

PLAN HISTORY			
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( 164 ) SHEETS WITH COVER			
본 도면은 대한민국 정부의 “친환경중소형선박 기술역량 강화사업”의 일환으로 작성된 문서입니다.			
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## A. INSTRUCTION

This trim and stability booklet is prepared for initial design in view of loading scheme, trim, stability and longitudinal strength of the ship.

## B. GENERAL PARTICULARS

### 1. PRINCIPAL DIMENSIONS

Length Over All	abt. 129.9 m
Length Between Perpendiculars	122.0 m
Breadth (Moulded)	21.0 m
Depth (Moulded)	11.8 m
Design Draft (Moulded)	8.55 m
Scantling Draft (Moulded)	8.55 m

### 2. LIGHTSHIP WEIGHT & DEADWEIGHT

Displacement (D.L.W.L. / S.L.W.L.)	abt. 17,605 Ton
Light Weight (Estimated)	abt. 4,560 Ton
Deadweight (D.L.W.L. / S.L.W.L.)	abt. 13,045 Ton

Main Engine	TYPE	Wartsila W6L32M x 1set
	NMCR	3,480 kW × 750.0 rpm
	SMCR	3,000 kW × 125.9 rpm
	NCR(90% of SMCR)	2,700 kW × 121.6 rpm

Speed	Design speed	abt. 13.0 knots
(design draft at NCR power with 15% sea margin)		

Complements	21 Persons
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## C. REFERENCE INFORMATION

### 1. ABBREVIATIONS

DISP	Displacement with all appendages
Ton	Metric ton
m	Meter
cm	Centimeter
LBP	Length between perpendiculars
FP	Fore perpendicular
AP	Aft perpendicular
WSA	Wetted surface area
Cb	Block coefficient
Cp	Prismatic coefficient
Cw	Waterplane coefficient
Cm	Midship section coefficient
LCB	Longitudinal centre of buoyancy from AP
LCG	Longitudinal centre of gravity from AP
LCF	Longitudinal centre of flotation from AP
VCB	Vertical center of buoyancy above base line
KG	Vertical center of gravity above base line
KMT	Transverse metacentric height
KML	Longitudinal metacentric height
TPC	Displacement per 1 cm immersion
MTC	Moment to change trim 1 cm
GM	Transverse metacentric height above vertical centre of gravity
GGo	Correction of free surface effect
GoM	Corrected metacentric height
SG	Specific gravity

## 2. CONVERSION TABLE

### 1) METRIC CONVERSION TABLE

Multiply by	To convert from	To obtain	
0.03937	Millimeter (mm)	Inches (")	25.400
0.3937	Centimeter (cm)	Inches (")	2.5400
3.2808	Meters (m)	Feet (')	0.3048
2.2046	Kilogrammes (kg)	Pounds 1bs.	0.45359
0.0009842	Kilogrammes (kg)	Long tons (2240 1bs)	1016.047
0.9842	Metric tons (i.e. Metric tons of 1000 kg)	Long tons (2240 1bs)	1.016
2.4998	Metric tons per centimeter (of immersion)	Tonnes per inch (immersion)	0.400
8.2014	Moment to change trim one centimeter (ton meter units)	Moment to change trim one inch (foot ton units)	0.122
187.9767	Meter Radians	Feet degrees	0.0053
To obtain			

### 2) RELATION BETWEEN WEIGHT AND VOLUME

10 mm cubed	=	1 cubic centimeter (cm <sup>3</sup> )	=	1000 mm <sup>3</sup>
1 cubic centimeter of freshwater	(SG 1.00)		=	1 gramme
1000 cubic centimeters of freshwater	(SG 1.00)		=	1 kilogramme 1000 grammes
1 cubic meter of fresh water	(SG 1.00)		=	1.00 ton 1000 kg
1 cubic meter of salt water	(SG 1.025)		=	1.025 ton
1 metric tonnes of salt water	(SG 1.025)		=	0.9756 cubic meters
1 cubic meter	=	35.3165	cubic feet	
1 cubic feet	=	0.0283	cubic meters	
1 cubic meter	=	8.39842	U.S barrel (Liquid)	
1 U.S barrel (Liquid)	=	0.11907	cubic meters	
1 cubic meter	=	6.2933	barrel (Oil)	
1 barrel (Oil)	=	0.15898	cubic meters	

### 3. SPECIFIC GRAVITY AND FILLING RATIO OF FLUID ADOPTED

Name	Specific Gravity	Filling Ratio (%)
Sea Water	1.025	Up to 100
Fresh Water	1.000	Up to 100
Marine Gas Oil	0.850	Up to 98
Lubricating Oil	0.900	Up to 98
Methanol	0.796	Up to 98

### 4. MEANING OF SIGNS IN ALL LOADING CONDITION

A) Trim ;

- (Negative sign) : Trim by the stern
- + (Positive sign) : Trim by the stem

B) LCG, LCB, LCF and Moments ;

- ( Negative sign) : Aft of A.P.
- + ( Positive sign) : Forward of A.P.

C) Heel ;

- ( Negative sign) : Port
- + ( Positive sign) : Starboard

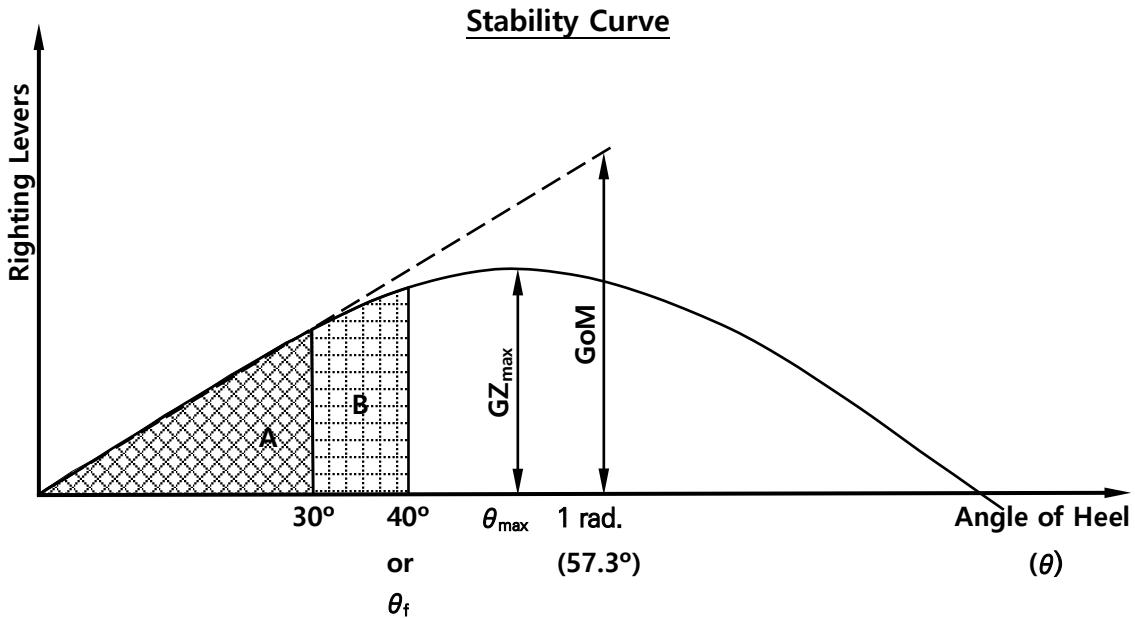
D) Bending Moment ;

- ( Negative sign) : Sagging
- + ( Positive sign) : Hogging

## 5. STABILITY CRITERIA BASED ON “IS CODE”

### 1) GENERAL INTACT STABILITY CRITERIA

It is most important to ensure that in any sailing condition the stability complies at least with the following minimum criteria :



- (a) The area under the righting lever curve (GZ curve) should not be less than 0.055 meter-radians up to  $\theta = 30^\circ$  angle of heel and not less than 0.090 meter-radians up to  $\theta = 40^\circ$  or the angle of flooding  $\theta_f$ , if this angle is less than  $40^\circ$  :

$$\text{Area } A \geq 0.055 \text{ m-rad.}$$

$$\text{Area } A + B \geq 0.090 \text{ m-rad.}$$

- (b) The area under the righting lever curve (GZ curve) between the angle of heel of  $30^\circ$  and  $40^\circ$  or between  $30^\circ$  and  $\theta_f$ , if this angle is less than  $40^\circ$  should not be less than 0.030 meter-radian :

$$\text{Area } B \geq 0.030 \text{ m-rad.}$$

- (c) The righting lever (GZ) should be at least 0.200 meter at an angle of heel equal to or greater than  $30^\circ$ .

- (d) The maximum righting lever ( $GZ_{\max}$ ) should occur at an angle of heel ( $\theta_{\max}$ ) preferably exceeding  $30^\circ$  but not less than  $25^\circ$ .

- (e) The initial metacentric height ( $GoM$ ) should not be less than 0.150 meter.

Where,

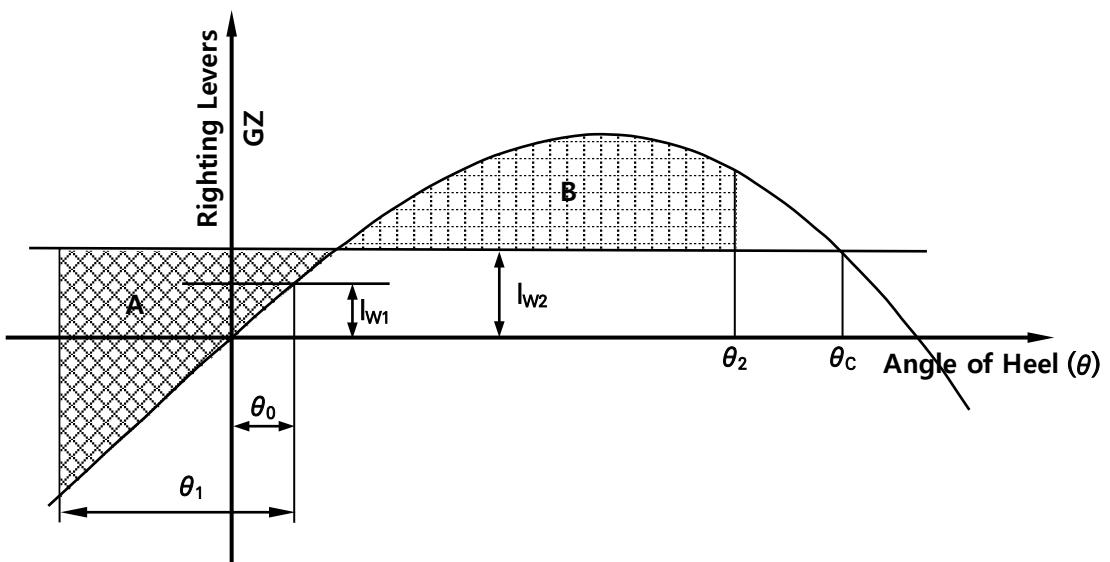
$\theta_f$  is an angle of heel at which openings in the hull, superstructures or deckhouse which cannot be closed weathertight immerse. In applying this criterion, small openings through which progressive flooding cannot take place need not be considered as open.

## 2) SEVERE WIND AND ROLLING CRITERION (WEATHER CRITERIA)

### (A) Recommended weather criteria

The ability of a ship to withstand the combined effects of beam wind and rolling should be demonstrated for each standard condition of loading with reference to the as follows:

- (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 ( $l_{w1}$ ).
- (2) From the resultant angle of equilibrium ( $\theta_0$ ), the ship is assumed to roll owing to wave action to an angle of roll ( $\theta_1$ ) to windward. The angle of heel under action of steady wind ( $\theta_0$ ) should be limited to a certain angle to the satisfaction of the Administration. As a guide,  $16^\circ$  or 80% of the angle of deck edge immersion, whichever is less, is suggested.
- (3) The ship is then subjected to a gust wind pressure which results in a gust wind heeling lever ( $l_{w2}$ )
- (4) Under these circumstances : area B should be equal to or greater than area A.
- (5) Free surface effects should be accounted for in the standard conditions of loading.



$\theta_0$  = angle of heel under action of steady wind

$\theta_1$  = angle of roll to windward due to wave action

$\theta_2$  = angle of down flooding( $\theta_f$ ) or  $50^\circ$  or  $\theta_c$  whichever is less,

where:  $\theta_f$  = angle of heel at which openings in the hull, superstructures or deckhouses which cannot be closed weathertight immerse.

$\theta_c$  = angle of second intercept between gust wind heeling lever  $l_{w1}$  and GZ curve

(B) The wind heeling levers  $l_{w1}$  and  $l_{w2}$  should be calculated as follows

$$l_{w1} = \frac{P \cdot A \cdot Z}{\Delta} \text{ (m)} \quad l_{w2} = 1.5 \times l_{w1} \text{ (m)}$$

Where:	P	=	wind pressure of 504 Pa. The value of P used for ships in restricted service may be reduced subject to the approval of the Administration
	A	=	projected lateral area of the portion of the ship and deck cargo above the waterline( $m^2$ )
	Z	=	vertical distance from the center of "A" to the center of the underwater lateral area or approximately to a point at one half the draft(m)
	$\Delta$	=	displacement(tonnes)

(C) The angle of roll ( $\theta_1$ )

$$\theta_1 = 109 \cdot k \cdot X1 \cdot X2 \cdot \sqrt{r \cdot s} \text{ (degrees)}$$

Where ;	X1	=	factor as shown in table1
	X2	=	factor as shown in table2
	k	=	as shown in table3 for a ship having bilge keels, a bar keel or both
	r	=	$0.73 \pm 0.6 \cdot OG/d$

With ; OG = distance between the center of gravity and the water line (m)  
                  (+ : If center of gravity is above the waterline)  
                  (- : If it is below)

d	=	mean moulded draught of the ship (m)
s	=	factor as shown in table4.

<Table1>

B/d	$\leq 2.4$	2.5	2.6	2.7	2.8	2.9	3.0	3.1	3.2	3.4	$\geq 3.5$
X1	1.00	0.98	0.96	0.95	0.93	0.91	0.90	0.88	0.86	0.82	0.80

<Table2>

CB	$\leq 0.45$	0.50	0.55	0.60	0.65	$\geq 0.70$
X2	0.75	0.82	0.89	0.95	0.97	1.00

<Table3>

$AK \times 100 / (L_{wl} \times B)$	0	1.0	1.5	2.0	2.5	3.0	3.5	$\geq 4.0$
k	1.00	0.98	0.95	0.88	0.79	0.74	0.72	0.70

<Table4>

T	$\leq 6$	7	8	12	14	16	18	$\geq 20$
s	0.100	0.098	0.093	0.065	0.053	0.044	0.038	0.035

(Intermediate values in the above table should be obtained by linear interpolation.)

(D) Rolling Period (T)

$$T = \frac{2 \cdot C \cdot B}{\sqrt{G_o M}} \text{ (seconds)}$$

Where;  $C = 0.373 + 0.023 (B/d) - 0.043 (L_{wl} / 100)$

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

$L_{wl}$  = waterline length of the ship (m)

B = moulded breadth of the ship (m)

d = mean moulded draft of the ship (m)

$C_b$  = block coefficient

$A_K$  = total overall area of bilge keel ( $m^2$ )

$G_o M$  = metacentric height corrected for free surface effect (m)

## 6. DEADWEIGHT CONSTANT

Provision & Crew effects

Items	Weight (Ton)	L.C.G. (m)	L - M (t-m)	V.C.G. (m)	V - M (t-m)
Crew effects	3.5	18.500	64.103	21.050	72.938
Provision	2.8	14.600	41.391	13.100	37.139
Subtotal	6.3	16.745	105.494	17.473	110.077

Store & Spares

Items	Weight (Ton)	L.C.G. (m)	L - M (t-m)	V.C.G. (m)	V - M (t-m)
BOSUN STORE	3.7	118.380	440.492	13.000	48.373
E/R STORE	3.0	7.100	21.137	12.800	38.106
OTHER STORES	8.2	29.802	243.991	12.800	104.794
Subtotal	14.9	47.405	705.620	12.850	191.272

Water & Oil (E/R & Deck Machinery)

Items	Weight (Ton)	L.C.G. (m)	L - M (t-m)	V.C.G. (m)	V - M (t-m)
E/R SMALL TANKS	15.0	14.700	220.500	10.500	157.500
Water in Pipe line	12.7	77.950	986.316	1.000	12.653
Subtotal	27.7	43.641	1206.816	6.153	170.153

Total	48.8	41.319	2017.929	9.654	471.502
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## 7. MISCELLANEOUS TANKS

### 1) Departure Condition

TANK	%	Weight (Ton)	L.C.G. (m)	LCG- MT (t-m)	V.C.G. (m)	VCG- MT (t-m)	T.C.G. (m)	TCG- MT (t-m)
NO.1 CYL. OIL T.(P)	65	7.8	15.70	122.46	8.06	62.85	-6.06	-47.27
NO.2 CYL. OIL T. (P)	65	7.6	15.71	119.37	8.18	62.18	-8.73	-66.35
M/E LO STOR. T. (P)	65	7.8	14.30	111.54	8.06	62.85	-6.06	-47.27
M/E LO SETT. T. (P)	65	7.2	14.31	103.02	8.23	59.23	-8.66	-62.33
G/E LO STOR. T. (P)	65	5.8	11.50	66.70	8.06	46.74	-5.72	-33.15
G/E LO SETT. T. (P)	65	8.1	11.51	93.25	8.29	67.15	-8.11	-65.71
R/G LO STOR. T. (P)	65	9.3	10.11	94.05	8.30	77.22	-7.63	-70.97
SLUDGE T. (S)	50	3.1	19.20	59.52	6.17	19.13	8.18	25.36
BILGE T.(C)	50	9.4	9.53	89.60	0.58	5.45	0.00	0.00
S/T LO SUMP. T. (S)	50	0.9	14.12	12.71	0.83	0.75	2.27	2.04
SEWAGE HOLD'G T. (S)	50	10.6	20.14	213.49	0.59	6.21	2.98	31.61
OILY BILGE T. (P)	50	7.3	19.24	140.45	0.61	4.43	-2.85	-20.83
LO SUMP T.(C)	50	1.5	18.50	27.75	0.20	0.30	0.27	0.41
MGO OVFL. T.(S)	50	11.7	24.54	287.11	0.47	5.52	3.26	38.13
G.W. HOLD'G T. (P)	50	18.1	24.51	443.54	0.44	7.91	-1.98	-35.91
C.W.T.(C)	100	31.9	5.28	168.30	5.43	173.09	0.00	0.00
<b>TOTAL</b>		148.1	14.5	2152.9	4.5	661.0	-2.4	-352.2

## 2) Arrival Condition

TANK	%	Weight (Ton)	L.C.G. (m)	LCG-MT (t-m)	V.C.G. (m)	VCG-MT (t-m)	T.C.G. (m)	TCG-MT (t-m)
NO.1 CYL. OIL T.(P)	30	3.6	15.70	56.52	7.45	26.80	-6.06	-21.82
NO.2 CYL. OIL T. (P)	30	3.5	15.71	54.97	7.55	26.41	-8.62	-30.16
M/E LO STOR. T. (P)	30	3.6	14.30	51.48	7.45	26.80	-6.06	-21.82
M/E LO SETT. T. (P)	30	3.3	14.31	47.24	7.59	25.04	-8.52	-28.11
G/E LO STOR. T. (P)	30	2.7	11.50	31.05	7.45	20.10	-5.72	-15.43
G/E LO SETT. T. (P)	30	3.7	11.52	42.62	7.65	28.29	-7.91	-29.26
R/G LO STOR. T. (P)	30	4.3	10.12	43.51	7.66	32.93	-7.39	-31.76
SLUDGE T. (S)	75	4.6	19.20	88.32	6.30	28.96	8.18	37.63
BILGE T.(C)	75	14.1	9.48	133.71	0.76	10.73	0.00	0.00
S/T LO SUMP. T. (S)	75	1.4	14.10	19.74	0.97	1.36	2.33	3.26
SEWAGE HOLD'G T. (S)	75	15.9	20.09	319.37	0.77	12.26	3.11	49.43
OILY BILGE T. (P)	75	11	19.20	211.23	0.79	8.68	-2.98	-32.73
LO SUMP T.(C)	75	2.2	18.50	40.70	0.30	0.66	0.27	0.59
MGO OVFL. T.(S)	75	17.6	24.53	431.78	0.66	11.62	3.43	60.33
G.W. HOLD'G T. (P)	75	27.2	24.50	666.48	0.63	17.05	-2.16	-58.75
C.W.T.(C)	100	31.9	5.28	168.30	5.43	173.09	0.00	0.00
<b>TOTAL</b>		150.6	16.0	2407.0	3.0	450.8	-0.8	-118.6

## 8. PROPELLER IMMERSION

### 8.1 Propeller immersion diagram

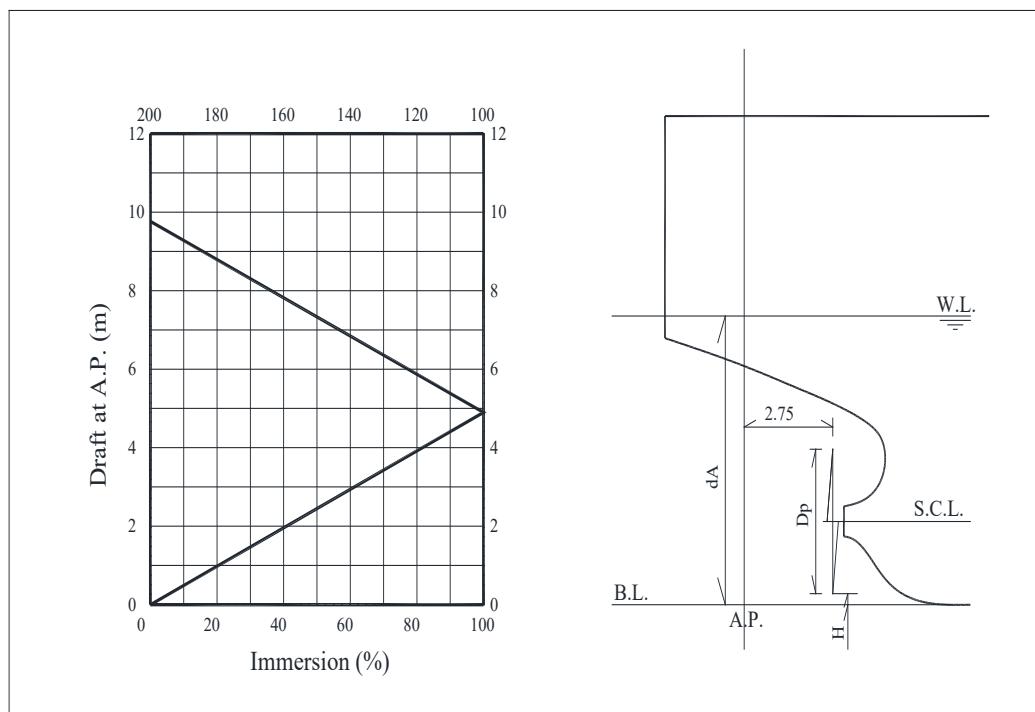
$$\text{Propeller immersion} : \left( dA - \frac{(2.75 \times \text{Trim})}{\text{LBP}} - H \right) / D_p \times 100 (\%)$$

where,  $dA$  : Draught at A.P (in m)

$H$  : Height of lowest tip of propeller blade A/B ( 0.1 m )

$D_p$  : Propeller Diameter ( 4.8 m )

note : From the definition of propeller immersion, a propeller immersion of 100% means that the upper tip of the propeller blade is immersed just to the level of the waterline.



## 9. VOLUME DATA FOR TANKS

### 9.1 Tank Summary Table

#### Liquid cargo, Rho: 1.000

COMPARTMENT	LOCATION (FR. NO.)	LOCATION	VOLUME	WEIGHT	L.C.G	T.C.G	V.C.G	MAX. IY
		100%	98.00%	FROM	FROM	FROM	OF	
		FULL	FULL	A.P	C.L	B.L	INERTIA	
		m3	t	m	m	m	m4	
No.1 C.O.T.(P)	73 - 80	850.2	833.2	103.304	-2.910	6.843	332.12	
No.1 C.O.T.(S)	73 - 80	857.4	840.2	103.418	2.886	6.843	338.67	
No.2 C.O.T.(P)	67 - 74	1,106.4	1,084.3	90.411	-4.170	6.762	705.42	
No.2 C.O.T.(S)	67 - 74	1,113.1	1,090.8	90.464	4.145	6.762	717.32	
No.3 C.O.T.(P)	61 - 68	1,197.3	1,173.3	77.946	-4.498	6.693	842.41	
No.3 C.O.T.(S)	61 - 68	1,204.0	1,179.9	77.994	4.473	6.694	855.84	
No.4 C.O.T.(P)	55 - 62	1,199.2	1,175.2	65.374	-4.505	6.692	845.62	
No.4 C.O.T.(S)	55 - 62	1,205.9	1,181.8	65.422	4.480	6.693	859.09	
No.5 C.O.T.(P)	49 - 56	1,199.2	1,175.2	52.794	-4.505	6.692	845.62	
No.5 C.O.T.(S)	49 - 56	1,205.9	1,181.8	52.842	4.480	6.693	859.09	
No.6 C.O.T.(P)	43 - 50	1,184.3	1,160.6	40.267	-4.457	6.745	845.62	
No.6 C.O.T.(S)	43 - 50	1,191.0	1,167.2	40.316	4.432	6.745	859.09	
SLOP T.(P)	42 - 44	288.1	282.3	32.422	-4.122	6.914	205.56	
SLOP T.(S)	42 - 44	282.3	276.7	32.429	4.206	6.916	194.69	
<b>SUBTOTAL</b>		<b>14,084.2</b>		<b>68.372</b>	<b>0.000</b>	<b>6.740</b>	<b>9,306</b>	

#### Water Ballast, Rho: 1.025

COMPARTMENT	LOCATION (FR. NO.)	LOCATION	VOLUME	WEIGHT	L.C.G	T.C.G	V.C.G	MAX. IY
		100%	100.00%	FROM	FROM	FROM	OF	
		FULL	FULL	A.P	C.L	B.L	INERTIA	
		m3	t	m	m	m	m4	
F.P.T.(C)	87 - 104	222.2	227.7	119.529	0.000	3.891	167.92	
NO.1 W.B.T.(P)	73 - 81	594.7	609.6	104.656	-5.411	5.633	606.36	
NO.1 W.B.T.(S)	73 - 81	559.1	573.1	104.518	5.756	5.821	396.69	
NO.2 W.B.T.(P)	67 - 73	410.8	421.0	90.284	-7.148	4.360	1,104.73	
NO.2 W.B.T.(S)	67 - 73	391.6	401.4	90.288	7.497	4.538	791.54	
NO.3 W.B.T.(P)	61 - 67	377.6	387.0	77.628	-7.238	3.860	1,369.58	
NO.3 W.B.T.(S)	61 - 67	358.4	367.4	77.628	7.625	4.028	1,004.13	
NO.4 W.B.T.(P)	55 - 61	378.7	388.2	65.050	-7.252	3.825	1,389.45	
NO.4 W.B.T.(S)	55 - 61	359.6	368.6	65.050	7.638	3.991	1,020.27	
NO.5 W.B.T.(P)	49 - 55	378.7	388.2	52.470	-7.252	3.825	1,389.45	
NO.5 W.B.T.(S)	49 - 55	359.6	368.5	52.470	7.638	3.991	1,020	
NO.6 W.B.T.(P)	42 - 49	466.2	477.9	38.433	-7.178	3.907	1,489	
NO.6 W.B.T.(S)	42 - 49	442.8	453.9	38.430	7.557	4.076	1,080	
<b>SUBTOTAL</b>		<b>5,299.9</b>		<b>75.191</b>	<b>0.000</b>	<b>4.402</b>	<b>12,829.35</b>	

**Fresh Water, Rho: 1.000**

COMPARTMENT	LOCATION	VOLUME	WEIGHT	L.C.G	T.C.G	V.C.G	MAX. IY
	(FR. NO.)	100% FULL m3	100.00% FULL t	FROM A.P m	FROM C.L m	FROM B.L m	OF INERTIA m4
F.W.T.(P)	-11	88.6	88.6	-0.006	-5.440	10.852	147.78
F.W.T.(S)	-11	88.6	88.6	-0.006	5.440	10.852	147.78
<b>SUBTOTAL</b>		<b>177.1</b>		<b>-0.006</b>	<b>0.000</b>	<b>10.852</b>	<b>295.56</b>

**Methanol Fuel Tank, Rho: 0.796**

COMPARTMENT	LOCATION	VOLUME	WEIGHT	L.C.G	T.C.G	V.C.G	MAX. IY
	(FR. NO.)	100% FULL m3	98.00% FULL t	FROM A.P m	FROM C.L m	FROM B.L m	OF INERTIA m4
METHANOL T.(P)	40 - 41	229.9	179.3	28.502	-4.212	6.591	192.10
METHANOL T.(S)	40 - 41	226.2	176.4	28.499	4.281	6.595	183.90
METHANOL SERV.T.(S)	45 - 47	36.9	28.8	38.650	-3.000	14.300	11.75
<b>SUBTOTAL</b>		<b>493.0</b>		<b>29.267</b>	<b>-0.227</b>	<b>7.175</b>	<b>387.75</b>

**Fuel oil, Rho: 0.850**

COMPARTMENT	LOCATION	VOLUME	WEIGHT	L.C.G	T.C.G	V.C.G	MAX. IY
	(FR. NO.)	100% FULL m3	98.00% FULL t	FROM A.P m	FROM C.L m	FROM B.L m	OF INERTIA m4
M.G.O.T.(P)	35 - 39	97.3	82.0	24.822	-6.869	7.189	27.37
M.G.O.T.(S)	35 - 39	74.5	62.8	24.829	7.223	6.659	25.19
M.G.O. SERV. T.(S)	35 - 39	22.8	19.2	24.800	5.715	8.920	2.04
<b>SUBTOTAL</b>		<b>194.6</b>		<b>24.822</b>	<b>0.000</b>	<b>7.189</b>	<b>54.60</b>

**Lubricating Oil, Rho: 0.900**

COMPARTMENT	LOCATION	VOLUME	WEIGHT	L.C.G	T.C.G	V.C.G	MAX. IY
	(FR. NO.)	100% FULL m3	98.00% FULL t	FROM A.P m	FROM C.L m	FROM B.L m	OF INERTIA m4
NO.1 CYL.OILT.(P)	23 - 25	13.3	11.7	15.700	-6.060	8.670	2.42
NO.2 CYL.OILT.(P)	23 - 25	12.9	11.4	15.705	-8.797	8.772	3.13
M/E L.O.SOTR.T.(P)	21 - 23	13.3	11.7	14.300	-6.060	8.670	2.42
M/E L.O.SET.T.(P)	21 - 23	12.3	10.8	14.307	-8.739	8.808	3.02
G/E L.O.STOR.T.(P)	17 - 19	10.0	8.8	11.500	-5.715	8.670	1.02
G/E L.O.SET.T.(P)	17 - 19	13.8	12.2	11.509	-8.236	8.859	5.10
R/G L.O.STOR.T.(P)	15 - 17	15.9	14.1	10.110	-7.781	8.869	8.14
<b>SUBTOTAL</b>		<b>91.6</b>		<b>13.248</b>	<b>-7.396</b>	<b>8.766</b>	<b>25.25</b>

**Miscellaneous, Rho: 1.000**

COMPARTMENT	LOCATION	VOLUME	WEIGHT	L.C.G	T.C.G	V.C.G	MAX. IY
	(FR. NO.)	100% FULL	100.00% FULL	FROM A.P	FROM C.L	FROM B.L	OF INERTIA
		m3	t	m	m	m	m4
SLUDGE T.(S)	26 - 32	6.1	6.1	19.200	8.180	6.420	1.12
D/B BILGE H.T.(C)	11 - 18	18.8	18.8	9.457	0.000	0.928	17.36
D/B S/T L.O.SUMP.T.(S)	20 - 23	1.9	1.9	14.088	2.368	1.099	0.32
D/B SEWAGE H.T.(S)	25 - 34	21.2	21.2	20.052	3.210	0.938	20.94
D/B OILY BILGE T.(P)	25 - 32	14.7	14.7	19.180	-3.071	0.952	11.78
D/B L.O.SUMP.T.(C)	23 - 33	3.0	3.0	18.500	0.270	0.400	0.09
D/B MGO OVFL. T.(S)	34 - 39	23.4	23.4	24.480	3.554	0.837	49.73
D/B G.W. H.T.(P)	34 - 39	36.3	36.3	24.456	-2.294	0.809	148.15
C.W.T.(C)	5 - 11	31.9	31.9	5.276	0.000	5.426	275.64
<b>SUBTOTAL</b>		<b>157.2</b>		<b>17.021</b>	<b>0.488</b>	<b>2.074</b>	<b>525.13</b>

## 10. HYDROSTATICS TABLE

DRAFT MLD (m)	MOULD VOL (m3)	DISP MLD (ton)	VCB (m)	LCB (m)	LCF (m)	KMT (m)	MTC (t-m)	TPC (ton)	WSA (m2)	CB	CW	CP	CM
2.5	4,426.5	4,560.3	1.30	64.29	64.39	14.331	19.7	126.8	2261.3	0.691	0.750	0.702	0.984
2.6	4,618.8	4,757.7	1.35	64.30	64.40	13.903	19.8	127.7	2287.1	0.693	0.752	0.704	0.985
2.7	4,811.7	4,955.7	1.40	64.30	64.41	13.510	19.8	128.5	2312.9	0.696	0.754	0.706	0.985
2.8	5,005.1	5,154.2	1.45	64.30	64.42	13.148	19.9	129.3	2338.7	0.698	0.756	0.708	0.986
2.9	5,199.0	5,353.2	1.50	64.31	64.44	12.815	19.9	130.0	2364.5	0.700	0.758	0.710	0.986
3.0	5,393.4	5,552.7	1.56	64.31	64.45	12.507	20.0	130.6	2390.4	0.702	0.759	0.711	0.987
3.1	5,588.1	5,752.6	1.61	64.32	64.47	12.222	20.0	131.2	2416.6	0.704	0.761	0.713	0.987
3.2	5,782.8	5,952.4	1.66	64.33	64.47	11.960	20.1	131.9	2442.1	0.705	0.763	0.714	0.988
3.3	5,978.7	6,153.4	1.71	64.33	64.46	11.716	20.1	132.7	2467.6	0.707	0.765	0.716	0.988
3.4	6,175.3	6,355.3	1.76	64.33	64.44	11.489	20.2	133.6	2493.1	0.709	0.767	0.717	0.988
3.5	6,372.0	6,557.1	1.82	64.34	64.42	11.279	20.2	134.4	2518.5	0.711	0.769	0.719	0.989
3.6	6,569.2	6,759.5	1.87	64.34	64.39	11.084	20.3	135.3	2544.0	0.712	0.771	0.720	0.989
3.7	6,766.9	6,962.4	1.92	64.34	64.35	10.903	20.3	136.2	2569.5	0.714	0.773	0.722	0.989
3.8	6,965.1	7,165.8	1.97	64.34	64.31	10.734	20.4	137.1	2595.0	0.715	0.775	0.723	0.989
3.9	7,164.0	7,369.9	2.02	64.34	64.25	10.577	20.4	138.1	2620.8	0.717	0.777	0.724	0.990
4.0	7,363.3	7,574.5	2.08	64.33	64.20	10.431	20.5	139.1	2646.6	0.719	0.779	0.726	0.990
4.1	7,563.1	7,779.6	2.13	64.33	64.13	10.295	20.5	140.1	2672.4	0.720	0.781	0.727	0.990
4.2	7,763.4	7,985.2	2.18	64.32	64.06	10.169	20.6	141.2	2698.3	0.721	0.783	0.728	0.990
4.3	7,964.4	8,191.4	2.23	64.32	63.99	10.052	20.7	142.2	2724.3	0.723	0.785	0.730	0.991
4.4	8,165.9	8,398.3	2.28	64.31	63.91	9.944	20.7	143.3	2750.5	0.724	0.788	0.731	0.991
4.5	8,368.1	8,605.7	2.34	64.30	63.82	9.842	20.8	144.4	2776.9	0.726	0.790	0.732	0.991
4.6	8,570.8	8,813.8	2.39	64.28	63.73	9.748	20.8	145.5	2803.3	0.727	0.792	0.734	0.991
4.7	8,774.1	9,022.4	2.44	64.27	63.63	9.662	20.9	146.6	2829.8	0.729	0.795	0.735	0.992
4.8	8,978.0	9,231.7	2.49	64.25	63.53	9.581	21.0	147.8	2856.4	0.730	0.797	0.736	0.992
4.9	9,182.5	9,441.6	2.55	64.24	63.43	9.506	21.0	148.9	2883.2	0.731	0.799	0.737	0.992
5.0	9,387.6	9,652.1	2.60	64.22	63.32	9.436	21.1	150.1	2910.1	0.733	0.802	0.739	0.992
5.1	9,593.3	9,863.2	2.65	64.20	63.20	9.372	21.1	151.4	2937.2	0.734	0.804	0.740	0.992
5.2	9,799.7	10,075.0	2.70	64.17	63.07	9.312	21.2	152.7	2964.6	0.736	0.807	0.741	0.992
5.3	10,006.7	10,287.5	2.76	64.15	62.94	9.257	21.3	154.0	2992.3	0.737	0.809	0.743	0.992
5.4	10,214.4	10,500.7	2.81	64.12	62.79	9.207	21.4	155.4	3020.3	0.738	0.812	0.744	0.993
5.5	10,422.6	10,714.4	2.86	64.10	62.63	9.161	21.4	157.0	3048.6	0.740	0.815	0.745	0.993
5.6	10,631.8	10,929.1	2.91	64.07	62.46	9.120	21.5	158.6	3077.3	0.741	0.818	0.746	0.993
5.7	10,841.7	11,144.6	2.97	64.03	62.28	9.082	21.6	160.2	3106.4	0.742	0.821	0.748	0.993
5.8	11,052.4	11,360.9	3.02	64.00	62.08	9.049	21.7	161.9	3135.9	0.744	0.824	0.749	0.993
5.9	11,264.0	11,578.0	3.07	63.96	61.88	9.018	21.8	163.7	3165.9	0.745	0.827	0.750	0.993

DRAFT MLD (m)	MOULD VOL (m3)	DISP MLD (ton)	VCB (m)	LCF (m)	KMT (m)	MTC (t-m)	TPC (ton)	WSA (m2)	CB	CW	CP	CM	
6.0	11,476.4	11,796.0	3.13	63.92	61.66	8.991	21.8	165.7	3196.5	0.747	0.831	0.752	0.993
6.1	11,689.7	12,015.0	3.18	63.88	61.43	8.966	21.9	167.7	3227.4	0.748	0.834	0.753	0.993
6.2	11,903.9	12,234.9	3.23	63.83	61.20	8.945	22.0	169.7	3258.3	0.749	0.838	0.754	0.994
6.3	12,119.0	12,455.7	3.29	63.78	60.97	8.925	22.1	171.6	3289.2	0.751	0.841	0.756	0.994
6.4	12,335.0	12,677.4	3.34	63.73	60.75	8.908	22.2	173.4	3320.0	0.752	0.845	0.757	0.994
6.5	12,551.8	12,899.9	3.39	63.68	60.53	8.892	22.3	175.1	3350.6	0.754	0.848	0.758	0.994
6.6	12,769.3	13,123.2	3.45	63.62	60.30	8.878	22.4	176.8	3381.2	0.755	0.851	0.760	0.994
6.7	12,987.7	13,347.3	3.50	63.56	60.08	8.865	22.4	178.4	3411.8	0.757	0.854	0.761	0.994
6.8	13,206.7	13,572.1	3.56	63.50	59.86	8.855	22.5	180.0	3442.4	0.758	0.856	0.763	0.994
6.9	13,426.5	13,797.7	3.61	63.44	59.64	8.845	22.6	181.5	3473.1	0.760	0.859	0.764	0.994
7.0	13,646.9	14,024.0	3.66	63.38	59.41	8.837	22.7	183.0	3503.9	0.761	0.862	0.765	0.994
7.1	13,868.0	14,250.9	3.72	63.32	59.18	8.830	22.7	184.3	3534.9	0.762	0.864	0.767	0.994
7.2	14,089.7	14,478.5	3.77	63.25	58.95	8.825	22.8	185.6	3565.9	0.764	0.867	0.768	0.994
7.3	14,312.1	14,706.7	3.82	63.18	58.71	8.822	22.8	186.8	3597.2	0.765	0.869	0.769	0.995
7.4	14,535.0	14,935.5	3.88	63.11	58.47	8.821	22.9	188.0	3628.6	0.767	0.871	0.771	0.995
7.5	14,758.4	15,164.9	3.93	63.04	58.23	8.820	23.0	189.1	3660.0	0.768	0.873	0.772	0.995
7.6	14,982.4	15,394.8	3.99	62.96	57.98	8.822	23.0	190.0	3691.5	0.769	0.875	0.774	0.995
7.7	15,206.9	15,625.2	4.04	62.89	57.75	8.825	23.1	191.0	3722.9	0.771	0.877	0.775	0.995
7.8	15,431.9	15,856.1	4.10	62.81	57.51	8.829	23.1	191.9	3754.3	0.772	0.879	0.776	0.995
7.9	15,657.3	16,087.6	4.15	62.73	57.28	8.834	23.2	192.9	3785.6	0.774	0.881	0.778	0.995
8.0	15,883.3	16,319.5	4.20	62.65	57.06	8.841	23.2	193.8	3816.8	0.775	0.883	0.779	0.995
8.1	16,109.8	16,552.0	4.26	62.57	56.84	8.848	23.3	194.7	3847.8	0.776	0.885	0.780	0.995
8.2	16,336.8	16,784.9	4.31	62.49	56.64	8.857	23.3	195.5	3878.4	0.778	0.887	0.781	0.995
8.3	16,564.2	17,018.3	4.37	62.41	56.45	8.867	23.4	196.1	3908.9	0.779	0.888	0.783	0.995
8.4	16,792.1	17,252.2	4.42	62.33	56.32	8.878	23.4	197.4	3937.4	0.780	0.891	0.784	0.995
8.5	17,020.6	17,486.7	4.47	62.25	56.21	8.890	23.5	198.7	3965.5	0.782	0.893	0.785	0.995
8.6	17,249.6	17,721.8	4.53	62.17	56.10	8.903	23.5	200.1	3993.4	0.783	0.895	0.787	0.995
8.7	17,479.3	17,957.5	4.58	62.09	56.01	8.917	23.6	201.4	4021.2	0.784	0.897	0.788	0.995
8.8	17,709.5	18,193.7	4.64	62.01	55.93	8.932	23.7	202.7	4048.8	0.785	0.900	0.789	0.995
8.9	17,940.3	18,430.6	4.69	61.93	55.86	8.947	23.7	204.0	4076.3	0.787	0.902	0.790	0.996
9.0	18,171.6	18,668.0	4.74	61.85	55.80	8.964	23.8	205.4	4103.6	0.788	0.904	0.792	0.996
9.1	18,403.5	18,906.0	4.80	61.78	55.75	8.981	23.8	206.7	4130.8	0.789	0.906	0.793	0.996
9.2	18,636.0	19,144.5	4.85	61.70	55.70	8.999	23.9	208.0	4158.0	0.791	0.908	0.794	0.996
9.3	18,869.0	19,383.6	4.91	61.63	55.67	9.018	23.9	209.3	4185.0	0.792	0.911	0.795	0.996
9.4	19,102.5	19,623.3	4.96	61.55	55.64	9.037	24.0	210.6	4212.0	0.793	0.913	0.797	0.996

DRAFT MLD (m)	MOULD VOL (m3)	DISP MLD (ton)	VCB (m)	LCB (m)	LCF (m)	KMT (m)	MTC (t-m)	TPC (ton)	WSA (m2)	CB	CW	CP	CM
9.5	19,336.6	19,863.5	5.02	61.48	55.62	9.057	24.0	211.9	4239.0	0.794	0.915	0.798	0.996
9.6	19,571.2	20,104.2	5.07	61.41	55.61	9.077	24.1	213.2	4265.9	0.796	0.917	0.799	0.996
9.7	19,806.4	20,345.5	5.12	61.34	55.60	9.099	24.2	214.5	4292.8	0.797	0.919	0.800	0.996
9.8	20,042.1	20,587.4	5.18	61.28	55.60	9.120	24.2	215.9	4319.7	0.798	0.921	0.802	0.996
9.9	20,278.3	20,829.8	5.23	61.21	55.61	9.143	24.3	217.2	4346.6	0.799	0.923	0.803	0.996
10.0	20,515.0	21,072.7	5.29	61.14	55.62	9.166	24.3	218.6	4373.5	0.801	0.925	0.804	0.996

## **D. LOADING CONDITIONS**

### **1. SUMMARY TABLE**

## Summary of Loading Conditions

LD01 : 01.LIGHTSHIP CONDITION

LD02 : 02.DRY DOCKING CONDITION

LD03 : 03.PROPELLER AFLOAT CONDITION

LD04 : 04.NORMAL BALLAST CONDITION DEP.

LD05 : 05.NORMAL BALLAST CONDITION ARR.

### Lightweight and Deadweight

	Unit	LD01	LD02	LD03	LD04	LD05
Cargo	t	0.0	0.0	2852.7	0.0	0.0
Ballast Water	t	0.0	2098.4	2232.8	4500.6	5432.4
Consumable	t	0.0	214.6	214.6	374.2	214.6
Deadweight	t	0.0	2368.8	5355.9	5421.5	5702.8
Lightweight	t	4560.0	4560.0	4560.0	4560.0	4560.0
Displacement	t	4560.0	6928.8	9915.9	9981.5	10262.8

### Draught

Draught at F.P	m	-0.022	3.682	8.862	4.584	4.867
Draught Midship	m	2.623	3.684	4.856	5.182	5.307
Draught at A.P	m	5.183	3.685	0.980	5.760	5.733
Draught Equivalent	m	2.500	3.683	5.125	5.156	5.288

### Trim and Stability

Trim	m	-5.206	-0.004	7.882	-1.175	-0.865
Heel	deg	0	-0.283	-0.326	-0.514	-0.234
LCB (from A.P)	m	50.276	64.331	75.094	62.359	62.837
LCF (from A.P)	m	60.631	64.355	64.388	62.25	62.297
LCG (from A.P)	m	50.601	64.331	74.827	62.4	62.863
MTC	tm/cm	118.4	136.1	124.5	158.4	158.8
TPC	t/cm	19.4	20.3	19.8	21.5	21.5
BG	m	7.608	5.858	4.139	4.232	3.784
KMT	m	14.72	10.932	9.243	9.461	9.352
KG	m	9.2	7.769	7.142	6.921	6.538
GM	m	5.52	3.163	2.101	2.54	2.814
GM Corr.(GGo)	m	0	0.153	0.268	0.357	0.347
GoM	m	5.52	3.01	1.833	2.183	2.467
Max GZ	m	1.462	1.545	1.358	1.819	2.061
Propeller Immersion	%	103.5	74.7	22	117.4	116.9
Non Visibility Length	m	216.1	104.7	37.7	106	100.9

### Longitudinal Strength

Max Shear Force	t	948	1289	-2052	1238	856
Max Bending Moment	tm	28533	42739	56690	35580	27209

Notes :

1) Propeller immersion considered

2) Non Visibility Length calculated according to IMO Visibility criteria (IMO.VISIBILITY)

3) Max SF and BM values are absolute maximum values including sign

4) Grouping of loads :

Cargo

Ballast Water

Consumable : Methanol, Marine Gas Oil, Lubricating Oil, Miscellaneous,

Fresh Water, DWT Constant

## Summary of Loading Conditions

LD06 : 06.HOMO. SCANT. CONDITION DEP.

LD07 : 07.HOMO. SCANT. CONDITION ARR.

LD08 : 08.FULL LOADED CONDITION DEP. (S.G. 1.53)

LD09 : 09.FULL LOADED CONDITION ARR. (S.G. 1.53)

LD10 : 10.HOMO LOADED CONDITION DEP. (S.G = 0.700)

### Lightweight and Deadweight

	Unit	LD06	LD07	LD08	LD09	LD10
Cargo	t	12123.4	12123.4	12123.3	12123.3	9661.7
Ballast Water	t	0.0	0.0	0.0	0.0	0.0
Consumable	t	374.2	214.6	374.2	214.6	374.2
Deadweight	t	13044.2	12393.8	13044.2	12393.8	10582.6
Lightweight	t	4560.0	4560.0	4560.0	4560.0	4560.0
Displacement	t	17604.2	16953.8	17604.2	16953.8	15142.6

### Draught

Draught at F.P	m	8.110	8.471	8.115	8.469	6.314
Draught Midship	m	8.523	8.283	8.523	8.283	7.448
Draught at A.P	m	8.922	8.100	8.919	8.102	8.545
Draught Equivalent	m	8.550	8.272	8.550	8.272	7.490

### Trim and Stability

Trim	m	-0.813	0.371	-0.804	0.367	-2.231
Heel	deg	-0.488	-0.276	-0.282	-0.154	-0.585
LCB (from A.P)	m	61.277	62.86	61.287	62.855	60.082
LCF (from A.P)	m	55.882	56.719	55.882	56.716	57.134
LCG (from A.P)	m	61.296	62.851	61.296	62.851	60.146
MTC	tm/cm	204.9	193.2	204.8	193.2	211
TPC	t/cm	23.7	23.2	23.7	23.2	23.8
BG	m	2.841	2.94	1.361	1.402	3.505
KMT	m	8.937	8.846	8.936	8.846	9.006
KG	m	7.344	7.29	5.864	5.753	7.46
GM	m	1.592	1.556	3.072	3.094	1.547
GM Corr.(GGo)	m	0.294	0.306	0.862	0.895	0.285
GoM	m	1.298	1.25	2.211	2.199	1.261
Max GZ	m	0.912	0.975	1.219	1.289	1.175
Propeller Immersion	%	183.4	166.8	183.4	166.9	174.9
Non Visibility Length	m	71.3	62.2	71.2	62.3	98.2

### Longitudinal Strength

Max Shear Force	t	-563	-765	-561	-766	483
Max Bending Moment	tm	-8773	-10933	-8815	-10998	8414

Notes :

1) Propeller immersion considered

2) Non Visibility Length calculated according to IMO Visibility criteria (IMO.VISIBILITY)

3) Max SF and BM values are absolute maximum values including sign

4) Grouping of loads :

Cargo

Ballast Water

Consumable : Methanol, Marine Gas Oil, Lubricating Oil, Miscellaneous,

Fresh Water, DWT Constant

## Summary of Loading Conditions

LD11 : 11.HOMO LOADED CONDITION ARR. (S.G = 0.700)

LD12 : 12.HOMO LOADED CONDITION DEP. (S.G = 0.800)

LD13 : 13.HOMO LOADED CONDITION ARR. (S.G = 0.800)

LD14 : 14.FULL LOADED CONDITION DEP. (S.G = 0.900)

LD15 : 15.FULL LOADED CONDITION ARR. (S.G = 0.900)

### Lightweight and Deadweight

	Unit	LD11	LD12	LD13	LD14	LD15
Cargo	t	9661.7	11042.0	11042.0	12123.7	12123.7
Ballast Water	t	0.0	0.0	0.0	0.0	0.0
Consumable	t	214.6	374.2	214.6	374.2	214.6
Deadweight	t	9932.2	11962.8	11312.4	13044.5	12394.1
Lightweight	t	4560.0	4560.0	4560.0	4560.0	4560.0
Displacement	t	14492.2	16522.8	15872.4	17604.5	16954.1

### Draught

Draught at F.P	m	6.670	7.305	7.660	8.110	8.471
Draught Midship	m	7.194	8.047	7.801	8.523	8.283
Draught at A.P	m	7.701	8.766	7.937	8.923	8.101
Draught Equivalent	m	7.206	8.087	7.807	8.550	8.273

### Trim and Stability

Trim	m	-1.031	-1.461	-0.277	-0.812	0.370
Heel	deg	-0.335	-0.536	-0.305	-0.465	-0.262
LCB (from A.P)	m	61.883	60.795	62.468	61.277	62.86
LCF (from A.P)	m	58.303	56.538	57.385	55.881	56.718
LCG (from A.P)	m	61.914	60.833	62.475	61.296	62.851
MTC	tm/cm	196.8	209.5	195.4	204.9	193.2
TPC	t/cm	23.2	23.8	23.2	23.7	23.2
BG	m	3.622	3.13	3.236	2.755	2.85
KMT	m	8.911	8.942	8.847	8.937	8.846
KG	m	7.402	7.391	7.335	7.258	7.201
GM	m	1.509	1.551	1.512	1.678	1.645
GM Corr.(GGo)	m	0.298	0.291	0.303	0.327	0.34
GoM	m	1.211	1.26	1.209	1.351	1.305
Max GZ	m	1.225	1.031	1.091	0.921	0.985
Propeller Immersion	%	157.9	179.9	163.1	183.4	166.9
Non Visibility Length	m	85.7	82.7	72.3	71.3	62.2

### Longitudinal Strength

Max Shear Force	t	477	429	-615	-563	-765
Max Bending Moment	tm	8492	6843	-7719	-8771	-10934

#### Notes :

1) Propeller immersion considered

2) Non Visibility Length calculated according to IMO Visibility criteria (IMO.VISIBILITY)

3) Max SF and BM values are absolute maximum values including sign

4) Grouping of loads :

Cargo

Ballast Water

Consumable : Methanol, Marine Gas Oil, Lubricating Oil, Miscellaneous,

Fresh Water, DWT Constant

## Summary of Loading Conditions

LD16 : 16.FULL LOADED CONDITION DEP. (S.G = 1.025)

LD17 : 17.FULL LOADED CONDITION ARR. (S.G = 1.025)

LD18 : 18.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. DEP.

LD19 : 19.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. ARR.

LD20 : 20.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. DEP.

### Lightweight and Deadweight

	Unit	LD16	LD17	LD18	LD19	LD20
Cargo	t	12123.6	12123.6	12123.7	12123.7	12123.4
Ballast Water	t	0.0	0.0	0.0	0.0	0.0
Consumable	t	374.2	214.6	374.2	214.6	374.2
Deadweight	t	13044.4	12394.0	13044.6	12394.2	13044.2
Lightweight	t	4560.0	4560.0	4560.0	4560.0	4560.0
Displacement	t	17604.4	16954.0	17604.6	16954.2	17604.2

### Draught

Draught at F.P	m	8.111	8.470	7.879	8.226	8.076
Draught Midship	m	8.523	8.283	8.509	8.270	8.521
Draught at A.P	m	8.922	8.102	9.118	8.313	8.951
Draught Equivalent	m	8.550	8.272	8.550	8.273	8.550

### Trim and Stability

Trim	m	-0.811	0.368	-1.239	-0.087	-0.875
Heel	deg	-0.399	-0.22	-0.367	-0.203	-0.367
LCB (from A.P)	m	61.279	62.857	60.777	62.333	61.205
LCF (from A.P)	m	55.882	56.717	55.848	56.48	55.875
LCG (from A.P)	m	61.294	62.85	60.799	62.335	61.221
MTC	tm/cm	204.9	193.2	208.5	196.9	205.4
TPC	t/cm	23.7	23.2	23.8	23.4	23.7
BG	m	2.339	2.418	2.192	2.27	2.197
KMT	m	8.937	8.846	8.961	8.868	8.94
KG	m	6.842	6.769	6.699	6.62	6.7
GM	m	2.094	2.077	2.262	2.248	2.24
GM Corr.(GGo)	m	0.531	0.551	0.564	0.586	0.543
GoM	m	1.563	1.526	1.697	1.662	1.697
Max GZ	m	0.981	1.050	1.034	1.10	1.051
Propeller Immersion	%	183.4	166.9	187.3	171.1	184
Non Visibility Length	m	71.3	62.3	75.9	66.5	72

### Longitudinal Strength

Max Shear Force	t	-563	-765	-720	-893	-657
Max Bending Moment	tm	-8770	-10938	-11215	-13592	-10183

#### Notes :

1) Propeller immersion considered

2) Non Visibility Length calculated according to IMO Visibility criteria (IMO.VISIBILITY)

3) Max SF and BM values are absolute maximum values including sign

4) Grouping of loads :

Cargo

Ballast Water

Consumable : Methanol, Marine Gas Oil, Lubricating Oil, Miscellaneous,

Fresh Water, DWT Constant

## Summary of Loading Conditions

LD21 : 21.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. ARR.

LD22 : 22.TROPICAL LOAD LINE DEP.

LD23 : 23.TROPICAL LOAD LINE ARR.

LD24 : 24.MARPOL ANNEX I REG. 27 (WORST POSSIBLE)

LD25 : 25.MARPOL SEGREGATED BALLAST CONDITION

### Lightweight and Deadweight

	Unit	LD21	LD22	LD23	LD24	LD25
Cargo	t	12123.4	12123.4	12123.4	9582.4	0.0
Ballast Water	t	0.0	0.0	0.0	54.3	5204.7
Consumable	t	214.6	374.2	214.6	374.2	0.0
Deadweight	t	12393.8	13044.2	12393.8	10557.5	5204.7
Lightweight	t	4560.0	4560.0	4560.0	4560.0	4560.0
Displacement	t	16953.8	17604.2	16953.8	15117.5	9764.7

### Draught

Draught at F.P	m	8.433	8.361	8.727	6.303	4.569
Draught Midship	m	8.281	8.713	8.468	7.433	5.077
Draught at A.P	m	8.133	9.052	8.218	8.527	5.569
Draught Equivalent	m	8.272	8.737	8.454	7.479	5.053

### Trim and Stability

Trim	m	0.299	-0.691	0.509	-2.224	-1.000
Heel	deg	-0.203	-0.481	-0.273	-1.681	0
LCB (from A.P)	m	62.779	61.277	62.86	60.092	62.641
LCF (from A.P)	m	56.67	55.65	56.582	57.154	62.563
LCG (from A.P)	m	62.773	61.296	62.851	60.155	62.673
MTC	tm/cm	193.7	204.6	195.3	210.9	155.5
TPC	t/cm	23.3	23.7	23.3	23.8	21.3
BG	m	2.271	2.741	2.841	3.489	4.022
KMT	m	8.849	8.953	8.862	9.007	9.501
KG	m	6.621	7.344	7.29	7.438	6.655
GM	m	2.228	1.609	1.571	1.569	2.847
GM Corr.(GGo)	m	0.564	0.294	0.306	1.154	0
GoM	m	1.664	1.314	1.27	0.415	2.847
Max GZ	m	1.119	0.856	0.922	0.624	2.279
Propeller Immersion	%	167.5	186.2	169.4	174.5	113.5
Non Visibility Length	m	62.9	68.4	59.5	98.3	104.7

### Longitudinal Strength

Max Shear Force	t	-779	-575	-776	485	758
Max Bending Moment	tm	-12188	-9090	-11246	8451	21618

#### Notes :

1) Propeller immersion considered

2) Non Visibility Length calculated according to IMO Visibility criteria (IMO.VISIBILITY)

3) Max SF and BM values are absolute maximum values including sign

4) Grouping of loads :

Cargo

Ballast Water

Consumable : Methanol, Marine Gas Oil, Lubricating Oil, Miscellaneous,

Fresh Water, DWT Constant

## Summary of Loading Conditions

LD26 : 26.[UR-S11] NORMAL BALLAST COND. DEP. - No.6 WBT FULL

LD27 : 27.[UR-S11] NORMAL BALLAST COND. ARR. - No.6 WBT EMPTY

### Lightweight and Deadweight

	Unit	LD26	LD27	
Cargo	t	0.0	0.0	
Ballast Water	t	5432.4	4500.6	
Consumable	t	374.2	214.6	
Deadweight	t	6353.2	4771.1	
Lightweight	t	4560.0	4560.0	
Displacement	t	10913.2	9331.1	

### Draught

Draught at F.P	m	4.369	5.175	
Draught Midship	m	5.619	4.827	
Draught at A.P	m	6.829	4.490	
Draught Equivalent	m	5.593	4.847	

### Trim and Stability

Trim	m	-2.460	0.685	
Heel	deg	-0.422	-0.273	
LCB (from A.P)	m	60.279	65.327	
LCF (from A.P)	m	60.066	63.839	
LCG (from A.P)	m	60.354	65.303	
MTC	tm/cm	178.3	146.1	
TPC	t/cm	22.4	20.9	
BG	m	3.721	4.271	
KMT	m	9.43	9.49	
KG	m	6.67	6.793	
GM	m	2.76	2.697	
GM Corr.(GGo)	m	0.327	0.382	
GoM	m	2.433	2.315	
Max GZ	m	2.014	1.855	
Propeller Immersion	%	139	91.8	
Non Visibility Length	m	120.2	87.6	

### Longitudinal Strength

Max Shear Force	t	863	1092	
Max Bending Moment	tm	32202	29657	

Notes :

- 1) Propeller immersion considered
- 2) Non Visibility Length calculated according to IMO Visibility criteria (IMO.VISIBILITY)

3) Max SF and BM values are absolute maximum values including sign

4) Grouping of loads :

Cargo

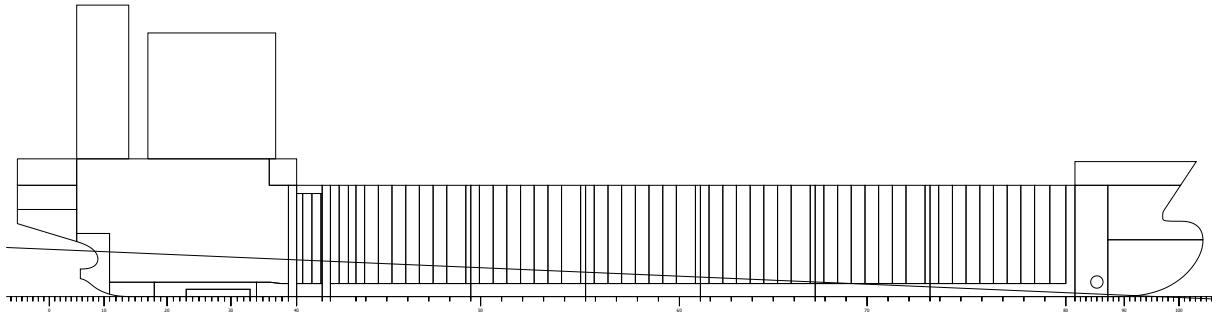
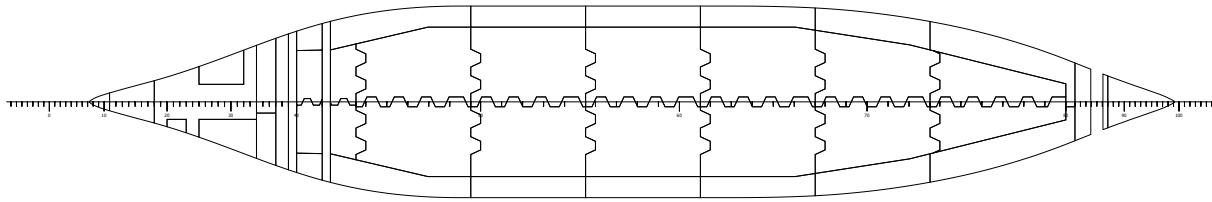
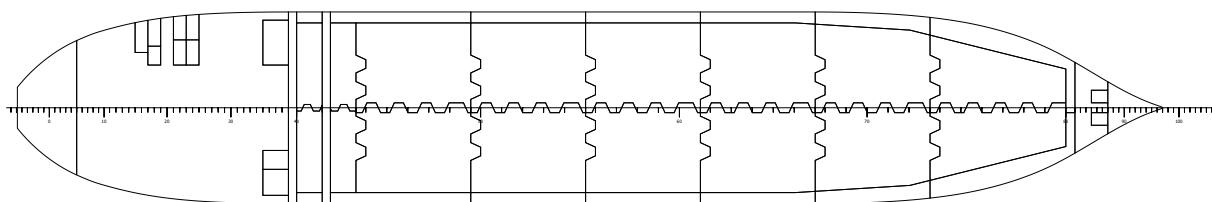
Ballast Water

Consumable : Methanol, Marine Gas Oil, Lubricating Oil, Miscellaneous,

Fresh Water, DWT Constant

## 2. DETAILS OF TYPICAL LOADED CONDITIONS

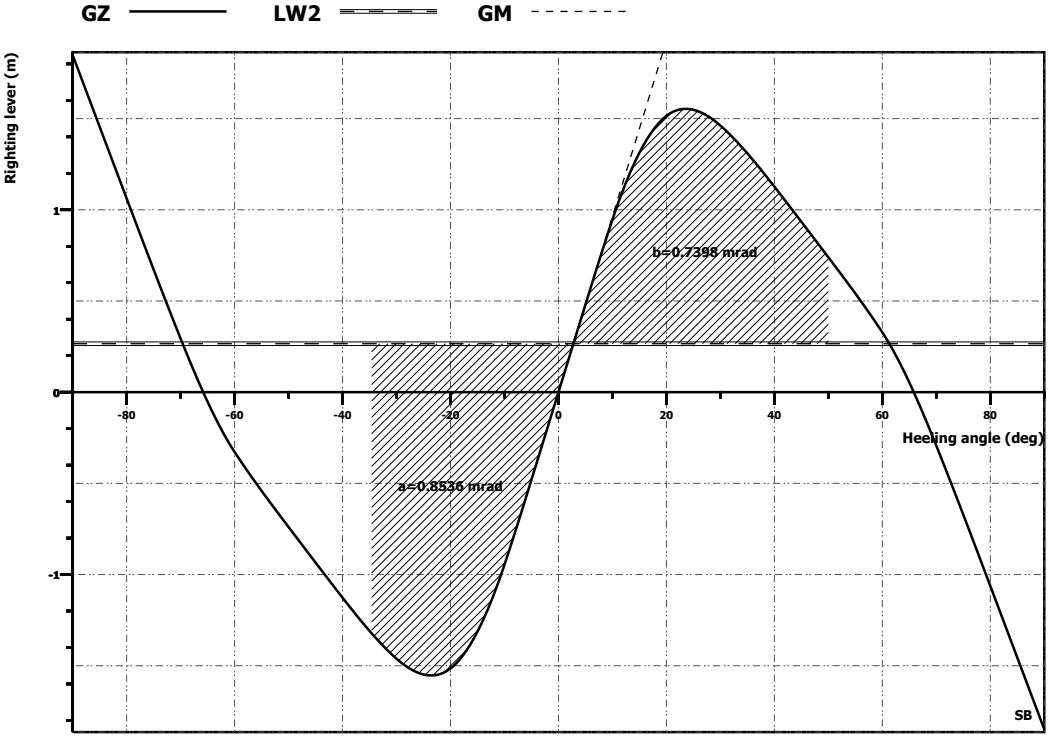
- (1) LIGHTSHIP
- (2) DRY DOCKING
- (3) PROPELLER AFLOAT
- (4) NORMAL BALLAST DEP.
- (5) NORMAL BALLAST ARR.
- (6) HOMO. SCANTLING DEP. (S.G=0.878)
- (7) HOMO. SCANTLING ARR. (S.G=0.878)
- (8) FULL LOADED DEP. (S.G=1.53)
- (9) FULL LOADED ARR. (S.G=1.53)
- (10) HOMO. LOADED DEP. (S.G.=0.7)
- (11) HOMO. LOADED ARR. (S.G.=0.7)
- (12) HOMO. LOADED DEP. (S.G=0.8)
- (13) HOMO. LOADED ARR. (S.G=0.8)
- (14) FULL LOADED DEP. (S.G=0.9)
- (15) FULL LOADED ARR. (S.G=0.9)
- (16) FULL LOADED DEP. (S.G=1.025)
- (17) FULL LOADED ARR. (S.G=1.025)
- (18) GROUP [NO.1/3/4/SLOP(S.G=0.7), NO. 2/4/6( S.G =1.53)] LOADED DEP.
- (19) GROUP [NO.1/3/4/SLOP(S.G=0.7), NO. 2/4/6( S.G =1.53)] LOADED ARR.
- (20) GROUP [NO.1/3/4/SLOP(S.G=1.53), NO. 2/4/6( S.G =0.7)] LOADED ARR.
- (21) GROUP [NO.1/3/4/SLOP(S.G=1.53), NO. 2/4/6( S.G =0.7)] LOADED ARR.
- (22) TROPICAL LOAD LINE DEP.
- (23) TROPICAL LOAD LINE ARR.
- (24) MARPOL ANNEX I/REG.27 (WORST POSSIBLE)
- (25) MARPOL SEGREGATED BALLAST
- (26) [UR-S11] NORMAL BALLAST DEP. – NO.6 WBT FULL
- (27) [UR-S11] NORMAL BALLAST ARR. - NO.6 WBT EMPTY

CONDITION NAME	01.LIGHTSHIP CONDITION					
	  					
						
	Sailing State (Free trim)					
Draught at F.P (MLD.)	-0.022 (m)	KMT	14.720 (m)			
Draught midship (MLD.)	2.623 (m)	KG (Solid)	9.200 (m)			
Draught at A.P (MLD.)	5.183 (m)	GM (Fluid)	5.520 (m)			
Draught Equivalent (MLD.)	2.500 (m)	GM Corr. (GGo)	0.000 (m)			
Trim (Stern:"-",Bow:"+")	-5.206 (m)	GoM (Fluid)	5.520 (m)			
Heel (Port:"-",Stbd:"+")	0.00 (deg.)	KGo (Fluid)	9.200 (m)			
Displacement	4560.0 tonnes	Free Surface Moment	0.000 (m)			
LCB (from A.P.)	50.276 (m)	MTC	118.44 (tm/Cm)			
LCF (from A.P.)	60.631 (m)	TPC	19.42 (t/Cm)			
Propeller Immersion	104 (%)					
Non visible length	216.1 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
	Weight (ton)	LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)	TCG (m)
Deadweight	0.0	0.000	0.00	0.000	0.00	0.000
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	4560.0	50.601	230740.3	9.200	41952.0	0.000

CONDITION NAME : 01.LIGHTSHIP CONDITION

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1</b>						
No.1 C.O.T.(P)	0.00	0.00	103.30	6.84	-2.91	0.00
No.1 C.O.T.(S)	0.00	0.00	103.42	6.84	2.89	0.00
No.2 C.O.T.(P)	0.00	0.00	90.41	6.76	-4.17	0.00
No.2 C.O.T.(S)	0.00	0.00	90.46	6.76	4.15	0.00
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	0.00	0.00	-0.01	10.85	-5.44	0.00
F.W.T.(S)	0.00	0.00	-0.01	10.85	5.44	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	0.00	0.00	38.65	14.30	5.50	0.00
METHANOL T.(P)	0.00	0.00	28.50	6.59	-4.21	0.00
METHANOL T.(S)	0.00	0.00	28.50	6.60	4.28	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	0.00	0.00	24.80	8.92	5.71	0.00
M.G.O.T.(P)	0.00	0.00	24.82	7.19	-6.87	0.00
M.G.O.T.(S)	0.00	0.00	24.83	6.66	7.22	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00

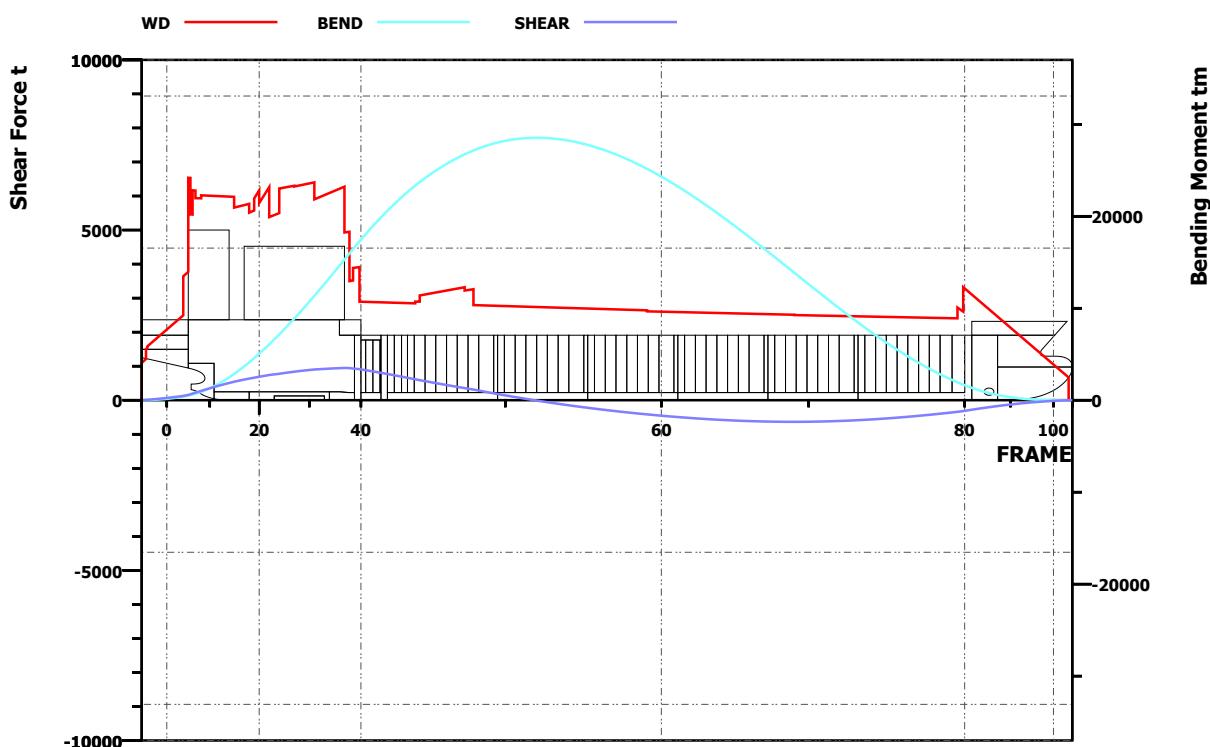
COMPARTMENTS	FILLING RATIO	WEIGHT		LCG	VCG	TCG	FREE SURFACE MOMENT
		%	t				
<b>Contents : LO, SG 0.9</b>							
G/E L.O.SET.T.(P)	0.00	0.00		11.51	8.86	-8.24	0.00
G/E L.O.STOR.T.(P)	0.00	0.00		11.50	8.67	-5.71	0.00
M/E L.O.SET.T.(P)	0.00	0.00		14.31	8.81	-8.74	0.00
M/E L.O.SOTR.T.(P)	0.00	0.00		14.30	8.67	-6.06	0.00
NO.1 CYL.OILT.(P)	0.00	0.00		15.70	8.67	-6.06	0.00
NO.2 CYL.OILT.(P)	0.00	0.00		15.71	8.77	-8.80	0.00
R/G L.O.STOR.T.(P)	0.00	0.00		10.11	8.87	-7.78	0.00
<b>SUBTOTAL</b>			0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT		LCG	VCG	TCG	FREE SURFACE MOMENT
		%	t				
<b>Contents : MIS, SG 1</b>							
C.W.T.	0.00	0.00		5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	0.00	0.00		9.46	0.93	0.00	0.00
D/B G.W. H.T.(P)	0.00	0.00		24.46	0.81	-2.29	0.00
D/B L.O.SUMP.T.(C)	0.00	0.00		18.50	0.40	0.27	0.00
D/B MGO OVFL. T.(S)	0.00	0.00		24.48	0.84	3.55	0.00
D/B OILY BILGE T.(P)	0.00	0.00		19.18	0.95	-3.07	0.00
D/B S/T L.O.SUMP.T.(S)	0.00	0.00		14.09	1.10	2.37	0.00
D/B SEWAGE H.T.(S)	0.00	0.00		20.05	0.94	3.21	0.00
SLUDGE T.(S)	0.00	0.00		19.20	6.42	8.18	0.00
<b>SUBTOTAL</b>			0.00	0.00	0.00	0.00	0.00
		WEIGHT		LCG	VCG	TCG	FREE SURFACE MOMENT
		t	m				
<b>TOTAL</b>		0.00	0.00	0.00	0.00	0.00	0.00

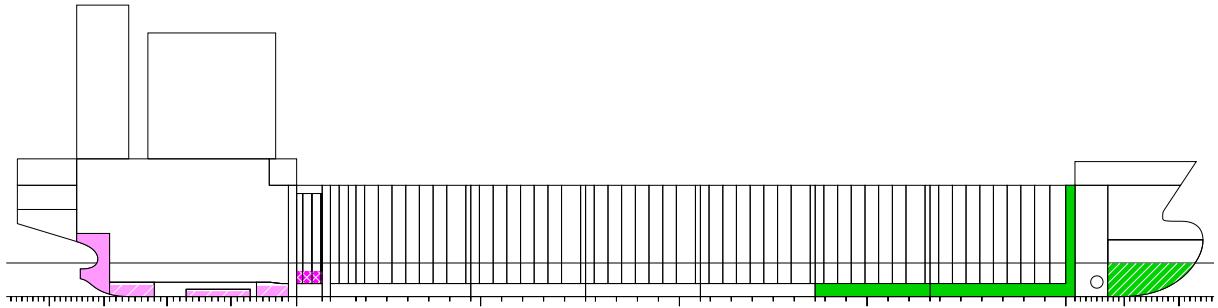
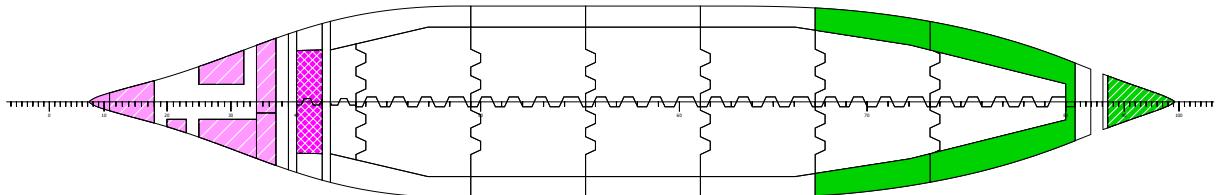
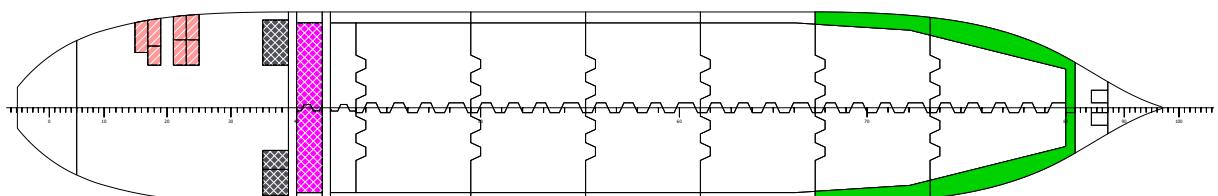
CONDITION NAME		01.LIGHTSHIP CONDITION										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	0.000	0.480	0.946	1.231	1.515	1.489	1.462	1.127	0.740	0.328	-0.293	
KN (m)	0.000	1.282	2.544	3.612	4.662	5.377	6.062	7.041	7.787	8.296	8.352	
KG0*sin(phi) (m)	0.000	0.802	1.598	2.381	3.147	3.888	4.600	5.914	7.048	7.967	8.645	
Area (mrad)	0.000	0.021	0.083	0.196	0.308	0.441	0.574	0.802	0.965	1.059	1.066	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Min GM value (m)	0.150			5.520			OK					
Max GZ value (m)	0.200			1.462			OK					
Heel angle at Max GZ(deg.)	25.000			23.581			NOT MET					
Area (0 - 30) deg. (m-rad)	0.055			0.574			OK					
Area (30 - 40) deg. (m-rad)	0.030			0.228			OK					
Area (0 - 40) deg. (m-rad)	0.090			0.802			OK					
Flooding angle (deg.)	30.000			-			-					
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Area (B) (m-rad)	-			0.740			-					
Area (A) (m-rad)	-			0.854			-					
Area (B) / Area (A)	1.000			0.867			NOT MET					
Projected area above W.L (m2)	-			1677.496			-					
Z (m)	-			9.363			-					
Steady Heeling level (Lw1) (m)	-			0.177			-					
Gust Heeling level (Lw2) (m)	-			0.266			-					
Theta 1 (degrees)	-			-36.457			-					
Theta 0 (degrees)	-			1.844			-					
Theta 2 (degrees)	-			50.000			-					
Heeling angle by steady wind(deg)	16.000			1.844			OK					
Rolling period (sec)	-			9.082			-					
 <p>The graph plots Righting lever (m) on the y-axis against Heeling angle (deg) on the x-axis. It shows two stability curves: LW1 (solid line) and LW2 (dashed line). The LW1 curve starts at a positive righting lever for negative heeling angles, reaches zero at approximately -36.457 degrees, and then dips below the horizontal axis (negative righting lever) before returning to zero at 16.000 degrees. The LW2 curve starts at zero, dips slightly below the axis around 10 degrees, and then rises back towards zero. Two areas under the curves are shaded: a large triangular area under LW1 between -36.457 and 16.000 degrees, and a smaller triangular area under LW2 between 0 and approximately 10 degrees. The area under LW1 is labeled <math>b=0.7398 \text{ mrad}</math>. The area under LW2 is labeled <math>a=0.8536 \text{ mrad}</math>. The point where the LW1 curve crosses the horizontal axis is marked with 'SB'.</p>												

CONDITION NAME , 01.LIGHTSHIP CONDITION

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	73.12	154	495
11.000	6.600	67.16	387	1518
17.000	10.800	64.13	605	3676
35.000	23.400	68.81	935	13950
39.000	26.200	43.53	926	16614
40.000	27.100	32.37	904	17449
41.000	29.900	32.18	804	19876
42.000	30.800	32.11	770	20595
43.000	33.600	31.91	658	22627
49.000	46.180	31.02	181	28018
55.000	58.760	30.13	-224	27754
61.000	71.340	28.97	-496	23238
67.000	83.920	28.28	-628	16147
73.000	96.500	27.56	-587	8449
80.000	111.380	36.75	-314	1629
81.000	112.380	34.73	-280	1344
87.000	115.980	27.47	-173	576

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	948	24.800	37.000
Maximum bending moment (tm)	28533	51.657	51.912
Minimum shear force (t)	-636	87.376	69.033
Minimum bending moment (tm)	-13	124.493	101.188



CONDITION NAME	02.DRY DOCKING CONDITION					
	  					
						
	Sailing State (Free trim)					
Draught at F.P (MLD.)	3.682 (m)	KMT	10.930 (m)			
Draught midship (MLD.)	3.684 (m)	KG (Solid)	7.769 (m)			
Draught at A.P (MLD.)	3.685 (m)	GM (Fluid)	3.163 (m)			
Draught Equivalent (MLD.)	3.683 (m)	GM Corr. (GGo)	0.153 (m)			
Trim (Stern:"-",Bow:"+")	-0.004 (m)	GoM (Fluid)	3.010 (m)			
Heel (Port:"-",Stbd:"+")	-0.28 (deg.)	KGo (Fluid)	7.922 (m)			
Displacement	6928.8 tonnes	Free Surface Moment	1063.6 (m)			
LCB (from A.P.)	64.331 (m)	MTC	136.07 (tm/Cm)			
LCF (from A.P.)	64.355 (m)	TPC	20.31 (t/Cm)			
Propeller Immersion	74.7 (%)					
Non visible length	104.7 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
	Weight (ton)	LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)	TCG (m)
Deadweight	2368.8	90.762	215002.6	5.014	11877.3	-0.044
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	6928.8	64.331	445742.9	7.769	53829.3	-0.015

CONDITION NAME : 02.DRY DOCKING CONDITION

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1</b>						
No.1 C.O.T.(P)	0.00	0.00	103.30	6.84	-2.91	0.00
No.1 C.O.T.(S)	0.00	0.00	103.42	6.84	2.89	0.00
No.2 C.O.T.(P)	0.00	0.00	90.41	6.76	-4.17	0.00
No.2 C.O.T.(S)	0.00	0.00	90.46	6.76	4.15	0.00
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	41.00	93.37	118.97	2.34	0.00	130.73
NO.1 W.B.T.(P)	100.00	609.56	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	100.00	573.06	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	100.00	421.03	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	100.00	401.41	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		2098.43	99.62	5.07	0.00	130.73
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		17.71	0.15	9.70	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		39.24	29.26	2.94	0.42	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		16.54	24.89	3.60	-0.04	46.41

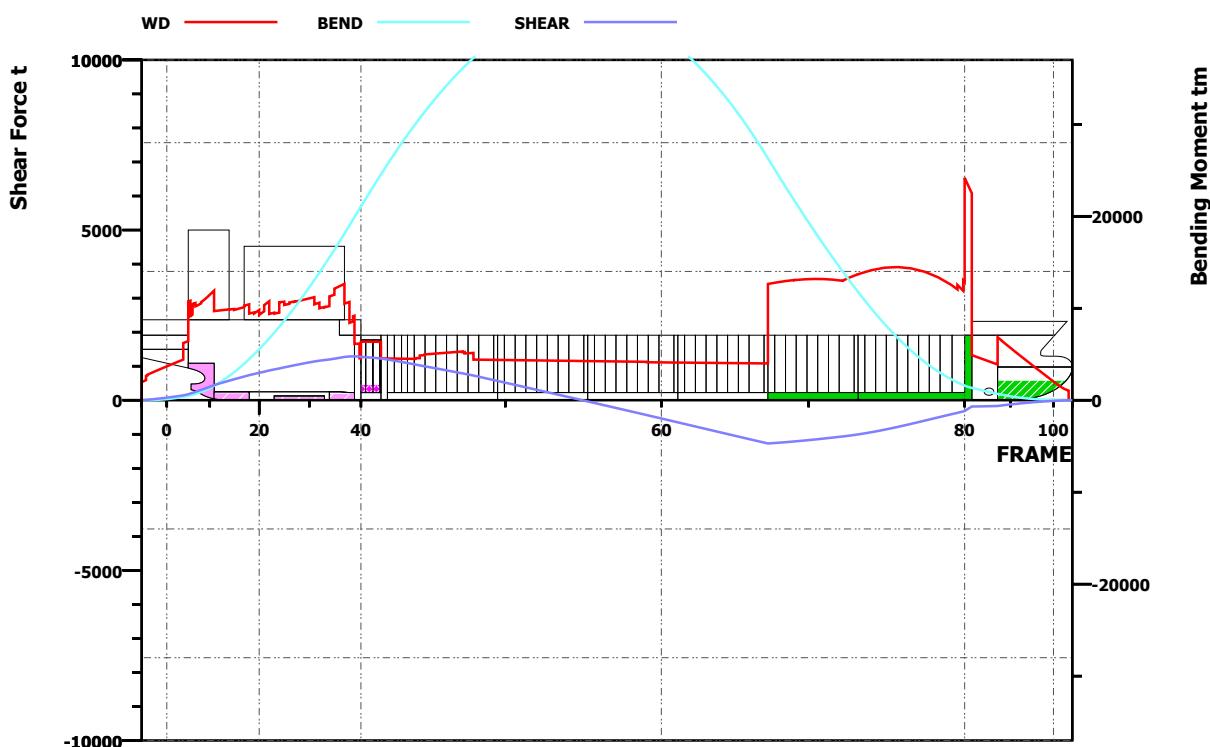
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		2368.85	90.76	5.01	-0.04	1063.56

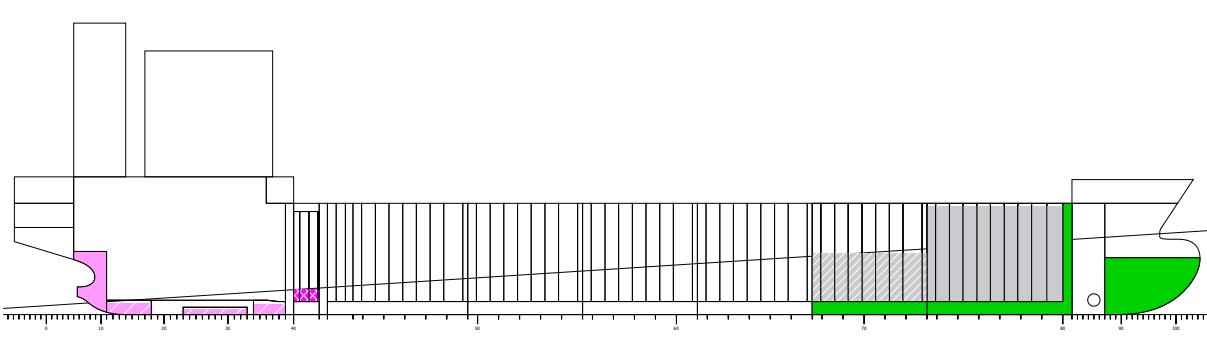
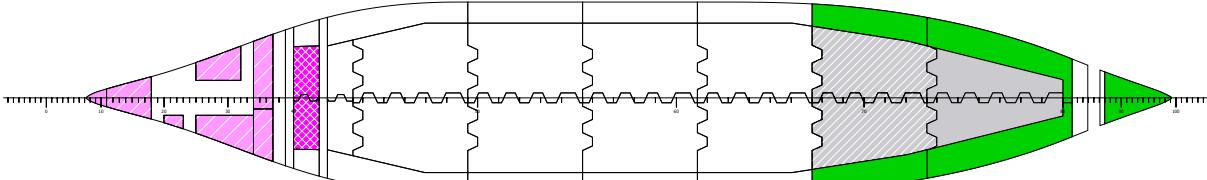
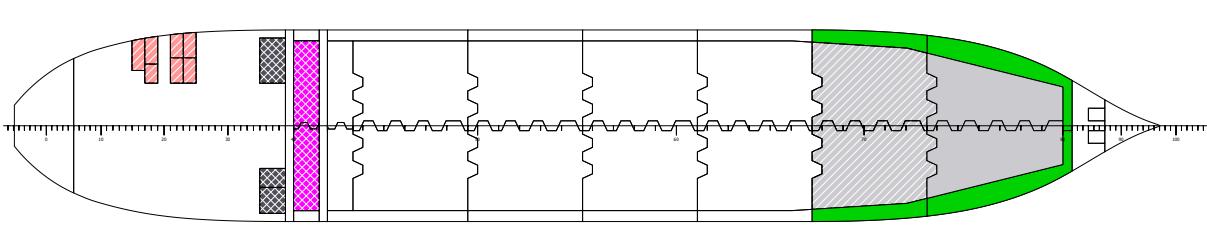
CONDITION NAME		02.DRY DOCKING CONDITION										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.015	0.250	0.530	0.834	1.139	1.313	1.488	1.539	1.401	0.998	0.433	
KN (m)	-0.015	0.941	1.905	2.885	3.848	4.661	5.449	6.631	7.470	7.859	7.877	
KG0*sin(phi) (m)	0.000	0.690	1.376	2.050	2.710	3.348	3.961	5.092	6.069	6.861	7.445	
Area (mrad)	0.000	0.010	0.044	0.117	0.190	0.308	0.425	0.692	0.952	1.164	1.291	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Min GM value (m)	0.150			3.010			OK					
Max GZ value (m)	0.200			1.545			OK					
Heel angle at Max GZ(deg.)	25.000			37.291			OK					
Area (0 - 30) deg. (m-rad)	0.055			0.425			OK					
Area (30 - 40) deg. (m-rad)	0.030			0.267			OK					
Area (0 - 40) deg. (m-rad)	0.090			0.692			OK					
Flooding angle (deg.)	30.000			-			-					
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Area (B) (m-rad)	-			0.815			-					
Area (A) (m-rad)	-			0.399			-					
Area (B) / Area (A)	1.000			2.043			OK					
Projected area above W.L (m2)	-			1531.998			-					
Z (m)	-			9.515			-					
Steady Heeling level (Lw1) (m)	-			0.108			-					
Gust Heeling level (Lw2) (m)	-			0.162			-					
Theta 1 (degrees)	-			-27.705			-					
Theta 0 (degrees)	-			2.329			-					
Theta 2 (degrees)	-			50.000			-					
Heeling angle by steady wind(deg)	16.000			2.329			OK					
Rolling period (sec)	-			10.952			-					

CONDITION NAME , 02.DRY DOCKING CONDITION

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	173	472
11.000	6.600	85.10	442	1569
17.000	10.800	73.44	695	3965
35.000	23.400	86.64	1219	16363
39.000	26.200	65.60	1289	19899
40.000	27.100	32.53	1274	21053
41.000	29.900	32.42	1226	24555
42.000	30.800	32.36	1196	25644
43.000	33.600	32.16	1092	28848
49.000	46.180	31.27	566	39391
55.000	58.760	30.38	-37	42725
61.000	71.340	29.22	-651	38409
67.000	83.920	90.25	-1271	26296
73.000	96.500	97.82	-1005	11772
80.000	111.380	172.74	-319	1589
81.000	112.380	160.74	-186	1336
87.000	115.980	48.91	-170	690

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	1289	26.200	39.000
Maximum bending moment (tm)	42739	58.151	54.735
Minimum shear force (t)	-1271	83.920	67.000
Minimum bending moment (tm)	0	-3.500	-5.833



CONDITION NAME	03.PROPELLER AFLOAT CONDITION					
	  					
						
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.862 (m)	KMT	9.240 (m)			
Draught midship (MLD.)	4.856 (m)	KG (Solid)	7.142 (m)			
Draught at A.P (MLD.)	0.980 (m)	GM (Fluid)	2.101 (m)			
Draught Equivalent (MLD.)	5.125 (m)	GM Corr. (GGo)	0.268 (m)			
Trim (Stern:"-",Bow:"+")	7.882 (m)	GoM (Fluid)	1.833 (m)			
Heel (Port:"-",Stbd:"+")	-0.33 (deg.)	KGo (Fluid)	7.410 (m)			
Displacement	9915.9 tonnes	Free Surface Moment	2658.8 (m)			
LCB (from A.P.)	75.094 (m)	MTC	124.55 (tm/Cm)			
LCF (from A.P.)	64.388 (m)	TPC	19.81 (t/Cm)			
Propeller Immersion	22.0 (%)					
Non visible length	37.67 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	5355.9	95.453	511237.2	5.390	28866.7	-0.019
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	9915.9	74.827	741977.6	7.142	70818.7	-0.010

CONDITION NAME : 03.PROPELLER AFLOAT CONDITION

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1.025</b>						
No.1 C.O.T.(P)	98.00	854.01	103.30	6.74	-2.93	132.21
No.1 C.O.T.(S)	98.00	861.21	103.42	6.74	2.91	135.50
No.2 C.O.T.(P)	50.00	567.02	90.38	4.19	-4.19	723.06
No.2 C.O.T.(S)	50.00	570.46	90.43	4.19	4.16	735.25
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00
<b>SUBTOTAL</b>		2852.70	98.20	5.72	0.00	1726.02
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	100.00	227.72	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	100.00	609.56	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	100.00	573.06	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	100.00	421.03	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	100.00	401.41	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		2232.79	100.84	5.07	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		17.71	0.15	9.70	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		39.24	29.26	2.94	0.42	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		16.54	24.89	3.60	-0.04	46.41

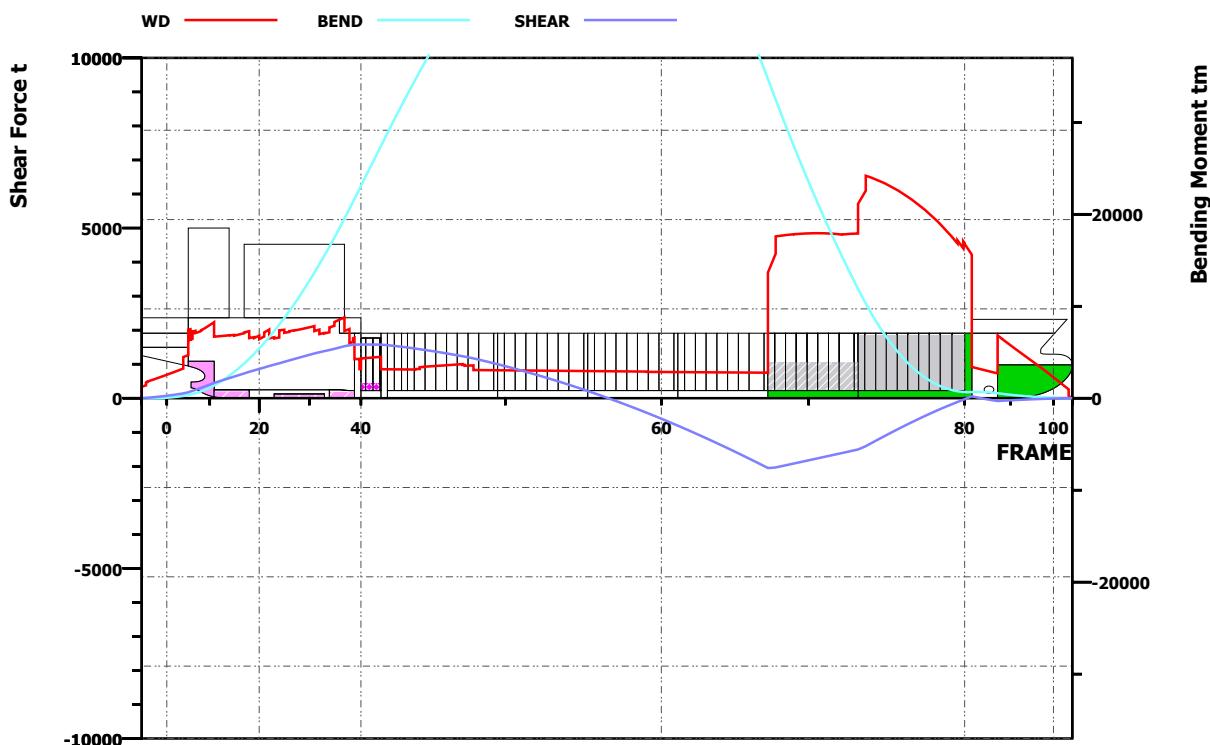
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						%	
<b>Contents : LO, SG 0.9</b>							
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59	
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92	
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72	
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17	
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17	
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82	
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33	
<b>SUBTOTAL</b>		<b>24.74</b>	<b>13.25</b>	<b>7.55</b>	<b>-7.22</b>	<b>22.72</b>	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						%	
<b>Contents : MIS, SG 1</b>							
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00	
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36	
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15	
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09	
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73	
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78	
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32	
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94	
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12	
<b>SUBTOTAL</b>		<b>125.88</b>	<b>16.51</b>	<b>2.10</b>	<b>0.47</b>	<b>249.49</b>	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						%	
<b>Contents : MASS, SG 1</b>							
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00	
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00	
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00	
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00	
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00	
<b>SUBTOTAL</b>		<b>46.30</b>	<b>42.79</b>	<b>9.38</b>	<b>0.00</b>	<b>10.00</b>	
		WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
		t	m	m	m	tm	
<b>TOTAL</b>		<b>5355.90</b>	<b>95.45</b>	<b>5.39</b>	<b>-0.02</b>	<b>2658.85</b>	

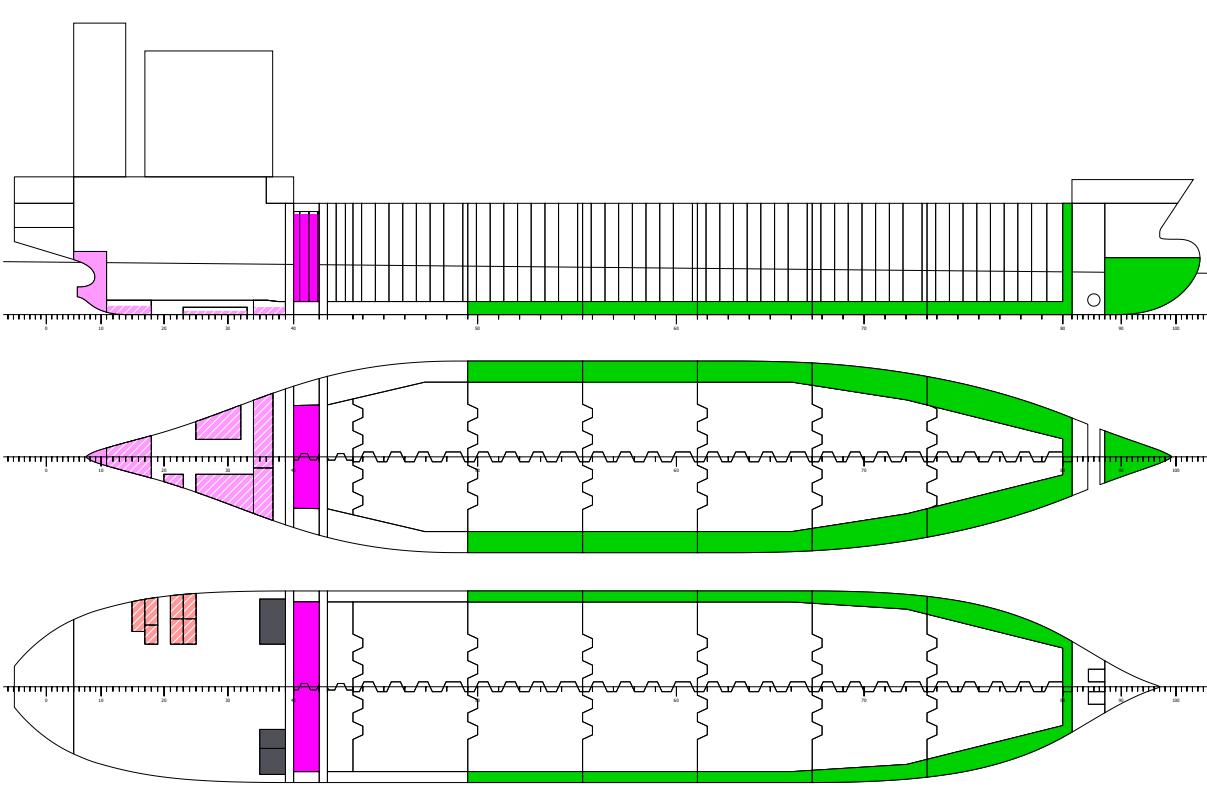
CONDITION NAME		03.PROPELLER AFLOAT CONDITION										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.010	0.150	0.322	0.530	0.738	0.964	1.190	1.358	1.180	0.779	0.281	
KN (m)	-0.010	0.796	1.608	2.447	3.272	4.095	4.895	6.121	6.857	7.196	7.244	
KG0*sin(phi) (m)	0.000	0.646	1.287	1.918	2.534	3.132	3.705	4.763	5.676	6.417	6.963	
Area (mrad)	0.000	0.006	0.027	0.072	0.117	0.202	0.287	0.515	0.741	0.914	1.007	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Min GM value (m)	0.150			1.833			OK					
Max GZ value (m)	0.200			1.358			OK					
Heel angle at Max GZ(deg.)	25.000			39.531			OK					
Area (0 - 30) deg. (m-rad)	0.055			0.287			OK					
Area (30 - 40) deg. (m-rad)	0.030			0.228			OK					
Area (0 - 40) deg. (m-rad)	0.090			0.515			OK					
Flooding angle (deg.)	30.000			-			-					
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Area (B) (m-rad)	-			0.640			-					
Area (A) (m-rad)	-			0.130			-					
Area (B) / Area (A)	1.000			4.915			OK					
Projected area above W.L (m2)	-			1352.095			-					
Z (m)	-			11.504			-					
Steady Heeling level (Lw1) (m)	-			0.081			-					
Gust Heeling level (Lw2) (m)	-			0.121			-					
Theta 1 (degrees)	-			-19.933			-					
Theta 0 (degrees)	-			2.850			-					
Theta 2 (degrees)	-			50.000			-					
Heeling angle by steady wind(deg)	16.000			2.850			OK					
Rolling period (sec)	-			13.092			-					

CONDITION NAME , 03.PROPELLER AFLOAT CONDITION

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	173	343
11.000	6.600	85.10	448	1382
17.000	10.800	73.63	727	3774
35.000	23.400	85.26	1450	17466
39.000	26.200	67.76	1573	21672
40.000	27.100	32.53	1575	23073
41.000	29.900	32.42	1574	27433
42.000	30.800	32.36	1557	28825
43.000	33.600	32.16	1490	33043
49.000	46.180	31.27	998	48812
55.000	58.760	30.38	212	56433
61.000	71.340	29.22	-807	52702
67.000	83.920	140.74	-2052	34705
73.000	96.500	217.58	-1506	11884
80.000	111.380	173.58	-28	670
81.000	112.380	160.74	55	665
87.000	115.980	70.29	-82	535

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	1576	28.378	40.456
Maximum bending moment (tm)	56690	61.398	56.678
Minimum shear force (t)	-2052	83.920	67.000
Minimum bending moment (tm)	-11	-2.215	-3.692



CONDITION NAME	04.NORMAL BALLAST CONDITION DEP.					
						
						
Sailing State (Free trim)						
Draught at F.P (MLD.)	4.584 (m)	KMT	9.460 (m)			
Draught midship (MLD.)	5.182 (m)	KG (Solid)	6.921 (m)			
Draught at A.P (MLD.)	5.760 (m)	GM (Fluid)	2.540 (m)			
Draught Equivalent (MLD.)	5.156 (m)	GM Corr. (GGo)	0.357 (m)			
Trim (Stern:"-",Bow:"+")	-1.175 (m)	GoM (Fluid)	2.183 (m)			
Heel (Port:"-",Stbd:"+")	-0.51 (deg.)	KGo (Fluid)	7.278 (m)			
Displacement	9981.5 tonnes	Free Surface Moment	3566.0 (m)			
LCB (from A.P.)	62.359 (m)	MTC	158.35 (tm/Cm)			
LCF (from A.P.)	62.250 (m)	TPC	21.49 (t/Cm)			
Propeller Immersion	117 (%)					
Non visible length	106.0 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	5421.5	72.324	392104.0	5.003	27125.9	-0.036
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	9981.5	62.400	622844.3	6.921	69077.9	-0.020

CONDITION NAME : 04.NORMAL BALLAST CONDITION DEP.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
<b>Contents : CAL, SG 1</b>							
No.1 C.O.T.(P)	0.00	0.00	103.30	6.84	-2.91	0.00	
No.1 C.O.T.(S)	0.00	0.00	103.42	6.84	2.89	0.00	
No.2 C.O.T.(P)	0.00	0.00	90.41	6.76	-4.17	0.00	
No.2 C.O.T.(S)	0.00	0.00	90.46	6.76	4.15	0.00	
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00	
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00	
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00	
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00	
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00	
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00	
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00	
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00	
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00	
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00	
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
<b>Contents : WB, SG 1.025</b>							
F.P.T.(C)	100.00	227.72	119.53	3.89	0.00	0.00	
NO.1 W.B.T.(P)	100.00	609.56	104.66	5.63	-5.41	0.00	
NO.1 W.B.T.(S)	100.00	573.06	104.52	5.82	5.76	0.00	
NO.2 W.B.T.(P)	100.00	421.03	90.28	4.36	-7.15	0.00	
NO.2 W.B.T.(S)	100.00	401.41	90.29	4.54	7.50	0.00	
NO.3 W.B.T.(P)	100.00	387.01	77.63	3.86	-7.24	0.00	
NO.3 W.B.T.(S)	100.00	367.40	77.63	4.03	7.62	0.00	
NO.4 W.B.T.(P)	100.00	388.17	65.05	3.83	-7.25	0.00	
NO.4 W.B.T.(S)	100.00	368.55	65.05	3.99	7.64	0.00	
NO.5 W.B.T.(P)	100.00	388.16	52.47	3.83	-7.25	0.00	
NO.5 W.B.T.(S)	100.00	368.55	52.47	3.99	7.64	0.00	
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	1526.60	
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	1106.58	
<b>SUBTOTAL</b>		4500.63	82.80	4.49	0.00	2633.18	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
<b>Contents : FW, SG 1</b>							
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78	
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78	
<b>SUBTOTAL</b>		177.13	-0.01	10.85	0.00	295.57	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
<b>Contents : METHAN, SG 0.796</b>							
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35	
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91	
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38	
<b>SUBTOTAL</b>		384.55	29.26	7.08	0.41	308.64	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
<b>Contents : MGO, SG 0.85</b>							
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73	
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27	
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41	
<b>SUBTOTAL</b>		162.12	24.82	7.11	0.00	46.41	

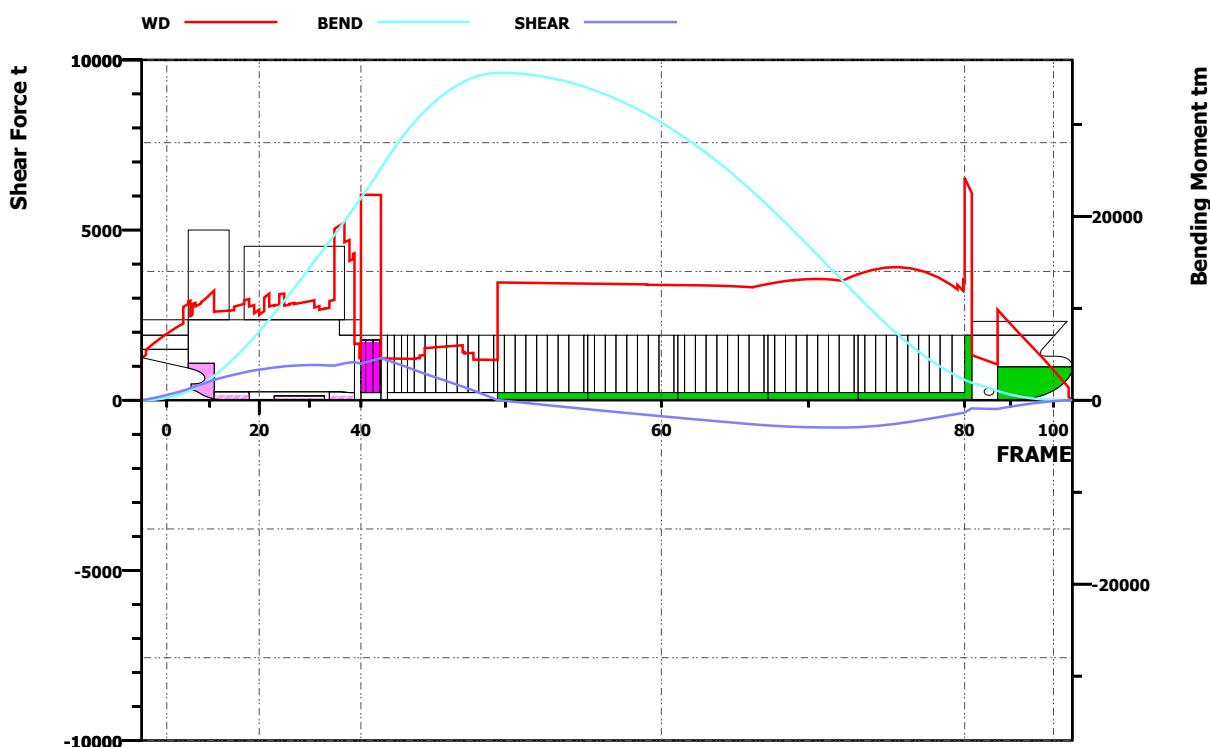
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		5421.46	72.32	5.00	-0.04	3566.02

CONDITION NAME	04.NORMAL BALLAST CONDITION DEP.										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.020	0.173	0.377	0.620	0.863	1.153	1.443	1.793	1.760	1.478	0.985
KN (m)	-0.020	0.807	1.640	2.503	3.352	4.228	5.082	6.471	7.335	7.781	7.823
KG0*sin(phi) (m)	0.000	0.634	1.264	1.884	2.489	3.076	3.639	4.678	5.575	6.303	6.839
Area (mrad)	0.000	0.007	0.031	0.084	0.137	0.237	0.338	0.626	0.941	1.226	1.444
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	2.183	OK								
Max GZ value (m)	0.200	1.819	OK								
Heel angle at Max GZ(deg.)	25.000	43.742	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.338	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.288	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.626	OK								
Flooding angle (deg.)	30.000	85.424	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.857	-								
Area (A) (m-rad)	-	0.180	-								
Area (B) / Area (A)	1.000	4.763	OK								
Projected area above W.L (m2)	-	1357.152	-								
Z (m)	-	9.537	-								
Steady Heeling level (Lw1) (m)	-	0.067	-								
Gust Heeling level (Lw2) (m)	-	0.100	-								
Theta 1 (degrees)	-	-21.762	-								
Theta 0 (degrees)	-	2.260	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	16.000	2.260	OK								
Rolling period (sec)	-	11.760	-								

CONDITION NAME , 04.NORMAL BALLAST CONDITION DEP.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	332	975
11.000	6.600	85.10	598	2655
17.000	10.800	77.59	816	5655
35.000	23.400	133.06	1016	17970
39.000	26.200	114.14	1119	20993
40.000	27.100	32.53	1071	21982
41.000	29.900	32.42	1237	25226
42.000	30.800	32.36	1173	26313
43.000	33.600	32.16	964	29316
49.000	46.180	91.40	6	35578
55.000	58.760	90.53	-265	33960
61.000	71.340	89.37	-516	29066
67.000	83.920	90.25	-742	21144
73.000	96.500	97.82	-792	11274
80.000	111.380	172.74	-363	2203
81.000	112.380	160.74	-240	1905
87.000	115.980	70.29	-258	1012

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	1238	29.893	40.998
Maximum bending moment (tm)	35580	46.461	49.260
Minimum shear force (t)	-803	93.871	71.857
Minimum bending moment (tm)	-2	125.754	103.289



CONDITION NAME	05.NORMAL BALLAST CONDITION ARR.					
	<b>Sailing State (Free trim)</b>					
Draught at F.P (MLD.)	4.867 (m)	KMT	9.350 (m)			
Draught midship (MLD.)	5.307 (m)	KG (Solid)	6.538 (m)			
Draught at A.P (MLD.)	5.733 (m)	GM (Fluid)	2.814 (m)			
Draught Equivalent (MLD.)	5.288 (m)	GM Corr. (GGo)	0.347 (m)			
Trim (Stern:"-",Bow:"+")	-0.865 (m)	GoM (Fluid)	2.467 (m)			
Heel (Port:"-",Stbd:"+")	-0.23 (deg.)	KGo (Fluid)	6.886 (m)			
Displacement	10262.8 tonnes	Free Surface Moment	3566.0 (m)			
LCB (from A.P.)	62.837 (m)	MTC	158.81 (tm/Cm)			
LCF (from A.P.)	62.297 (m)	TPC	21.51 (t/Cm)			
Propeller Immersion	117 (%)					
Non visible length	100.9 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
	Weight (ton)	LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)	TCG (m)
Deadweight	5702.8	72.669	414416.5	4.410	25147.0	-0.018
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	10262.8	62.863	645156.8	6.538	67099.0	-0.010

CONDITION NAME : 05.NORMAL BALLAST CONDITION ARR.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1</b>						
No.1 C.O.T.(P)	0.00	0.00	103.30	6.84	-2.91	0.00
No.1 C.O.T.(S)	0.00	0.00	103.42	6.84	2.89	0.00
No.2 C.O.T.(P)	0.00	0.00	90.41	6.76	-4.17	0.00
No.2 C.O.T.(S)	0.00	0.00	90.46	6.76	4.15	0.00
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	100.00	227.72	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	100.00	609.56	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	100.00	573.06	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	100.00	421.03	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	100.00	401.41	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	100.00	387.01	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	100.00	367.40	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	100.00	388.17	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	100.00	368.55	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	100.00	388.16	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	100.00	368.55	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	100.00	477.88	38.43	3.91	-7.18	1526.60
NO.6 W.B.T.(S)	100.00	453.90	38.43	4.08	7.56	1106.58
<b>SUBTOTAL</b>		5432.41	75.19	4.40	0.00	2633.18
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		17.71	0.15	9.70	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		39.24	29.26	2.94	0.42	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		16.54	24.89	3.60	-0.04	46.41

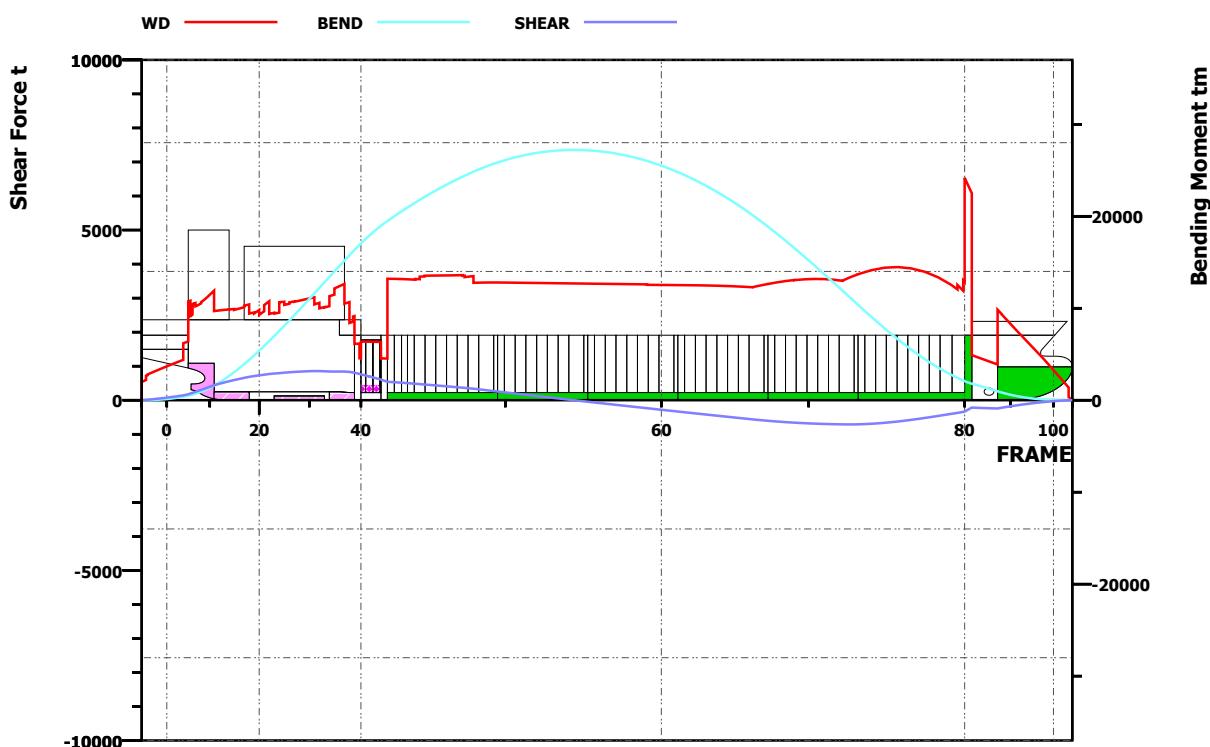
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		5702.83	72.67	4.41	-0.02	3566.02

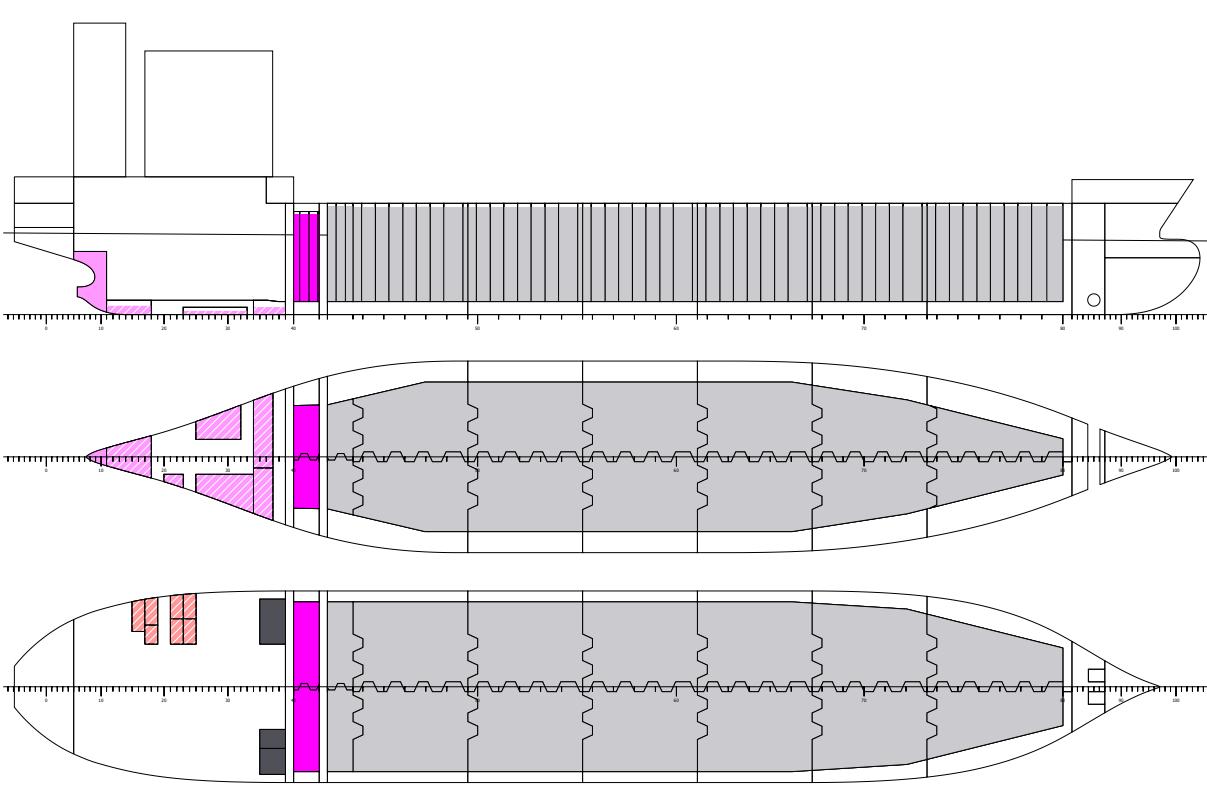
CONDITION NAME	05.NORMAL BALLAST CONDITION ARR.										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.010	0.207	0.435	0.701	0.967	1.286	1.606	2.012	2.027	1.785	1.325
KN (m)	-0.010	0.807	1.631	2.483	3.322	4.196	5.048	6.438	7.302	7.748	7.795
KG0*sin(phi) (m)	0.000	0.600	1.196	1.782	2.355	2.910	3.443	4.426	5.275	5.963	6.470
Area (mrad)	0.000	0.009	0.036	0.097	0.157	0.269	0.382	0.703	1.060	1.396	1.670
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	2.467	OK								
Max GZ value (m)	0.200	2.061	OK								
Heel angle at Max GZ(deg.)	25.000	45.187	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.382	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.321	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.703	OK								
Flooding angle (deg.)	30.000	85.400	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.978	-								
Area (A) (m-rad)	-	0.202	-								
Area (B) / Area (A)	1.000	4.844	OK								
Projected area above W.L (m2)	-	1340.324	-								
Z (m)	-	9.590	-								
Steady Heeling level (Lw1) (m)	-	0.064	-								
Gust Heeling level (Lw2) (m)	-	0.097	-								
Theta 1 (degrees)	-	-21.840	-								
Theta 0 (degrees)	-	1.726	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	16.000	1.726	OK								
Rolling period (sec)	-	11.003	-								

CONDITION NAME , 05.NORMAL BALLAST CONDITION ARR.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	173	487
11.000	6.600	85.10	439	1589
17.000	10.800	73.41	656	3919
35.000	23.400	86.79	841	13997
39.000	26.200	65.37	809	16338
40.000	27.100	32.53	760	17046
41.000	29.900	32.42	605	18966
42.000	30.800	94.32	540	19483
43.000	33.600	93.89	501	20947
49.000	46.180	91.40	255	25845
55.000	58.760	90.53	-45	27168
61.000	71.340	89.37	-333	24797
67.000	83.920	90.25	-606	18872
73.000	96.500	97.82	-709	10369
80.000	111.380	172.74	-336	2070
81.000	112.380	160.74	-216	1796
87.000	115.980	70.29	-243	968

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	856	20.600	31.000
Maximum bending moment (tm)	27209	56.852	54.170
Minimum shear force (t)	-712	95.170	72.422
Minimum bending moment (tm)	-1	125.768	103.313



CONDITION NAME	06.HOMO. SCANT. CONDITION DEP.					
						
						
	Sailing State (Free trim)					
Draught at F.P (MLD.)	8.110 (m)	KMT	8.940 (m)			
Draught midship (MLD.)	8.523 (m)	KG (Solid)	7.344 (m)			
Draught at A.P (MLD.)	8.922 (m)	GM (Fluid)	1.592 (m)			
Draught Equivalent (MLD.)	8.550 (m)	GM Corr. (GGo)	0.294 (m)			
Trim (Stern:"-",Bow:"+")	-0.813 (m)	GoM (Fluid)	1.298 (m)			
Heel (Port:"-",Stbd:"+")	-0.49 (deg.)	KGo (Fluid)	7.639 (m)			
Displacement	17604.2 tonnes	Free Surface Moment	5183.7 (m)			
LCB (from A.P.)	61.277 (m)	MTC	204.89 (tm/Cm)			
LCF (from A.P.)	55.882 (m)	TPC	23.71 (t/Cm)			
Propeller Immersion	183 (%)					
Non visible length	71.30 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
	Weight (ton)	LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)	TCG (m)
Deadweight	13044.2	65.035	848326.0	6.696	87338.8	-0.015
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	17604.2	61.296	1079066	7.344	129291	-0.011

CONDITION NAME : 06.HOMO. SCANT. CONDITION DEP.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : CAL, SG 0.87835</b>						
No.1 C.O.T.(P)	98.00	731.82	103.30	6.74	-2.93	113.30
No.1 C.O.T.(S)	98.00	738.00	103.42	6.74	2.91	116.11
No.2 C.O.T.(P)	98.00	952.35	90.41	6.66	-4.20	315.81
No.2 C.O.T.(S)	98.00	958.13	90.46	6.66	4.17	322.32
No.3 C.O.T.(P)	98.00	1030.59	77.94	6.59	-4.53	394.31
No.3 C.O.T.(S)	98.00	1036.37	77.99	6.59	4.50	401.89
No.4 C.O.T.(P)	98.00	1032.23	65.37	6.58	-4.54	396.18
No.4 C.O.T.(S)	98.00	1038.01	65.42	6.59	4.51	403.79
No.5 C.O.T.(P)	98.00	1032.23	52.79	6.58	-4.54	396.18
No.5 C.O.T.(S)	98.00	1038.01	52.84	6.59	4.51	403.79
No.6 C.O.T.(P)	98.00	1019.42	40.27	6.64	-4.49	395.76
No.6 C.O.T.(S)	98.00	1025.20	40.31	6.64	4.46	403.36
SLOP T.(P)	98.00	248.00	32.42	6.81	-4.15	97.18
SLOP T.(S)	98.00	243.04	32.43	6.81	4.23	90.84
<b>SUBTOTAL</b>		<b>12123.41</b>	<b>68.37</b>	<b>6.63</b>	<b>0.00</b>	<b>4250.84</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

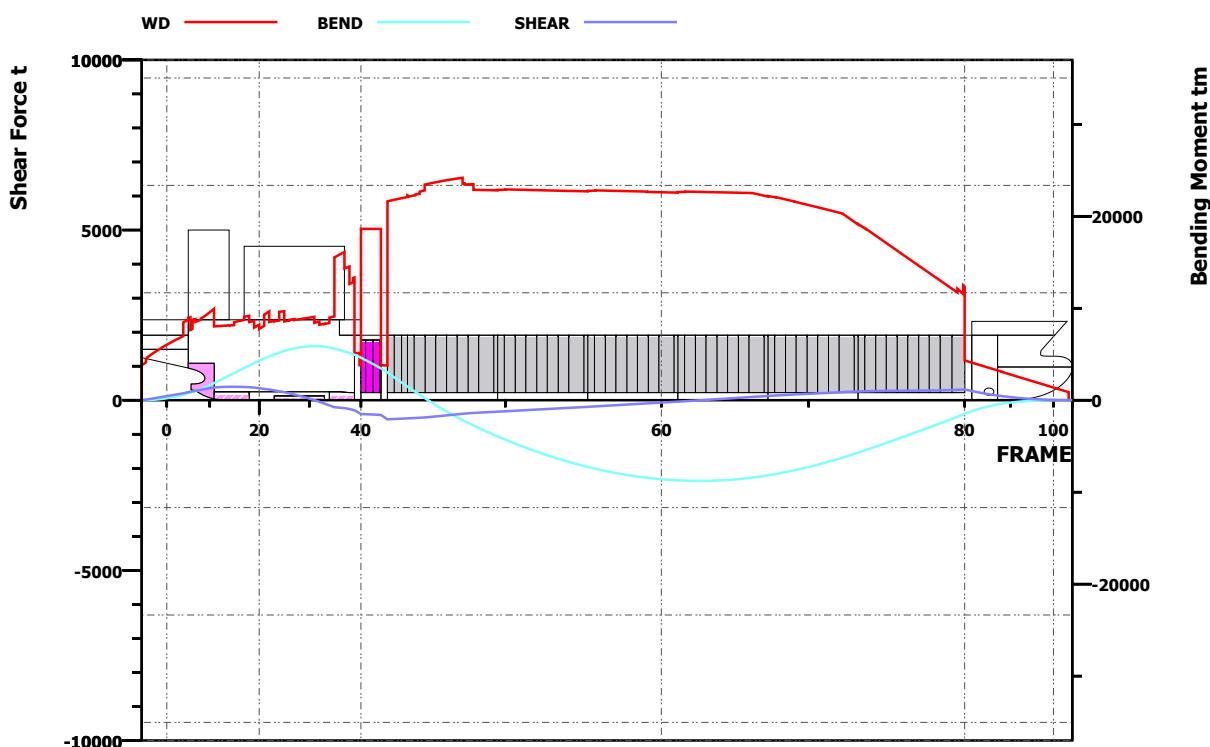
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		13044.24	65.03	6.70	-0.01	5183.67

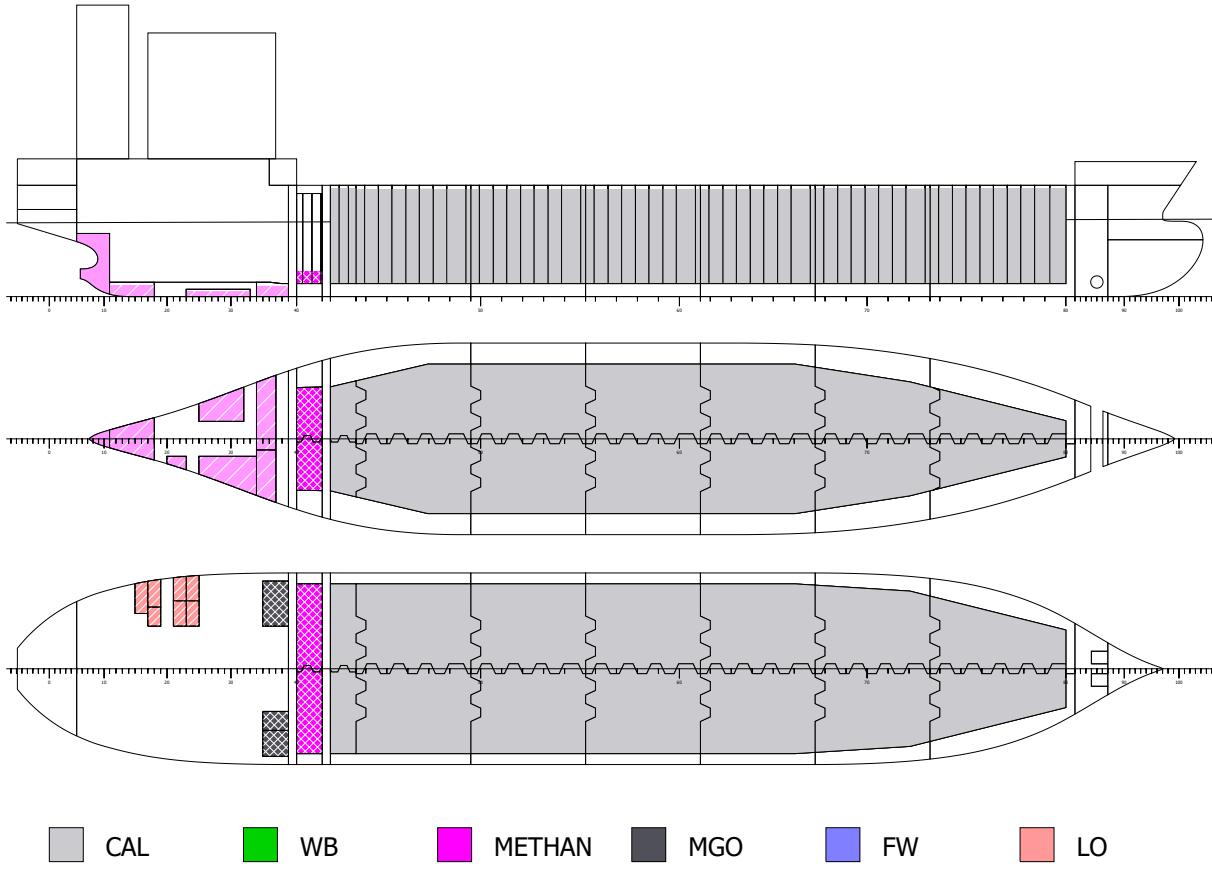
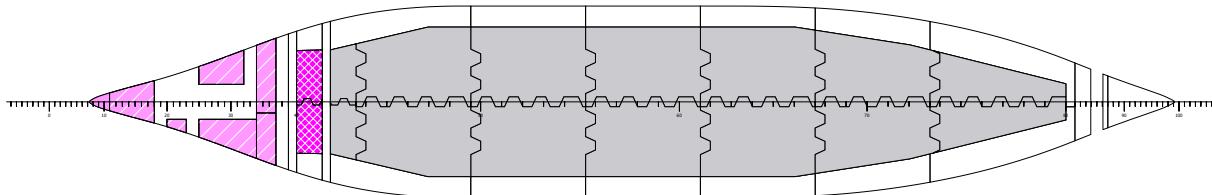
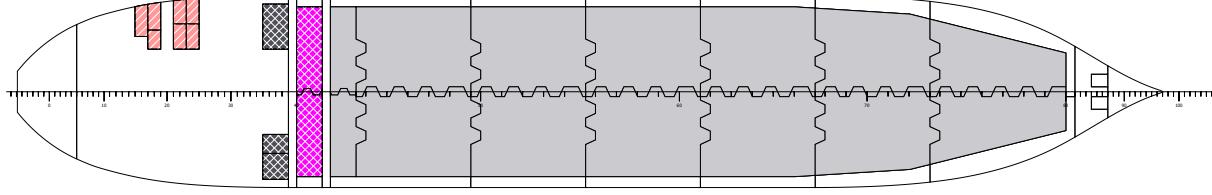
CONDITION NAME		06.HOMO. SCANT. CONDITION DEP.										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.011	0.106	0.237	0.395	0.554	0.661	0.769	0.905	0.856	0.629	0.294	
KN (m)	-0.011	0.771	1.563	2.372	3.166	3.890	4.589	5.815	6.708	7.245	7.472	
KG0*sin(phi) (m)	0.000	0.666	1.326	1.977	2.613	3.228	3.819	4.910	5.852	6.615	7.178	
Area (mrad)	0.000	0.004	0.019	0.053	0.088	0.146	0.205	0.353	0.509	0.641	0.723	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	1.298	OK									
Max GZ value (m)	0.200	0.912	OK									
Heel angle at Max GZ(deg.)	25.000	42.647	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.205	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.148	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.353	OK									
Flooding angle (deg.)	30.000	65.551	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.474	-									
Area (A) (m-rad)	-	0.095	-									
Area (B) / Area (A)	1.000	4.973	OK									
Projected area above W.L (m2)	-	931.629	-									
Z (m)	-	10.271	-									
Steady Heeling level (Lw1) (m)	-	0.028	-									
Gust Heeling level (Lw2) (m)	-	0.042	-									
Theta 1 (degrees)	-	-20.160	-									
Theta 0 (degrees)	-	1.709	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	12.725	1.709	OK									
Rolling period (sec)	-	13.801	-									
<p>The graph illustrates the stability characteristics of the vessel. The X-axis represents the Heeling angle in degrees, ranging from -80 to 80. The Y-axis represents the Righting lever in meters, ranging from -1 to 1. The GZ curve (solid line) shows the righting moment, which is negative at small angles (bow down) and positive at large angles (bow up). The LW2 curve (dashed line) represents the limit of static stability. The GM curve (dotted line) is a horizontal line at approximately 1.298 m. The area under the GZ curve between the limits of stability is shaded. Two parameters are labeled: <math>a = 0.0953 \text{ mrad}</math> and <math>b = 0.4737 \text{ mrad}</math>.</p>												

CONDITION NAME , 06.HOMO. SCANT. CONDITION DEP.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	235	743
11.000	6.600	85.10	373	1855
17.000	10.800	77.59	388	3500
35.000	23.400	132.99	-206	5607
39.000	26.200	114.24	-296	4939
40.000	27.100	32.53	-407	4626
41.000	29.900	32.42	-435	3459
42.000	30.800	32.36	-563	3012
43.000	33.600	190.80	-535	1483
49.000	46.180	195.87	-338	-3930
55.000	58.760	194.96	-195	-7253
61.000	71.340	193.80	-42	-8711
67.000	83.920	190.14	124	-8172
73.000	96.500	164.04	256	-5706
80.000	111.380	105.53	316	-1489
81.000	112.380	34.98	269	-1194
87.000	115.980	27.72	137	-469

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	394	9.050	14.500
Maximum bending moment (tm)	5880	20.600	31.000
Minimum shear force (t)	-563	30.808	42.003
Minimum bending moment (tm)	-8773	74.440	62.878



CONDITION NAME	07.HOMO. SCANT. CONDITION ARR.					
						
						
						
						
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.471 (m)	KMT	8.850 (m)			
Draught midship (MLD.)	8.283 (m)	KG (Solid)	7.290 (m)			
Draught at A.P (MLD.)	8.100 (m)	GM (Fluid)	1.556 (m)			
Draught Equivalent (MLD.)	8.272 (m)	GM Corr. (GGo)	0.306 (m)			
Trim (Stern:"-",Bow:"+")	0.371 (m)	GoM (Fluid)	1.250 (m)			
Heel (Port:"-",Stbd:"+")	-0.28 (deg.)	KGo (Fluid)	7.596 (m)			
Displacement	16953.8 tonnes	Free Surface Moment	5183.7 (m)			
LCB (from A.P.)	62.860 (m)	MTC	193.20 (tm/Cm)			
LCF (from A.P.)	56.719 (m)	TPC	23.24 (t/Cm)			
Propeller Immersion	167 (%)					
Non visible length	62.23 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	12393.8	67.358	834829.2	6.587	81642.7	-0.008
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	16953.8	62.851	1065570	7.290	123595	-0.006

CONDITION NAME : 07.HOMO. SCANT. CONDITION ARR.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.87835</b>						
No.1 C.O.T.(P)	98.00	731.82	103.30	6.74	-2.93	113.30
No.1 C.O.T.(S)	98.00	738.00	103.42	6.74	2.91	116.11
No.2 C.O.T.(P)	98.00	952.35	90.41	6.66	-4.20	315.81
No.2 C.O.T.(S)	98.00	958.13	90.46	6.66	4.17	322.32
No.3 C.O.T.(P)	98.00	1030.59	77.94	6.59	-4.53	394.31
No.3 C.O.T.(S)	98.00	1036.37	77.99	6.59	4.50	401.89
No.4 C.O.T.(P)	98.00	1032.23	65.37	6.58	-4.54	396.18
No.4 C.O.T.(S)	98.00	1038.01	65.42	6.59	4.51	403.79
No.5 C.O.T.(P)	98.00	1032.23	52.79	6.58	-4.54	396.18
No.5 C.O.T.(S)	98.00	1038.01	52.84	6.59	4.51	403.79
No.6 C.O.T.(P)	98.00	1019.42	40.27	6.64	-4.49	395.76
No.6 C.O.T.(S)	98.00	1025.20	40.31	6.64	4.46	403.36
SLOP T.(P)	98.00	248.00	32.42	6.81	-4.15	97.18
SLOP T.(S)	98.00	243.04	32.43	6.81	4.23	90.84
<b>SUBTOTAL</b>		<b>12123.41</b>	<b>68.37</b>	<b>6.63</b>	<b>0.00</b>	<b>4250.84</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		<b>17.71</b>	<b>0.15</b>	<b>9.70</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		<b>39.24</b>	<b>29.26</b>	<b>2.94</b>	<b>0.42</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		<b>16.54</b>	<b>24.89</b>	<b>3.60</b>	<b>-0.04</b>	<b>46.41</b>

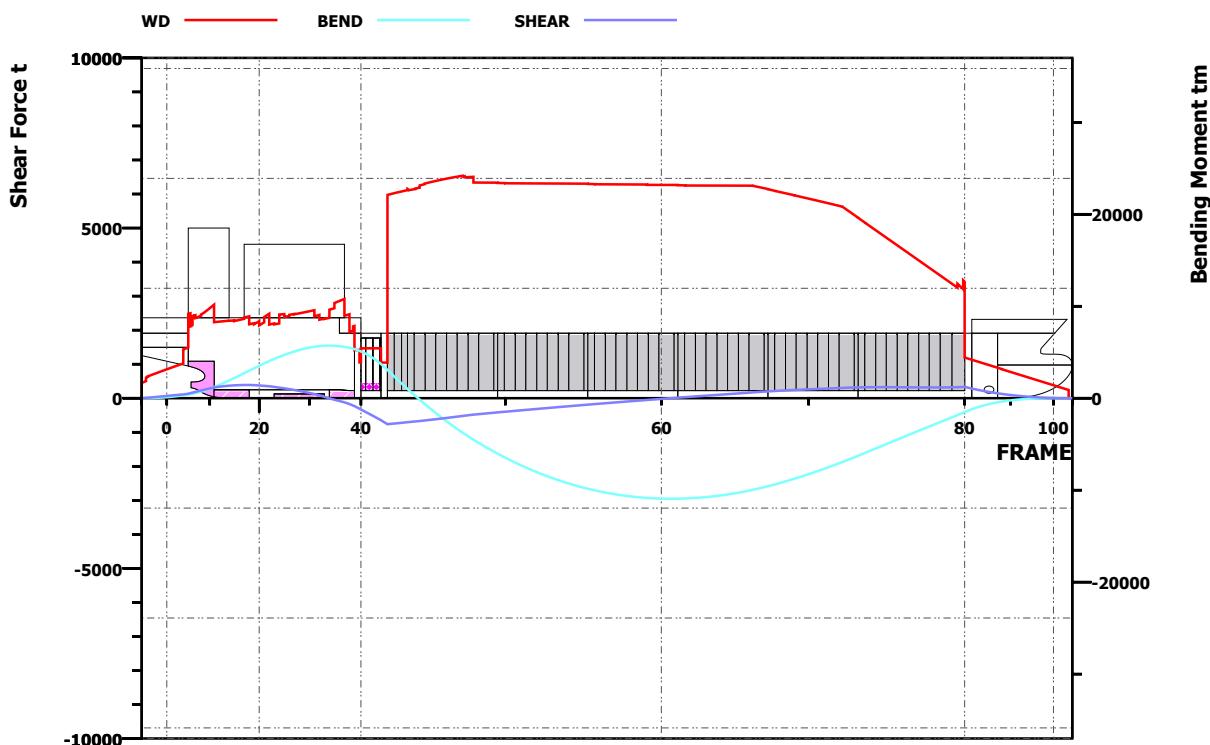
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		12393.83	67.36	6.59	-0.01	5183.67

CONDITION NAME		07.HOMO. SCANT. CONDITION ARR.										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.006	0.106	0.234	0.393	0.553	0.670	0.787	0.960	0.928	0.699	0.356	
KN (m)	-0.006	0.768	1.553	2.359	3.151	3.880	4.585	5.842	6.746	7.277	7.493	
KG0*sin(phi) (m)	0.000	0.662	1.319	1.966	2.598	3.210	3.798	4.883	5.819	6.578	7.138	
Area (mrad)	0.000	0.004	0.019	0.053	0.088	0.147	0.206	0.360	0.528	0.672	0.765	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	1.250	OK									
Max GZ value (m)	0.200	0.975	OK									
Heel angle at Max GZ(deg.)	25.000	43.550	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.206	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.154	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.360	OK									
Flooding angle (deg.)	30.000	69.865	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.489	-									
Area (A) (m-rad)	-	0.089	-									
Area (B) / Area (A)	1.000	5.524	OK									
Projected area above W.L (m2)	-	962.227	-									
Z (m)	-	10.415	-									
Steady Heeling level (Lw1) (m)	-	0.030	-									
Gust Heeling level (Lw2) (m)	-	0.046	-									
Theta 1 (degrees)	-	-19.649	-									
Theta 0 (degrees)	-	1.655	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	14.151	1.655	OK									
Rolling period (sec)	-	14.174	-									

CONDITION NAME , 07.HOMO. SCANT. CONDITION ARR.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	132	395
11.000	6.600	85.10	315	1206
17.000	10.800	73.44	387	2721
35.000	23.400	86.58	-45	5698
39.000	26.200	65.70	-233	5335
40.000	27.100	32.53	-333	5081
41.000	29.900	32.42	-647	3712
42.000	30.800	32.36	-764	3076
43.000	33.600	190.46	-706	1015
49.000	46.180	196.11	-417	-6030
55.000	58.760	195.18	-190	-9840
61.000	71.340	194.02	15	-10926
67.000	83.920	190.30	200	-9572
73.000	96.500	164.27	318	-6262
80.000	111.380	105.88	333	-1507
81.000	112.380	34.98	284	-1199
87.000	115.980	27.72	143	-451

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	389	11.500	18.000
Maximum bending moment (tm)	5716	22.700	34.000
Minimum shear force (t)	-765	30.808	42.003
Minimum bending moment (tm)	-10933	70.441	60.609



CONDITION NAME	08.FULL LOADED CONDITION DEP. (S.G. 1.53)					
	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #ccc;"></span> CAL</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #008000;"></span> WB</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #ff00ff;"></span> METHAN</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #333;"></span> MGO</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #6a5acd;"></span> FW</li> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: #ff0000;"></span> LO</li> </ul>					
	Sailing State (Free trim)					
Draught at F.P (MLD.)	8.115 (m)	KMT	8.940 (m)			
Draught midship (MLD.)	8.523 (m)	KG (Solid)	5.864 (m)			
Draught at A.P (MLD.)	8.919 (m)	GM (Fluid)	3.072 (m)			
Draught Equivalent (MLD.)	8.550 (m)	GM Corr. (GGo)	0.862 (m)			
Trim (Stern:"-",Bow:"+")	-0.804 (m)	GoM (Fluid)	2.211 (m)			
Heel (Port:"-",Stbd:"+")	-0.28 (deg.)	KGo (Fluid)	6.725 (m)			
Displacement	17604.2 tonnes	Free Surface Moment	15171 (m)			
LCB (from A.P.)	61.287 (m)	MTC	204.81 (tm/Cm)			
LCF (from A.P.)	55.883 (m)	TPC	23.70 (t/Cm)			
Propeller Immersion	183 (%)					
Non visible length	71.21 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
	Weight (ton)	LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)	TCG (m)
Deadweight	13044.2	65.035	848322.0	4.697	61273.5	-0.015
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	17604.2	61.296	1079062	5.864	103226	-0.011

CONDITION NAME : 08.FULL LOADED CONDITION DEP. (S.G. 1.53)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1.53</b>						
No.1 C.O.T.(P)	56.26	731.82	103.30	4.65	-2.92	508.14
No.1 C.O.T.(S)	56.26	737.99	103.41	4.65	2.89	518.16
No.2 C.O.T.(P)	56.26	952.35	90.39	4.51	-4.21	1079.30
No.2 C.O.T.(S)	56.26	958.13	90.44	4.51	4.18	1097.49
No.3 C.O.T.(P)	56.26	1030.59	77.94	4.42	-4.58	1288.89
No.3 C.O.T.(S)	56.26	1036.36	77.99	4.42	4.55	1309.44
No.4 C.O.T.(P)	56.26	1032.23	65.37	4.41	-4.59	1293.80
No.4 C.O.T.(S)	56.26	1038.00	65.42	4.41	4.56	1314.41
No.5 C.O.T.(P)	56.26	1032.23	52.79	4.41	-4.59	1293.80
No.5 C.O.T.(S)	56.26	1038.00	52.84	4.41	4.56	1314.41
No.6 C.O.T.(P)	56.26	1019.42	40.30	4.49	-4.50	1293.80
No.6 C.O.T.(S)	56.26	1025.20	40.35	4.49	4.48	1314.41
SLOP T.(P)	56.26	248.00	32.43	4.70	-4.05	314.51
SLOP T.(S)	56.26	243.04	32.44	4.71	4.13	297.87
<b>SUBTOTAL</b>		<b>12123.34</b>	<b>68.37</b>	<b>4.48</b>	<b>0.00</b>	<b>14238.44</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

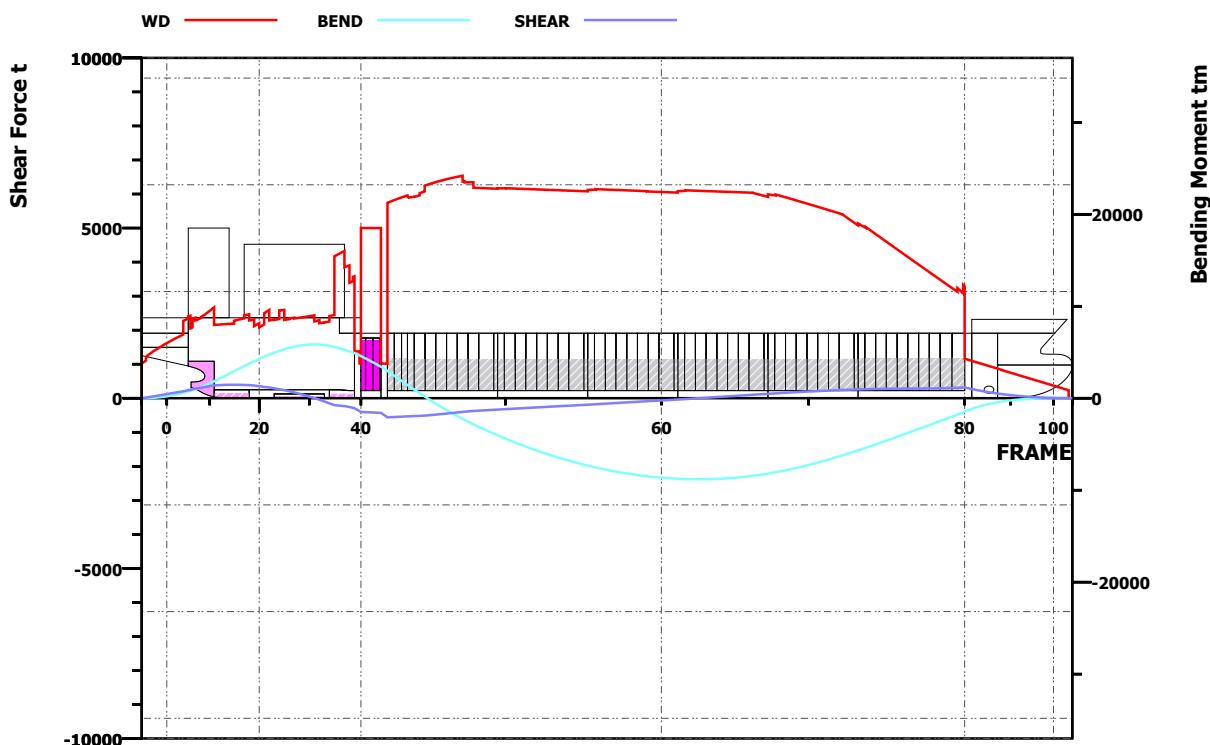
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		13044.17	65.03	4.70	-0.01	15171.27
						tm

CONDITION NAME		08.FULL LOADED CONDITION DEP. (S.G. 1.53)										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.011	0.183	0.381	0.593	0.804	0.942	1.081	1.218	1.087	0.741	0.324	
KN (m)	-0.011	0.769	1.549	2.333	3.104	3.785	4.444	5.541	6.240	6.565	6.643	
KG0*sin(phi) (m)	0.000	0.586	1.168	1.741	2.300	2.842	3.363	4.323	5.152	5.824	6.320	
Area (mrad)	0.000	0.008	0.032	0.084	0.136	0.219	0.303	0.506	0.711	0.873	0.966	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	2.211	OK									
Max GZ value (m)	0.200	1.219	OK									
Heel angle at Max GZ(deg.)	25.000	40.566	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.303	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.203	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.506	OK									
Flooding angle (deg.)	30.000	65.527	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.675	-									
Area (A) (m-rad)	-	0.170	-									
Area (B) / Area (A)	1.000	3.976	OK									
Projected area above W.L (m2)	-	931.586	-									
Z (m)	-	10.272	-									
Steady Heeling level (Lw1) (m)	-	0.028	-									
Gust Heeling level (Lw2) (m)	-	0.042	-									
Theta 1 (degrees)	-	-21.720	-									
Theta 0 (degrees)	-	1.003	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	12.735	1.003	OK									
Rolling period (sec)	-	10.575	-									
<p>The graph plots Righting lever (m) on the y-axis (from -1 to 1) against Heeling angle (deg) on the x-axis (from -80 to 80). Three curves are shown: GZ (solid line), LW2 (dashed line), and GM (dotted line). The GZ curve has a minimum around -45 degrees and a maximum around 45 degrees. The LW2 curve is a straight line from (-80, 0) to (80, 0). The GM curve is a horizontal line at 1.0. Shaded areas represent stability regions: a large hatched area between the GZ and LW2 curves, and a smaller hatched area between the LW2 and GM curves. Parameters labeled are a = 0.1699 mrad and b = 0.6754 mrad.</p>												

CONDITION NAME , 08.FULL LOADED CONDITION DEP. (S.G. 1.53)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	235	730
11.000	6.600	85.10	373	1836
17.000	10.800	77.59	389	3475
35.000	23.400	132.99	-204	5570
39.000	26.200	114.24	-294	4900
40.000	27.100	32.53	-405	4587
41.000	29.900	32.42	-433	3419
42.000	30.800	32.36	-561	2972
43.000	33.600	189.18	-534	1438
49.000	46.180	196.75	-335	-4032
55.000	58.760	195.19	-192	-7327
61.000	71.340	194.05	-39	-8757
67.000	83.920	191.07	127	-8192
73.000	96.500	163.83	257	-5678
80.000	111.380	104.87	317	-1458
81.000	112.380	34.98	270	-1165
87.000	115.980	27.72	137	-448

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	395	9.050	14.500
Maximum bending moment (tm)	5845	20.600	31.000
Minimum shear force (t)	-561	30.808	42.003
Minimum bending moment (tm)	-8815	74.240	62.791



CONDITION NAME	09.FULL LOADED CONDITION ARR. (S.G. 1.53)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.469 (m)	KMT	8.850 (m)			
Draught midship (MLD.)	8.283 (m)	KG (Solid)	5.753 (m)			
Draught at A.P (MLD.)	8.102 (m)	GM (Fluid)	3.094 (m)			
Draught Equivalent (MLD.)	8.272 (m)	GM Corr. (GGo)	0.895 (m)			
Trim (Stern:"-",Bow:"+")	0.367 (m)	GoM (Fluid)	2.199 (m)			
Heel (Port:"-",Stbd:"+")	-0.15 (deg.)	KGo (Fluid)	6.648 (m)			
Displacement	16953.8 tonnes	Free Surface Moment	15171 (m)			
LCB (from A.P.)	62.855 (m)	MTC	193.24 (tm/Cm)			
LCF (from A.P.)	56.715 (m)	TPC	23.24 (t/Cm)			
Propeller Immersion	167 (%)					
Non visible length	62.27 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	12393.8	67.359	834825.2	4.484	55577.4	-0.008
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	16953.8	62.851	1065565	5.753	97529.4	-0.006

CONDITION NAME : 09.FULL LOADED CONDITION ARR. (S.G. 1.53)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1.53</b>						
No.1 C.O.T.(P)	56.26	731.82	103.30	4.65	-2.92	508.14
No.1 C.O.T.(S)	56.26	737.99	103.41	4.65	2.89	518.16
No.2 C.O.T.(P)	56.26	952.35	90.39	4.51	-4.21	1079.30
No.2 C.O.T.(S)	56.26	958.13	90.44	4.51	4.18	1097.49
No.3 C.O.T.(P)	56.26	1030.59	77.94	4.42	-4.58	1288.89
No.3 C.O.T.(S)	56.26	1036.36	77.99	4.42	4.55	1309.44
No.4 C.O.T.(P)	56.26	1032.23	65.37	4.41	-4.59	1293.80
No.4 C.O.T.(S)	56.26	1038.00	65.42	4.41	4.56	1314.41
No.5 C.O.T.(P)	56.26	1032.23	52.79	4.41	-4.59	1293.80
No.5 C.O.T.(S)	56.26	1038.00	52.84	4.41	4.56	1314.41
No.6 C.O.T.(P)	56.26	1019.42	40.30	4.49	-4.50	1293.80
No.6 C.O.T.(S)	56.26	1025.20	40.35	4.49	4.48	1314.41
SLOP T.(P)	56.26	248.00	32.43	4.70	-4.05	314.51
SLOP T.(S)	56.26	243.04	32.44	4.71	4.13	297.87
<b>SUBTOTAL</b>		<b>12123.34</b>	<b>68.37</b>	<b>4.48</b>	<b>0.00</b>	<b>14238.44</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		<b>17.71</b>	<b>0.15</b>	<b>9.70</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		<b>39.24</b>	<b>29.26</b>	<b>2.94</b>	<b>0.42</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		<b>16.54</b>	<b>24.89</b>	<b>3.60</b>	<b>-0.04</b>	<b>46.41</b>

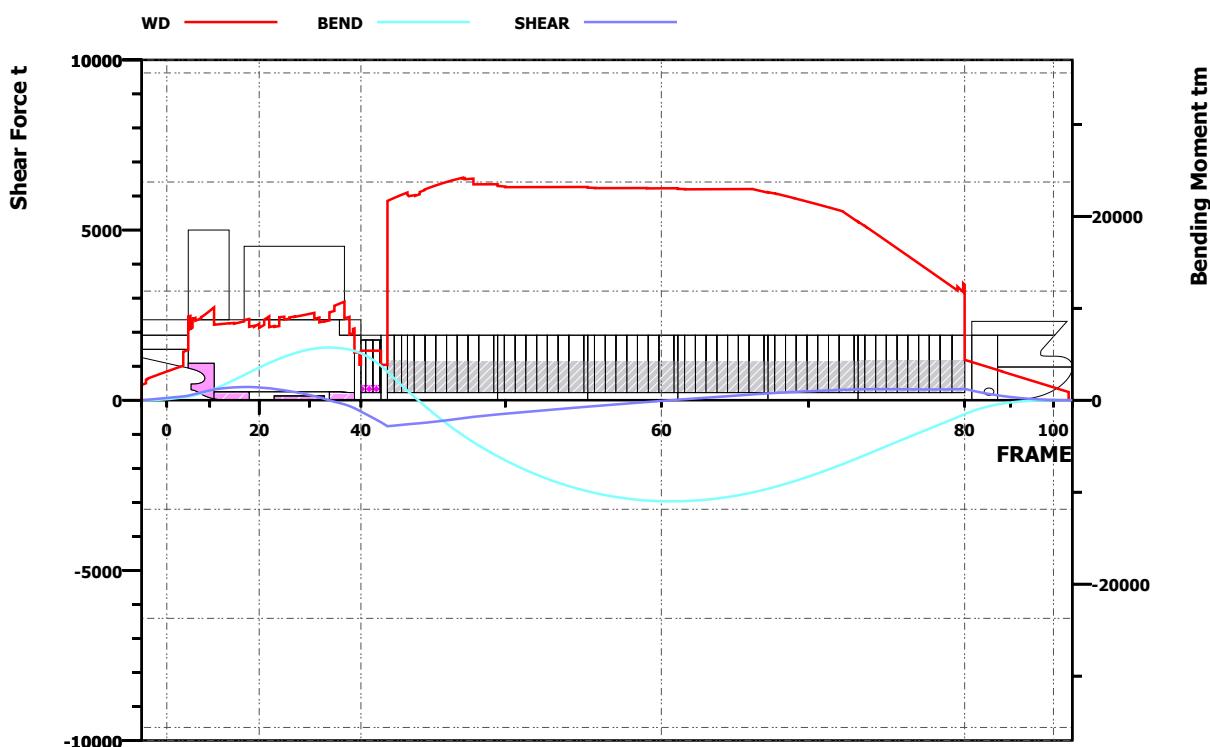
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		12393.76	67.36	4.48	-0.01	15171.27
						tm

CONDITION NAME		09.FULL LOADED CONDITION ARR. (S.G. 1.53)									
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.006	0.187	0.384	0.598	0.812	0.962	1.111	1.286	1.168	0.815	0.386
KN (m)	-0.006	0.766	1.539	2.319	3.086	3.771	4.435	5.559	6.260	6.572	6.633
KG0*sin(phi) (m)	0.000	0.579	1.154	1.721	2.274	2.809	3.324	4.273	5.092	5.757	6.247
Area (mrad)	0.000	0.008	0.033	0.085	0.138	0.222	0.307	0.519	0.738	0.913	1.018
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	2.199	OK								
Max GZ value (m)	0.200	1.289	OK								
Heel angle at Max GZ(deg.)	25.000	41.310	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.307	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.212	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.519	OK								
Flooding angle (deg.)	30.000	69.829	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.699	-								
Area (A) (m-rad)	-	0.164	-								
Area (B) / Area (A)	1.000	4.249	OK								
Projected area above W.L (m2)	-	962.241	-								
Z (m)	-	10.414	-								
Steady Heeling level (Lw1) (m)	-	0.030	-								
Gust Heeling level (Lw2) (m)	-	0.046	-								
Theta 1 (degrees)	-	-21.345	-								
Theta 0 (degrees)	-	0.942	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	14.158	0.942	OK								
Rolling period (sec)	-	10.688	-								

CONDITION NAME , 09.FULL LOADED CONDITION ARR. (S.G. 1.53)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	132	401
11.000	6.600	85.10	315	1215
17.000	10.800	73.44	387	2733
35.000	23.400	86.58	-46	5716
39.000	26.200	65.70	-234	5354
40.000	27.100	32.53	-334	5100
41.000	29.900	32.42	-648	3731
42.000	30.800	32.36	-765	3096
43.000	33.600	188.28	-708	1031
49.000	46.180	197.92	-418	-6095
55.000	58.760	195.45	-190	-9905
61.000	71.340	194.29	15	-10991
67.000	83.920	190.74	200	-9633
73.000	96.500	163.70	317	-6284
80.000	111.380	105.86	333	-1521
81.000	112.380	34.98	284	-1213
87.000	115.980	27.72	143	-461

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	389	11.500	18.000
Maximum bending moment (tm)	5733	22.700	34.000
Minimum shear force (t)	-766	30.808	42.003
Minimum bending moment (tm)	-10998	70.375	60.581



CONDITION NAME	10.HOMO LOADED CONDITION DEP. (S.G = 0.700)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	6.314 (m)	KMT	9.010 (m)			
Draught midship (MLD.)	7.448 (m)	KG (Solid)	7.460 (m)			
Draught at A.P (MLD.)	8.545 (m)	GM (Fluid)	1.547 (m)			
Draught Equivalent (MLD.)	7.490 (m)	GM Corr. (GGo)	0.285 (m)			
Trim (Stern:"-",Bow:"+")	-2.231 (m)	GoM (Fluid)	1.261 (m)			
Heel (Port:"-",Stbd:"+")	-0.58 (deg.)	KGo (Fluid)	7.745 (m)			
Displacement	15142.6 tonnes	Free Surface Moment	4320.5 (m)			
LCB (from A.P.)	60.082 (m)	MTC	211.02 (tm/Cm)			
LCF (from A.P.)	57.134 (m)	TPC	23.79 (t/Cm)			
Propeller Immersion	175 (%)					
Non visible length	98.23 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	10582.6	64.259	680021.3	6.710	71011.3	-0.018
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	15142.6	60.146	910761.6	7.460	112963	-0.013

CONDITION NAME : 10.HOMO LOADED CONDITION DEP. (S.G = 0.700)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.7</b>						
No.1 C.O.T.(P)	98.00	583.22	103.30	6.74	-2.93	90.29
No.1 C.O.T.(S)	98.00	588.15	103.42	6.74	2.91	92.53
No.2 C.O.T.(P)	98.00	758.98	90.41	6.66	-4.20	251.69
No.2 C.O.T.(S)	98.00	763.58	90.46	6.66	4.17	256.87
No.3 C.O.T.(P)	98.00	821.33	77.94	6.59	-4.53	314.25
No.3 C.O.T.(S)	98.00	825.93	77.99	6.59	4.50	320.29
No.4 C.O.T.(P)	98.00	822.64	65.37	6.58	-4.54	315.74
No.4 C.O.T.(S)	98.00	827.24	65.42	6.59	4.51	321.80
No.5 C.O.T.(P)	98.00	822.64	52.79	6.58	-4.54	315.74
No.5 C.O.T.(S)	98.00	827.24	52.84	6.59	4.51	321.80
No.6 C.O.T.(P)	98.00	812.43	40.27	6.64	-4.49	315.40
No.6 C.O.T.(S)	98.00	817.03	40.31	6.64	4.46	321.46
SLOP T.(P)	98.00	197.64	32.42	6.81	-4.15	77.45
SLOP T.(S)	98.00	193.69	32.43	6.81	4.23	72.39
<b>SUBTOTAL</b>		<b>9661.74</b>	<b>68.37</b>	<b>6.63</b>	<b>0.00</b>	<b>3387.70</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

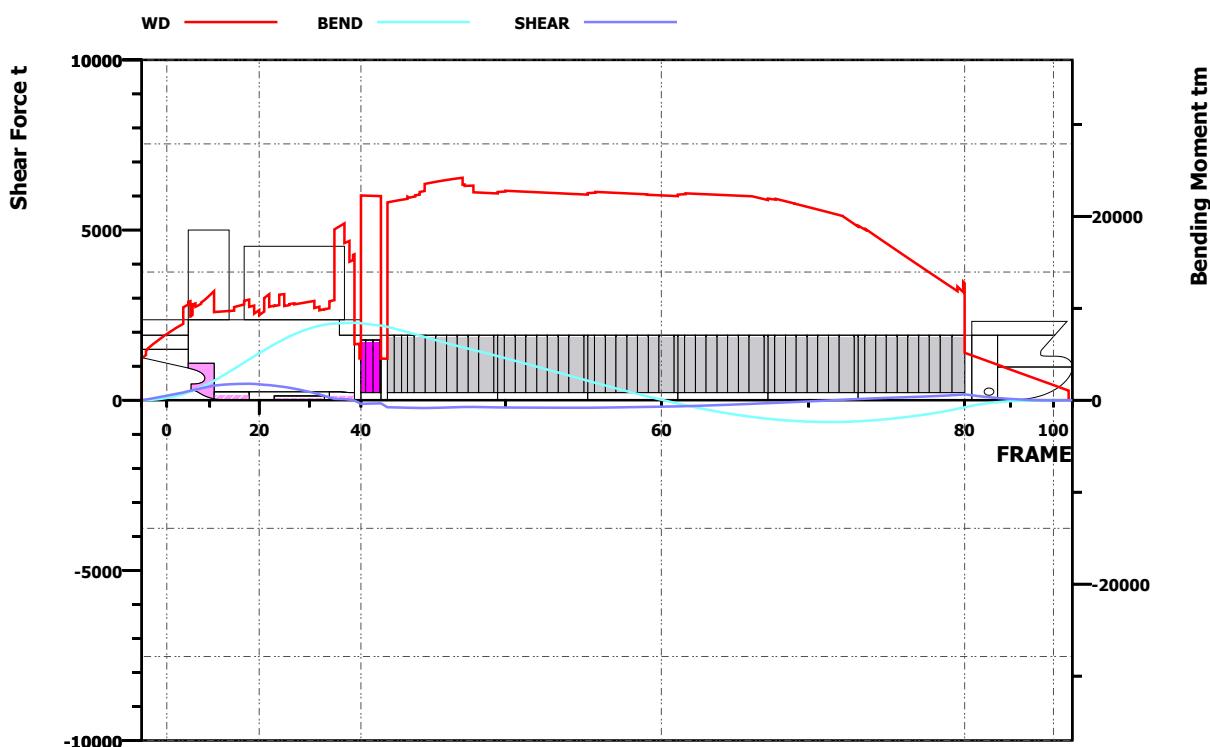
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		10582.56	64.26	6.71	-0.02	4320.53

CONDITION NAME		10.HOMO LOADED CONDITION DEP. (S.G = 0.700)									
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.013	0.100	0.228	0.389	0.550	0.741	0.933	1.165	1.098	0.808	0.394
KN (m)	-0.013	0.775	1.573	2.394	3.199	4.015	4.805	6.143	7.031	7.515	7.672
KG0*sin(phi) (m)	0.000	0.675	1.345	2.005	2.649	3.273	3.873	4.979	5.933	6.708	7.278
Area (mrad)	0.000	0.004	0.018	0.051	0.084	0.149	0.214	0.401	0.602	0.771	0.877
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.261	OK								
Max GZ value (m)	0.200	1.175	OK								
Heel angle at Max GZ(deg.)	25.000	42.587	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.214	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.187	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.401	OK								
Flooding angle (deg.)	30.000	69.062	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.558	-								
Area (A) (m-rad)	-	0.088	-								
Area (B) / Area (A)	1.000	6.357	OK								
Projected area above W.L (m2)	-	1072.912	-								
Z (m)	-	9.768	-								
Steady Heeling level (Lw1) (m)	-	0.036	-								
Gust Heeling level (Lw2) (m)	-	0.053	-								
Theta 1 (degrees)	-	-19.629	-								
Theta 0 (degrees)	-	2.188	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	15.078	2.188	OK								
Rolling period (sec)	-	14.286	-								

CONDITION NAME , 10.HOMO LOADED CONDITION DEP. (S.G = 0.700)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	263	847
11.000	6.600	85.10	427	2123
17.000	10.800	77.57	481	4092
35.000	23.400	133.27	40	8329
39.000	26.200	113.85	-10	8414
40.000	27.100	32.53	-108	8368
41.000	29.900	32.42	-94	8108
42.000	30.800	32.36	-207	7979
43.000	33.600	158.89	-222	7397
49.000	46.180	162.46	-212	4791
55.000	58.760	161.55	-222	2117
61.000	71.340	160.39	-182	-363
67.000	83.920	157.31	-88	-2018
73.000	96.500	136.24	34	-2295
80.000	111.380	91.28	173	-771
81.000	112.380	34.98	144	-606
87.000	115.980	27.72	65	-216

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	483	11.500	18.000
Maximum bending moment (tm)	8414	26.046	38.780
Minimum shear force (t)	-230	36.000	44.574
Minimum bending moment (tm)	-2376	92.620	71.313



CONDITION NAME	11.HOMO LOADED CONDITION ARR. (S.G = 0.700)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	6.670 (m)	KMT	8.910 (m)			
Draught midship (MLD.)	7.194 (m)	KG (Solid)	7.402 (m)			
Draught at A.P (MLD.)	7.701 (m)	GM (Fluid)	1.509 (m)			
Draught Equivalent (MLD.)	7.206 (m)	GM Corr. (GGo)	0.298 (m)			
Trim (Stern:"-",Bow:"+")	-1.030 (m)	GoM (Fluid)	1.211 (m)			
Heel (Port:"-",Stbd:"+")	-0.33 (deg.)	KGo (Fluid)	7.700 (m)			
Displacement	14492.2 tonnes	Free Surface Moment	4320.5 (m)			
LCB (from A.P.)	61.883 (m)	MTC	196.80 (tm/Cm)			
LCF (from A.P.)	58.303 (m)	TPC	23.22 (t/Cm)			
Propeller Immersion	158 (%)					
Non visible length	85.71 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	9932.2	67.108	666524.4	6.576	65315.2	-0.010
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	14492.2	61.914	897264.7	7.402	107267	-0.007

CONDITION NAME : 11.HOMO LOADED CONDITION ARR. (S.G = 0.700)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.7</b>						
No.1 C.O.T.(P)	98.00	583.22	103.30	6.74	-2.93	90.29
No.1 C.O.T.(S)	98.00	588.15	103.42	6.74	2.91	92.53
No.2 C.O.T.(P)	98.00	758.98	90.41	6.66	-4.20	251.69
No.2 C.O.T.(S)	98.00	763.58	90.46	6.66	4.17	256.87
No.3 C.O.T.(P)	98.00	821.33	77.94	6.59	-4.53	314.25
No.3 C.O.T.(S)	98.00	825.93	77.99	6.59	4.50	320.29
No.4 C.O.T.(P)	98.00	822.64	65.37	6.58	-4.54	315.74
No.4 C.O.T.(S)	98.00	827.24	65.42	6.59	4.51	321.80
No.5 C.O.T.(P)	98.00	822.64	52.79	6.58	-4.54	315.74
No.5 C.O.T.(S)	98.00	827.24	52.84	6.59	4.51	321.80
No.6 C.O.T.(P)	98.00	812.43	40.27	6.64	-4.49	315.40
No.6 C.O.T.(S)	98.00	817.03	40.31	6.64	4.46	321.46
SLOP T.(P)	98.00	197.64	32.42	6.81	-4.15	77.45
SLOP T.(S)	98.00	193.69	32.43	6.81	4.23	72.39
<b>SUBTOTAL</b>		9661.74	68.37	6.63	0.00	3387.70
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		17.71	0.15	9.70	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		39.24	29.26	2.94	0.42	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		16.54	24.89	3.60	-0.04	46.41

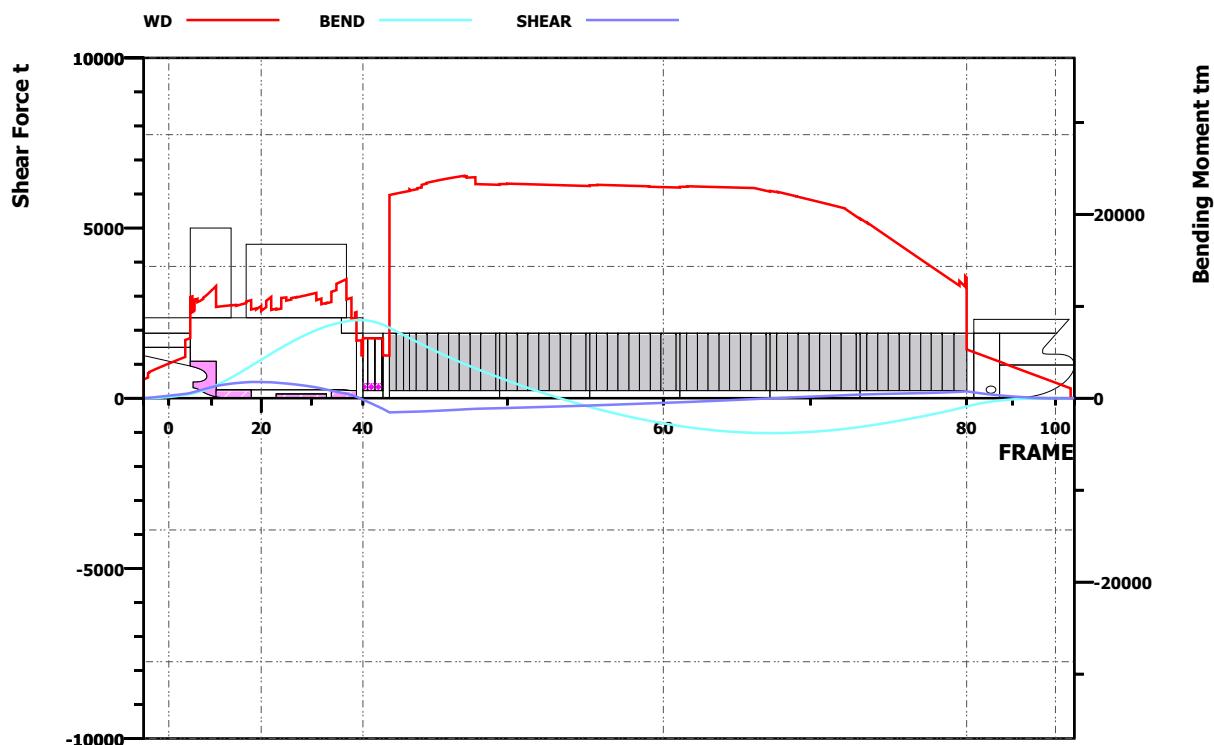
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						%	
<b>Contents : LO, SG 0.9</b>							
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59	
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92	
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72	
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17	
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17	
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82	
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33	
<b>SUBTOTAL</b>		<b>24.74</b>	<b>13.25</b>	<b>7.55</b>	<b>-7.22</b>	<b>22.72</b>	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						%	
<b>Contents : MIS, SG 1</b>							
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00	
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36	
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15	
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09	
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73	
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78	
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32	
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94	
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12	
<b>SUBTOTAL</b>		<b>125.88</b>	<b>16.51</b>	<b>2.10</b>	<b>0.47</b>	<b>249.49</b>	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						%	
<b>Contents : MASS, SG 1</b>							
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00	
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00	
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00	
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00	
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00	
<b>SUBTOTAL</b>		<b>46.30</b>	<b>42.79</b>	<b>9.38</b>	<b>0.00</b>	<b>10.00</b>	
		WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
		t	m	m	m	tm	
<b>TOTAL</b>		<b>9932.16</b>	<b>67.11</b>	<b>6.58</b>	<b>-0.01</b>	<b>4320.53</b>	

CONDITION NAME	11.HOMO LOADED CONDITION ARR. (S.G = 0.700)										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.007	0.102	0.226	0.384	0.542	0.748	0.954	1.207	1.162	0.877	0.460
KN (m)	-0.007	0.773	1.563	2.377	3.176	4.002	4.804	6.157	7.061	7.546	7.696
KG0*sin(phi) (m)	0.000	0.671	1.337	1.993	2.634	3.254	3.850	4.949	5.898	6.668	7.236
Area (mrad)	0.000	0.004	0.018	0.051	0.083	0.149	0.214	0.407	0.618	0.798	0.916
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.211	OK								
Max GZ value (m)	0.200	1.225	OK								
Heel angle at Max GZ(deg.)	25.000	43.366	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.214	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.193	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.407	OK								
Flooding angle (deg.)	30.000	73.221	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.569	-								
Area (A) (m-rad)	-	0.081	-								
Area (B) / Area (A)	1.000	7.021	OK								
Projected area above W.L (m2)	-	1103.887	-								
Z (m)	-	9.878	-								
Steady Heeling level (Lw1) (m)	-	0.039	-								
Gust Heeling level (Lw2) (m)	-	0.058	-								
Theta 1 (degrees)	-	-19.137	-								
Theta 0 (degrees)	-	2.151	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	16.000	2.151	OK								
Rolling period (sec)	-	14.683	-								

CONDITION NAME , 11.HOMO LOADED CONDITION ARR. (S.G = 0.700)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	151	462
11.000	6.600	85.10	358	1395
17.000	10.800	73.41	467	3179
35.000	23.400	86.82	189	8120
39.000	26.200	65.32	42	8481
40.000	27.100	32.53	-44	8483
41.000	29.900	32.42	-315	7994
42.000	30.800	32.36	-417	7668
43.000	33.600	158.64	-400	6532
49.000	46.180	162.45	-294	2227
55.000	58.760	161.54	-215	-949
61.000	71.340	160.39	-120	-3027
67.000	83.920	157.32	-5	-3797
73.000	96.500	136.36	105	-3127
80.000	111.380	91.57	203	-901
81.000	112.380	34.98	171	-711
87.000	115.980	27.72	83	-256

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	477	12.200	19.000
Maximum bending moment (tm)	8492	26.688	39.543
Minimum shear force (t)	-418	30.808	42.003
Minimum bending moment (tm)	-3798	84.143	67.206



CONDITION NAME	12.HOMO LOADED CONDITION DEP. (S.G = 0.800)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	7.305 (m)	KMT	8.940 (m)			
Draught midship (MLD.)	8.047 (m)	KG (Solid)	7.391 (m)			
Draught at A.P (MLD.)	8.766 (m)	GM (Fluid)	1.551 (m)			
Draught Equivalent (MLD.)	8.087 (m)	GM Corr. (GGo)	0.291 (m)			
Trim (Stern:"-",Bow:"+")	-1.461 (m)	GoM (Fluid)	1.260 (m)			
Heel (Port:"-",Stbd:"+")	-0.54 (deg.)	KGo (Fluid)	7.682 (m)			
Displacement	16522.8 tonnes	Free Surface Moment	4804.5 (m)			
LCB (from A.P.)	60.795 (m)	MTC	209.53 (tm/Cm)			
LCF (from A.P.)	56.538 (m)	TPC	23.80 (t/Cm)			
Propeller Immersion	180 (%)					
Non visible length	82.73 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	11962.8	64.733	774388.9	6.701	80166.1	-0.016
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	16522.8	60.833	1005129	7.391	122118	-0.012

CONDITION NAME : 12.HOMO LOADED CONDITION DEP. (S.G = 0.800)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.8</b>						
No.1 C.O.T.(P)	98.00	666.54	103.30	6.74	-2.93	103.19
No.1 C.O.T.(S)	98.00	672.17	103.42	6.74	2.91	105.75
No.2 C.O.T.(P)	98.00	867.40	90.41	6.66	-4.20	287.64
No.2 C.O.T.(S)	98.00	872.67	90.46	6.66	4.17	293.57
No.3 C.O.T.(P)	98.00	938.66	77.94	6.59	-4.53	359.14
No.3 C.O.T.(S)	98.00	943.92	77.99	6.59	4.50	366.04
No.4 C.O.T.(P)	98.00	940.16	65.37	6.58	-4.54	360.84
No.4 C.O.T.(S)	98.00	945.42	65.42	6.59	4.51	367.77
No.5 C.O.T.(P)	98.00	940.16	52.79	6.58	-4.54	360.84
No.5 C.O.T.(S)	98.00	945.42	52.84	6.59	4.51	367.77
No.6 C.O.T.(P)	98.00	928.49	40.27	6.64	-4.49	360.46
No.6 C.O.T.(S)	98.00	933.75	40.31	6.64	4.46	367.38
SLOP T.(P)	98.00	225.88	32.42	6.81	-4.15	88.51
SLOP T.(S)	98.00	221.36	32.43	6.81	4.23	82.74
<b>SUBTOTAL</b>		11041.99	68.37	6.63	0.00	3871.66
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		177.13	-0.01	10.85	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		384.55	29.26	7.08	0.41	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		162.12	24.82	7.11	0.00	46.41

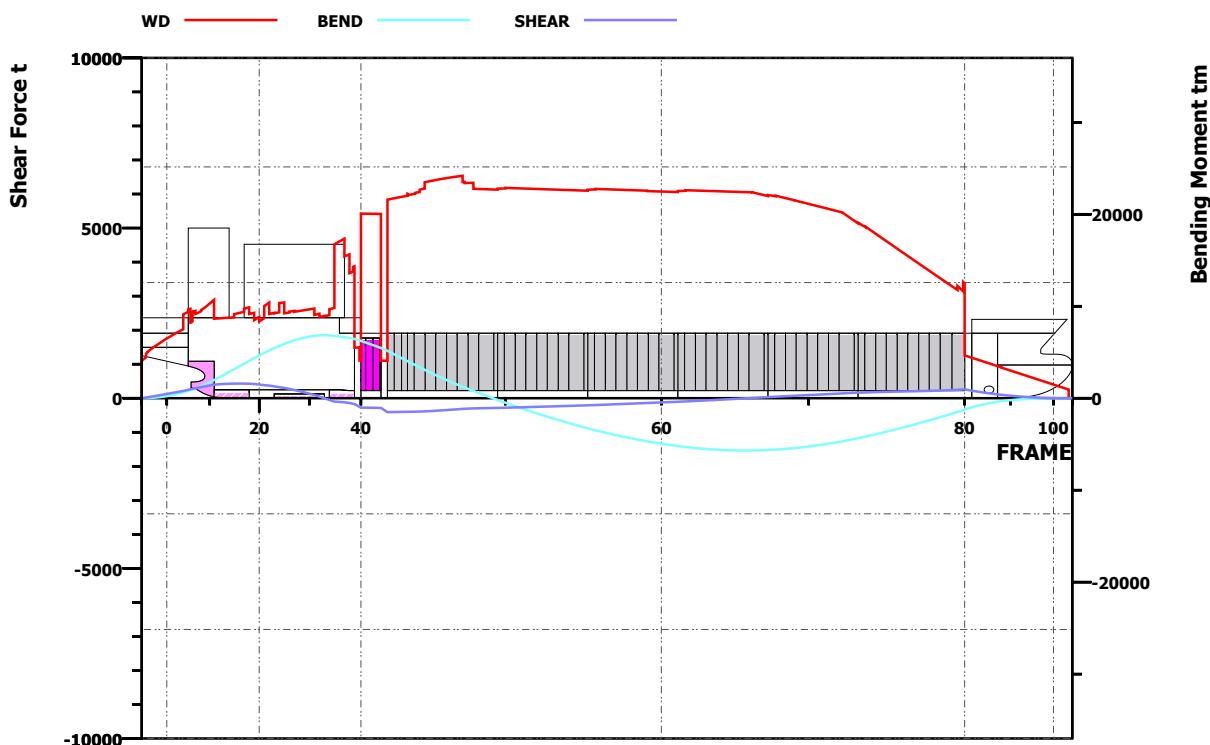
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMPT.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMPT.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		11962.81	64.73	6.70	-0.02	4804.49

CONDITION NAME	12.HOMO LOADED CONDITION DEP. (S.G = 0.800)										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.012	0.101	0.229	0.390	0.550	0.696	0.841	1.021	0.968	0.713	0.343
KN (m)	-0.012	0.771	1.563	2.378	3.177	3.942	4.682	5.959	6.852	7.366	7.562
KG0*sin(phi) (m)	0.000	0.670	1.334	1.988	2.627	3.246	3.841	4.938	5.884	6.653	7.218
Area (mrad)	0.000	0.004	0.018	0.052	0.086	0.147	0.208	0.373	0.550	0.699	0.793
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.260	OK								
Max GZ value (m)	0.200	1.031	OK								
Heel angle at Max GZ(deg.)	25.000	42.762	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.208	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.165	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.373	OK								
Flooding angle (deg.)	30.000	67.021	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.511	-								
Area (A) (m-rad)	-	0.089	-								
Area (B) / Area (A)	1.000	5.718	OK								
Projected area above W.L (m2)	-	993.902	-								
Z (m)	-	10.021	-								
Steady Heeling level (Lw1) (m)	-	0.031	-								
Gust Heeling level (Lw2) (m)	-	0.046	-								
Theta 1 (degrees)	-	-19.775	-								
Theta 0 (degrees)	-	1.931	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	13.759	1.931	OK								
Rolling period (sec)	-	14.114	-								

CONDITION NAME , 12.HOMO LOADED CONDITION DEP. (S.G = 0.800)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	247	788
11.000	6.600	85.10	396	1971
17.000	10.800	77.58	428	3755
35.000	23.400	133.12	-100	6777
39.000	26.200	114.06	-173	6433
40.000	27.100	32.53	-278	6235
41.000	29.900	32.42	-288	5459
42.000	30.800	32.36	-409	5149
43.000	33.600	176.81	-400	4028
49.000	46.180	181.20	-286	-191
55.000	58.760	180.29	-210	-3266
61.000	71.340	179.13	-105	-5200
67.000	83.920	175.72	31	-5634
73.000	96.500	151.82	161	-4352
80.000	111.380	99.25	261	-1239
81.000	112.380	34.98	222	-994
87.000	115.980	27.72	112	-391

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	429	10.100	16.000
Maximum bending moment (tm)	6843	22.000	33.000
Minimum shear force (t)	-410	30.808	42.003
Minimum bending moment (tm)	-5691	80.773	65.632



CONDITION NAME	13.HOMO LOADED CONDITION ARR. (S.G = 0.800)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	7.660 (m)	KMT	8.850 (m)			
Draught midship (MLD.)	7.801 (m)	KG (Solid)	7.335 (m)			
Draught at A.P (MLD.)	7.937 (m)	GM (Fluid)	1.512 (m)			
Draught Equivalent (MLD.)	7.807 (m)	GM Corr. (GGo)	0.303 (m)			
Trim (Stern:"-",Bow:"+")	-0.277 (m)	GoM (Fluid)	1.209 (m)			
Heel (Port:"-",Stbd:"+")	-0.31 (deg.)	KGo (Fluid)	7.638 (m)			
Displacement	15872.4 tonnes	Free Surface Moment	4804.5 (m)			
LCB (from A.P.)	62.468 (m)	MTC	195.39 (tm/Cm)			
LCF (from A.P.)	57.386 (m)	TPC	23.25 (t/Cm)			
Propeller Immersion	163 (%)					
Non visible length	72.32 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	11312.4	67.262	760892.1	6.583	74470.0	-0.009
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	15872.4	62.475	991632.4	7.335	116422	-0.006

CONDITION NAME : 13.HOMO LOADED CONDITION ARR. (S.G = 0.800)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.8</b>						
No.1 C.O.T.(P)	98.00	666.54	103.30	6.74	-2.93	103.19
No.1 C.O.T.(S)	98.00	672.17	103.42	6.74	2.91	105.75
No.2 C.O.T.(P)	98.00	867.40	90.41	6.66	-4.20	287.64
No.2 C.O.T.(S)	98.00	872.67	90.46	6.66	4.17	293.57
No.3 C.O.T.(P)	98.00	938.66	77.94	6.59	-4.53	359.14
No.3 C.O.T.(S)	98.00	943.92	77.99	6.59	4.50	366.04
No.4 C.O.T.(P)	98.00	940.16	65.37	6.58	-4.54	360.84
No.4 C.O.T.(S)	98.00	945.42	65.42	6.59	4.51	367.77
No.5 C.O.T.(P)	98.00	940.16	52.79	6.58	-4.54	360.84
No.5 C.O.T.(S)	98.00	945.42	52.84	6.59	4.51	367.77
No.6 C.O.T.(P)	98.00	928.49	40.27	6.64	-4.49	360.46
No.6 C.O.T.(S)	98.00	933.75	40.31	6.64	4.46	367.38
SLOP T.(P)	98.00	225.88	32.42	6.81	-4.15	88.51
SLOP T.(S)	98.00	221.36	32.43	6.81	4.23	82.74
<b>SUBTOTAL</b>		11041.99	68.37	6.63	0.00	3871.66
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		17.71	0.15	9.70	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		39.24	29.26	2.94	0.42	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		16.54	24.89	3.60	-0.04	46.41

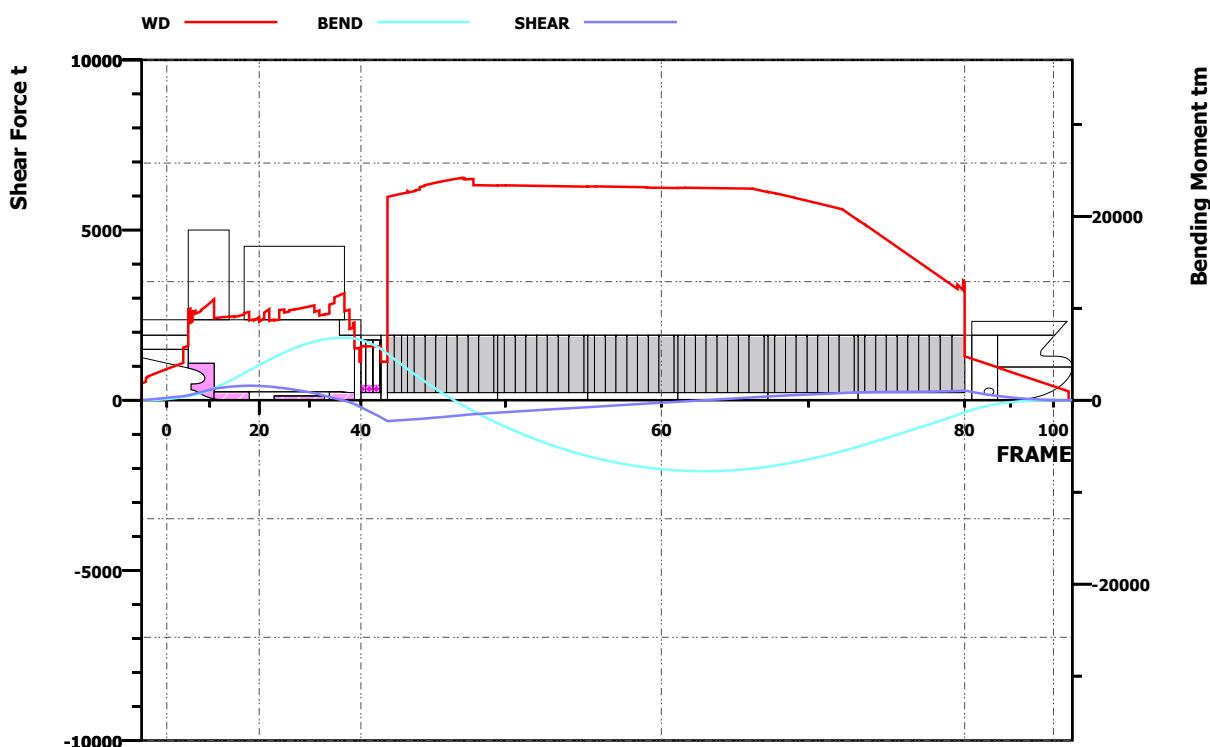
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT						
						%	t	m	m	m	tm	
<b>Contents : LO, SG 0.9</b>												
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91						4.59	
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71						0.92	
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52						2.72	
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06						2.17	
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06						2.17	
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62						2.82	
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38						7.33	
<b>SUBTOTAL</b>		<b>24.74</b>	<b>13.25</b>	<b>7.55</b>	<b>-7.22</b>						<b>22.72</b>	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT						
						%	t	m	m	m	tm	
<b>Contents : MIS, SG 1</b>												
C.W.T.	100.00	31.92	5.28	5.43	0.00						0.00	
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00						17.36	
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16						148.15	
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27						0.09	
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43						49.73	
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97						11.78	
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33						0.32	
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11						20.94	
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18						1.12	
<b>SUBTOTAL</b>		<b>125.88</b>	<b>16.51</b>	<b>2.10</b>	<b>0.47</b>						<b>249.49</b>	
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT						
						%	t	m	m	m	tm	
<b>Contents : MASS, SG 1</b>												
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00						0.00	
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00						10.00	
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00						0.00	
STORE & SPARES	0.00	14.90	47.41	12.80	0.00						0.00	
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00						0.00	
<b>SUBTOTAL</b>		<b>46.30</b>	<b>42.79</b>	<b>9.38</b>	<b>0.00</b>						<b>10.00</b>	
								WEIGHT	LCG	VCG	TCG	
								t	m	m	m	
<b>TOTAL</b>								<b>11312.41</b>	<b>67.26</b>	<b>6.58</b>	<b>-0.01</b>	<b>4804.49</b>

CONDITION NAME		13.HOMO LOADED CONDITION ARR. (S.G = 0.800)										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.006	0.102	0.226	0.384	0.542	0.701	0.860	1.073	1.037	0.784	0.407	
KN (m)	-0.006	0.768	1.553	2.361	3.154	3.929	4.678	5.983	6.888	7.398	7.584	
KG0*sin(phi) (m)	0.000	0.666	1.326	1.977	2.612	3.228	3.819	4.909	5.851	6.614	7.177	
Area (mrad)	0.000	0.004	0.018	0.051	0.085	0.146	0.207	0.379	0.567	0.728	0.833	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	1.209	OK									
Max GZ value (m)	0.200	1.091	OK									
Heel angle at Max GZ(deg.)	25.000	43.541	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.207	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.171	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.379	OK									
Flooding angle (deg.)	30.000	71.260	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.524	-									
Area (A) (m-rad)	-	0.084	-									
Area (B) / Area (A)	1.000	6.229	OK									
Projected area above W.L (m2)	-	1024.231	-									
Z (m)	-	10.150	-									
Steady Heeling level (Lw1) (m)	-	0.034	-									
Gust Heeling level (Lw2) (m)	-	0.050	-									
Theta 1 (degrees)	-	-19.468	-									
Theta 0 (degrees)	-	1.887	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	16.000	1.887	OK									
Rolling period (sec)	-	14.488	-									

CONDITION NAME , 13.HOMO LOADED CONDITION ARR. (S.G = 0.800)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	140	426
11.000	6.600	85.10	334	1290
17.000	10.800	73.43	422	2922
35.000	23.400	86.69	56	6743
39.000	26.200	65.53	-115	6691
40.000	27.100	32.53	-209	6548
41.000	29.900	32.42	-504	5557
42.000	30.800	32.36	-615	5054
43.000	33.600	176.51	-575	3390
49.000	46.180	181.18	-367	-2496
55.000	58.760	180.27	-205	-6074
61.000	71.340	179.11	-47	-7632
67.000	83.920	175.72	110	-7225
73.000	96.500	151.95	228	-5055
80.000	111.380	99.56	284	-1322
81.000	112.380	34.98	243	-1058
87.000	115.980	27.72	125	-408

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	426	11.500	18.000
Maximum bending moment (tm)	6776	24.440	36.486
Minimum shear force (t)	-615	30.808	42.003
Minimum bending moment (tm)	-7717	75.040	63.139



CONDITION NAME	14.FULL LOADED CONDITION DEP. (S.G = 0.900)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.110 (m)	KMT	8.940 (m)			
Draught midship (MLD.)	8.523 (m)	KG (Solid)	7.258 (m)			
Draught at A.P (MLD.)	8.923 (m)	GM (Fluid)	1.678 (m)			
Draught Equivalent (MLD.)	8.550 (m)	GM Corr. (GGo)	0.327 (m)			
Trim (Stern:"-",Bow:"+")	-0.812 (m)	GoM (Fluid)	1.351 (m)			
Heel (Port:"-",Stbd:"+")	-0.46 (deg.)	KGo (Fluid)	7.586 (m)			
Displacement	17604.5 tonnes	Free Surface Moment	5760.6 (m)			
LCB (from A.P.)	61.277 (m)	MTC	204.89 (tm/Cm)			
LCF (from A.P.)	55.882 (m)	TPC	23.71 (t/Cm)			
Propeller Immersion	183 (%)					
Non visible length	71.30 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	13044.5	65.034	848339.3	6.580	85830.5	-0.015
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	17604.5	61.296	1079080	7.258	127783	-0.011

CONDITION NAME : 14.FULL LOADED CONDITION DEP. (S.G = 0.900)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.9</b>						
No.1 C.O.T.(P)	95.64	731.84	103.31	6.62	-2.95	137.54
No.1 C.O.T.(S)	95.64	738.02	103.42	6.61	2.92	140.76
No.2 C.O.T.(P)	95.64	952.38	90.41	6.53	-4.21	359.74
No.2 C.O.T.(S)	95.64	958.16	90.46	6.53	4.19	366.87
No.3 C.O.T.(P)	95.64	1030.62	77.94	6.46	-4.55	446.09
No.3 C.O.T.(S)	95.65	1036.40	77.99	6.46	4.52	454.37
No.4 C.O.T.(P)	95.64	1032.26	65.37	6.46	-4.55	448.15
No.4 C.O.T.(S)	95.65	1038.04	65.42	6.46	4.53	456.44
No.5 C.O.T.(P)	95.64	1032.26	52.79	6.46	-4.55	448.15
No.5 C.O.T.(S)	95.64	1038.04	52.84	6.46	4.53	456.44
No.6 C.O.T.(P)	95.65	1019.45	40.27	6.51	-4.50	447.16
No.6 C.O.T.(S)	95.64	1025.23	40.31	6.51	4.48	455.46
SLOP T.(P)	95.64	248.00	32.42	6.69	-4.16	108.74
SLOP T.(S)	95.64	243.04	32.43	6.69	4.24	101.88
<b>SUBTOTAL</b>		<b>12123.72</b>	<b>68.37</b>	<b>6.51</b>	<b>0.00</b>	<b>4827.80</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

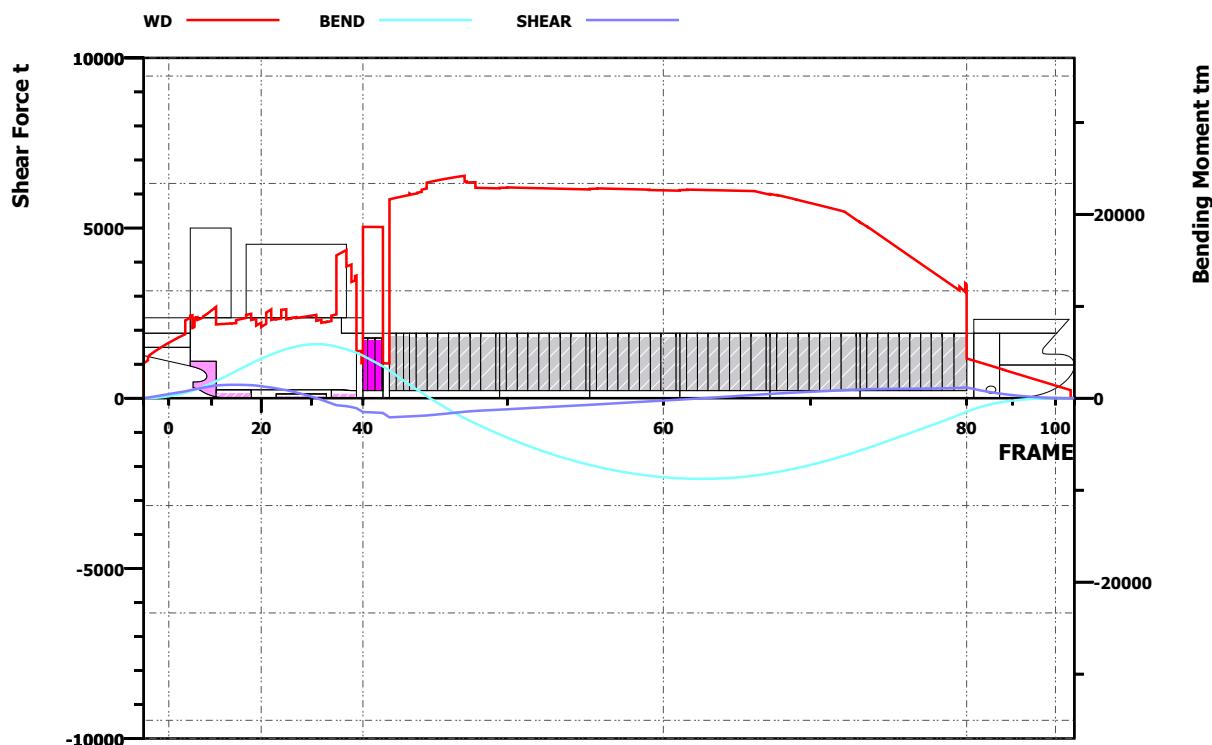
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		13044.55	65.03	6.58	-0.01	5760.63

CONDITION NAME	14.FULL LOADED CONDITION DEP. (S.G = 0.900)										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.011	0.108	0.235	0.391	0.547	0.657	0.767	0.911	0.871	0.651	0.320
KN (m)	-0.011	0.769	1.552	2.354	3.142	3.863	4.560	5.787	6.682	7.221	7.448
KG0*sin(phi) (m)	0.000	0.661	1.317	1.963	2.594	3.206	3.793	4.876	5.811	6.569	7.128
Area (mrad)	0.000	0.004	0.019	0.053	0.087	0.145	0.203	0.351	0.510	0.645	0.731
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.351	OK								
Max GZ value (m)	0.200	0.921	OK								
Heel angle at Max GZ(deg.)	25.000	43.056	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.203	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.148	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.351	OK								
Flooding angle (deg.)	30.000	65.551	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.474	-								
Area (A) (m-rad)	-	0.097	-								
Area (B) / Area (A)	1.000	4.869	OK								
Projected area above W.L (m2)	-	931.610	-								
Z (m)	-	10.271	-								
Steady Heeling level (Lw1) (m)	-	0.028	-								
Gust Heeling level (Lw2) (m)	-	0.042	-								
Theta 1 (degrees)	-	-20.367	-								
Theta 0 (degrees)	-	1.639	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	12.724	1.639	OK								
Rolling period (sec)	-	13.527	-								

CONDITION NAME , 14.FULL LOADED CONDITION DEP. (S.G = 0.900)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	235	743
11.000	6.600	85.10	373	1854
17.000	10.800	77.59	388	3498
35.000	23.400	132.99	-206	5604
39.000	26.200	114.24	-296	4935
40.000	27.100	32.53	-407	4622
41.000	29.900	32.42	-435	3455
42.000	30.800	32.36	-563	3008
43.000	33.600	190.80	-535	1478
49.000	46.180	195.92	-338	-3935
55.000	58.760	194.98	-195	-7255
61.000	71.340	193.83	-42	-8710
67.000	83.920	190.17	125	-8168
73.000	96.500	163.98	256	-5698
80.000	111.380	105.71	316	-1487
81.000	112.380	34.98	269	-1192
87.000	115.980	27.72	137	-468

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	394	9.050	14.500
Maximum bending moment (tm)	5877	20.600	31.000
Minimum shear force (t)	-563	30.808	42.003
Minimum bending moment (tm)	-8771	74.407	62.864



CONDITION NAME	15.FULL LOADED CONDITION ARR. (S.G = 0.900)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.471 (m)	KMT	8.850 (m)			
Draught midship (MLD.)	8.283 (m)	KG (Solid)	7.201 (m)			
Draught at A.P (MLD.)	8.101 (m)	GM (Fluid)	1.645 (m)			
Draught Equivalent (MLD.)	8.273 (m)	GM Corr. (GGo)	0.340 (m)			
Trim (Stern:"-",Bow:"+")	0.370 (m)	GoM (Fluid)	1.305 (m)			
Heel (Port:"-",Stbd:"+")	-0.26 (deg.)	KGo (Fluid)	7.541 (m)			
Displacement	16954.1 tonnes	Free Surface Moment	5760.6 (m)			
LCB (from A.P.)	62.860 (m)	MTC	193.21 (tm/Cm)			
LCF (from A.P.)	56.718 (m)	TPC	23.24 (t/Cm)			
Propeller Immersion	167 (%)					
Non visible length	62.23 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	12394.1	67.358	834842.5	6.466	80134.5	-0.008
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	16954.1	62.851	1065583	7.201	122086	-0.006

CONDITION NAME : 15.FULL LOADED CONDITION ARR. (S.G = 0.900)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.9</b>						
No.1 C.O.T.(P)	95.64	731.84	103.31	6.62	-2.95	137.54
No.1 C.O.T.(S)	95.64	738.02	103.42	6.61	2.92	140.76
No.2 C.O.T.(P)	95.64	952.38	90.41	6.53	-4.21	359.74
No.2 C.O.T.(S)	95.64	958.16	90.46	6.53	4.19	366.87
No.3 C.O.T.(P)	95.64	1030.62	77.94	6.46	-4.55	446.09
No.3 C.O.T.(S)	95.65	1036.40	77.99	6.46	4.52	454.37
No.4 C.O.T.(P)	95.64	1032.26	65.37	6.46	-4.55	448.15
No.4 C.O.T.(S)	95.65	1038.04	65.42	6.46	4.53	456.44
No.5 C.O.T.(P)	95.64	1032.26	52.79	6.46	-4.55	448.15
No.5 C.O.T.(S)	95.64	1038.04	52.84	6.46	4.53	456.44
No.6 C.O.T.(P)	95.65	1019.45	40.27	6.51	-4.50	447.16
No.6 C.O.T.(S)	95.64	1025.23	40.31	6.51	4.48	455.46
SLOP T.(P)	95.64	248.00	32.42	6.69	-4.16	108.74
SLOP T.(S)	95.64	243.04	32.43	6.69	4.24	101.88
<b>SUBTOTAL</b>		<b>12123.72</b>	<b>68.37</b>	<b>6.51</b>	<b>0.00</b>	<b>4827.80</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		<b>17.71</b>	<b>0.15</b>	<b>9.70</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		<b>39.24</b>	<b>29.26</b>	<b>2.94</b>	<b>0.42</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		<b>16.54</b>	<b>24.89</b>	<b>3.60</b>	<b>-0.04</b>	<b>46.41</b>

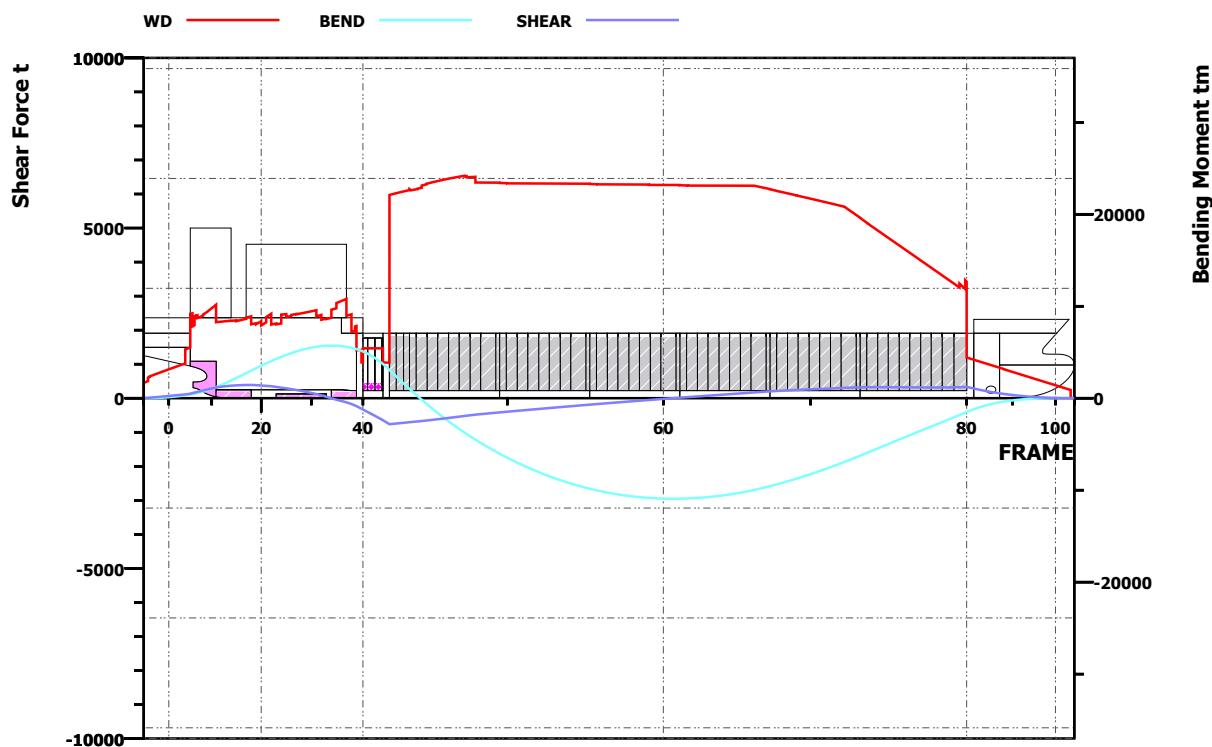
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		<b>24.74</b>	<b>13.25</b>	<b>7.55</b>	<b>-7.22</b>	<b>22.72</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		<b>125.88</b>	<b>16.51</b>	<b>2.10</b>	<b>0.47</b>	<b>249.49</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		<b>46.30</b>	<b>42.79</b>	<b>9.38</b>	<b>0.00</b>	<b>10.00</b>
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		<b>12394.14</b>	<b>67.36</b>	<b>6.47</b>	<b>-0.01</b>	<b>5760.63</b>

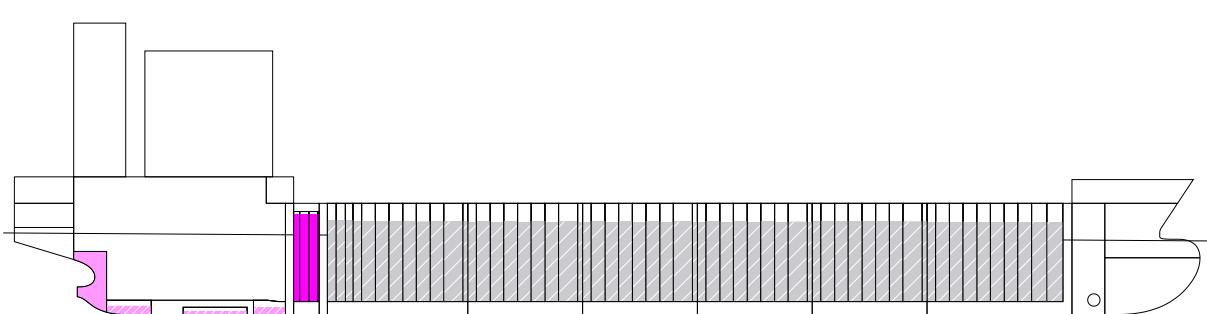
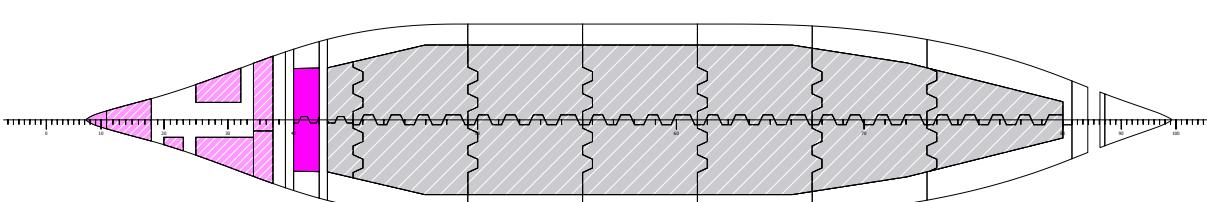
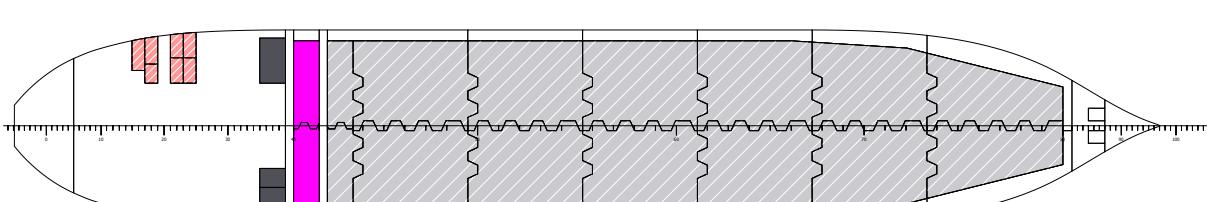
CONDITION NAME		15.FULL LOADED CONDITION ARR. (S.G = 0.900)										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.006	0.109	0.232	0.389	0.546	0.665	0.784	0.966	0.943	0.722	0.382	
KN (m)	-0.006	0.766	1.541	2.341	3.125	3.852	4.555	5.813	6.719	7.252	7.468	
KG0*sin(phi) (m)	0.000	0.657	1.309	1.952	2.579	3.187	3.770	4.847	5.777	6.530	7.086	
Area (mrad)	0.000	0.004	0.019	0.053	0.087	0.145	0.204	0.358	0.528	0.676	0.773	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	1.305	OK									
Max GZ value (m)	0.200	0.985	OK									
Heel angle at Max GZ(deg.)	25.000	43.930	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.204	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.154	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.358	OK									
Flooding angle (deg.)	30.000	69.861	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.489	-									
Area (A) (m-rad)	-	0.090	-									
Area (B) / Area (A)	1.000	5.414	OK									
Projected area above W.L (m2)	-	962.211	-									
Z (m)	-	10.414	-									
Steady Heeling level (Lw1) (m)	-	0.030	-									
Gust Heeling level (Lw2) (m)	-	0.046	-									
Theta 1 (degrees)	-	-19.841	-									
Theta 0 (degrees)	-	1.583	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	14.151	1.583	OK									
Rolling period (sec)	-	13.871	-									

CONDITION NAME , 15.FULL LOADED CONDITION ARR. (S.G = 0.900)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	132	396
11.000	6.600	85.10	315	1206
17.000	10.800	73.44	387	2721
35.000	23.400	86.58	-45	5698
39.000	26.200	65.70	-233	5335
40.000	27.100	32.53	-333	5081
41.000	29.900	32.42	-648	3711
42.000	30.800	32.36	-765	3075
43.000	33.600	190.43	-706	1014
49.000	46.180	196.18	-417	-6032
55.000	58.760	195.19	-190	-9841
61.000	71.340	194.04	15	-10926
67.000	83.920	190.32	200	-9570
73.000	96.500	164.30	318	-6257
80.000	111.380	106.10	333	-1508
81.000	112.380	34.98	284	-1200
87.000	115.980	27.72	143	-452

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	389	11.500	18.000
Maximum bending moment (tm)	5715	22.700	34.000
Minimum shear force (t)	-765	30.808	42.003
Minimum bending moment (tm)	-10933	70.441	60.609



CONDITION NAME	16.FULL LOADED CONDITION DEP. (S.G = 1.025)					
	  					
						
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.111 (m)	KMT	8.940 (m)			
Draught midship (MLD.)	8.523 (m)	KG (Solid)	6.842 (m)			
Draught at A.P (MLD.)	8.922 (m)	GM (Fluid)	2.094 (m)			
Draught Equivalent (MLD.)	8.550 (m)	GM Corr. (GGo)	0.531 (m)			
Trim (Stern:"-",Bow:"+")	-0.811 (m)	GoM (Fluid)	1.563 (m)			
Heel (Port:"-",Stbd:"+")	-0.40 (deg.)	KGo (Fluid)	7.373 (m)			
Displacement	17604.4 tonnes	Free Surface Moment	9347.8 (m)			
LCB (from A.P.)	61.279 (m)	MTC	204.88 (tm/Cm)			
LCF (from A.P.)	55.882 (m)	TPC	23.71 (t/Cm)			
Propeller Immersion	183 (%)					
Non visible length	71.28 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	13044.4	65.032	848309.4	6.018	78501.1	-0.015
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	17604.4	61.294	1079050	6.842	120453	-0.011

CONDITION NAME : 16.FULL LOADED CONDITION DEP. (S.G = 1.025)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1.025</b>						
No.1 C.O.T.(P)	83.98	731.83	103.32	6.03	-2.98	289.81
No.1 C.O.T.(S)	83.98	738.01	103.43	6.03	2.96	295.51
No.2 C.O.T.(P)	83.98	952.37	90.40	5.93	-4.26	633.81
No.2 C.O.T.(S)	83.98	958.15	90.45	5.93	4.23	644.67
No.3 C.O.T.(P)	83.98	1030.61	77.94	5.85	-4.60	767.42
No.3 C.O.T.(S)	83.98	1036.38	77.99	5.85	4.57	779.79
No.4 C.O.T.(P)	83.98	1032.25	65.37	5.85	-4.60	770.54
No.4 C.O.T.(S)	83.98	1038.02	65.41	5.85	4.58	782.94
No.5 C.O.T.(P)	83.98	1032.25	52.79	5.85	-4.60	770.54
No.5 C.O.T.(S)	83.98	1038.02	52.83	5.85	4.58	782.94
No.6 C.O.T.(P)	83.98	1019.44	40.27	5.91	-4.55	765.81
No.6 C.O.T.(S)	83.98	1025.22	40.32	5.91	4.52	778.20
SLOP T.(P)	83.98	248.00	32.42	6.10	-4.18	181.47
SLOP T.(S)	83.98	243.04	32.43	6.10	4.26	171.50
<b>SUBTOTAL</b>		<b>12123.58</b>	<b>68.37</b>	<b>5.90</b>	<b>0.00</b>	<b>8414.95</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

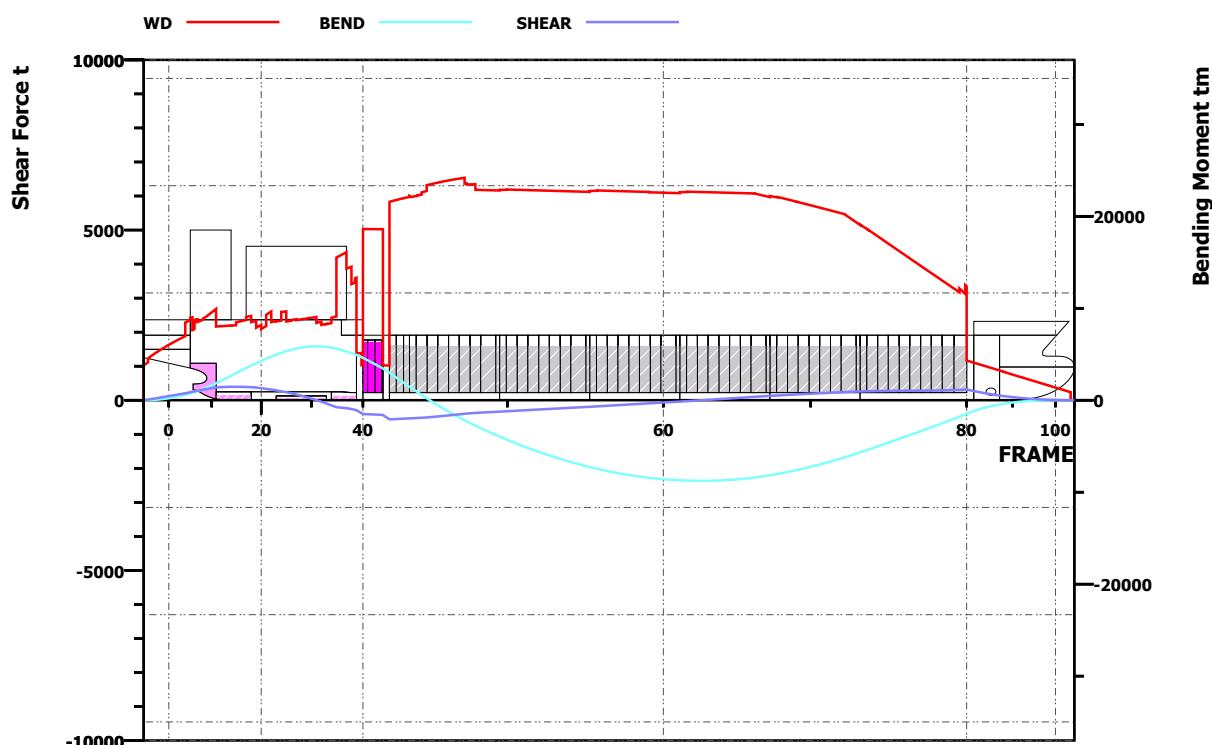
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		13044.40	65.03	6.02	-0.01	9347.78

CONDITION NAME		16.FULL LOADED CONDITION DEP. (S.G = 1.025)										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.011	0.126	0.270	0.433	0.596	0.705	0.815	0.967	0.938	0.721	0.371	
KN (m)	-0.011	0.769	1.550	2.341	3.118	3.821	4.501	5.706	6.586	7.107	7.300	
KG0*sin(phi) (m)	0.000	0.643	1.280	1.908	2.522	3.116	3.687	4.739	5.648	6.385	6.929	
Area (mrad)	0.000	0.005	0.022	0.060	0.098	0.160	0.222	0.379	0.549	0.696	0.793	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	1.563	OK									
Max GZ value (m)	0.200	0.981	OK									
Heel angle at Max GZ(deg.)	25.000	43.598	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.223	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.157	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.379	OK									
Flooding angle (deg.)	30.000	65.543	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.513	-									
Area (A) (m-rad)	-	0.115	-									
Area (B) / Area (A)	1.000	4.451	OK									
Projected area above W.L (m2)	-	931.611	-									
Z (m)	-	10.271	-									
Steady Heeling level (Lw1) (m)	-	0.028	-									
Gust Heeling level (Lw2) (m)	-	0.042	-									
Theta 1 (degrees)	-	-20.890	-									
Theta 0 (degrees)	-	1.416	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	12.726	1.416	OK									
Rolling period (sec)	-	12.575	-									

CONDITION NAME , 16.FULL LOADED CONDITION DEP. (S.G = 1.025)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	235	739
11.000	6.600	85.10	373	1848
17.000	10.800	77.59	388	3490
35.000	23.400	132.99	-206	5591
39.000	26.200	114.24	-295	4921
40.000	27.100	32.53	-406	4608
41.000	29.900	32.42	-435	3440
42.000	30.800	32.36	-562	2993
43.000	33.600	190.61	-534	1462
49.000	46.180	196.14	-337	-3957
55.000	58.760	195.08	-194	-7266
61.000	71.340	193.93	-41	-8711
67.000	83.920	190.37	126	-8158
73.000	96.500	163.78	257	-5676
80.000	111.380	105.97	316	-1478
81.000	112.380	34.98	269	-1184
87.000	115.980	27.72	137	-462

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	394	9.050	14.500
Maximum bending moment (tm)	5865	20.600	31.000
Minimum shear force (t)	-563	30.808	42.003
Minimum bending moment (tm)	-8770	74.340	62.835



CONDITION NAME	17.FULL LOADED CONDITION ARR. (S.G = 1.025)					
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.470 (m)	KMT	8.850 (m)			
Draught midship (MLD.)	8.283 (m)	KG (Solid)	6.769 (m)			
Draught at A.P (MLD.)	8.102 (m)	GM (Fluid)	2.077 (m)			
Draught Equivalent (MLD.)	8.272 (m)	GM Corr. (GGo)	0.551 (m)			
Trim (Stern:"-",Bow:"+")	0.368 (m)	GoM (Fluid)	1.526 (m)			
Heel (Port:"-",Stbd:"+")	-0.22 (deg.)	KGo (Fluid)	7.320 (m)			
Displacement	16954.0 tonnes	Free Surface Moment	9347.8 (m)			
LCB (from A.P.)	62.857 (m)	MTC	193.23 (tm/Cm)			
LCF (from A.P.)	56.716 (m)	TPC	23.24 (t/Cm)			
Propeller Immersion	167 (%)					
Non visible length	62.25 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	12394.0	67.356	834812.6	5.874	72805.1	-0.008
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	16954.0	62.850	1065553	6.769	114757	-0.006

CONDITION NAME : 17.FULL LOADED CONDITION ARR. (S.G = 1.025)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1.025</b>						
No.1 C.O.T.(P)	83.98	731.83	103.32	6.03	-2.98	289.81
No.1 C.O.T.(S)	83.98	738.01	103.43	6.03	2.96	295.51
No.2 C.O.T.(P)	83.98	952.37	90.40	5.93	-4.26	633.81
No.2 C.O.T.(S)	83.98	958.15	90.45	5.93	4.23	644.67
No.3 C.O.T.(P)	83.98	1030.61	77.94	5.85	-4.60	767.42
No.3 C.O.T.(S)	83.98	1036.38	77.99	5.85	4.57	779.79
No.4 C.O.T.(P)	83.98	1032.25	65.37	5.85	-4.60	770.54
No.4 C.O.T.(S)	83.98	1038.02	65.41	5.85	4.58	782.94
No.5 C.O.T.(P)	83.98	1032.25	52.79	5.85	-4.60	770.54
No.5 C.O.T.(S)	83.98	1038.02	52.83	5.85	4.58	782.94
No.6 C.O.T.(P)	83.98	1019.44	40.27	5.91	-4.55	765.81
No.6 C.O.T.(S)	83.98	1025.22	40.32	5.91	4.52	778.20
SLOP T.(P)	83.98	248.00	32.42	6.10	-4.18	181.47
SLOP T.(S)	83.98	243.04	32.43	6.10	4.26	171.50
<b>SUBTOTAL</b>		<b>12123.58</b>	<b>68.37</b>	<b>5.90</b>	<b>0.00</b>	<b>8414.95</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		<b>17.71</b>	<b>0.15</b>	<b>9.70</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		<b>39.24</b>	<b>29.26</b>	<b>2.94</b>	<b>0.42</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		<b>16.54</b>	<b>24.89</b>	<b>3.60</b>	<b>-0.04</b>	<b>46.41</b>

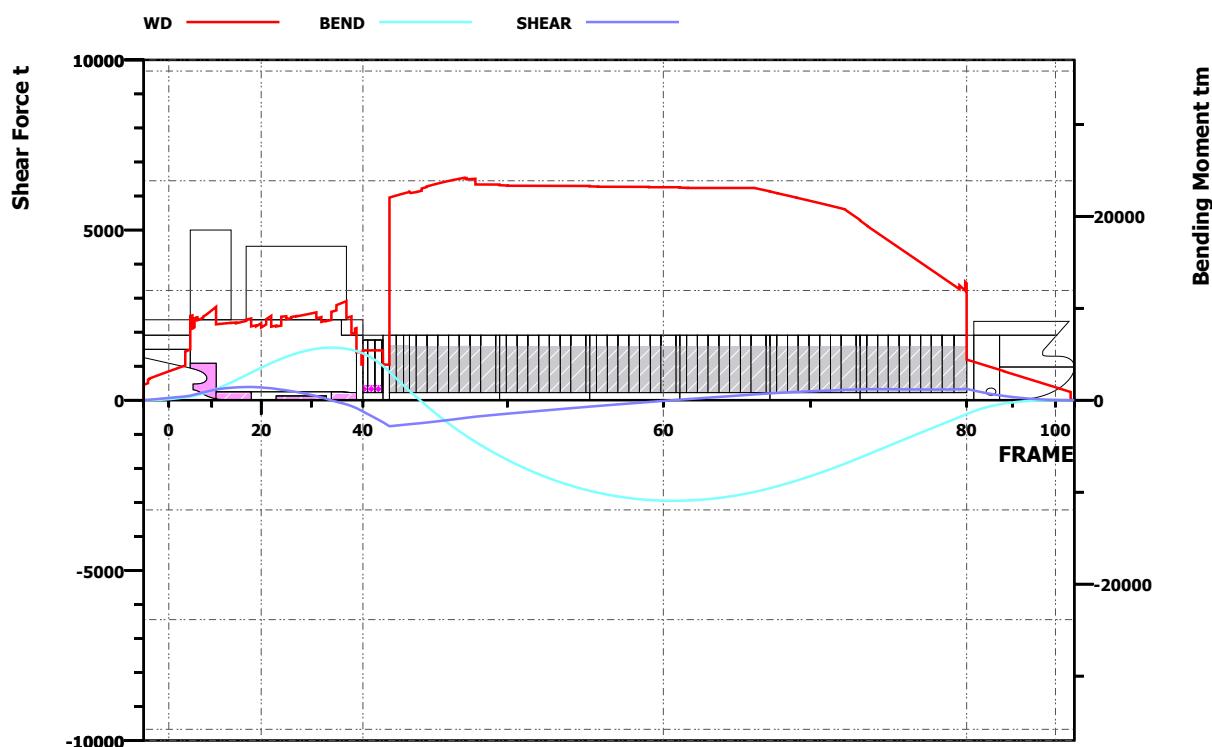
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		12394.00	67.36	5.87	-0.01	9347.78

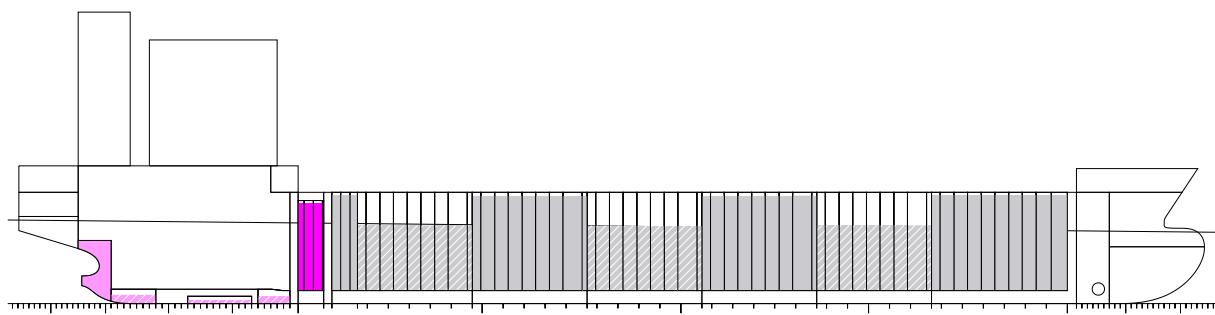
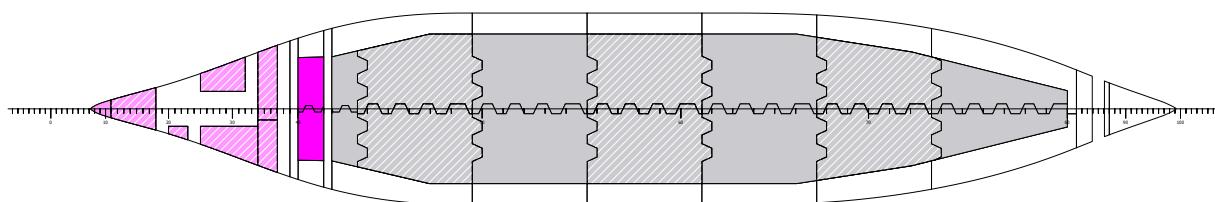
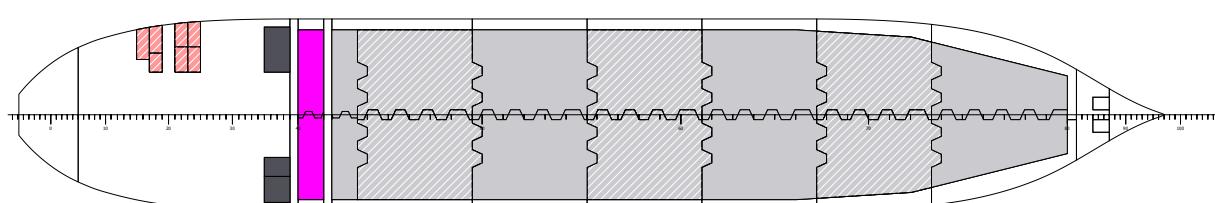
CONDITION NAME	17.FULL LOADED CONDITION ARR. (S.G = 1.025)										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.006	0.128	0.269	0.433	0.597	0.715	0.834	1.024	1.013	0.795	0.435
KN (m)	-0.006	0.766	1.540	2.327	3.100	3.809	4.494	5.729	6.620	7.134	7.314
KG0*sin(phi) (m)	0.000	0.638	1.271	1.895	2.504	3.094	3.660	4.705	5.608	6.339	6.879
Area (mrad)	0.000	0.005	0.023	0.060	0.098	0.161	0.224	0.387	0.569	0.729	0.838
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.526	OK								
Max GZ value (m)	0.200	1.050	OK								
Heel angle at Max GZ(deg.)	25.000	44.392	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.224	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.163	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.387	OK								
Flooding angle (deg.)	30.000	69.848	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.530	-								
Area (A) (m-rad)	-	0.109	-								
Area (B) / Area (A)	1.000	4.861	OK								
Projected area above W.L (m2)	-	962.225	-								
Z (m)	-	10.414	-								
Steady Heeling level (Lw1) (m)	-	0.030	-								
Gust Heeling level (Lw2) (m)	-	0.046	-								
Theta 1 (degrees)	-	-20.453	-								
Theta 0 (degrees)	-	1.354	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	14.155	1.354	OK								
Rolling period (sec)	-	12.829	-								

CONDITION NAME , 17.FULL LOADED CONDITION ARR. (S.G = 1.025)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	132	397
11.000	6.600	85.10	315	1209
17.000	10.800	73.44	387	2724
35.000	23.400	86.58	-45	5701
39.000	26.200	65.70	-234	5338
40.000	27.100	32.53	-333	5084
41.000	29.900	32.42	-648	3714
42.000	30.800	32.36	-765	3078
43.000	33.600	190.04	-706	1016
49.000	46.180	196.55	-417	-6043
55.000	58.760	195.27	-190	-9849
61.000	71.340	194.11	15	-10931
67.000	83.920	190.35	201	-9571
73.000	96.500	164.30	318	-6249
80.000	111.380	106.58	333	-1512
81.000	112.380	34.98	284	-1204
87.000	115.980	27.72	143	-455

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	389	11.500	18.000
Maximum bending moment (tm)	5719	22.700	34.000
Minimum shear force (t)	-765	30.808	42.003
Minimum bending moment (tm)	-10938	70.408	60.595



CONDITION NAME	18.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. DEP.												
													
													
													
													
Sailing State (Free trim)													
Draught at F.P (MLD.)	7.879 (m)	KMT	8.960 (m)										
Draught midship (MLD.)	8.509 (m)	KG (Solid)	6.699 (m)										
Draught at A.P (MLD.)	9.118 (m)	GM (Fluid)	2.262 (m)										
Draught Equivalent (MLD.)	8.550 (m)	GM Corr. (GGo)	0.564 (m)										
Trim (Stern:"-",Bow:"+")	-1.239 (m)	GoM (Fluid)	1.697 (m)										
Heel (Port:"-",Stbd:"+")	-0.37 (deg.)	KGo (Fluid)	7.263 (m)										
Displacement	17604.6 tonnes	Free Surface Moment	9930.8 (m)										
LCB (from A.P.)	60.777 (m)	MTC	208.52 (tm/Cm)										
LCF (from A.P.)	55.848 (m)	TPC	23.83 (t/Cm)										
Propeller Immersion	187 (%)												
Non visible length	75.91 (m)												
Conning point	X= 24.05 Z= 28.05 (m)												
Check point	X=126.40 Z= 16.00 (m)												
Weight (ton)													
LCG (m)													
Deadweight	13044.6	64.364	839596.0	5.825	75986.5								
Lightweight	4560.0	50.601	230740.3	9.200	41952.0								
Displacement	17604.6	60.799	1070336	6.699	117938								
V-m (t-m)													
TCG (m)													
					-0.015								
					0.000								
					-0.011								

CONDITION NAME : 18.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. DEP.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.7</b>						
No.1 C.O.T.(P)	98.00	583.22	103.30	6.74	-2.93	90.29
No.1 C.O.T.(S)	98.00	588.15	103.42	6.74	2.91	92.53
No.2 C.O.T.(P)	67.83	1148.12	90.39	5.10	-4.24	1079.30
No.2 C.O.T.(S)	67.83	1155.08	90.44	5.10	4.21	1097.49
No.3 C.O.T.(P)	98.00	821.33	77.94	6.59	-4.53	314.25
No.3 C.O.T.(S)	98.00	825.93	77.99	6.59	4.50	320.29
No.4 C.O.T.(P)	67.83	1244.41	65.37	5.01	-4.60	1293.80
No.4 C.O.T.(S)	67.83	1251.38	65.41	5.01	4.57	1314.41
No.5 C.O.T.(P)	98.00	822.64	52.79	6.58	-4.54	315.74
No.5 C.O.T.(S)	98.00	827.24	52.84	6.59	4.51	321.80
No.6 C.O.T.(P)	67.83	1228.97	40.29	5.08	-4.53	1293.80
No.6 C.O.T.(S)	67.83	1235.94	40.33	5.08	4.50	1314.41
SLOP T.(P)	98.00	197.64	32.42	6.81	-4.15	77.45
SLOP T.(S)	98.00	193.69	32.43	6.81	4.23	72.39
<b>SUBTOTAL</b>		12123.75	67.65	5.70	0.00	8997.95
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		177.13	-0.01	10.85	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		384.55	29.26	7.08	0.41	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		162.12	24.82	7.11	0.00	46.41

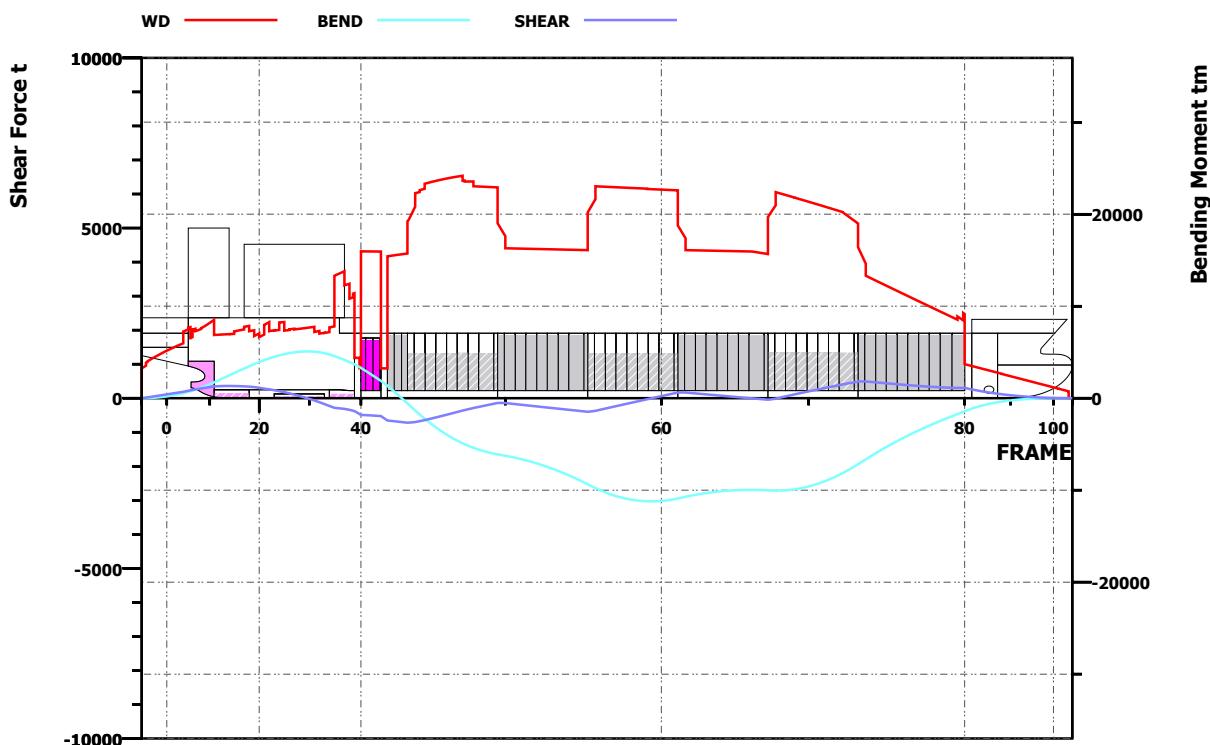
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		<b>53.61</b>	<b>13.25</b>	<b>8.18</b>	<b>-7.33</b>	<b>22.72</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		<b>94.56</b>	<b>15.27</b>	<b>2.36</b>	<b>0.43</b>	<b>249.49</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		<b>48.86</b>	<b>41.31</b>	<b>9.57</b>	<b>0.00</b>	<b>10.00</b>
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		<b>13044.57</b>	<b>64.36</b>	<b>5.83</b>	<b>-0.01</b>	<b>9930.78</b>

CONDITION NAME	18.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. DEP.										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.011	0.139	0.298	0.476	0.654	0.778	0.901	1.031	0.957	0.694	0.323
KN (m)	-0.011	0.772	1.559	2.356	3.138	3.847	4.533	5.700	6.521	6.984	7.148
KG0*sin(phi) (m)	0.000	0.633	1.261	1.880	2.484	3.070	3.632	4.669	5.564	6.290	6.825
Area (mrad)	0.000	0.006	0.024	0.066	0.108	0.177	0.245	0.416	0.593	0.739	0.829
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.697	OK								
Max GZ value (m)	0.200	1.034	OK								
Heel angle at Max GZ(deg.)	25.000	41.646	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.245	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.171	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.416	OK								
Flooding angle (deg.)	30.000	64.576	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.557	-								
Area (A) (m-rad)	-	0.130	-								
Area (B) / Area (A)	1.000	4.290	OK								
Projected area above W.L (m2)	-	933.910	-								
Z (m)	-	10.192	-								
Steady Heeling level (Lw1) (m)	-	0.028	-								
Gust Heeling level (Lw2) (m)	-	0.042	-								
Theta 1 (degrees)	-	-21.222	-								
Theta 0 (degrees)	-	1.294	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	12.026	1.294	OK								
Rolling period (sec)	-	12.064	-								

CONDITION NAME , 18.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. DEP.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	219	693
11.000	6.600	85.10	345	1725
17.000	10.800	77.58	347	3224
35.000	23.400	133.07	-282	4576
39.000	26.200	114.12	-379	3682
40.000	27.100	32.53	-492	3293
41.000	29.900	32.42	-526	1878
42.000	30.800	32.36	-655	1348
43.000	33.600	192.33	-720	-572
49.000	46.180	229.11	-141	-6106
55.000	58.760	201.88	-399	-9358
61.000	71.340	225.90	166	-10908
67.000	83.920	196.90	-45	-10015
73.000	96.500	189.89	489	-7180
80.000	111.380	91.52	303	-1421
81.000	112.380	34.98	258	-1138
87.000	115.980	27.72	132	-445

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	492	97.232	73.677
Maximum bending moment (tm)	5087	19.623	29.604
Minimum shear force (t)	-720	33.600	43.000
Minimum bending moment (tm)	-11215	67.693	59.414



CONDITION NAME	19.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. ARR.					
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.226 (m)	KMT	8.870 (m)			
Draught midship (MLD.)	8.270 (m)	KG (Solid)	6.620 (m)			
Draught at A.P (MLD.)	8.313 (m)	GM (Fluid)	2.248 (m)			
Draught Equivalent (MLD.)	8.273 (m)	GM Corr. (GGo)	0.586 (m)			
Trim (Stern:"-",Bow:"+")	-0.087 (m)	GoM (Fluid)	1.662 (m)			
Heel (Port:"-",Stbd:"+")	-0.20 (deg.)	KGo (Fluid)	7.206 (m)			
Displacement	16954.2 tonnes	Free Surface Moment	9930.8 (m)			
LCB (from A.P.)	62.333 (m)	MTC	196.87 (tm/Cm)			
LCF (from A.P.)	56.479 (m)	TPC	23.38 (t/Cm)			
Propeller Immersion	171 (%)					
Non visible length	66.47 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	12394.2	66.652	826099.2	5.671	70290.4	-0.008
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	16954.2	62.335	1056839	6.620	112242	-0.006

CONDITION NAME : 19.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. ARR.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.7</b>						
No.1 C.O.T.(P)	98.00	583.22	103.30	6.74	-2.93	90.29
No.1 C.O.T.(S)	98.00	588.15	103.42	6.74	2.91	92.53
No.2 C.O.T.(P)	67.83	1148.12	90.39	5.10	-4.24	1079.30
No.2 C.O.T.(S)	67.83	1155.08	90.44	5.10	4.21	1097.49
No.3 C.O.T.(P)	98.00	821.33	77.94	6.59	-4.53	314.25
No.3 C.O.T.(S)	98.00	825.93	77.99	6.59	4.50	320.29
No.4 C.O.T.(P)	67.83	1244.41	65.37	5.01	-4.60	1293.80
No.4 C.O.T.(S)	67.83	1251.38	65.41	5.01	4.57	1314.41
No.5 C.O.T.(P)	98.00	822.64	52.79	6.58	-4.54	315.74
No.5 C.O.T.(S)	98.00	827.24	52.84	6.59	4.51	321.80
No.6 C.O.T.(P)	67.83	1228.97	40.29	5.08	-4.53	1293.80
No.6 C.O.T.(S)	67.83	1235.94	40.33	5.08	4.50	1314.41
SLOP T.(P)	98.00	197.64	32.42	6.81	-4.15	77.45
SLOP T.(S)	98.00	193.69	32.43	6.81	4.23	72.39
<b>SUBTOTAL</b>		12123.75	67.65	5.70	0.00	8997.95
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		17.71	0.15	9.70	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		39.24	29.26	2.94	0.42	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		16.54	24.89	3.60	-0.04	46.41

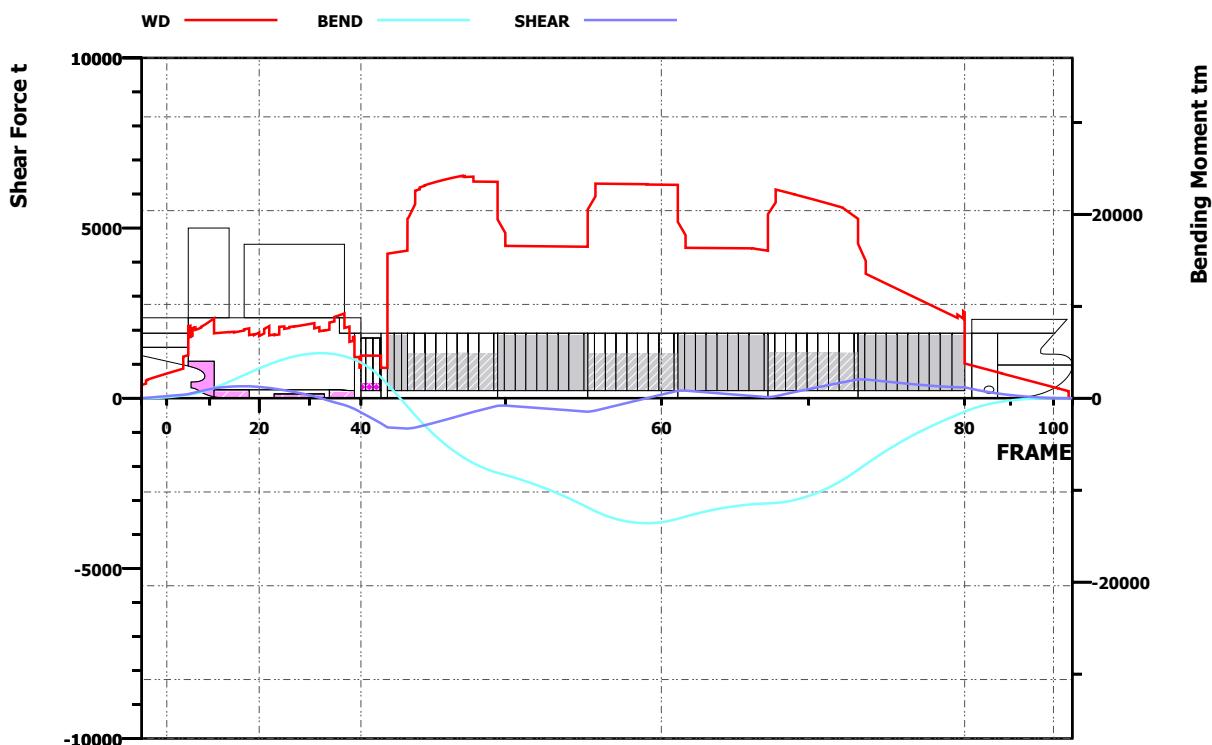
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		12394.16	66.65	5.67	-0.01	9930.78

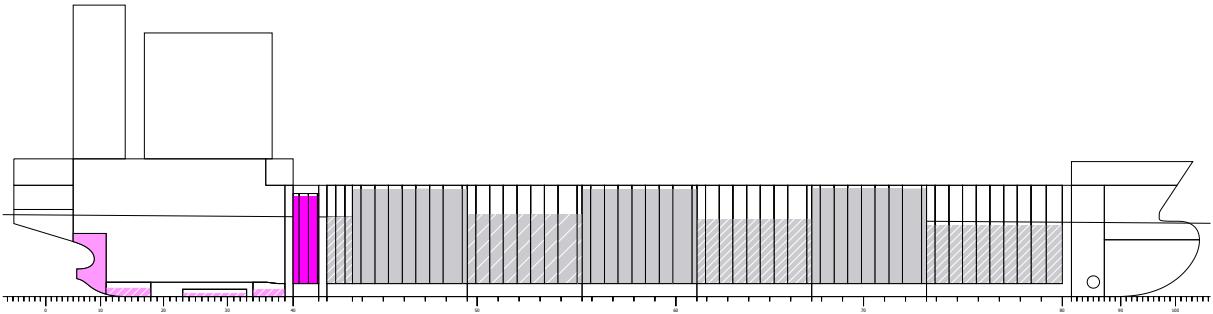
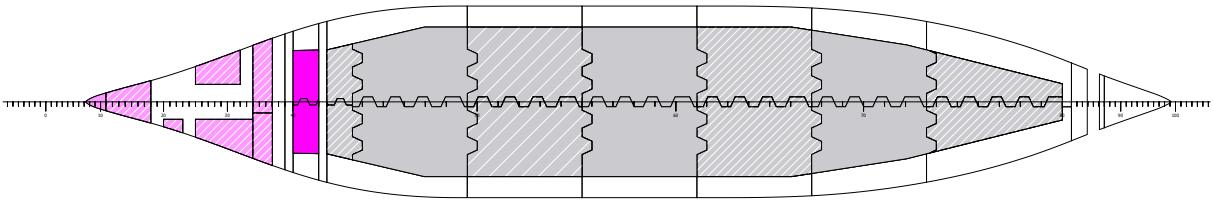
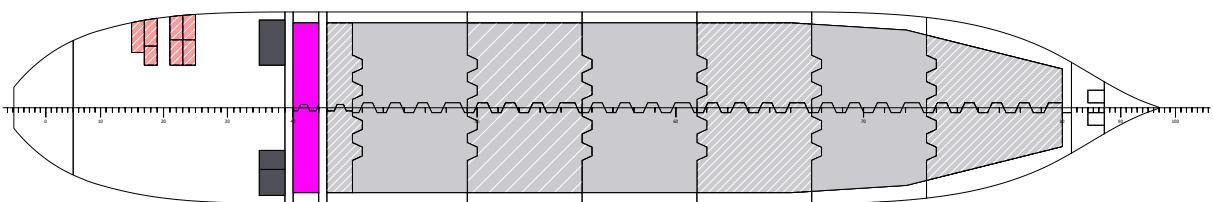
CONDITION NAME		19.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. ARR.										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.006	0.141	0.297	0.477	0.657	0.790	0.923	1.095	1.035	0.769	0.387	
KN (m)	-0.006	0.769	1.548	2.342	3.122	3.836	4.526	5.727	6.556	7.009	7.158	
KG0*sin(phi) (m)	0.000	0.628	1.251	1.865	2.465	3.045	3.603	4.632	5.520	6.241	6.772	
Area (mrad)	0.000	0.006	0.025	0.067	0.108	0.178	0.247	0.426	0.615	0.775	0.877	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	1.662	OK									
Max GZ value (m)	0.200	1.104	OK									
Heel angle at Max GZ(deg.)	25.000	42.590	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.247	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.178	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.426	OK									
Flooding angle (deg.)	30.000	68.864	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.577	-									
Area (A) (m-rad)	-	0.124	-									
Area (B) / Area (A)	1.000	4.639	OK									
Projected area above W.L (m2)	-	963.606	-									
Z (m)	-	10.322	-									
Steady Heeling level (Lw1) (m)	-	0.030	-									
Gust Heeling level (Lw2) (m)	-	0.045	-									
Theta 1 (degrees)	-	-20.854	-									
Theta 0 (degrees)	-	1.229	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	14.591	1.229	OK									
Rolling period (sec)	-	12.259	-									

CONDITION NAME , 19.GROUP[NO.1,3,5,S/2,4,6(S.G=0.7/1.53)] LOAD COND. ARR.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	119	370
11.000	6.600	85.10	292	1120
17.000	10.800	73.43	350	2512
35.000	23.400	86.66	-121	4781
39.000	26.200	65.58	-316	4198
40.000	27.100	32.53	-418	3869
41.000	29.900	32.42	-739	2255
42.000	30.800	32.36	-858	1536
43.000	33.600	191.37	-893	-914
49.000	46.180	230.71	-223	-8115
55.000	58.760	201.16	-398	-11879
61.000	71.340	227.49	219	-13116
67.000	83.920	196.22	28	-11435
73.000	96.500	191.27	549	-7793
80.000	111.380	91.78	321	-1476
81.000	112.380	34.98	273	-1179
87.000	115.980	27.72	139	-452

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	551	97.095	73.551
Maximum bending moment (tm)	4896	21.550	32.357
Minimum shear force (t)	-893	33.590	42.997
Minimum bending moment (tm)	-13592	66.991	59.109



CONDITION NAME	20.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. DEP.				
					
					
					
					
Sailing State (Free trim)					
Draught at F.P (MLD.)	8.076 (m)	KMT	8.940 (m)		
Draught midship (MLD.)	8.521 (m)	KG (Solid)	6.700 (m)		
Draught at A.P (MLD.)	8.951 (m)	GM (Fluid)	2.240 (m)		
Draught Equivalent (MLD.)	8.550 (m)	GM Corr. (GGo)	0.543 (m)		
Trim (Stern:"-",Bow:"+")	-0.875 (m)	GoM (Fluid)	1.697 (m)		
Heel (Port:"-",Stbd:"+")	-0.37 (deg.)	KGo (Fluid)	7.243 (m)		
Displacement	17604.2 tonnes	Free Surface Moment	9561.0 (m)		
LCB (from A.P.)	61.205 (m)	MTC	205.41 (tm/Cm)		
LCF (from A.P.)	55.875 (m)	TPC	23.73 (t/Cm)		
Propeller Immersion	184 (%)				
Non visible length	71.95 (m)				
Conning point	X= 24.05 Z= 28.05 (m)				
Check point	X=126.40 Z= 16.00 (m)				
Weight (ton)					
LCG (m)					
Deadweight	13044.2	64.933	847002.2	5.826	75997.3
Lightweight	4560.0	50.601	230740.3	9.200	41952.0
Displacement	17604.2	61.221	1077742	6.700	117949
L-m (t-m)					
VCG (m)					
V-m (t-m)					
TCG (m)					
124					

CONDITION NAME : 20.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. DEP.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1.53</b>						
No.1 C.O.T.(P)	60.10	781.77	103.30	4.84	-2.93	508.14
No.1 C.O.T.(S)	60.10	788.36	103.42	4.84	2.91	518.16
No.2 C.O.T.(P)	98.00	758.98	90.41	6.66	-4.20	251.69
No.2 C.O.T.(S)	98.00	763.58	90.46	6.66	4.17	256.87
No.3 C.O.T.(P)	67.50	1236.48	77.94	5.00	-4.59	1288.89
No.3 C.O.T.(S)	67.50	1243.42	77.99	5.00	4.57	1309.44
No.4 C.O.T.(P)	98.00	822.64	65.37	6.58	-4.54	315.74
No.4 C.O.T.(S)	98.00	827.24	65.42	6.59	4.51	321.80
No.5 C.O.T.(P)	72.80	1335.69	52.79	5.27	-4.60	1293.80
No.5 C.O.T.(S)	72.80	1343.17	52.83	5.27	4.58	1314.41
No.6 C.O.T.(P)	98.00	812.43	40.27	6.64	-4.49	315.40
No.6 C.O.T.(S)	98.00	817.03	40.31	6.64	4.46	321.46
SLOP T.(P)	67.90	299.31	32.43	5.29	-4.12	314.51
SLOP T.(S)	67.90	293.32	32.43	5.30	4.20	297.87
<b>SUBTOTAL</b>		<b>12123.42</b>	<b>68.26</b>	<b>5.70</b>	<b>0.00</b>	<b>8628.19</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

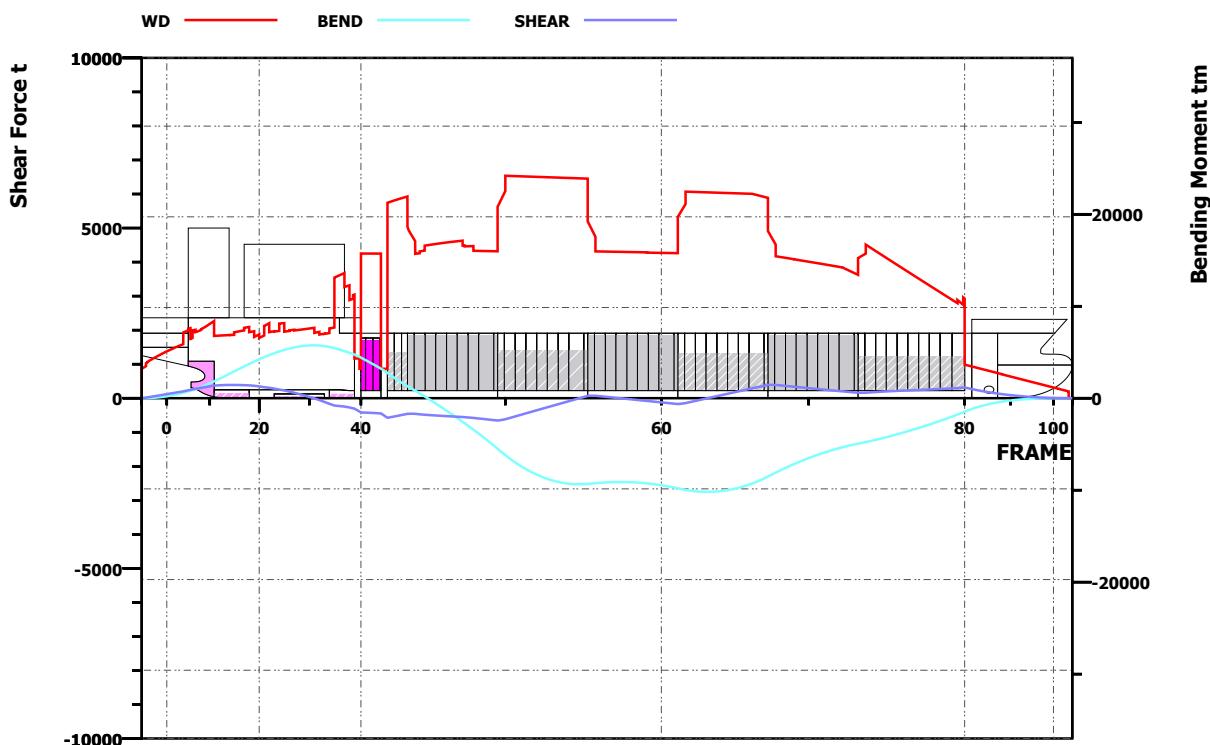
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		<b>53.61</b>	<b>13.25</b>	<b>8.18</b>	<b>-7.33</b>	<b>22.72</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		<b>94.56</b>	<b>15.27</b>	<b>2.36</b>	<b>0.43</b>	<b>249.49</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		<b>48.86</b>	<b>41.31</b>	<b>9.57</b>	<b>0.00</b>	<b>10.00</b>
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		<b>13044.24</b>	<b>64.93</b>	<b>5.83</b>	<b>-0.01</b>	<b>9561.02</b>

CONDITION NAME		20.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. DEP.										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.011	0.139	0.298	0.478	0.658	0.781	0.903	1.045	0.984	0.726	0.348	
KN (m)	-0.011	0.770	1.556	2.353	3.136	3.842	4.525	5.701	6.532	6.998	7.154	
KG0*sin(phi) (m)	0.000	0.631	1.258	1.875	2.477	3.061	3.622	4.656	5.549	6.273	6.806	
Area (mrad)	0.000	0.006	0.025	0.066	0.108	0.177	0.246	0.418	0.599	0.750	0.845	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	1.697	OK									
Max GZ value (m)	0.200	1.051	OK									
Heel angle at Max GZ(deg.)	25.000	42.277	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.246	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.172	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.418	OK									
Flooding angle (deg.)	30.000	65.393	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.563	-									
Area (A) (m-rad)	-	0.130	-									
Area (B) / Area (A)	1.000	4.315	OK									
Projected area above W.L (m2)	-	931.965	-									
Z (m)	-	10.259	-									
Steady Heeling level (Lw1) (m)	-	0.028	-									
Gust Heeling level (Lw2) (m)	-	0.042	-									
Theta 1 (degrees)	-	-21.223	-									
Theta 0 (degrees)	-	1.297	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	12.625	1.297	OK									
Rolling period (sec)	-	12.069	-									

CONDITION NAME , 20.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. DEP.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	232	732
11.000	6.600	85.10	369	1830
17.000	10.800	77.59	382	3451
35.000	23.400	133.00	-217	5441
39.000	26.200	114.22	-308	4738
40.000	27.100	32.53	-419	4414
41.000	29.900	32.42	-448	3210
42.000	30.800	32.36	-576	2750
43.000	33.600	189.07	-460	1303
49.000	46.180	211.02	-657	-5496
55.000	58.760	242.11	67	-9321
61.000	71.340	199.96	-172	-9797
67.000	83.920	220.93	389	-8522
73.000	96.500	154.53	159	-4943
80.000	111.380	109.67	314	-1469
81.000	112.380	34.98	268	-1176
87.000	115.980	27.72	137	-459

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	391	84.461	67.501
Maximum bending moment (tm)	5746	20.587	30.981
Minimum shear force (t)	-657	46.180	49.000
Minimum bending moment (tm)	-10183	75.478	63.329



CONDITION NAME	21.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. ARR.				
Sailing State (Free trim)					
Draught at F.P (MLD.)	8.433 (m)	KMT	8.850 (m)		
Draught midship (MLD.)	8.281 (m)	KG (Solid)	6.621 (m)		
Draught at A.P (MLD.)	8.134 (m)	GM (Fluid)	2.228 (m)		
Draught Equivalent (MLD.)	8.272 (m)	GM Corr. (GGo)	0.564 (m)		
Trim (Stern:"-",Bow:"+")	0.299 (m)	GoM (Fluid)	1.664 (m)		
Heel (Port:"-",Stbd:"+")	-0.20 (deg.)	KGo (Fluid)	7.185 (m)		
Displacement	16953.8 tonnes	Free Surface Moment	9561.0 (m)		
LCB (from A.P.)	62.779 (m)	MTC	193.69 (tm/Cm)		
LCF (from A.P.)	56.670 (m)	TPC	23.26 (t/Cm)		
Propeller Immersion	168 (%)				
Non visible length	62.87 (m)				
Conning point	X= 24.05 Z= 28.05 (m)				
Check point	X=126.40 Z= 16.00 (m)				
Weight (ton)					
LCG (m)					
Deadweight	12393.8	67.252	833505.3	5.672	70301.2
Lightweight	4560.0	50.601	230740.3	9.200	41952.0
Displacement	16953.8	62.773	1064246	6.621	112253
V-m (t-m)					
TCG (m)					

CONDITION NAME : 21.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. ARR.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1.53</b>						
No.1 C.O.T.(P)	60.10	781.77	103.30	4.84	-2.93	508.14
No.1 C.O.T.(S)	60.10	788.36	103.42	4.84	2.91	518.16
No.2 C.O.T.(P)	98.00	758.98	90.41	6.66	-4.20	251.69
No.2 C.O.T.(S)	98.00	763.58	90.46	6.66	4.17	256.87
No.3 C.O.T.(P)	67.50	1236.48	77.94	5.00	-4.59	1288.89
No.3 C.O.T.(S)	67.50	1243.42	77.99	5.00	4.57	1309.44
No.4 C.O.T.(P)	98.00	822.64	65.37	6.58	-4.54	315.74
No.4 C.O.T.(S)	98.00	827.24	65.42	6.59	4.51	321.80
No.5 C.O.T.(P)	72.80	1335.69	52.79	5.27	-4.60	1293.80
No.5 C.O.T.(S)	72.80	1343.17	52.83	5.27	4.58	1314.41
No.6 C.O.T.(P)	98.00	812.43	40.27	6.64	-4.49	315.40
No.6 C.O.T.(S)	98.00	817.03	40.31	6.64	4.46	321.46
SLOP T.(P)	67.90	299.31	32.43	5.29	-4.12	314.51
SLOP T.(S)	67.90	293.32	32.43	5.30	4.20	297.87
<b>SUBTOTAL</b>		<b>12123.42</b>	<b>68.26</b>	<b>5.70</b>	<b>0.00</b>	<b>8628.19</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		<b>17.71</b>	<b>0.15</b>	<b>9.70</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		<b>39.24</b>	<b>29.26</b>	<b>2.94</b>	<b>0.42</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		<b>16.54</b>	<b>24.89</b>	<b>3.60</b>	<b>-0.04</b>	<b>46.41</b>

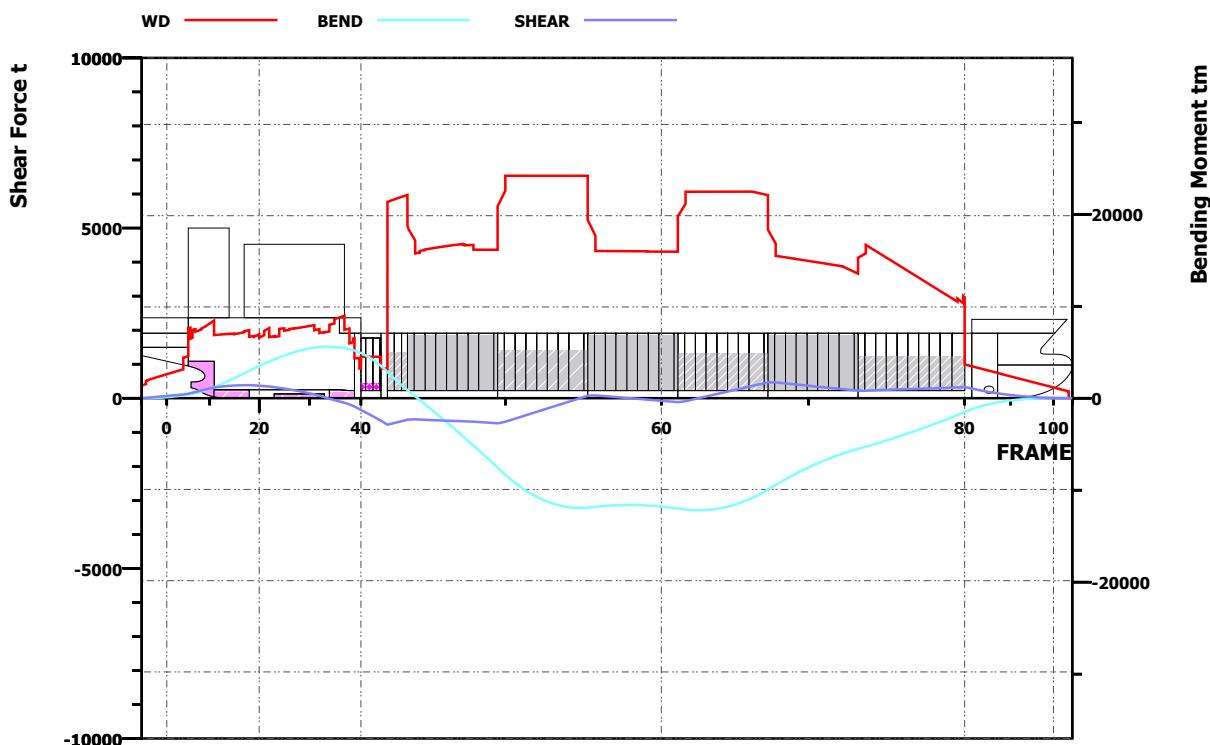
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		12393.83	67.25	5.67	-0.01	9561.02

CONDITION NAME	21.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. ARR.										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.006	0.141	0.298	0.480	0.662	0.794	0.926	1.106	1.060	0.799	0.411
KN (m)	-0.006	0.767	1.546	2.339	3.119	3.830	4.519	5.724	6.565	7.022	7.163
KG0*sin(phi) (m)	0.000	0.626	1.248	1.860	2.457	3.037	3.593	4.618	5.504	6.222	6.752
Area (mrad)	0.000	0.006	0.025	0.067	0.109	0.179	0.249	0.428	0.621	0.786	0.892
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.664	OK								
Max GZ value (m)	0.200	1.119	OK								
Heel angle at Max GZ(deg.)	25.000	43.145	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.249	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.179	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.428	OK								
Flooding angle (deg.)	30.000	69.700	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.582	-								
Area (A) (m-rad)	-	0.125	-								
Area (B) / Area (A)	1.000	4.672	OK								
Projected area above W.L (m2)	-	962.414	-								
Z (m)	-	10.400	-								
Steady Heeling level (Lw1) (m)	-	0.030	-								
Gust Heeling level (Lw2) (m)	-	0.046	-								
Theta 1 (degrees)	-	-20.822	-								
Theta 0 (degrees)	-	1.234	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	14.223	1.234	OK								
Rolling period (sec)	-	12.285	-								

CONDITION NAME , 21.GROUP[NO.1,3,5,S/2,4,6(S.G=1.53/0.7)] LOAD COND. ARR.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	130	395
11.000	6.600	85.10	312	1198
17.000	10.800	73.44	382	2696
35.000	23.400	86.59	-56	5571
39.000	26.200	65.68	-246	5176
40.000	27.100	32.53	-346	4911
41.000	29.900	32.42	-661	3505
42.000	30.800	32.36	-779	2857
43.000	33.600	188.88	-632	879
49.000	46.180	210.27	-738	-7550
55.000	58.760	243.73	71	-11892
61.000	71.340	199.22	-116	-11999
67.000	83.920	222.53	463	-9937
73.000	96.500	154.02	220	-5508
80.000	111.380	110.67	331	-1509
81.000	112.380	34.98	282	-1203
87.000	115.980	27.72	143	-456

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	466	84.493	67.530
Maximum bending moment (tm)	5598	22.513	33.734
Minimum shear force (t)	-779	30.808	42.003
Minimum bending moment (tm)	-12188	74.240	62.791



CONDITION NAME	22.TROPICAL LOAD LINE DEP.				
	Sailing State (Free trim)				
Draught at F.P (MLD.)	8.361 (m)	KMT	8.950 (m)		
Draught midship (MLD.)	8.713 (m)	KG (Solid)	7.344 (m)		
Draught at A.P (MLD.)	9.052 (m)	GM (Fluid)	1.609 (m)		
Draught Equivalent (MLD.)	8.737 (m)	GM Corr. (GGo)	0.294 (m)		
Trim (Stern:"-",Bow:"+")	-0.691 (m)	GoM (Fluid)	1.314 (m)		
Heel (Port:"-",Stbd:"+")	-0.48 (deg.)	KGo (Fluid)	7.639 (m)		
Displacement	17604.2 tonnes	Free Surface Moment	5183.7 (m)		
LCB (from A.P.)	61.280 (m)	MTC	204.61 (tm/Cm)		
LCF (from A.P.)	55.650 (m)	TPC	23.73 (t/Cm)		
Propeller Immersion	186 (%)				
Non visible length	68.38 (m)				
Conning point	X= 24.05 Z= 28.05 (m)				
Check point	X=126.40 Z= 16.00 (m)				
	Weight (ton)	LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)
Deadweight	13044.2	65.035	848326.0	6.696	87338.8
Lightweight	4560.0	50.601	230740.3	9.200	41952.0
Displacement	17604.2	61.296	1079066	7.344	129291
					-0.011

CONDITION NAME : 22.TROPICAL LOAD LINE DEP.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : CAL, SG 0.87835</b>						
No.1 C.O.T.(P)	98.00	731.82	103.30	6.74	-2.93	113.30
No.1 C.O.T.(S)	98.00	738.00	103.42	6.74	2.91	116.11
No.2 C.O.T.(P)	98.00	952.35	90.41	6.66	-4.20	315.81
No.2 C.O.T.(S)	98.00	958.13	90.46	6.66	4.17	322.32
No.3 C.O.T.(P)	98.00	1030.59	77.94	6.59	-4.53	394.31
No.3 C.O.T.(S)	98.00	1036.37	77.99	6.59	4.50	401.89
No.4 C.O.T.(P)	98.00	1032.23	65.37	6.58	-4.54	396.18
No.4 C.O.T.(S)	98.00	1038.01	65.42	6.59	4.51	403.79
No.5 C.O.T.(P)	98.00	1032.23	52.79	6.58	-4.54	396.18
No.5 C.O.T.(S)	98.00	1038.01	52.84	6.59	4.51	403.79
No.6 C.O.T.(P)	98.00	1019.42	40.27	6.64	-4.49	395.76
No.6 C.O.T.(S)	98.00	1025.20	40.31	6.64	4.46	403.36
SLOP T.(P)	98.00	248.00	32.42	6.81	-4.15	97.18
SLOP T.(S)	98.00	243.04	32.43	6.81	4.23	90.84
<b>SUBTOTAL</b>		<b>12123.41</b>	<b>68.37</b>	<b>6.63</b>	<b>0.00</b>	<b>4250.84</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%	t	m	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

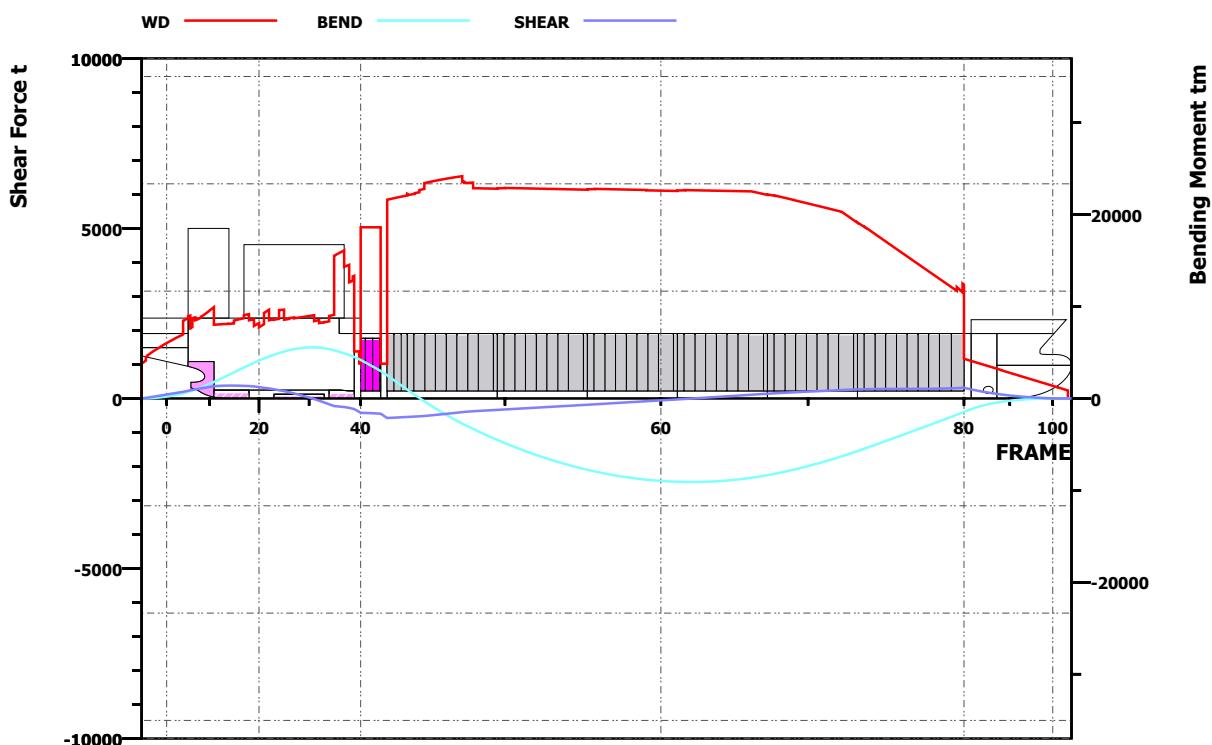
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		13044.24	65.03	6.70	-0.01	5183.67

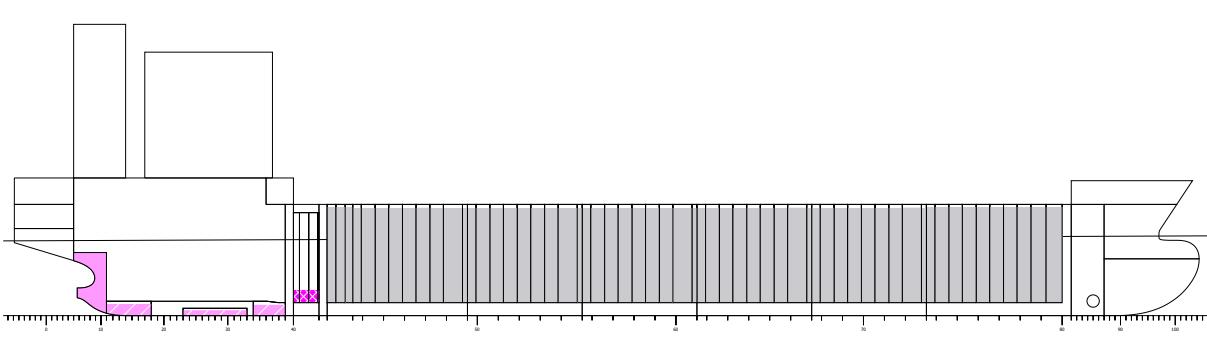
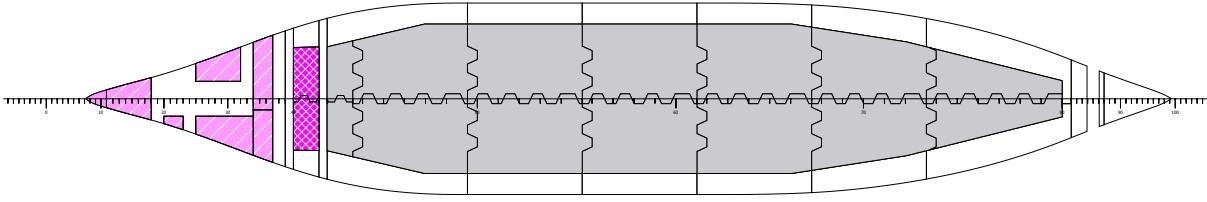
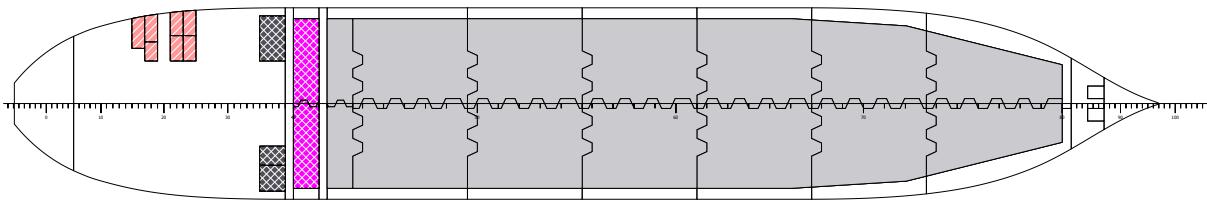
CONDITION NAME	22.TROPICAL LOAD LINE DEP.										
Intact Stability											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.011	0.107	0.240	0.394	0.548	0.643	0.739	0.851	0.800	0.582	0.259
KN (m)	-0.011	0.773	1.566	2.371	3.161	3.872	4.558	5.761	6.652	7.197	7.437
KG0*sin(phi) (m)	0.000	0.666	1.326	1.977	2.613	3.228	3.819	4.910	5.852	6.615	7.178
Area (mrad)	0.000	0.004	0.019	0.054	0.088	0.145	0.202	0.342	0.489	0.612	0.686
Applied Rule : 2008 IS Code Part A Chapter 2.2											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	1.314	OK								
Max GZ value (m)	0.200	0.856	OK								
Heel angle at Max GZ(deg.)	25.000	42.292	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.202	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.140	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.342	OK								
Flooding angle (deg.)	30.000	64.646	OK								
Applied Rule : 2008 IS Code Part A Chapter 2.3											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.454	-								
Area (A) (m-rad)	-	0.097	-								
Area (B) / Area (A)	1.000	4.678	OK								
Projected area above W.L (m2)	-	907.410	-								
Z (m)	-	10.356	-								
Steady Heeling level (Lw1) (m)	-	0.027	-								
Gust Heeling level (Lw2) (m)	-	0.041	-								
Theta 1 (degrees)	-	-20.294	-								
Theta 0 (degrees)	-	1.667	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	12.067	1.667	OK								
Rolling period (sec)	-	13.716	-								

CONDITION NAME , 22.TROPICAL LOAD LINE DEP.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	227	717
11.000	6.600	85.10	360	1790
17.000	10.800	77.59	371	3369
35.000	23.400	132.97	-223	5237
39.000	26.200	114.28	-312	4520
40.000	27.100	32.53	-422	4192
41.000	29.900	32.42	-448	2985
42.000	30.800	32.36	-575	2526
43.000	33.600	190.76	-545	965
49.000	46.180	195.87	-336	-4504
55.000	58.760	194.95	-185	-7756
61.000	71.340	193.80	-28	-9064
67.000	83.920	190.14	139	-8344
73.000	96.500	164.06	265	-5724
80.000	111.380	105.57	315	-1455
81.000	112.380	34.98	267	-1162
87.000	115.980	27.72	134	-449

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	378	9.025	14.464
Maximum bending moment (tm)	5563	20.265	30.522
Minimum shear force (t)	-575	30.808	42.003
Minimum bending moment (tm)	-9090	73.340	62.400



CONDITION NAME	23.TROPICAL	LOAD LINE ARR.				
						
						
						
						
Sailing State (Free trim)						
Draught at F.P (MLD.)	8.727 (m)	KMT	8.860 (m)			
Draught midship (MLD.)	8.468 (m)	KG (Solid)	7.290 (m)			
Draught at A.P (MLD.)	8.218 (m)	GM (Fluid)	1.571 (m)			
Draught Equivalent (MLD.)	8.454 (m)	GM Corr. (GGo)	0.306 (m)			
Trim (Stern:"-",Bow:"+")	0.509 (m)	GoM (Fluid)	1.266 (m)			
Heel (Port:"-",Stbd:"+")	-0.27 (deg.)	KGo (Fluid)	7.596 (m)			
Displacement	16953.8 tonnes	Free Surface Moment	5183.7 (m)			
LCB (from A.P.)	62.863 (m)	MTC	195.34 (tm/Cm)			
LCF (from A.P.)	56.582 (m)	TPC	23.34 (t/Cm)			
Propeller Immersion	169 (%)					
Non visible length	59.51 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton)		LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)	TCG (m)
Deadweight	12393.8	67.358	834829.2	6.587	81642.7	-0.008
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	16953.8	62.851	1065570	7.290	123595	-0.006

CONDITION NAME : 23.TROPICAL LOAD LINE ARR.

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.87835</b>						
No.1 C.O.T.(P)	98.00	731.82	103.30	6.74	-2.93	113.30
No.1 C.O.T.(S)	98.00	738.00	103.42	6.74	2.91	116.11
No.2 C.O.T.(P)	98.00	952.35	90.41	6.66	-4.20	315.81
No.2 C.O.T.(S)	98.00	958.13	90.46	6.66	4.17	322.32
No.3 C.O.T.(P)	98.00	1030.59	77.94	6.59	-4.53	394.31
No.3 C.O.T.(S)	98.00	1036.37	77.99	6.59	4.50	401.89
No.4 C.O.T.(P)	98.00	1032.23	65.37	6.58	-4.54	396.18
No.4 C.O.T.(S)	98.00	1038.01	65.42	6.59	4.51	403.79
No.5 C.O.T.(P)	98.00	1032.23	52.79	6.58	-4.54	396.18
No.5 C.O.T.(S)	98.00	1038.01	52.84	6.59	4.51	403.79
No.6 C.O.T.(P)	98.00	1019.42	40.27	6.64	-4.49	395.76
No.6 C.O.T.(S)	98.00	1025.20	40.31	6.64	4.46	403.36
SLOP T.(P)	98.00	248.00	32.42	6.81	-4.15	97.18
SLOP T.(S)	98.00	243.04	32.43	6.81	4.23	90.84
<b>SUBTOTAL</b>		<b>12123.41</b>	<b>68.37</b>	<b>6.63</b>	<b>0.00</b>	<b>4250.84</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	0.00	0.00	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	0.00	0.00	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	0.00	0.00	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	0.00	0.00	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	0.00	0.00	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	0.00	0.00	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	0.00	0.00	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	0.00	0.00	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	0.00	0.00	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	0.00	0.00	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	0.00
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78
<b>SUBTOTAL</b>		<b>17.71</b>	<b>0.15</b>	<b>9.70</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38
<b>SUBTOTAL</b>		<b>39.24</b>	<b>29.26</b>	<b>2.94</b>	<b>0.42</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41
<b>SUBTOTAL</b>		<b>16.54</b>	<b>24.89</b>	<b>3.60</b>	<b>-0.04</b>	<b>46.41</b>

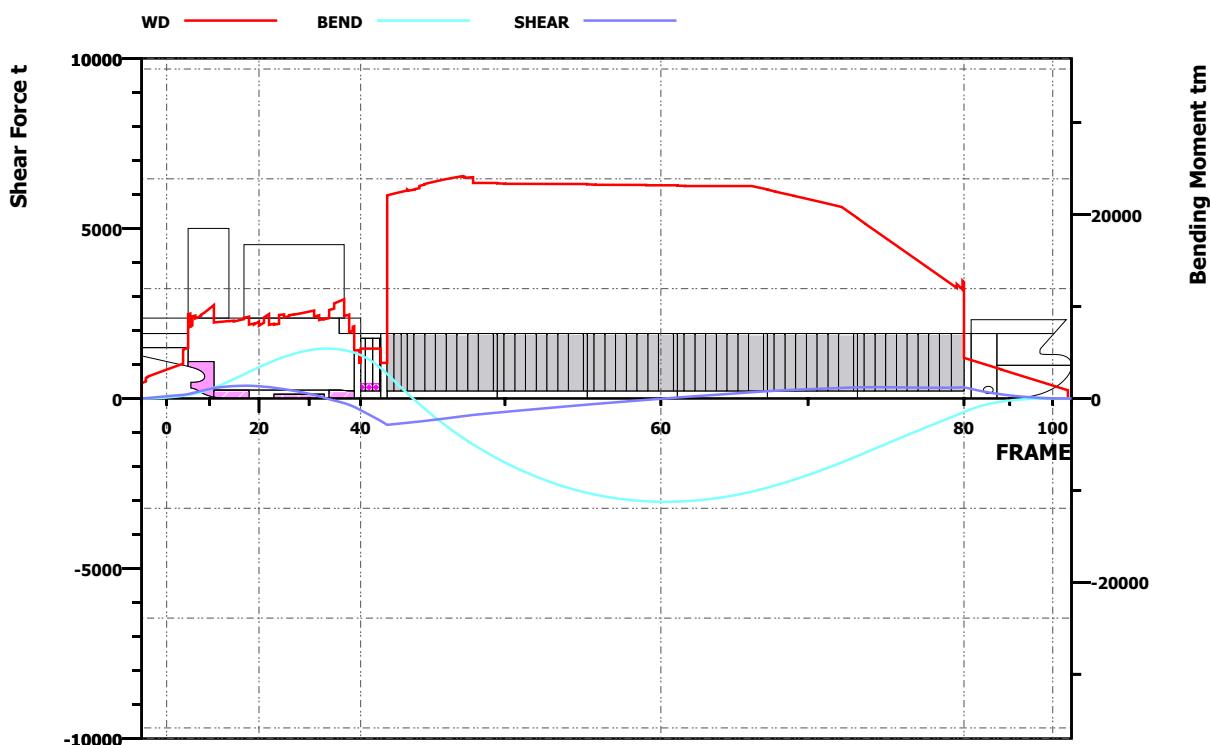
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.45	-5.72	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		12393.83	67.36	6.59	-0.01	5183.67
						tm

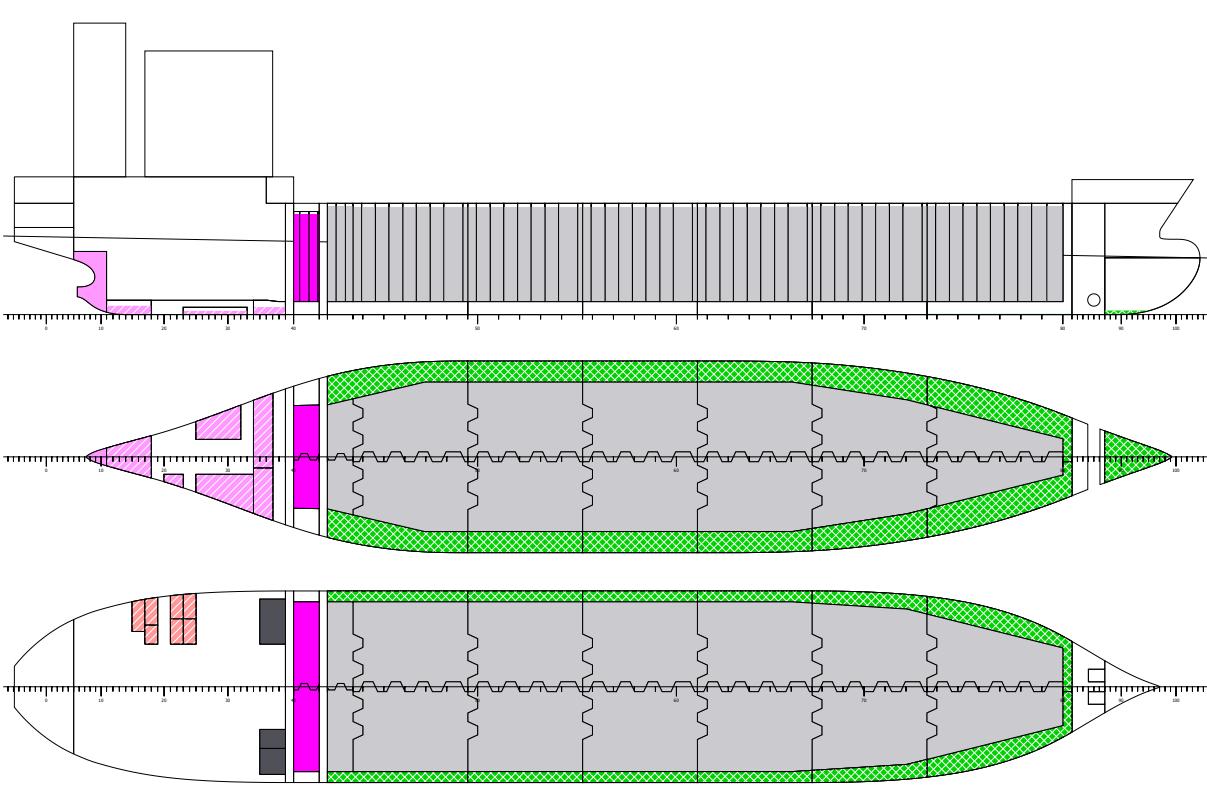
CONDITION NAME		23.TROPICAL LOAD LINE ARR.										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.006	0.108	0.237	0.394	0.550	0.653	0.756	0.909	0.874	0.653	0.321	
KN (m)	-0.006	0.770	1.556	2.359	3.148	3.863	4.554	5.791	6.693	7.231	7.459	
KG0*sin(phi) (m)	0.000	0.662	1.319	1.966	2.598	3.210	3.798	4.883	5.819	6.578	7.138	
Area (mrad)	0.000	0.004	0.019	0.054	0.088	0.146	0.203	0.350	0.509	0.644	0.730	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Min GM value (m)	0.150			1.266			OK					
Max GZ value (m)	0.200			0.922			OK					
Heel angle at Max GZ(deg.)	25.000			43.350			OK					
Area (0 - 30) deg. (m-rad)	0.055			0.203			OK					
Area (30 - 40) deg. (m-rad)	0.030			0.147			OK					
Area (0 - 40) deg. (m-rad)	0.090			0.350			OK					
Flooding angle (deg.)	30.000			69.076			OK					
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE			ATTAINED VALUE			STATUS					
Area (B) (m-rad)	-			0.471			-					
Area (A) (m-rad)	-			0.091			-					
Area (B) / Area (A)	1.000			5.188			OK					
Projected area above W.L (m2)	-			939.017			-					
Z (m)	-			10.503			-					
Steady Heeling level (Lw1) (m)	-			0.030			-					
Gust Heeling level (Lw2) (m)	-			0.045			-					
Theta 1 (degrees)	-			-19.809			-					
Theta 0 (degrees)	-			1.613			-					
Theta 2 (degrees)	-			50.000			-					
Heeling angle by steady wind(deg)	13.294			1.613			OK					
Rolling period (sec)	-			14.039			-					

CONDITION NAME , 23.TROPICAL LOAD LINE ARR.

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	126	379
11.000	6.600	85.10	305	1161
17.000	10.800	73.45	373	2623
35.000	23.400	86.55	-61	5393
39.000	26.200	65.74	-247	4987
40.000	27.100	32.53	-347	4720
41.000	29.900	32.42	-659	3313
42.000	30.800	32.36	-776	2667
43.000	33.600	190.43	-715	577
49.000	46.180	196.20	-416	-6522
55.000	58.760	195.26	-181	-10271
61.000	71.340	194.11	28	-11223
67.000	83.920	190.39	213	-9707
73.000	96.500	164.34	326	-6261
80.000	111.380	105.91	331	-1467
81.000	112.380	34.98	281	-1162
87.000	115.980	27.72	140	-428

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	374	11.500	18.000
Maximum bending moment (tm)	5425	22.513	33.734
Minimum shear force (t)	-776	30.808	42.003
Minimum bending moment (tm)	-11246	69.684	60.280



CONDITION NAME	24.MARPOL ANNEX I REG. 27 (WORST POSSIBLE)					
						
						
Sailing State (Free trim)						
Draught at F.P (MLD.)	6.303 (m)	KMT	9.010 (m)			
Draught midship (MLD.)	7.433 (m)	KG (Solid)	7.438 (m)			
Draught at A.P (MLD.)	8.527 (m)	GM (Fluid)	1.569 (m)			
Draught Equivalent (MLD.)	7.479 (m)	GM Corr. (GGo)	1.154 (m)			
Trim (Stern:"-",Bow:"+")	-2.224 (m)	GoM (Fluid)	0.415 (m)			
Heel (Port:"-",Stbd:"+")	-1.68 (deg.)	KGo (Fluid)	8.591 (m)			
Displacement	15117.5 tonnes	Free Surface Moment	17443 (m)			
LCB (from A.P.)	60.092 (m)	MTC	210.91 (tm/Cm)			
LCF (from A.P.)	57.154 (m)	TPC	23.79 (t/Cm)			
Propeller Immersion	174 (%)					
Non visible length	98.27 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	10557.5	64.282	678658.8	6.676	70486.8	-0.017
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	15117.5	60.155	909399.1	7.438	112439	-0.012

CONDITION NAME : 24.MARPOL ANNEX I REG. 27 (WORST POSSIBLE)

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 0.69425</b>						
No.1 C.O.T.(P)	98.00	578.43	103.30	6.74	-2.93	89.55
No.1 C.O.T.(S)	98.00	583.31	103.42	6.74	2.91	91.77
No.2 C.O.T.(P)	98.00	752.74	90.41	6.66	-4.20	249.62
No.2 C.O.T.(S)	98.00	757.31	90.46	6.66	4.17	254.76
No.3 C.O.T.(P)	98.00	814.58	77.94	6.59	-4.53	311.66
No.3 C.O.T.(S)	98.00	819.15	77.99	6.59	4.50	317.66
No.4 C.O.T.(P)	98.00	815.88	65.37	6.58	-4.54	313.15
No.4 C.O.T.(S)	98.00	820.45	65.42	6.59	4.51	319.16
No.5 C.O.T.(P)	98.00	815.88	52.79	6.58	-4.54	313.15
No.5 C.O.T.(S)	98.00	820.45	52.84	6.59	4.51	319.16
No.6 C.O.T.(P)	98.00	805.76	40.27	6.64	-4.49	312.81
No.6 C.O.T.(S)	98.00	810.32	40.31	6.64	4.46	318.82
SLOP T.(P)	98.00	196.02	32.42	6.81	-4.15	76.81
SLOP T.(S)	98.00	192.10	32.43	6.81	4.23	71.80
<b>SUBTOTAL</b>		<b>9582.37</b>	<b>68.37</b>	<b>6.63</b>	<b>0.00</b>	<b>3359.88</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	1.00	2.28	117.45	0.28	0.00	172.12
NO.1 W.B.T.(P)	1.00	6.10	103.22	0.04	-2.04	621.52
NO.1 W.B.T.(S)	1.00	5.73	102.89	0.05	2.66	406.61
NO.2 W.B.T.(P)	1.00	4.21	89.91	0.02	-3.43	1132.35
NO.2 W.B.T.(S)	1.00	4.01	89.87	0.02	3.98	811.33
NO.3 W.B.T.(P)	1.00	3.87	77.52	0.02	-4.24	1403.82
NO.3 W.B.T.(S)	1.00	3.67	77.51	0.02	4.78	1029.23
NO.4 W.B.T.(P)	1.00	3.88	65.05	0.02	-4.38	1424.19
NO.4 W.B.T.(S)	1.00	3.69	65.05	0.02	4.92	1045.77
NO.5 W.B.T.(P)	1.00	3.88	52.47	0.02	-4.38	1424.19
NO.5 W.B.T.(S)	1.00	3.69	52.47	0.02	4.92	1045.78
NO.6 W.B.T.(P)	1.00	4.78	39.02	0.02	-3.78	1526.60
NO.6 W.B.T.(S)	1.00	4.54	39.10	0.02	4.34	1106.58
<b>SUBTOTAL</b>		<b>54.32</b>	<b>74.80</b>	<b>0.03</b>	<b>0.17</b>	<b>13150.08</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		<b>177.13</b>	<b>-0.01</b>	<b>10.85</b>	<b>0.00</b>	<b>295.57</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		<b>384.55</b>	<b>29.26</b>	<b>7.08</b>	<b>0.41</b>	<b>308.64</b>
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		<b>162.12</b>	<b>24.82</b>	<b>7.11</b>	<b>0.00</b>	<b>46.41</b>

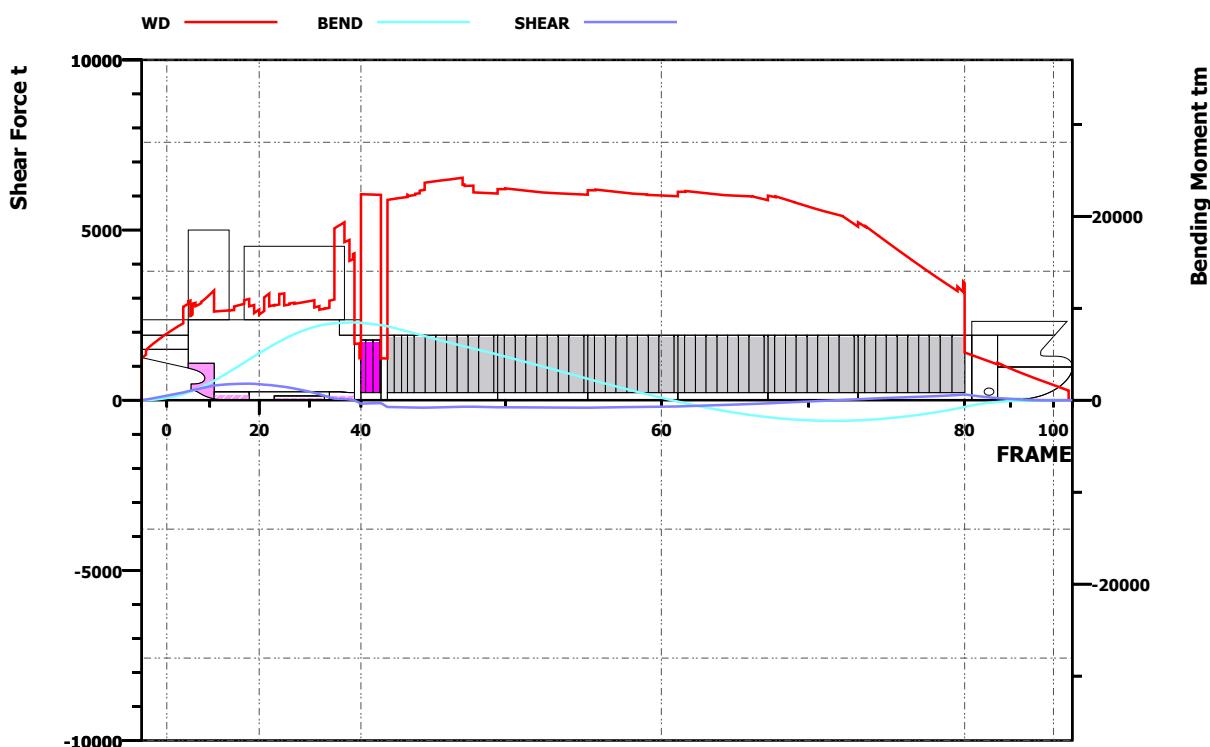
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		10557.52	64.28	6.68	-0.02	17442.79

CONDITION NAME	24.MARPOL ANNEX I REG. 27 (WORST POSSIBLE)										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	-0.012	0.027	0.082	0.171	0.261	0.386	0.511	0.623	0.452	0.077	-0.401
KN (m)	-0.012	0.776	1.574	2.395	3.199	4.017	4.807	6.146	7.033	7.517	7.672
KG0*sin(phi) (m)	0.000	0.749	1.492	2.224	2.938	3.631	4.296	5.522	6.581	7.440	8.073
Area (mrad)	0.000	0.001	0.005	0.019	0.034	0.067	0.101	0.204	0.301	0.350	0.322
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	0.415	OK								
Max GZ value (m)	0.200	0.624	OK								
Heel angle at Max GZ(deg.)	25.000	39.185	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.101	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.103	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.204	OK								
Flooding angle (deg.)	30.000	69.136	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	0.259	-								
Area (A) (m-rad)	-	0.024	-								
Area (B) / Area (A)	1.000	10.734	OK								
Projected area above W.L (m2)	-	1074.263	-								
Z (m)	-	9.766	-								
Steady Heeling level (Lw1) (m)	-	0.036	-								
Gust Heeling level (Lw2) (m)	-	0.054	-								
Theta 1 (degrees)	-	-16.124	-								
Theta 0 (degrees)	-	5.895	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	15.134	5.895	OK								
Rolling period (sec)	-	24.905	-								

CONDITION NAME , 24.MARPOL ANNEX I REG. 27 (WORST POSSIBLE)

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	264	840
11.000	6.600	85.10	429	2114
17.000	10.800	77.57	483	4086
35.000	23.400	133.27	45	8353
39.000	26.200	113.85	-4	8451
40.000	27.100	32.53	-102	8409
41.000	29.900	32.42	-87	8164
42.000	30.800	32.36	-200	8039
43.000	33.600	159.31	-212	7478
49.000	46.180	163.69	-208	4960
55.000	58.760	162.78	-221	2328
61.000	71.340	161.62	-184	-150
67.000	83.920	158.61	-94	-1844
73.000	96.500	137.96	26	-2192
80.000	111.380	90.84	170	-728
81.000	112.380	34.98	141	-568
87.000	115.980	28.95	62	-195

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	485	11.500	18.000
Maximum bending moment (tm)	8451	26.200	39.000
Minimum shear force (t)	-221	58.760	55.000
Minimum bending moment (tm)	-2245	93.221	71.574



CONDITION NAME	25.MARPOL SEGREGATED BALLAST CONDITION					
	<p style="text-align: center;"> <span style="display: inline-block; width: 15px; height: 15px; background-color: #ccc;"></span> CAL              <span style="display: inline-block; width: 15px; height: 15px; background-color: #008000;"></span> WB              <span style="display: inline-block; width: 15px; height: 15px; background-color: #ff00ff;"></span> METHAN              <span style="display: inline-block; width: 15px; height: 15px; background-color: #333;"></span> MGO              <span style="display: inline-block; width: 15px; height: 15px; background-color: #6495ed;"></span> FW              <span style="display: inline-block; width: 15px; height: 15px; background-color: #ff0000;"></span> LO     </p>					
	Sailing State (Free trim)					
Draught at F.P (MLD.)	4.569 (m)	KMT	9.500 (m)			
Draught midship (MLD.)	5.077 (m)	KG (Solid)	6.655 (m)			
Draught at A.P (MLD.)	5.569 (m)	GM (Fluid)	2.847 (m)			
Draught Equivalent (MLD.)	5.053 (m)	GM Corr. (GGo)	0.000 (m)			
Trim (Stern:"-",Bow:"+")	-1.000 (m)	GoM (Fluid)	2.847 (m)			
Heel (Port:"-",Stbd:"+")	0.00 (deg.)	KGo (Fluid)	6.655 (m)			
Displacement	9764.7 tonnes	Free Surface Moment	0.000 (m)			
LCB (from A.P.)	62.641 (m)	MTC	155.47 (tm/Cm)			
LCF (from A.P.)	62.563 (m)	TPC	21.35 (t/Cm)			
Propeller Immersion	114 (%)					
Non visible length	104.7 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
	Weight (ton)	LCG (m)	L-m (t-m)	VCG (m)	V-m (t-m)	TCG (m)
Deadweight	5204.7	73.251	381246.6	4.425	23028.9	0.000
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	9764.7	62.673	611986.9	6.655	64980.9	0.000

CONDITION NAME : 25.MARPOL SEGREGATED BALLAST CONDITION

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1</b>						
No.1 C.O.T.(P)	0.00	0.00	103.30	6.84	-2.91	0.00
No.1 C.O.T.(S)	0.00	0.00	103.42	6.84	2.89	0.00
No.2 C.O.T.(P)	0.00	0.00	90.41	6.76	-4.17	0.00
No.2 C.O.T.(S)	0.00	0.00	90.46	6.76	4.15	0.00
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00
SUBTOTAL		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	0.00	0.00	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	100.00	609.56	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	100.00	573.06	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	100.00	421.03	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	100.00	401.41	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	100.00	387.01	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	100.00	367.40	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	100.00	388.17	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	100.00	368.55	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	100.00	388.16	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	100.00	368.55	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	100.00	477.88	38.43	3.91	-7.18	0.00
NO.6 W.B.T.(S)	100.00	453.90	38.43	4.08	7.56	0.00
SUBTOTAL		5204.69	73.25	4.42	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	0.00	0.00	-0.01	10.85	-5.44	0.00
F.W.T.(S)	0.00	0.00	-0.01	10.85	5.44	0.00
SUBTOTAL		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	0.00	0.00	38.65	14.30	5.50	0.00
METHANOL T.(P)	0.00	0.00	28.50	6.59	-4.21	0.00
METHANOL T.(S)	0.00	0.00	28.50	6.60	4.28	0.00
SUBTOTAL		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	0.00	0.00	24.80	8.92	5.71	0.00
M.G.O.T.(P)	0.00	0.00	24.82	7.19	-6.87	0.00
M.G.O.T.(S)	0.00	0.00	24.83	6.66	7.22	0.00
SUBTOTAL		0.00	0.00	0.00	0.00	0.00

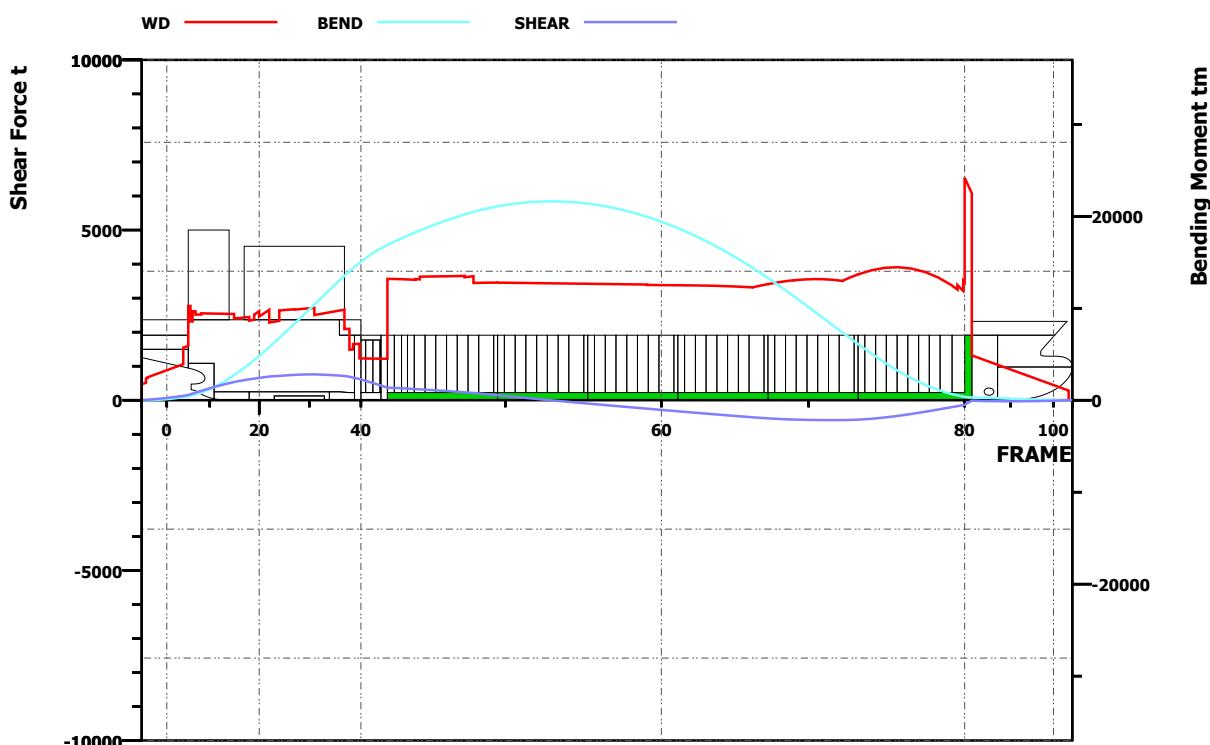
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE	SURFACE MOMENT						
						%	t	m	m	m	tm		
<b>Contents : LO, SG 0.9</b>													
G/E L.O.SET.T.(P)	0.00	0.00	11.51	8.86	-8.24					0.00			
G/E L.O.STOR.T.(P)	0.00	0.00	11.50	8.67	-5.71					0.00			
M/E L.O.SET.T.(P)	0.00	0.00	14.31	8.81	-8.74					0.00			
M/E L.O.SOTR.T.(P)	0.00	0.00	14.30	8.67	-6.06					0.00			
NO.1 CYL.OILT.(P)	0.00	0.00	15.70	8.67	-6.06					0.00			
NO.2 CYL.OILT.(P)	0.00	0.00	15.71	8.77	-8.80					0.00			
R/G L.O.STOR.T.(P)	0.00	0.00	10.11	8.87	-7.78					0.00			
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>					<b>0.00</b>			
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE	SURFACE MOMENT						
						%	t	m	m	tm			
<b>Contents : MIS, SG 1</b>													
C.W.T.	0.00	0.00	5.28	5.43	0.00					0.00			
D/B BILGE H.T.(C)	0.00	0.00	9.46	0.93	0.00					0.00			
D/B G.W. H.T.(P)	0.00	0.00	24.46	0.81	-2.29					0.00			
D/B L.O.SUMP.T.(C)	0.00	0.00	18.50	0.40	0.27					0.00			
D/B MGO OVFL. T.(S)	0.00	0.00	24.48	0.84	3.55					0.00			
D/B OILY BILGE T.(P)	0.00	0.00	19.18	0.95	-3.07					0.00			
D/B S/T L.O.SUMP.T.(S)	0.00	0.00	14.09	1.10	2.37					0.00			
D/B SEWAGE H.T.(S)	0.00	0.00	20.05	0.94	3.21					0.00			
SLUDGE T.(S)	0.00	0.00	19.20	6.42	8.18					0.00			
<b>SUBTOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>					<b>0.00</b>			
									WEIGHT	LCG	VCG	TCG	FREE
									<b>t</b>	<b>m</b>	<b>m</b>	<b>m</b>	<b>SURFACE MOMENT</b>
<b>TOTAL</b>		<b>5204.69</b>		<b>73.25</b>					<b>4.42</b>		<b>0.00</b>		<b>0.00</b>

CONDITION NAME	25.MARPOL SEGREGATED BALLAST CONDITION										
<b>Intact Stability</b>											
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75
GZ (m)	0.000	0.250	0.512	0.812	1.112	1.450	1.787	2.218	2.256	2.035	1.581
KN (m)	0.000	0.830	1.667	2.534	3.388	4.262	5.115	6.496	7.354	7.798	7.835
KG0*sin(phi) (m)	0.000	0.580	1.156	1.722	2.276	2.812	3.327	4.278	5.098	5.763	6.253
Area (mrad)	0.000	0.011	0.044	0.114	0.184	0.311	0.438	0.793	1.188	1.566	1.884
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Min GM value (m)	0.150	2.847	OK								
Max GZ value (m)	0.200	2.279	OK								
Heel angle at Max GZ(deg.)	25.000	45.898	OK								
Area (0 - 30) deg. (m-rad)	0.055	0.438	OK								
Area (30 - 40) deg. (m-rad)	0.030	0.355	OK								
Area (0 - 40) deg. (m-rad)	0.090	0.793	OK								
Flooding angle (deg.)	30.000	87.702	OK								
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>											
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS								
Area (B) (m-rad)	-	1.100	-								
Area (A) (m-rad)	-	0.261	-								
Area (B) / Area (A)	1.000	4.221	OK								
Projected area above W.L (m2)	-	1369.038	-								
Z (m)	-	9.546	-								
Steady Heeling level (Lw1) (m)	-	0.069	-								
Gust Heeling level (Lw2) (m)	-	0.103	-								
Theta 1 (degrees)	-	-23.129	-								
Theta 0 (degrees)	-	1.386	-								
Theta 2 (degrees)	-	50.000	-								
Heeling angle by steady wind(deg)	16.000	1.386	OK								
Rolling period (sec)	-	10.350	-								

CONDITION NAME , 25.MARPOL SEGREGATED BALLAST CONDITION

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	73.12	154	434
11.000	6.600	67.16	386	1422
17.000	10.800	64.13	589	3511
35.000	23.400	68.81	732	12507
39.000	26.200	43.53	655	14484
40.000	27.100	32.37	610	15055
41.000	29.900	32.18	430	16521
42.000	30.800	94.07	368	16882
43.000	33.600	93.64	341	17882
49.000	46.180	91.16	145	21074
55.000	58.760	90.28	-98	21370
61.000	71.340	89.12	-326	18711
67.000	83.920	90.01	-534	13284
73.000	96.500	97.58	-571	6106
80.000	111.380	172.49	-135	366
81.000	112.380	160.49	-13	294
87.000	115.980	27.47	-31	217

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	758	20.600	31.000
Maximum bending moment (tm)	21618	53.605	52.759
Minimum shear force (t)	-585	92.897	71.433
Minimum bending moment (tm)	-1	125.608	103.047



CONDITION NAME	26.[UR-S11] NORMAL BALLAST COND. DEP. - No.6 WBT FULL							
Sailing State (Free trim)								
Draught at F.P (MLD.)	4.369 (m)	KMT	9.430 (m)					
Draught midship (MLD.)	5.619 (m)	KG (Solid)	6.670 (m)					
Draught at A.P (MLD.)	6.829 (m)	GM (Fluid)	2.760 (m)					
Draught Equivalent (MLD.)	5.593 (m)	GM Corr. (GGo)	0.327 (m)					
Trim (Stern:"-",Bow:"+")	-2.460 (m)	GoM (Fluid)	2.433 (m)					
Heel (Port:"-",Stbd:"+")	-0.42 (deg.)	KGo (Fluid)	6.997 (m)					
Displacement	10913.2 tonnes	Free Surface Moment	3566.0 (m)					
LCB (from A.P.)	60.279 (m)	MTC	178.33 (tm/Cm)					
LCF (from A.P.)	60.066 (m)	TPC	22.39 (t/Cm)					
Propeller Immersion	139 (%)							
Non visible length	120.1 (m)							
Conning point	X= 24.05 Z= 28.05 (m)							
Check point	X=126.40 Z= 16.00 (m)							
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)								
Deadweight	6353.2	67.354	427913.3	4.855	30843.1	-0.031		
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000		
Displacement	10913.2	60.354	658653.6	6.670	72795.1	-0.018		

CONDITION NAME : 26.[UR-S11] NORMAL BALLAST COND. DEP. - No.6 WBT FULL

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : CAL, SG 1</b>						
No.1 C.O.T.(P)	0.00	0.00	103.30	6.84	-2.91	0.00
No.1 C.O.T.(S)	0.00	0.00	103.42	6.84	2.89	0.00
No.2 C.O.T.(P)	0.00	0.00	90.41	6.76	-4.17	0.00
No.2 C.O.T.(S)	0.00	0.00	90.46	6.76	4.15	0.00
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : WB, SG 1.025</b>						
F.P.T.(C)	100.00	227.72	119.53	3.89	0.00	0.00
NO.1 W.B.T.(P)	100.00	609.56	104.66	5.63	-5.41	0.00
NO.1 W.B.T.(S)	100.00	573.06	104.52	5.82	5.76	0.00
NO.2 W.B.T.(P)	100.00	421.03	90.28	4.36	-7.15	0.00
NO.2 W.B.T.(S)	100.00	401.41	90.29	4.54	7.50	0.00
NO.3 W.B.T.(P)	100.00	387.01	77.63	3.86	-7.24	0.00
NO.3 W.B.T.(S)	100.00	367.40	77.63	4.03	7.62	0.00
NO.4 W.B.T.(P)	100.00	388.17	65.05	3.83	-7.25	0.00
NO.4 W.B.T.(S)	100.00	368.55	65.05	3.99	7.64	0.00
NO.5 W.B.T.(P)	100.00	388.16	52.47	3.83	-7.25	0.00
NO.5 W.B.T.(S)	100.00	368.55	52.47	3.99	7.64	0.00
NO.6 W.B.T.(P)	100.00	477.88	38.43	3.91	-7.18	1526.60
NO.6 W.B.T.(S)	100.00	453.90	38.43	4.08	7.56	1106.58
<b>SUBTOTAL</b>		5432.41	75.19	4.40	0.00	2633.18
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : FW, SG 1</b>						
F.W.T.(P)	100.00	88.57	-0.01	10.85	-5.44	147.78
F.W.T.(S)	100.00	88.57	-0.01	10.85	5.44	147.78
<b>SUBTOTAL</b>		177.13	-0.01	10.85	0.00	295.57
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : METHAN, SG 0.796</b>						
METHANOL SERV.T.(S)	98.00	28.77	38.65	14.27	5.50	9.35
METHANOL T.(P)	98.00	179.35	28.50	6.50	-4.24	152.91
METHANOL T.(S)	98.00	176.43	28.50	6.50	4.31	146.38
<b>SUBTOTAL</b>		384.55	29.26	7.08	0.41	308.64
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MGO, SG 0.85</b>						
M.G.O. SERV.T.(S)	98.00	19.02	24.80	8.88	5.71	1.73
M.G.O.T.(P)	98.00	81.06	24.82	7.11	-6.86	23.27
M.G.O.T.(S)	98.00	62.04	24.83	6.57	7.20	21.41
<b>SUBTOTAL</b>		162.12	24.82	7.11	0.00	46.41

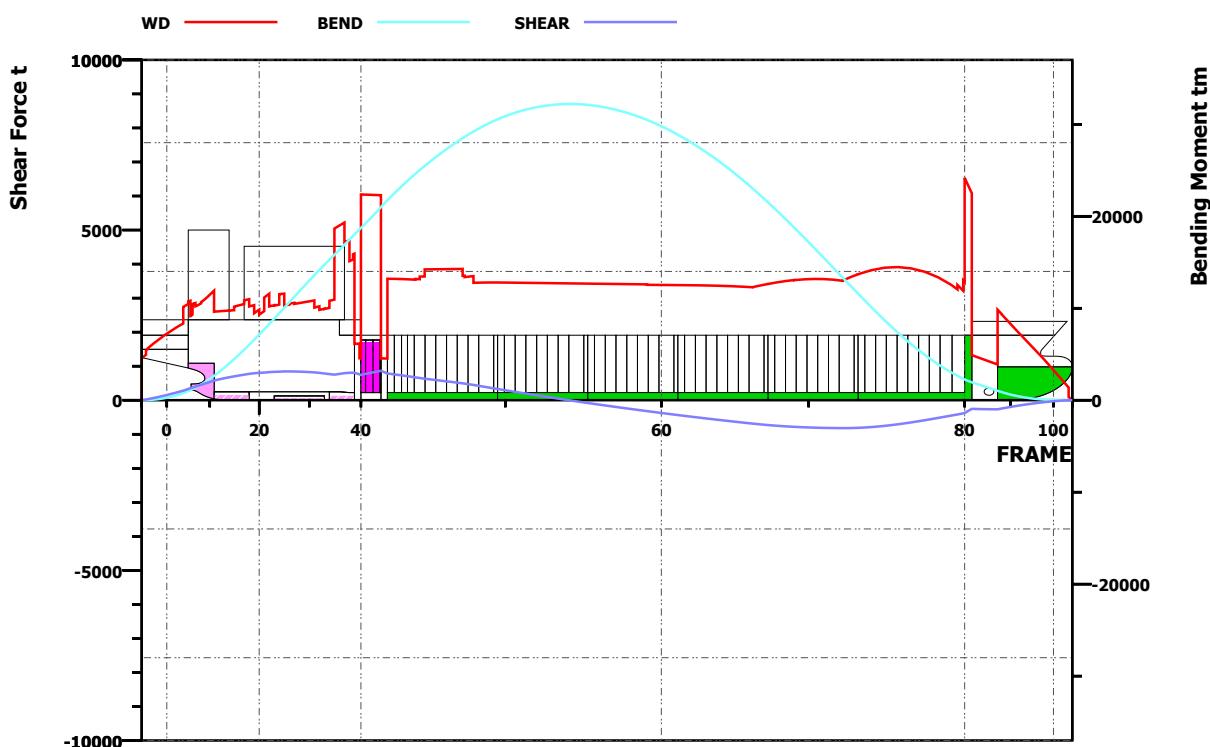
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	65.00	8.08	11.51	8.29	-8.11	4.59
G/E L.O.STOR.T.(P)	65.00	5.84	11.50	8.06	-5.71	0.92
M/E L.O.SET.T.(P)	65.00	7.19	14.31	8.23	-8.66	2.72
M/E L.O.SOTR.T.(P)	65.00	7.79	14.30	8.06	-6.06	2.17
NO.1 CYL.OILT.(P)	65.00	7.79	15.70	8.06	-6.06	2.17
NO.2 CYL.OILT.(P)	65.00	7.57	15.71	8.18	-8.73	2.82
R/G L.O.STOR.T.(P)	65.00	9.33	10.11	8.30	-7.63	7.33
<b>SUBTOTAL</b>		53.61	13.25	8.18	-7.33	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	50.00	9.39	9.53	0.58	0.00	17.36
D/B G.W. H.T.(P)	50.00	18.14	24.50	0.44	-1.98	148.15
D/B L.O.SUMP.T.(C)	50.00	1.49	18.50	0.20	0.27	0.09
D/B MGO OVFL. T.(S)	50.00	11.71	24.54	0.47	3.26	49.73
D/B OILY BILGE T.(P)	50.00	7.33	19.24	0.61	-2.85	11.78
D/B S/T L.O.SUMP.T.(S)	50.00	0.95	14.12	0.83	2.27	0.32
D/B SEWAGE H.T.(S)	50.00	10.58	20.14	0.59	2.98	20.94
SLUDGE T.(S)	50.00	3.06	19.20	6.17	8.18	1.12
<b>SUBTOTAL</b>		94.56	15.27	2.36	0.43	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	2.84	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		48.86	41.31	9.57	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		6353.23	67.35	4.85	-0.03	3566.02

CONDITION NAME		26.[UR-S11] NORMAL BALLAST COND. DEP. - No.6 WBT FULL										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.018	0.195	0.417	0.671	0.925	1.239	1.553	1.965	1.974	1.704	1.243	
KN (m)	-0.018	0.805	1.632	2.482	3.318	4.196	5.051	6.462	7.334	7.764	7.818	
KG0*sin(phi) (m)	0.000	0.610	1.215	1.811	2.393	2.957	3.499	4.498	5.360	6.060	6.575	
Area (mrad)	0.000	0.008	0.034	0.092	0.149	0.258	0.366	0.678	1.027	1.351	1.611	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	2.433	OK									
Max GZ value (m)	0.200	2.014	OK									
Heel angle at Max GZ(deg.)	25.000	45.051	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.366	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.312	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.678	OK									
Flooding angle (deg.)	30.000	79.973	OK									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.953	-									
Area (A) (m-rad)	-	0.191	-									
Area (B) / Area (A)	1.000	4.994	OK									
Projected area above W.L (m2)	-	1308.376	-									
Z (m)	-	9.453	-									
Steady Heeling level (Lw1) (m)	-	0.058	-									
Gust Heeling level (Lw2) (m)	-	0.087	-									
Theta 1 (degrees)	-	-21.582	-									
Theta 0 (degrees)	-	1.794	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	16.000	1.794	OK									
Rolling period (sec)	-	10.905	-									

CONDITION NAME , 26.[UR-S11] NORMAL BALLAST COND. DEP. - No.6 WBT FULL

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	330	994
11.000	6.600	85.10	576	2648
17.000	10.800	77.56	750	5486
35.000	23.400	133.31	750	15802
39.000	26.200	113.79	806	18023
40.000	27.100	32.53	743	18727
41.000	29.900	32.42	863	20996
42.000	30.800	94.32	785	21743
43.000	33.600	93.89	705	23848
49.000	46.180	91.40	329	30539
55.000	58.760	90.53	-82	32108
61.000	71.340	89.37	-437	28868
67.000	83.920	90.25	-731	21518
73.000	96.500	97.82	-812	11592
80.000	111.380	172.74	-378	2257
81.000	112.380	160.74	-255	1947
87.000	115.980	70.29	-268	1021

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	863	29.893	40.998
Maximum bending moment (tm)	32202	56.203	53.888
Minimum shear force (t)	-821	94.520	72.139
Minimum bending moment (tm)	-4	125.428	102.746



CONDITION NAME	27.[UR-S11] NORMAL BALLAST COND. ARR. - No.6 WBT EMPTY					
Sailing State (Free trim)						
Draught at F.P (MLD.)	5.175 (m)	KMT	9.490 (m)			
Draught midship (MLD.)	4.827 (m)	KG (Solid)	6.793 (m)			
Draught at A.P (MLD.)	4.490 (m)	GM (Fluid)	2.697 (m)			
Draught Equivalent (MLD.)	4.847 (m)	GM Corr. (GGo)	0.382 (m)			
Trim (Stern:"-",Bow:"+")	0.685 (m)	GoM (Fluid)	2.315 (m)			
Heel (Port:"-",Stbd:"+")	-0.27 (deg.)	KGo (Fluid)	7.175 (m)			
Displacement	9331.1 tonnes	Free Surface Moment	3566.0 (m)			
LCB (from A.P.)	65.327 (m)	MTC	146.12 (tm/Cm)			
LCF (from A.P.)	63.839 (m)	TPC	20.87 (t/Cm)			
Propeller Immersion	91.8 (%)					
Non visible length	87.56 (m)					
Conning point	X= 24.05 Z= 28.05 (m)					
Check point	X=126.40 Z= 16.00 (m)					
Weight (ton) LCG (m) L-m (t-m) VCG (m) V-m (t-m) TCG (m)						
Deadweight	4771.1	79.355	378607.2	4.492	21429.8	-0.022
Lightweight	4560.0	50.601	230740.3	9.200	41952.0	0.000
Displacement	9331.1	65.303	609347.5	6.793	63381.8	-0.011

CONDITION NAME : 27.[UR-S11] NORMAL BALLAST COND. ARR. - No.6 WBT EMPTY

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						tm	
<b>Contents : CAL, SG 1</b>							
No.1 C.O.T.(P)	0.00	0.00	103.30	6.84	-2.91	0.00	
No.1 C.O.T.(S)	0.00	0.00	103.42	6.84	2.89	0.00	
No.2 C.O.T.(P)	0.00	0.00	90.41	6.76	-4.17	0.00	
No.2 C.O.T.(S)	0.00	0.00	90.46	6.76	4.15	0.00	
No.3 C.O.T.(P)	0.00	0.00	77.95	6.69	-4.50	0.00	
No.3 C.O.T.(S)	0.00	0.00	77.99	6.69	4.47	0.00	
No.4 C.O.T.(P)	0.00	0.00	65.37	6.69	-4.50	0.00	
No.4 C.O.T.(S)	0.00	0.00	65.42	6.69	4.48	0.00	
No.5 C.O.T.(P)	0.00	0.00	52.79	6.69	-4.50	0.00	
No.5 C.O.T.(S)	0.00	0.00	52.84	6.69	4.48	0.00	
No.6 C.O.T.(P)	0.00	0.00	40.27	6.74	-4.46	0.00	
No.6 C.O.T.(S)	0.00	0.00	40.32	6.74	4.43	0.00	
SLOP T.(P)	0.00	0.00	32.42	6.91	-4.12	0.00	
SLOP T.(S)	0.00	0.00	32.43	6.92	4.21	0.00	
<b>SUBTOTAL</b>		0.00	0.00	0.00	0.00	0.00	
<b>COMPARTMENTS</b>							
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						tm	
<b>Contents : WB, SG 1.025</b>							
F.P.T.(C)	100.00	227.72	119.53	3.89	0.00	0.00	
NO.1 W.B.T.(P)	100.00	609.56	104.66	5.63	-5.41	0.00	
NO.1 W.B.T.(S)	100.00	573.06	104.52	5.82	5.76	0.00	
NO.2 W.B.T.(P)	100.00	421.03	90.28	4.36	-7.15	0.00	
NO.2 W.B.T.(S)	100.00	401.41	90.29	4.54	7.50	0.00	
NO.3 W.B.T.(P)	100.00	387.01	77.63	3.86	-7.24	0.00	
NO.3 W.B.T.(S)	100.00	367.40	77.63	4.03	7.62	0.00	
NO.4 W.B.T.(P)	100.00	388.17	65.05	3.83	-7.25	0.00	
NO.4 W.B.T.(S)	100.00	368.55	65.05	3.99	7.64	0.00	
NO.5 W.B.T.(P)	100.00	388.16	52.47	3.83	-7.25	0.00	
NO.5 W.B.T.(S)	100.00	368.55	52.47	3.99	7.64	0.00	
NO.6 W.B.T.(P)	0.00	0.00	38.43	3.91	-7.18	1526.60	
NO.6 W.B.T.(S)	0.00	0.00	38.43	4.08	7.56	1106.58	
<b>SUBTOTAL</b>		4500.63	82.80	4.49	0.00	2633.18	
<b>COMPARTMENTS</b>							
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						tm	
<b>Contents : FW, SG 1</b>							
F.W.T.(P)	10.00	8.86	0.15	9.70	-5.03	147.78	
F.W.T.(S)	10.00	8.86	0.15	9.70	5.03	147.78	
<b>SUBTOTAL</b>		17.71	0.15	9.70	0.00	295.57	
<b>COMPARTMENTS</b>							
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						tm	
<b>Contents : METHAN, SG 0.796</b>							
METHANOL SERV.T.(S)	10.00	2.94	38.65	13.08	5.50	9.35	
METHANOL T.(P)	10.00	18.30	28.50	2.11	-3.05	152.91	
METHANOL T.(S)	10.00	18.00	28.50	2.12	3.12	146.38	
<b>SUBTOTAL</b>		39.24	29.26	2.94	0.42	308.64	
<b>COMPARTMENTS</b>							
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE SURFACE MOMENT	
						tm	
<b>Contents : MGO, SG 0.85</b>							
M.G.O. SERV.T.(S)	10.00	1.94	24.80	7.12	5.72	1.73	
M.G.O.T.(P)	10.00	8.27	24.90	3.21	-5.81	23.27	
M.G.O.T.(S)	10.00	6.33	24.91	3.03	5.73	21.41	
<b>SUBTOTAL</b>		16.54	24.89	3.60	-0.04	46.41	

COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : LO, SG 0.9</b>						
G/E L.O.SET.T.(P)	30.00	3.73	11.52	7.65	-7.91	4.59
G/E L.O.STOR.T.(P)	30.00	2.70	11.50	7.44	-5.71	0.92
M/E L.O.SET.T.(P)	30.00	3.32	14.31	7.59	-8.52	2.72
M/E L.O.SOTR.T.(P)	30.00	3.60	14.30	7.45	-6.06	2.17
NO.1 CYL.OILT.(P)	30.00	3.60	15.70	7.45	-6.06	2.17
NO.2 CYL.OILT.(P)	30.00	3.50	15.71	7.55	-8.62	2.82
R/G L.O.STOR.T.(P)	30.00	4.31	10.12	7.66	-7.38	7.33
<b>SUBTOTAL</b>		24.74	13.25	7.55	-7.22	22.72
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MIS, SG 1</b>						
C.W.T.	100.00	31.92	5.28	5.43	0.00	0.00
D/B BILGE H.T.(C)	75.00	14.08	9.48	0.76	0.00	17.36
D/B G.W. H.T.(P)	75.00	27.21	24.50	0.63	-2.16	148.15
D/B L.O.SUMP.T.(C)	75.00	2.23	18.50	0.30	0.27	0.09
D/B MGO OVFL. T.(S)	75.00	17.56	24.53	0.66	3.43	49.73
D/B OILY BILGE T.(P)	75.00	11.00	19.20	0.79	-2.97	11.78
D/B S/T L.O.SUMP.T.(S)	75.00	1.42	14.10	0.97	2.33	0.32
D/B SEWAGE H.T.(S)	75.00	15.87	20.09	0.77	3.11	20.94
SLUDGE T.(S)	75.00	4.59	19.20	6.30	8.18	1.12
<b>SUBTOTAL</b>		125.88	16.51	2.10	0.47	249.49
COMPARTMENTS	FILLING RATIO	WEIGHT	LCG	VCG	TCG	FREE
						SURFACE MOMENT
%		t	m	m	m	tm
<b>Contents : MASS, SG 1</b>						
CREW & EFFECTS	0.00	3.47	18.50	21.05	0.00	0.00
E/R SMALL TANKS	0.00	15.00	14.70	10.50	0.00	10.00
PROVISION(DEP.)	0.00	0.28	14.60	13.10	0.00	0.00
STORE & SPARES	0.00	14.90	47.41	12.80	0.00	0.00
WATER IN PIPE LINE	0.00	12.65	77.95	0.73	0.00	0.00
<b>SUBTOTAL</b>		46.30	42.79	9.38	0.00	10.00
		WEIGHT	LCG	VCG	TCG	FREE
		t	m	m	m	SURFACE MOMENT
<b>TOTAL</b>		4771.05	79.36	4.49	-0.02	3566.02

CONDITION NAME		27.[UR-S11] NORMAL BALLAST COND. ARR. - No.6 WBT EMPTY										
<b>Intact Stability</b>												
Heel angle (deg.)	0	5	10	15	20	30	40	50	60	70	75	
GZ (m)	-0.011	0.193	0.410	0.670	0.930	1.217	1.505	1.836	1.786	1.511	1.022	
KN (m)	-0.011	0.818	1.656	2.527	3.384	4.250	5.092	6.448	7.282	7.724	7.764	
KG0*sin(phi) (m)	0.000	0.625	1.246	1.857	2.454	3.032	3.587	4.612	5.496	6.213	6.742	
Area (mrad)	0.000	0.008	0.034	0.092	0.149	0.256	0.363	0.660	0.980	1.271	1.495	
<b>Applied Rule : 2008 IS Code Part A Chapter 2.2</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Min GM value (m)	0.150	2.315	OK									
Max GZ value (m)	0.200	1.855	OK									
Heel angle at Max GZ(deg.)	25.000	43.148	OK									
Area (0 - 30) deg. (m-rad)	0.055	0.363	OK									
Area (30 - 40) deg. (m-rad)	0.030	0.297	OK									
Area (0 - 40) deg. (m-rad)	0.090	0.660	OK									
Flooding angle (deg.)	30.000	-	-									
<b>Applied Rule : 2008 IS Code Part A Chapter 2.3</b>												
ITEM	REQUIRED VALUE	ATTAINED VALUE	STATUS									
Area (B) (m-rad)	-	0.886	-									
Area (A) (m-rad)	-	0.204	-									
Area (B) / Area (A)	1.000	4.349	OK									
Projected area above W.L (m2)	-	1390.221	-									
Z (m)	-	9.747	-									
Steady Heeling level (Lw1) (m)	-	0.075	-									
Gust Heeling level (Lw2) (m)	-	0.112	-									
Theta 1 (degrees)	-	-22.345	-									
Theta 0 (degrees)	-	2.112	-									
Theta 2 (degrees)	-	50.000	-									
Heeling angle by steady wind(deg)	16.000	2.112	OK									
Rolling period (sec)	-	11.621	-									

CONDITION NAME , 27.[UR-S11] NORMAL BALLAST COND. ARR. - No.6 WBT EMPTY

FRAME_NO.	FROM_A.P.	WD	SHEAR_FORCE	BEND.MOMENT
#	m	t/m	t	tm
5.000	3.000	76.81	173	460
11.000	6.600	85.10	441	1550
17.000	10.800	73.45	683	3917
35.000	23.400	86.52	1063	15397
39.000	26.200	65.79	1083	18422
40.000	27.100	32.53	1051	19381
41.000	29.900	32.42	948	22178
42.000	30.800	32.36	899	23007
43.000	33.600	32.16	737	25296
49.000	46.180	91.40	-68	29622
55.000	58.760	90.53	-212	27865
61.000	71.340	89.37	-387	24106
67.000	83.920	90.25	-590	17939
73.000	96.500	97.82	-668	9792
80.000	111.380	172.74	-311	1970
81.000	112.380	160.74	-194	1716
87.000	115.980	70.29	-228	942

LONGITUDINAL STRENGTH	VALUE	FROM A.P.	FRAME NO.
Maximum shear force (t)	1092	25.500	38.000
Maximum bending moment (tm)	29657	45.162	48.557
Minimum shear force (t)	-672	95.170	72.422
Minimum bending moment (tm)	0	-3.179	-5.298

