	10	16	256.5	10	25.7	-148.497	23.46	11.77	330_Max
T O T A L S			513.0		51.4	-148.497	23.46	0.00	659

Miscellaneous **Density = 1.000** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	90	100.7	-140.157	2.25	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		144.9	-142.265	3.02	0.00	97

Miscellaneous **Density = .900** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	88	2.7	-135.150	3.51	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	88	2.7	-135.150	3.51	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	90	3.5	-120.700	13.86	10.93	2_Max
T O T A L S			11.1		8.9	-129.467	7.58	4.30	3

Miscellaneous **Density = .950** **MT/m3** 

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	90	93.0	-126.040	2.44	-4.50	62_Max
T O T A L S			108.7		93.0	-126.040	2.44	-4.50	62

Miscellaneous Density = .980 MT/m3

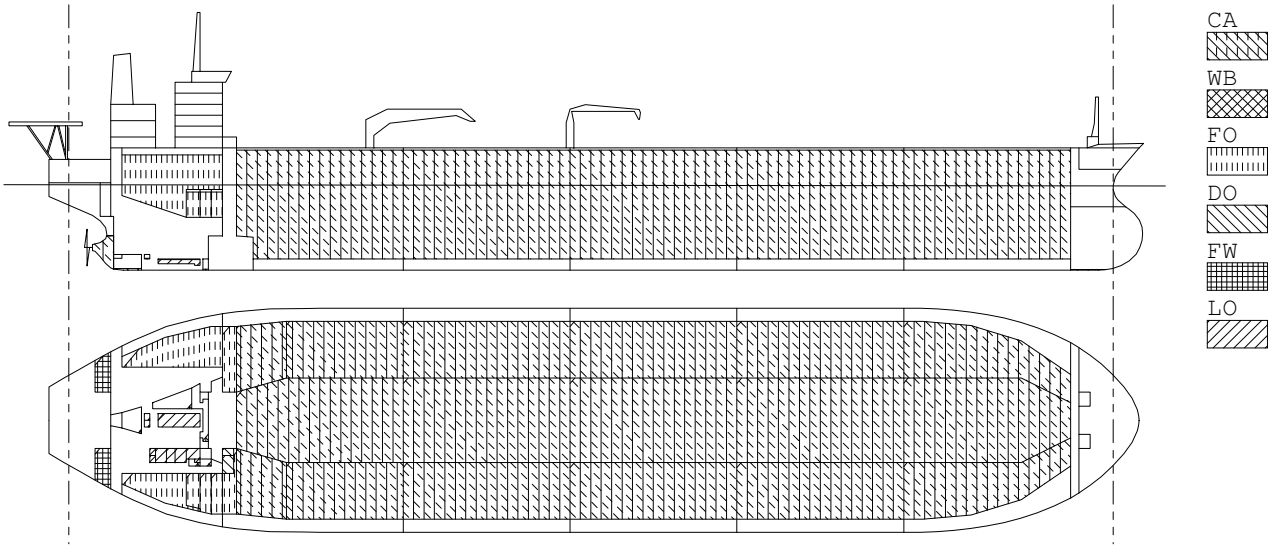
COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	90	125.9	-118.282	1.76	-1.81	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	90	3.8	-117.300	13.86	10.93	2_Max
T O T A L S			147.1		129.7	-118.254	2.11	-1.44	1037

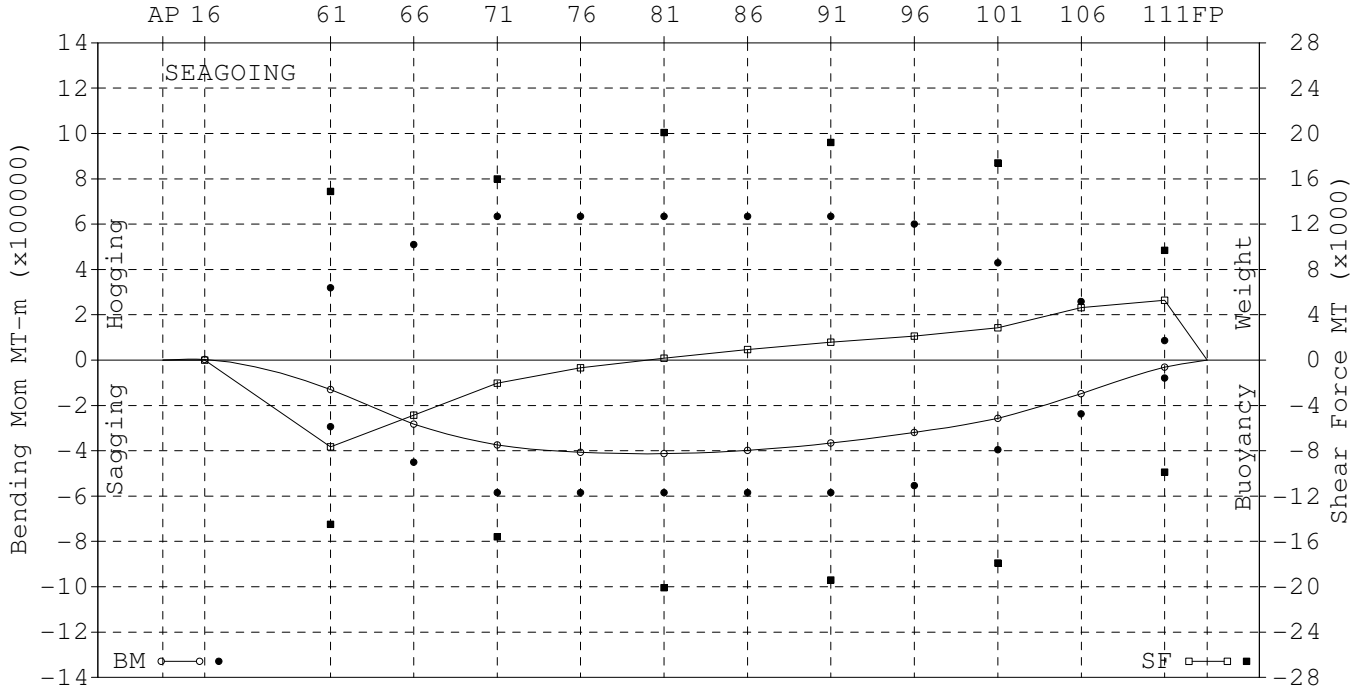
CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	5.0	-122.82	33.45	0.00
T O T A L S				5.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

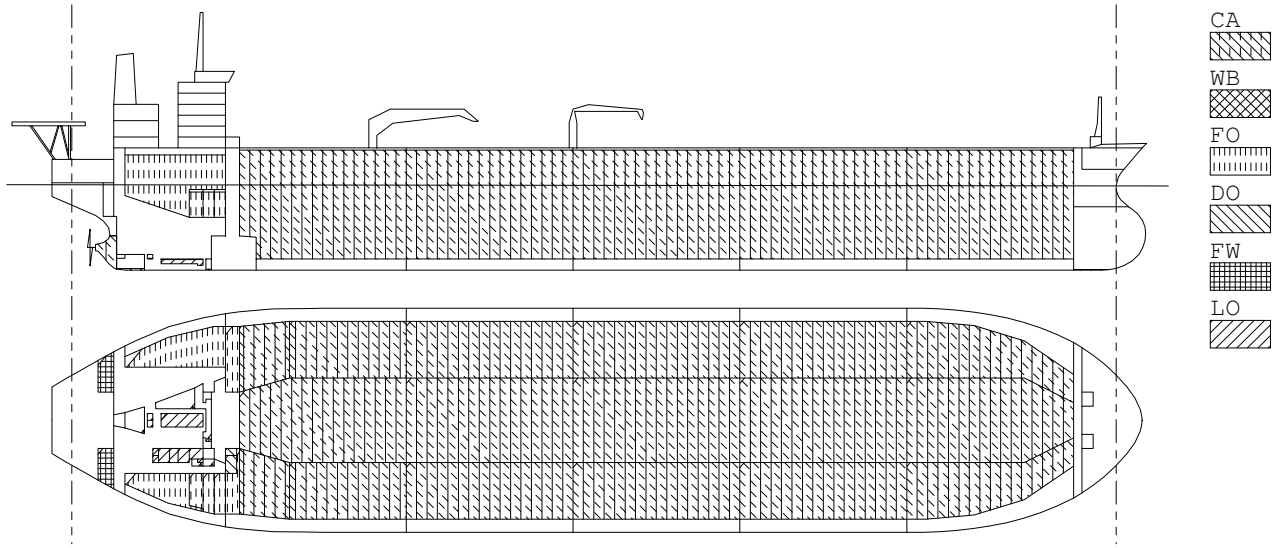


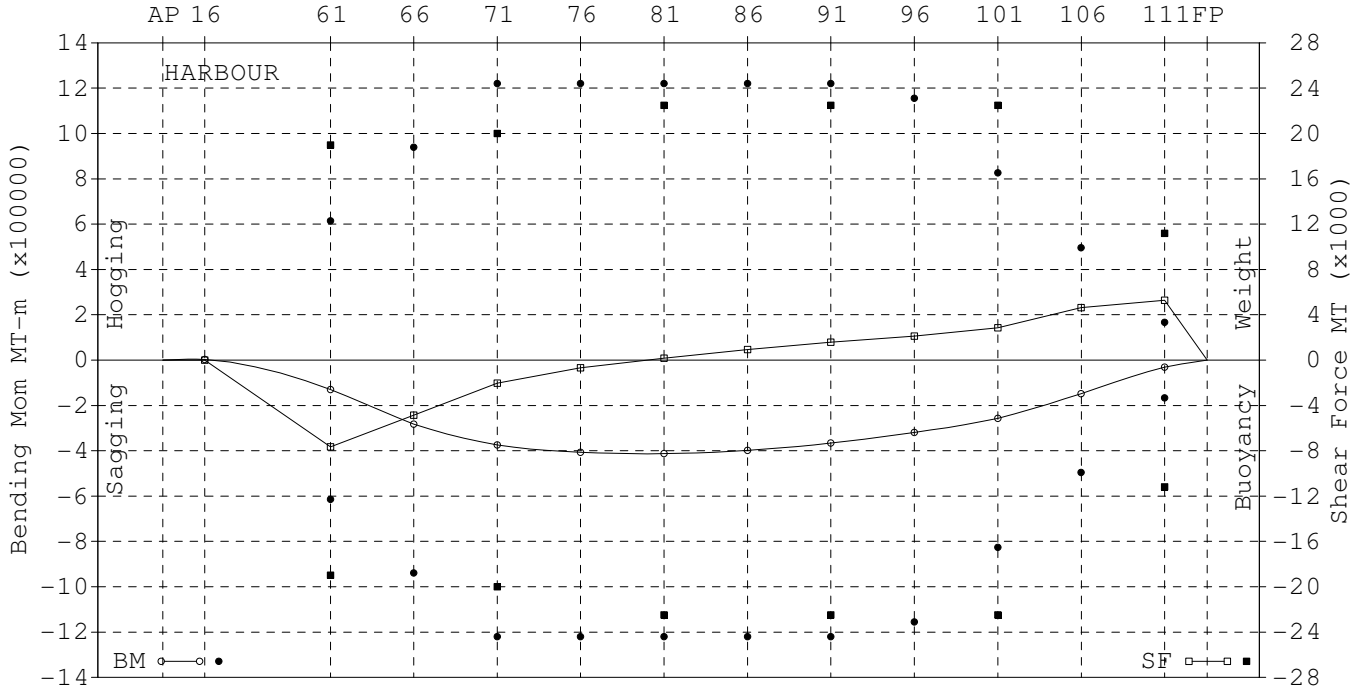


FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				SEAGOING
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	-4	-	-	3366	-	-	-	-
61	-7670	53	-14500	-129327	-	319000	44	-294000
66	-4858	-	-	-281863	-	510000	63	-450000
71	-2035	13	-15600	-374406	-	635000	64	-585000
76	-677	-	-	-406157	-	635000	69	-585000
81	159	1	20100	-412712	-	635000	71	-585000
86	938	-	-	-398181	-	635000	68	-585000
91	1574	8	19200	-365985	-	635000	63	-585000
96	2128	-	-	-318908	-	600000	58	-554000
101	2864	16	17400	-256496	-	429000	65	-395000
106	4641	-	-	-147783	-	258000	62	-237000
111	5288	55	9700	-30485	-	86000	39	-79000

SF max -7670 MT 53% at F61 +Buoyancy (5288 MT 55% at F111 +Weight)
BM max -413223 MT-m 71% at F80 Sagging

Estimated Deflection Amidships = -14cm SAGGING





FRAME	S H E A R F O R C E			B E N D I N G M O M E N T				HARBOUR
					HOGGING		SAGGING	
No	Actual (MT)	Percent %	Limit (MT)	Actual (MT-m)	Percent %	Limit (MT-m)	Percent %	Limit (MT-m)
16	-4	-	-	3366	-	-	-	-
61	-7670	40	-19000	-129327	-	615000	21	-615000
66	-4858	-	-	-281863	-	940000	30	-940000
71	-2035	10	-20000	-374406	-	1221000	31	-1221000
76	-677	-	-	-406157	-	1221000	33	-1221000
81	159	1	22500	-412712	-	1221000	34	-1221000
86	938	-	-	-398181	-	1221000	33	-1221000
91	1574	7	22500	-365985	-	1221000	30	-1221000
96	2128	-	-	-318908	-	1156000	28	-1156000
101	2864	13	22500	-256496	-	826000	31	-826000
106	4641	-	-	-147783	-	496000	30	-496000
111	5288	47	11200	-30485	-	167000	18	-167000

SF max -7670 MT 40% at F61 +Buoyancy (5288 MT 47% at F111 +Weight)
BM max -413223 MT-m 34% at F80 Sagging

Estimated Deflection Amidships = -14cm SAGGING

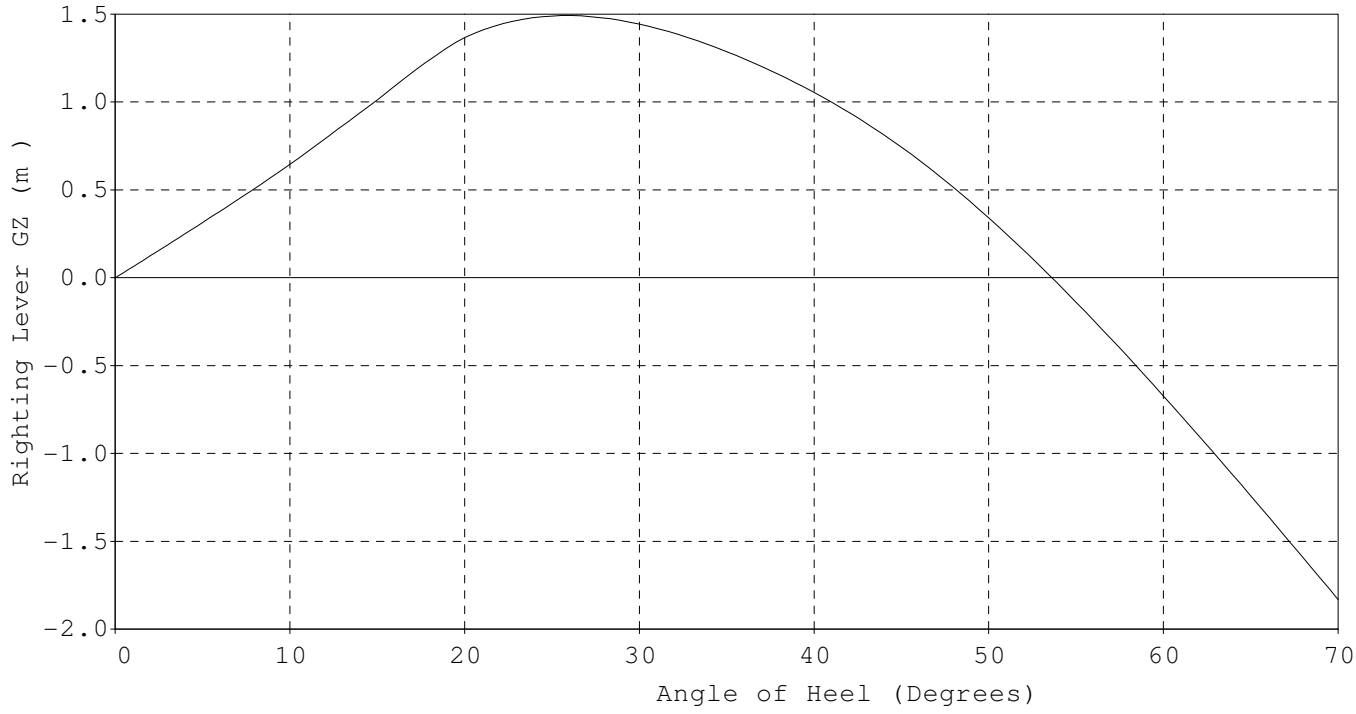
INTACT STABILITY ANALYSIS Sea Density : 1.0250 MT/m3

ITEMS	Weight MT	VCG m	LCG m	TCG m	FSM MT-m
LightShip	41502	15.97	-9.94	-0.05	0
Constants	250	25.81	-59.28	0.00	0
Cargo	299261	17.57	17.61	0.00	300124
Ballast	1009	0.32	24.08	0.00	830385
Fresh Water	464	25.83	-148.50	0.00	659
Fuel Oil	7654	23.14	-120.40	-0.52	6698
Diesel Oil	303	22.29	-110.49	10.47	66
LO & Misc	390	17.64	-128.64	6.06	1285
Stores	15	33.45	-122.82	0.00	0
Deadweight	309347	17.68	13.58	0.01	1139218
TOTALS	350849	17.48	10.80	0.00	1139218

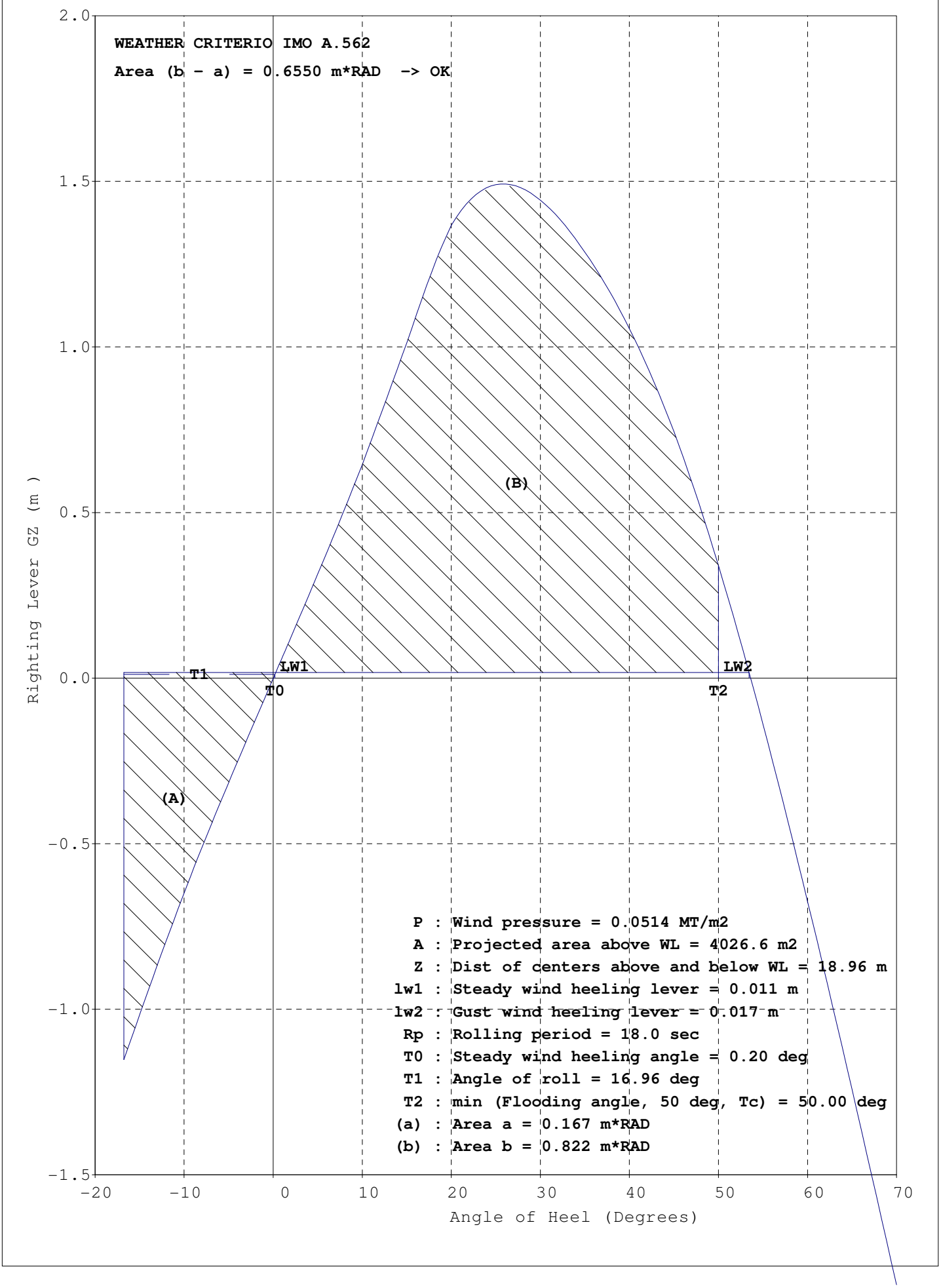
HYDROSTATICS		
Draft FPP	22.38	m
Mk F123	22.39	m
APP	22.66	m
Mk F18	22.65	m
Mid	22.52	m
Mk	22.52	m
LCF	22.52	m
TRIM	0.28	m
HEEL	0.0	Deg
LCF	-1.18	m
Prop Imm	221.5	%
Rolling	21	sec
TPC-I	173.38	MT/cm
MCT	4007.8	MT-m/cm
MCH	21915	MT-m/deg
FLood	54.7	Deg
LCB	10.79	m
KM(T)	24.30	m
KG	17.48	m
GM	6.83	m
GGo	3.25	m
GoM	3.58	m
KG(eff)	20.72	m

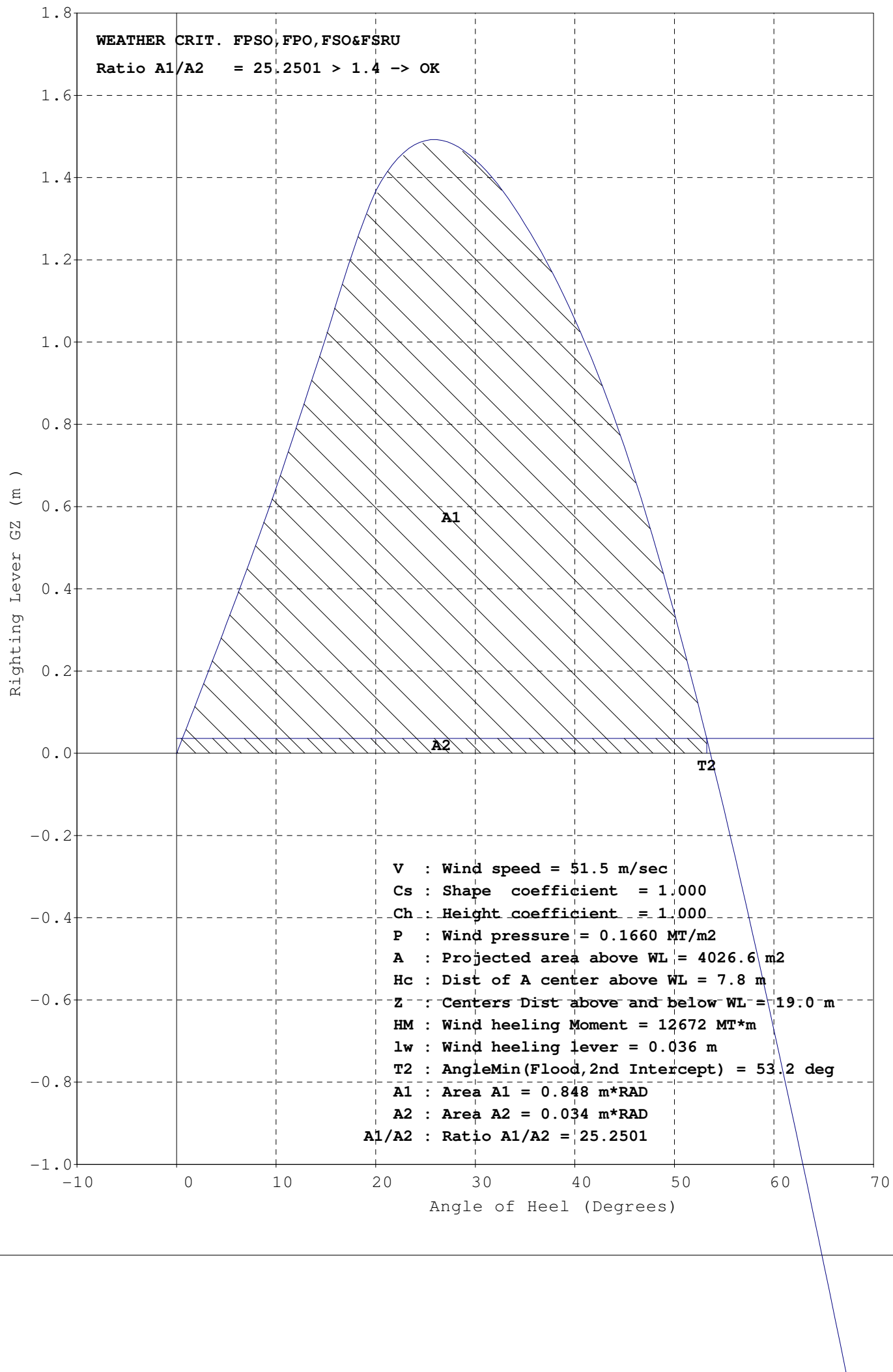
STABILITY CRITERIA

Criterion		Actual		Limit	
Area 0-30 deg	m x RAD	0.4872	>=	0.055	OK
Area 0-40 deg	m x RAD	0.7097	>=	0.09	OK
Area 30-40 deg	m x RAD	0.2224	>=	0.03	OK
GZ at/or> 30 deg	m	1.443	>=	0.2	OK
Max GZ Angle	Deg	25.842	>=	25.0	OK
Maximum GZ	1.49 m				
Initial GM	m	3.579	>=	0.15	OK
Weather Area(B-A)	m x RAD	0.655	>=	0.0	OK
Weather Ratio A1/A2	m x RAD	25.2501	>=	1.4	OK
Lim KG-Intact	m	20.724	=<	21.073	OK
Min FPP Draft	m	22.385	>=	7.825	OK
SteadyWind Angle	Deg	0.197	=<	13.472	OK
Deck Edge Angle	16.84 Deg				



Angle (Deg)	0	2	5	10	15	20	25	30	35	40	45	50	55	60	65	70
GZ (m)	0.00	0.12	0.31	0.64	1.01	1.37	1.49	1.44	1.29	1.05	0.74	0.34	-0.14	-0.67	-1.24	-1.83


WEATHER CRITERIO IMO A.562
Area (b - a) = 0.6550 m*RAD -> OK
Righting Lever GZ (m)
Angle of Heel (Degrees)
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-20
-10
0
10
20
30
40
50
60
70
(A)
(B)
T1
T0
LW1
LW2
T2
P : Wind pressure = 0.0514 MT/m2
A : Projected area above WL = 4026.6 m2
Z : Dist of centers above and below WL = 18.96 m
lw1 : Steady wind heeling lever = 0.011 m
lw2 : Gust wind heeling lever = 0.017 m
Rp : Rolling period = 18.0 sec
T0 : Steady wind heeling angle = 0.20 deg
T1 : Angle of roll = 16.96 deg
T2 : min (Flooding angle, 50 deg, Tc) = 50.00 deg
(a) : Area a = 0.167 m*RAD
(b) : Area b = 0.822 m*RAD


WEATHER CRIT. FPSO,FPO,FSO&FSRU
Ratio A1/A2 = 25.2501 > 1.4 -> OK
A1
A2
T2
V : Wind speed = 51.5 m/sec
Cs : Shape coefficient = 1.000
Ch : Height coefficient = 1.000
P : Wind pressure = 0.1660 MT/m2
A : Projected area above WL = 4026.6 m2
Hc : Dist of A center above WL = 7.8 m
Z : Centers Dist above and below WL = 19.0 m
HM : Wind heeling Moment = 12672 MT*m
lw : Wind heeling lever = 0.036 m
T2 : AngleMin(Flood,2nd Intercept) = 53.2 deg
A1 : Area A1 = 0.848 m*RAD
A2 : Area A2 = 0.034 m*RAD
A1/A2 : Ratio A1/A2 = 25.2501
Righting Lever GZ (m)
Angle of Heel (Degrees)
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-10
0
10
20
30
40
50
60
70

LIQUID CARGO IN TANKS

COMPARTMENT NAME	FRAME AFT	FRAME FOR	LOAD No	DENS MT/m3	VOLUME (m3)	FIL %	TEMP °F	WEIGHT (MT)	LCG Mid(m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 C.O.T. (C)	101	111	1	0.8710	29032	98	60	25287.0	118.72	17.32	0.00	32292_Max
No1 C.O.T. (P)	101	111	1	0.8710	16321	98	60	14216.0	117.26	17.60	-16.48	10866_Max
No1 C.O.T. (S)	101	111	1	0.8710	16321	98	60	14216.0	117.26	17.60	16.48	10866_Max
No2 C.O.T. (C)	91	101	1	0.8710	31763	98	60	27666.0	69.85	17.31	0.00	39048_Max
No2 C.O.T. (P)	91	101	1	0.8710	20144	98	60	17545.0	69.85	17.47	-18.11	11570_Max
No2 C.O.T. (S)	91	101	1	0.8710	20144	98	60	17545.0	69.85	17.47	18.11	11570_Max
No3 C.O.T. (C)	81	91	1	0.8710	31763	98	60	27666.0	19.05	17.31	0.00	39048_Max
No3 C.O.T. (P)	81	91	1	0.8710	20144	98	60	17545.0	19.05	17.47	-18.11	11570_Max
No3 C.O.T. (S)	81	91	1	0.8710	20144	98	60	17545.0	19.05	17.47	18.11	11570_Max
No4 C.O.T. (C)	71	81	1	0.8710	31763	98	60	27666.0	-31.75	17.31	0.00	39048_Max
No4 C.O.T. (P)	71	81	1	0.8710	20144	98	60	17545.0	-31.75	17.47	-18.11	11570_Max
No4 C.O.T. (S)	71	81	1	0.8710	20144	98	60	17545.0	-31.75	17.47	18.11	11570_Max
No5 C.O.T. (C)	61	71	1	0.8710	29701	98	60	25870.0	-81.09	17.50	0.00	34323_Max
No5 C.O.T. (P)	64	71	1	0.8710	13086	98	60	11398.0	-74.26	18.26	-17.81	8099_Max
No5 C.O.T. (S)	64	71	1	0.8710	13086	98	60	11398.0	-74.26	18.26	17.81	8099_Max
Slop Tank (P)	61	64	1	0.8710	4941	98	60	4304.0	-100.28	20.41	-15.99	4509_Max
Slop Tank (S)	61	64	1	0.8710	4941	98	60	4304.0	-100.28	20.41	16.00	4509_Max
T O T A L S					343583			299261.0	17.61	17.57	0.00	300124

LIQUID CARGO PER LOAD TYPE

NOTE: [C] : Crude ASTM-IP

LOAD No	Description	API 60 F	SG 60 F	SG 15 C	MT/m3 60 F	MT/m3 15 C	LOADED (MT)	(Bls)	Bls 60F
1	[C] Crude ASTM-IP	30.6	0.8730	0.8734	0.8710	0.8714	299261	2161073	2161073

Ballast Density = 1.025 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Fore Peak Tank (C)	111	137	4812.4	1	49.3	150.302	0.40	0.01	17045_Max
No1 W.B.Tk (P)	101	111	8789.5	1	90.1	116.116	0.05	-9.97	55933_Max
No1 W.B.Tk (S)	101	111	8789.5	1	90.1	116.116	0.05	9.97	55933_Max
No2 W.B.Tk (P)	91	101	9731.2	1	99.7	69.525	0.04	-13.74	102675_Max
No2 W.B.Tk (S)	91	101	9731.2	1	99.7	69.525	0.04	13.74	102675_Max
No3 W.B.Tk (P)	81	91	9782.4	1	100.3	19.050	0.03	-13.99	105452_Max
No3 W.B.Tk (S)	81	91	9782.4	1	100.3	19.050	0.04	13.99	105452_Max
No4 W.B.Tk (P)	71	81	9514.4	1	97.5	-30.706	0.04	-13.09	94443_Max
No4 W.B.Tk (S)	71	81	9514.4	1	97.5	-30.706	0.04	13.09	94443_Max
No5 W.B.Tk (P)	56	71	8009.9	1	82.1	-77.248	0.06	-8.48	33929_Max
No5 W.B.Tk (S)	56	71	8009.9	1	82.1	-77.248	0.06	8.48	33929_Max
Aft Peak Tank (C)	-8	17	2015.8	1	20.7	-147.318	12.72	0.11	28476_Max
T O T A L S			98483.0		1009.5	24.081	0.32	0.00	830385

Fuel Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
No1 HFO Stor Tk(P)	56	61	1300.2	90	1147.0	-110.075	21.25	-14.70	1696_Max
No1 HFO Stor Tk(S)	56	61	920.3	90	812.0	-109.902	20.96	16.41	826_Max
No2 HFO Stor Tk(P)	20	56	3239.6	90	2860.0	-123.874	23.69	-17.63	1671_Max
No2 HFO Stor Tk(S)	20	56	2688.3	90	2373.0	-125.424	25.12	17.70	1671_Max
No1 HFO Sett.Tk(S)	52	56	184.1	90	163.0	-113.900	17.93	17.65	320_Max
No2 HFO Sett.Tk(S)	48	52	176.4	90	156.0	-117.273	17.94	17.49	292_Max
HFO Service Tk (S)	43	48	161.5	90	143.0	-121.043	18.35	16.79	222_Max
T O T A L S			8670.4		7654.0	-120.405	23.14	-0.52	6698

Diesel **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
DO Storage Tank(S)	56	60	319.5	90	260.0	-110.569	23.09	10.84	64_Max
DO Service Tank(S)	56	61	53.3	90	43.3	-110.049	17.50	8.24	2_Max
T O T A L S			372.8		303.3	-110.495	22.29	10.47	66

Lub Oil **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
M/E LO Sump Tk(C)	33	48	57.0	90	46.2	-125.130	2.26	0.00	38_Max
No1 Cyl.Stor.Tk(S)	43	48	83.0	90	67.3	-121.273	24.94	9.00	13_Max
No2 Cyl.Stor.Ts(S)	39	43	73.9	90	59.9	-124.944	24.94	9.16	13_Max
Turb LO Stor.Tk(S)	46	48	9.2	90	7.5	-119.850	24.95	10.52	0_Max
MELO Storage Tk(S)	32	36	73.5	90	59.6	-130.900	24.95	9.15	13_Max
MELO Settling T(S)	36	39	55.2	90	44.7	-127.925	24.95	9.15	9_Max
GELO Storage Tk(S)	30	32	13.8	90	11.2	-133.238	24.95	8.24	1_Max
GELO Settling T(S)	30	32	13.8	90	11.2	-133.238	24.95	10.07	1_Max
T O T A L S			379.5		307.4	-126.236	21.54	7.78	86

Fresh Water **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Distilled W.Tk (P)	10	16	256.5	90	232.0	-148.503	25.83	-11.94	330_Max
Fresh Water Tk (S)	10	16	256.5	90	232.0	-148.503	25.83	11.94	330_Max
T O T A L S			513.0		464.0	-148.503	25.83	0.00	659

Miscellaneous **Density = 1.000** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Bilge Hold Tank(C)	17	27	111.9	10	11.2	-139.951	0.58	0.00	91_Max
B/W Tank (C)	17	20	8.7						
B/W Tank (P)	48	51	6.6						
B/W Tank (S)	48	51	6.6						
Cooling W.Tank (C)	11	17	44.2	100	44.2	-147.068	4.78	-0.01	6_Max
T O T A L S			178.0		55.4	-145.629	3.93	0.00	97

Miscellaneous **Density = .900** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
LO Drain Tank (P)	28	30	3.4	16	0.5	-135.150	3.10	-0.87	1_Max
LO Drain Tank (S)	28	30	3.4	16	0.5	-135.150	3.10	0.87	1_Max
MELO Puri.Tank (S)	44	48	4.3	26	1.0	-120.700	13.63	10.80	2_Max
T O T A L S			11.1		2.0	-127.925	8.36	5.40	3

Miscellaneous **Density = .950** **MT/m3**

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
Sep.Bilge Oil T(P)	31	45	108.7	10	10.3	-124.797	0.74	-3.84	62_Max
T O T A L S			108.7		10.3	-124.797	0.74	-3.84	62

Miscellaneous Density = .980 MT/m3

COMPARTMENT NAME	FRAME AFT	FRAME FOR	VOLUME (m3)	FILL %	WEIGHT (MT)	LCG Mid (m)	VCG (m)	TCG (m)	FSM (MT*m)
FO Overflow Tk (C)	45	51	142.8	10	14.0	-117.951	0.29	-0.66	1035_Max
FO Puri Slud.Tk(S)	48	52	4.3	24	1.0	-117.300	13.62	10.79	2_Max
T O T A L S			147.1		15.0	-117.908	1.18	0.10	1037

CONSUMABLES

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
STORE & PROV.	39	48	7.66	15.0	-122.82	33.45	0.00
T O T A L S				15.0	-122.82	33.45	0.00

CONSTANTS

DESCRIPTION OF LOADED WEIGHT	FRAME AFT	FRAME FOR	LENGTH (m)	WEIGHT (MT)	LCG-Mid (m)	VCG-BL (m)	TCG (m)
DWT CONSTANT	0	92	208.53	240.0	-56.93	25.27	0.00
CREW EFFECT	48	56	6.80	10.0	-115.60	38.85	0.00
T O T A L S				250.0	-59.28	25.81	0.00

APPENDIX I
BLANK CALCULATION FORMS

LOADING - Stability Calculation Form

Condition _____

Items	Full (%)	Weight (MT) (1)	LCG (m) (2)	LCG-Mom (MT-m) (3)	VCG (m) (4)	VCG-Mom (MT-m) (5)	TCG (m) (6)	TCG-Mom (MT-m) (7)	FSM (MT-m) (8)
LIGHTSHIP		**41502.1**	**-9.939**	**-412489.4**	**15.965**	**662581.1**	**-0.048**	**-1992.1**	
CONSTANTS		**250.0**	**-59.277**	**-14819.2**	**25.813**	**6453.3**	**0.000**	**0.0**	
PROVISIONS		**15.0**	**-122.820**	**-1842.3**	**33.450**	**501.8**	**0.000**	**0.0**	
1.No1 C.O.T. (C)			118.724				0.000		
2.No1 C.O.T. (P)			117.263				-16.478		
3.No1 C.O.T. (S)			117.263				16.478		
4.No2 C.O.T. (C)			69.850				0.000		
5.No2 C.O.T. (P)			69.850				-18.106		
6.No2 C.O.T. (S)			69.850				18.106		
7.No3 C.O.T. (C)			19.050				0.000		
8.No3 C.O.T. (P)			19.050				-18.106		
9.No3 C.O.T. (S)			19.050				18.106		
10.No4 C.O.T. (C)			-31.750				0.000		
11.No4 C.O.T. (P)			-31.750				-18.105		
12.No4 C.O.T. (S)			-31.750				18.105		
13.No5 C.O.T. (C)			-81.091				0.000		
14.No5 C.O.T. (P)			-74.261				-17.809		
15.No5 C.O.T. (S)			-74.261				17.809		
16.Slop Tank (P)			-100.279				-15.995		
17.Slop Tank (S)			-100.280				15.995		
CARGO Total									
18.No1 HFO Stor Tk(P)			-110.075				-14.769		
19.No1 HFO Stor Tk(S)			-109.898				16.517		
20.No2 HFO Stor Tk(P)			-123.960				-17.651		
21.No2 HFO Stor Tk(S)			-125.384				17.722		
22.No1 HFO Sett.Tk(S)			-113.900				17.742		
23.No2 HFO Sett.Tk(S)			-117.274				17.592		

... Cont

LOADING - Stability Calculation Form

Condition _____

Items	Full (%)	Weight (MT) (1)	LCG (m) (2)	LCG-Mom (MT-m) (3)	VCG (m) (4)	VCG-Mom (MT-m) (5)	TCG (m) (6)	TCG-Mom (MT-m) (7)	FSM (MT-m) (8)
24.HFO Service Tk (S)			-121.047				16.884		
FUEL OIL Total									
25.DO Storage Tank(S)			-110.569				10.818		
26.DO Service Tank(S)			-110.051				8.235		
DIESEL OIL Total									
27.M/E LO Sump Tk(C)			-125.150				0.000		
28.No1 Cyl.Stor.Tk(S)			-121.273				9.003		
29.No2 Cyl.Stor.Ts(S)			-124.945				9.156		
30.Turb LO Stor.Tk(S)			-119.850				10.522		
31.MELO Storage Tk(S)			-130.900				9.150		
32.MELO Settling T(S)			-127.925				9.150		
33.GELO Storage Tk(S)			-133.237				8.235		
34.GELO Settling T(S)			-133.238				10.065		
LUB OIL Total									
35.Fore Peak Tank (C)			152.867				0.000		
36.No1 W.B.Tk (P)			120.992				-18.533		
37.No1 W.B.Tk (S)			120.992				18.533		
38.No2 W.B.Tk (P)			69.746				-21.320		
39.No2 W.B.Tk (S)			69.746				21.320		
40.No3 W.B.Tk (P)			19.050				-21.354		
41.No3 W.B.Tk (S)			19.050				21.354		
42.No4 W.B.Tk (P)			-31.315				-21.191		
43.No4 W.B.Tk (S)			-31.315				21.191		
44.No5 W.B.Tk (P)			-82.363				-20.008		
45.No5 W.B.Tk (S)			-82.363				20.008		
46.Aft Peak Tank (C)			-145.987				0.000		

... Cont

LOADING - Stability Calculation Form

Condition _____

Items	Full (%)	Weight (MT) (1)	LCG (m) (2)	LCG-Mom (MT-m) (3)	VCG (m) (4)	VCG-Mom (MT-m) (5)	TCG (m) (6)	TCG-Mom (MT-m) (7)	FSM (MT-m) (8)
WATER BALLAST Total									
47.Distilled W.Tk (P)			-148.505				-11.908		
48.Fresh Water Tk (S)			-148.505				11.908		
FRESH WATER Total									
49.Bilge Hold Tank(C)			-139.951				0.000		
50.B/W Tank (C)			-144.012				0.000		
51.LO Drain Tank (P)			-135.150				-0.870		
52.LO Drain Tank (S)			-135.150				0.870		
53.Sep.Bilge Oil T(P)			-124.797				-3.839		
54.FO Overflow Tk (C)			-117.951				-0.664		
55.B/W Tank (P)			-118.067				-6.153		
56.B/W Tank (S)			-118.067				6.153		
57.MELO Puri.Tank (S)			-120.700				10.567		
58.FO Puri Slud.Tk(S)			-117.300				10.552		
59.Cooling W.Tank (C)			-147.068				-0.006		
MISCELLANEOUS Total									
GRAND Total									

Stability Calculation Sheet

Condition _____

Step 1. DISPLACEMENT

	MT/m3	MT
Cargo	_____	_____
Fuel Oil	_____	_____
Diesel Oil	_____	_____
Lub Oil	_____	_____
Fresh Water	_____	_____
Ballast Water	_____	_____
Constants and Provisions		_____

Step 2. COMPLETE LOADING FORM

Write down in

Column (1) All weights in MT
(2) LCG (if not already provided in form)
(3) Weight x LCG
(4) KG which can be found from the tables of Cargo Spaces / Tanks
(5) Weight x KG
(6) TCG
(7) Weight x TCG
(8) Free Surface Moments

Calculate the sum in columns (1), (3), (5) and (6).

Displacement = _____ MT - Sum of column (1)

$$KG = \frac{\text{Sum of Col(5)}}{\text{Disp}} = \text{----------} = \text{_____ m}$$

$$LCG = \frac{\text{Sum of Col(3)}}{\text{Disp}} = \text{----------} = \text{_____ m}$$

$$TCG = \frac{\text{Sum of Col(7)}}{\text{Disp}} = \text{----------} = \text{_____ m}$$

Step 3. HYDROSTATIC PARTICULARS

From the Hydrostatic Tables find by interpolation

- Draught (at LCF) = _____ m
- LCB = _____ m
- MCT - 1cm = _____ MT-m/cm
- LCF = _____ m
- KM(T) = _____ m

... Cont

Step 4. CHECK LIMITING KGo

$$GGo = \frac{FSM(total)}{Disp} = \frac{\qquad}{\qquad} = \_\_\_\_\_ \text{ m}$$

KGo = KG + GGo = _____ + _____ = _____ m

KGo = ... < KG Limiting Intact = ... STATUS .....

Step 5. TRIM AND DRAUGHTS

BG = LCB - LCG = _____ - _____ = _____ m

$$Trim = \frac{(BG \times Disp)}{(MCT\text{-}1cm \times 100)} = \frac{\qquad}{\qquad} = \_\_\_\_\_ \text{ m}$$

$$R = \frac{(LCF \times Trim)}{LBP} = \frac{\qquad}{\qquad} = \_\_\_\_\_ \text{ m}$$

Dfwd = (Draught at LCF) - (0.5 x Trim - R) =

_____ - (0.5 x _____ - _____)= _____ m

Daft = Dfwd + Trim = _____ + _____ = _____ m

... Cont

APPENDIX II
LIGHT WEIGHT DUE TO FSO MODIFICATION

ITEM	WEIGHT (TON)	LCG(m) (From Mid)	L-MOM (T*M)	TCG (m) (From CL)	T-MOM (T*M)	VCG (m) (From CL)	V-MOM (T*M)
LIGHTSHIP WEIGHT AS TANKER	40711.9	-8.595	-349918.8	0.00	0	15.617	635797.7
MODIFICATION WEIGHT TO FSO	790.2	-79.195	-62579.9	-2.50	-1975.5	33.895	26783.8
LIGHTSHIP WEIGHT AS FSO	**41502.1**	**-9.939**	-412498.7	**-0.048**	-1975.5	**15.965**	662581.6

WEIGHTS DUE TO FSO MODIFICATION

Operating Wegiht	X (m)	X (m)	Y (m)	Z (m)	Remarks
MT	from A.P	from MID	from C.L. STBD	To BL	
84	290.74	131.740	-24.22	30.694	From MTO + Stopper
84	290.74	131.740	24.22	30.694	From MTO + Stopper
-45	290.74	131.740	-24.22	30.694	Estimate
-45	290.74	131.740	24.22	30.694	Estimate
65	19.421	-139.579	-22.05	31.495	From MTO + Stopper
65	19.421	-139.579	22.05	31.495	From MTO + Stopper
-35	19.421	-139.579	-22.05	31.495	Estimate
-35	19.421	-139.579	22.05	31.495	Estimate
76	91.316	-67.684	-25.50	37.050	From Vendor 51(selfweight + 25 Loads)
7.7	91.316	-67.684	-25.50	29.450	From MTO
-51	152.35	-6.650	-19.85	37.490	Existing No Change
51	167.55	8.550	-27.05	37.490	Existing No Change
127	104.85	-54.150	-12.80	35.640	From Vendor
16	104.85	-54.150	-12.80	32.110	Structure FDN
45.5	153.1	-5.900	29.51	30.150	From MTO
1.9	153.1	-5.900	27.21	34.550	From Vendor
25	97.141	-61.859	-5.35	34.850	from MTO
10	28.95	-130.050	-26.61	31.934	From MTO
30	41.853	-117.147	0.00	35.574	Davit, Boat & Reinforcement
8	5.6	-153.400	0.00	29.560	From Vendor dwg
55	0	-159.000	0.00	29.350	From MTO
-50	36.66	-122.340	-18.10	35.434	Removed from Port side with reinforcement; the removed structure is estimated
51	23.079	-135.921	2.80	31.494	The main Structure of Pool no change and relocate with new reinforcement; The removed structure is more than new reinforcement
179.3	-6.914	-165.914	0.00	37.680	From COSCO MTO, then removed 6 Tons Pillar
13.6	-3	-162.000	0.00	29.350	From MTO
12	20.281	-138.719	9.76	39.477	From Vendor Dwg
8	20.281	-138.719	-9.76	39.477	From Vendor Dwg
5	49.641	-109.359	-6.00	5.900	From MTO
31.2	186.352	27.352	9.90	34.070	Weight 28MT & 3.1 MT Reinforcement
790.2	79.805	**-79.195**	**-2.50**	**33.895**	