

# SHIP EQUIPMENT

## HOSE HANDLING CRANES (NORLIFT)

- Two (2) Hydraulic type, each capacity of S.W.L. 15 tonnes max. Working radius 16.8 m and max outreach 6.4 m from the ship's side.

## BOW MOORING/LOADING EQUIPMENT (PUSNES)

- Chain Stopper : One (1) Hydraulic self-locking type. Max. tension force 500 tonnes, chain dim. 83 mm
- Mooring Winch : One (1) Twin drum traction type. Pulling capacity of 70 tonnes at 7 m/min
- Storage Unit : Storage capacity of 500 m 100 mm dia. Rope
- Loading Manifold : One (1) Single Probe type 20"
- Hose Handling Winch : One (1) Double drum. Pulling capacity of 25 tonnes
- Service Crane : One (1) Hydraulic jib type. Capacity of 5.0 tonnes, working radius 9 m

## STEERING GEARS (PORSGRUND - AKER)

- Two (2) Electro – Hydraulic, Rotary Vane type

## RUDDERS

- Two (2) sets Becker Flap type

## THRUSTERS (ULSTEIN)

- Forward – Two (2) sets C.P.P. type. Capacity of 2,100 kW each
- AFT – Two (2) sets C.P.P. type. Capacity of 1,200 kW each

## WINDLASSES (PUSNES)

- Two (2) Hydraulic high pressure type s(combined with 2 Mooring Drums). Capacity of 45 tonnes 9 m/min

## WINCHES (PUSNES)

- Eight (8) Hydraulic high pressure type. Capacity of 20 tonnes, 15 m/min. each 2 drums

## HELICOPTER DECK

- One (1) Designed for a "EH101" type Helicopter

## PROVISION CRANES (NORLIFT)

- One (1) Electro – Hydraulic. Capacity of 5 tonnes \* 10 m radius (starboard side)
- One (1) Electro – Hydraulic. Capacity of 2 tonnes \* 10 m radius (port side)

# PUMPS

## CARGO PUMPS (SHINKO)

- Two (2) Two speed electric motor driven and one(1) steam driven vertical centrifugal type.  
Capacity of 4,000 m<sup>3</sup>/h x 150 mLC(S.G.: 0.82)

## BALLAST PUMPS (SHINKO)

- Two (2) Electric motor driven vertical centrifugal type. Capacity of 2,500 m<sup>3</sup>/h x 25 mWC

## CRUDE OIL WASHING PUMP (SHINKO)

- One (1) Electric motor driven vertical centrifugal type. Capacity of 1,000 m<sup>3</sup>/h x 150 mLC(S.G.:0.82)

## CARGO STRIPPING PUMP (SHINKO)

- One (1) Steam driven vertical reciprocating type. Capacity of 300 m<sup>3</sup>/h x 150 mLC(S.G.:0.82)

# MACHINERY

## MAIN ENGINES

- Two(2) SAMSUNG MAN B&W, Type 7S50MC
- MCR: 12,700 BHP \* 118.8 RPM (Each)
- CSR: 11,430 BHP, 90 % of MCR (Each)
- 7 cylinders, 2 stroke, single acting, non-reversible, crosshead, turbo-charged

### **AUX. ENGINES**

- Two (2) Ssangyong-MAN-B&W, type 7L32/40 - 4285 BHP at 720 RPM, 3000 kW Alternator - ABB
- Two (2) Ssangyong-MAN-B&W, type 6L32/40 - 3000 BHP at 720 RPM, 2250 kW Alternator - ABB

### **EMERGENCY DIESEL ENGINE**

- One (1) MAN-DEMP, type D2842LE, 449 BHP \* 1,800 RPM, 400 kW Alternator

### **PROPELLERS**

- Two (2) sets, Ulstein Controllable Pitch Propeller, four (4) blades
- Diameter, 6,000 mm
- Direction of rotation : Outboard
- Material : Ni-Al-Bronze

### **OIL FIRED BOILER**

- Two(2) MITSUBISHI type MAC-25B
- Each capacity of 25,000 kg/h \* 16 kg/cm<sup>2</sup>

### **EXHAUST GAS ECONOMIZER**

- Not provided

### **INERT GAS PLANT**

- One (1) set Aalborg Sunrod, boiler flue gas type with (2) inert gas fans, each capacity 16,250 Nm<sup>3</sup>/h

### **FRESH WATER GENERATOR**

- Two (2) sets Nirex, Plate type. Each capacity of 30 tonnes/day

## **NAVIGATION AND COMMUNICATION EQUIPMENT**

### **RADAR PLANT**

- One (1) set, S-Band with ARPA, Kongsberg Norcontrol DB1028
- One (1) set, X-Band with ARPA, Kongsberg Norcontrol DB1028
- One (1) X-Band scanner on foremast, Kelvin Hughes

### **MARINE NAVIGATION SYSTEM**

- Two (2) sets, GPS, Leica MX412B
- One (1) set, LORAN-C, Furuno LC90 MKII
- One (1) set, Integrated Navigation System, Kongsberg Norcontrol

### **GYRO COMPASS**

- Three (3) sets, C-Plath Navigat X MKI

### **ECHO SOUNDER**

- One (1) set, Skipper GDS 101, with 2 transducers, one fwd. and one aft.

### **AUTO PILOT**

- One (1) set, Kongsberg Simrad

### **DYNAMIC POSITIONING SYSTEM, Kongsberg Simrad**

- One (1) set, dual redundant SDP 22
- One (1) set, SDP 12 (Joystick back-up system)
- Two (2) sets, DP Operator Stations

*The DP system is interfaced to the following environmental sensors:*

- Three (3) C-Plath gyro compasses

- Two (2) MRU 2
- Two (2) Deif windsensors
- Four (4) Draft sensors

*DP Position Reference Systems available for use are:*

- One (1) Artemis MK IV (Antenna located in top of fore mast)
- One (1) Kongsberg Simrad OLS 410 HPR System
- Two (2) Seatex DARPS 100

*The DP system controls the following propellers/rudders:*

- Two (2) CPP tunnel thrusters forward (ULSTEIN)
- Two (2) CPP tunnel thrusters aft (ULSTEIN)
- Two (2) CPP Main propellers (ULSTEIN)
- Two (2) High Lift Rudders (BECKER)

### **SPEED LOG**

- One (1) set, Doppler speed log (dual axis), Consillium SAL 860

### **WEATHER FACSIMILE RECORDER**

- One (1) set, JRC JAX90

### **NAVTEX RECEIVER**

- One (1) set, JRC NCR300

### **RADIO STATION (Kongsberg Norcontrol)**

- In accordance with Requirements for GMDSS - Radio station

# MAIN DIMENSIONS

Length overall	:	271.8 M	–	891'	8 3/4"
Length between perpendicular	:	258.0 M	–	846'	5 1/2"
Breadth moulded	:	46.0 M	–	150'	11 0"
Depth moulded	:	22.6 M	–	74'	1 3/4"
Designed draft (moulded)	:	14.8 M	–	48'	6 3/4"
Draft on summer freeboard (moulded)	:	15.3 M	–	50'	2 1/4"
Height from keel to top of highest mast/antenna	:	50.9 M	–	167'	0"
Lightship displacement	:	27,870.1 Tonnes			
Deadweight at summer draft	:	125,826.8 Tonnes			
Service speed	:	14.8 Knots			
Cruising range	:	12,000 S.M.			

# TONNAGE

	International	Suez
<b>Gross Tonnage</b>	76,567	77,651
<b>Net Tonnage</b>	34,691	69,455

# CLASS

American Bureau Shipping  
 ✕A1 (E) Oil Carrier SH DLA; ICE CLASS IC; ✕AMS; ✕ACCU; DPS-2

# MANIFOLD

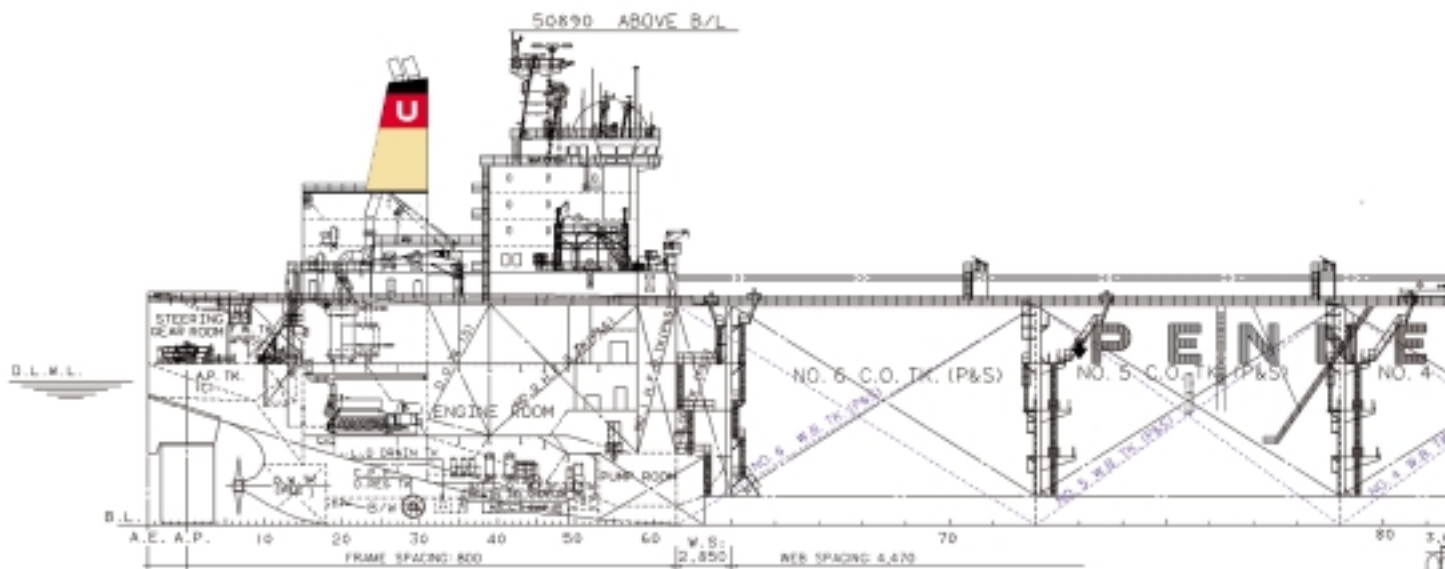
Distance from bow to centre of manifold	:	133.91 M – (439' 4")
Distance from stern to centre of manifold	:	137.89 M
Distance from cargo manifold to side of vessel	:	4.60 M
Centre height of cargo manifold above deck	:	2.10 M
No. and diam. of cargo manifold connections	:	Three (3) – ANSI 16"
Cargo reducers	:	16" x 16" – 6 pieces
	:	16" x 12" – 3 pieces
	:	16" x 10" – 3 pieces
	:	16" x 8" – 3 pieces
No. and diam. of Vapour return Connections	:	Two (2) – ANSI 18"
Vapour reducers	:	18" x 16" – 4 pieces
	:	18" x 12" – 2 pieces

# CARGO VAPOUR EMISSION CONTROL SYSTEM

In accordance with ABS «Guide for Cargo Vapor Emission Control System on Board Tank Vessels» as of the 1991 Edition and the vessel's provisions for the applicable portions of the United States Code of Federal Regulations (CFR) Title 46, part 39 pertaining to Vapour Emission Control Systems applicable to Oil Carriers during cargo transfer operations.



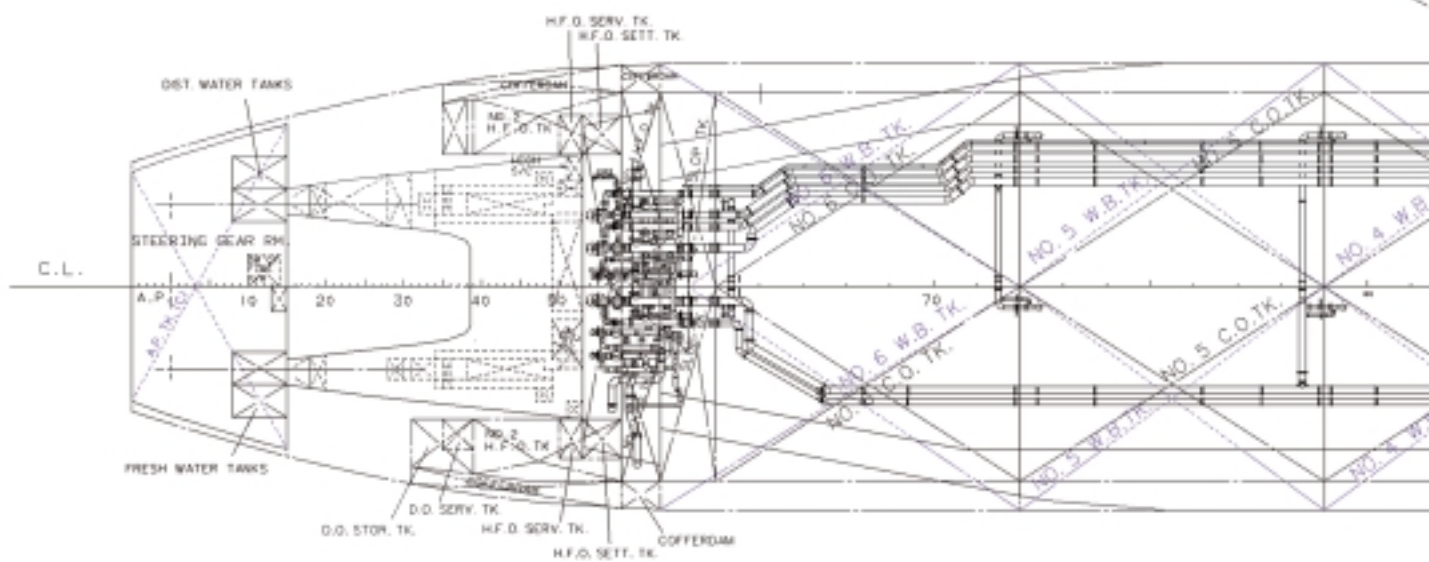
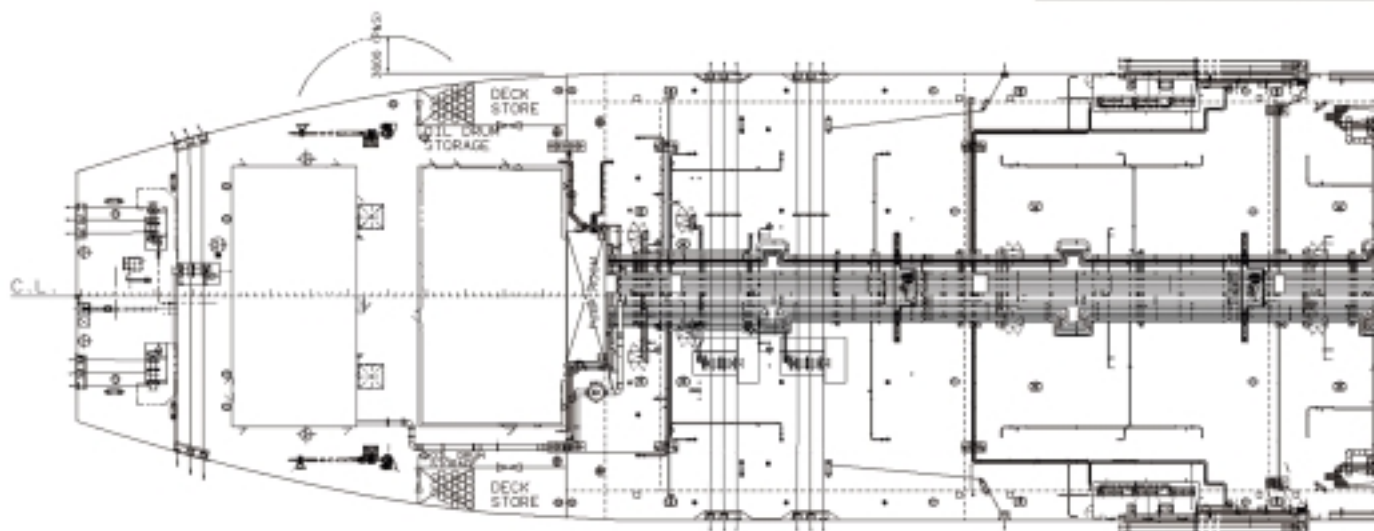
<b>FLAG:</b>	CANADIAN
<b>PORT OF REGISTRY:</b>	ST. JOHN'S, NEWFOUNDLAND
<b>CALL SIGN:</b>	V C Z J
<b>OFFICIAL NO.</b>	820794
<b>IMO NO.</b>	9216389
<b>COMMUNICATION:</b>	SATELLITE «B»:   Voice   331 600 228 Fax     331 600 230 Telex  331 600 232 V N L D SATELLITE «C»: # 1 Telex 431 600 228 # 2 Telex 431 600 229 MMSI NUMBER (DSC)   316 002 280
<b>OWNER:</b>	PENNEY UGLAND II INC.
<b>MANAGER:</b>	CANSHIP UGLAND LTD. P.O. BOX 8274, STN «A» 1315 TOPSAIL ROAD, ST. JOHN'S, NEWFOUNDLAND, CANADA A1B 3N4 Telephone:                   (709) 782 3333 Telefax:                     (709) 782 0225 E-mail:                       cul@canship.com
<b>BUILDER:</b>	SAMSUNG HEAVY INDUSTRIES CO., LTD., HN 1293
<b>BUILT:</b>	2000
<b>DESCRIPTION:</b>	The vessel is a twin skeg, twin screw SHUTTLE TANKER with 12 cargo tanks, 2 slop tanks, 13 segregated ballast tanks and bow loading system on the forecastle deck.

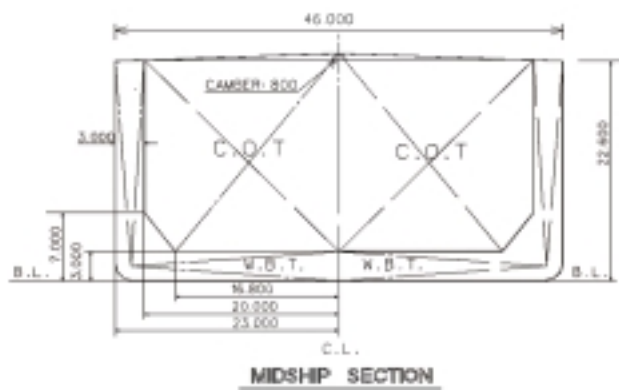


DISTANCE FROM A.E. TO 1/2 L.O.A. = 137.89

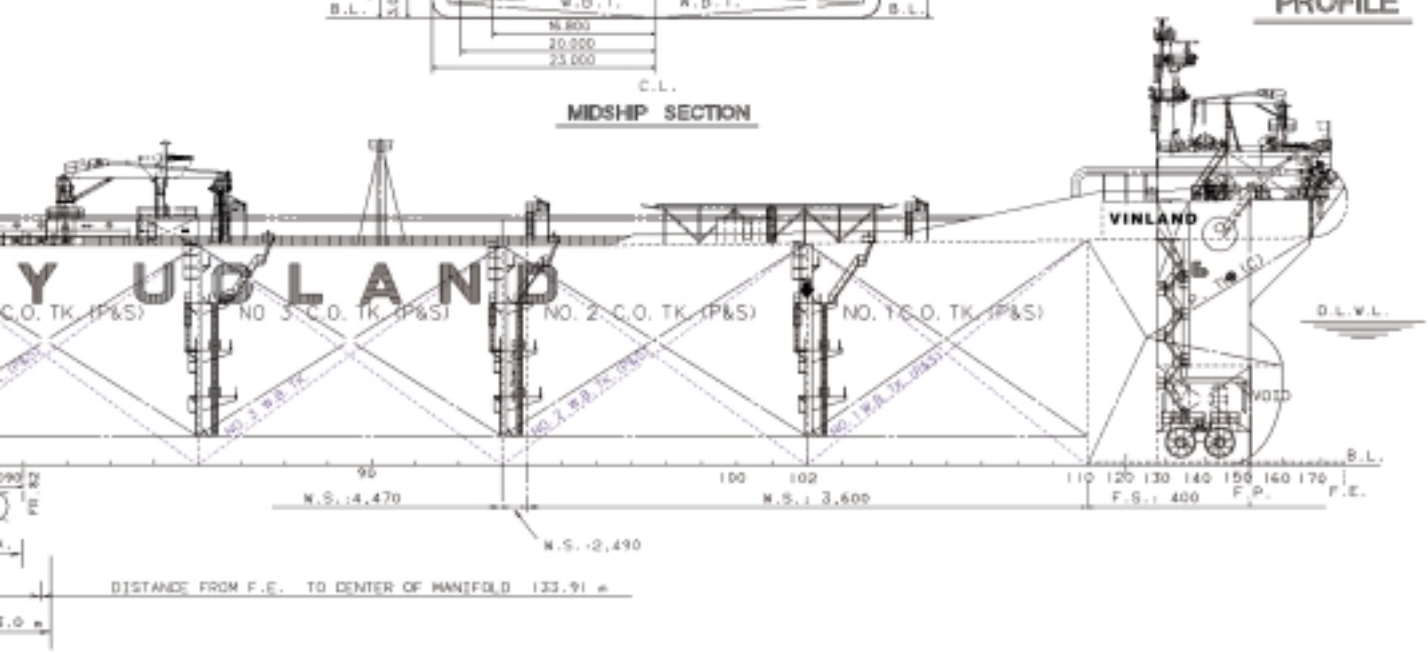
DISTANCE FROM A.E. TO CENTER OF MANIFOLD = 137.89

DISTANCE FROM A.E. TO 1/2 L.O.A. = 137.89

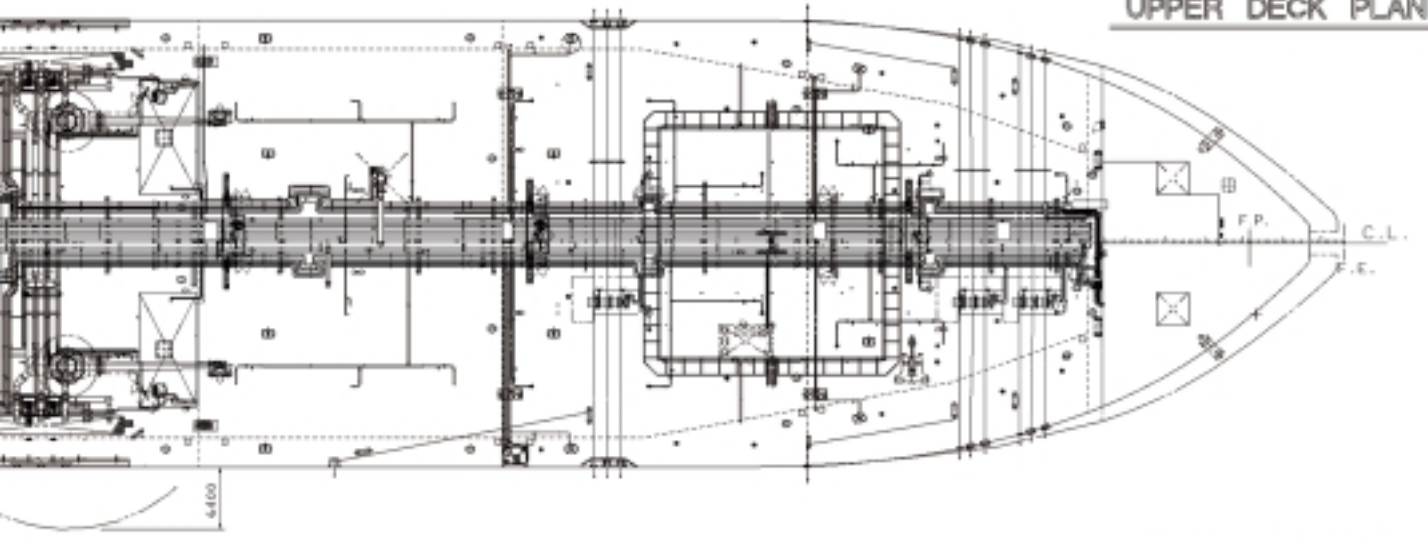




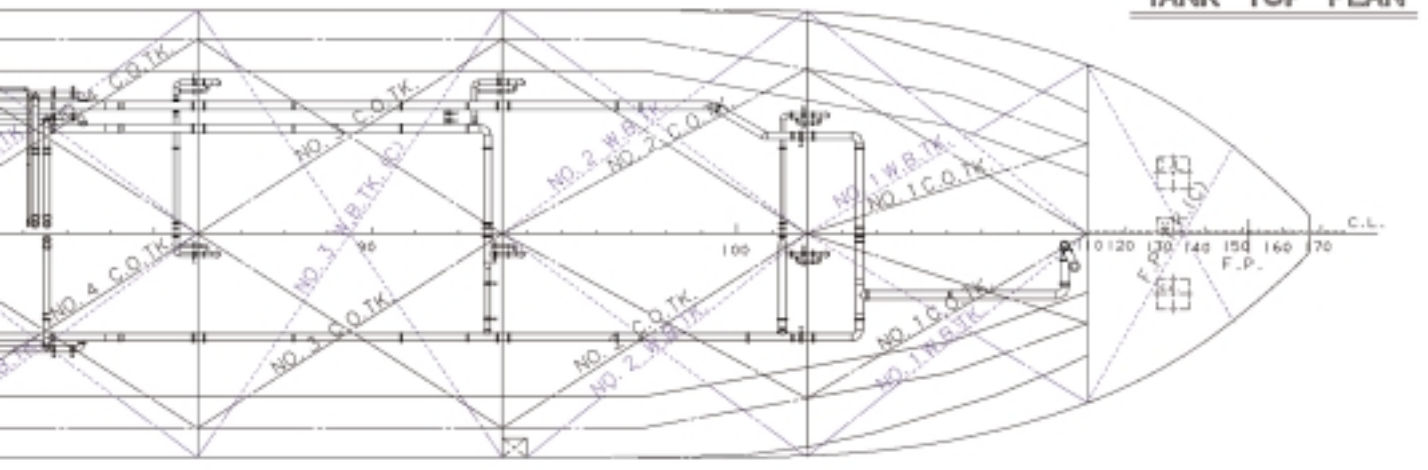
**PROFILE**



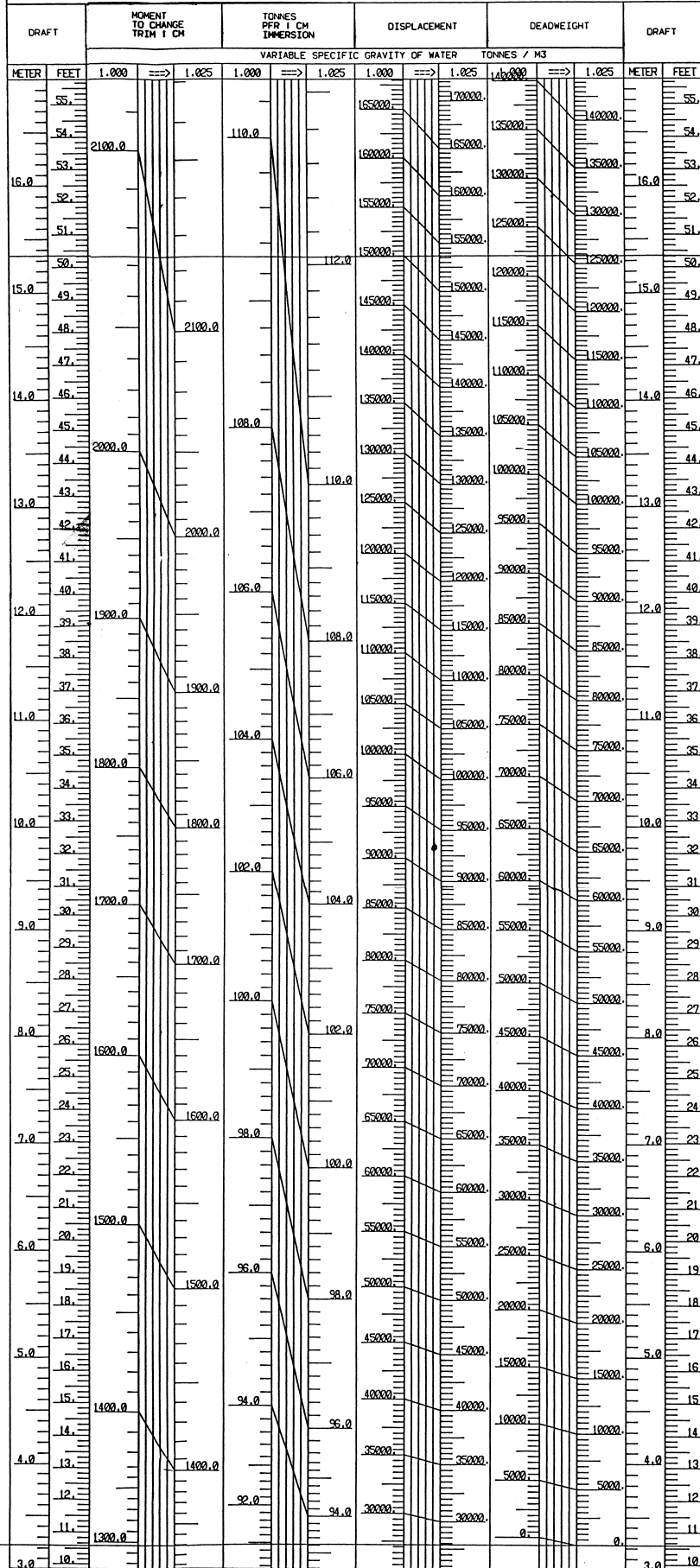
**UPPER DECK PLAN**



**TANK TOP PLAN**



# DEADWEIGHT SCALE



## FREEBOARD, DRAFT & DEADWEIGHT TABLE

FREE BOARD	FREE BOARD (MM)	DRAFT EXT. (MM)	FULL DIS-PLACEMENT (Tonnes)	DEAD-WEIGHT (Tonnes)
TROPICAL FRESH WATER	TF	6,658.0	15,008.5	130,162.8
FRESH WATER	F	6,977.0	15,689.5	126,661.6
TROPICAL	T	7,001.0	15,666.5	130,235.5
SUMMER	S	7,320.0	15,346.5	126,646.6
WINTER	W	7,639.0	15,027.5	123,085.9

## MISCELLANEOUS OIL TANKS

C O M P A R T M E N T	LOCATION (FR. NO)	CAPACITIES		100% FULL		MAX. MOM. OF INERTIA (M <sup>4</sup> )
		VOLUME 100% FULL (M <sup>3</sup> )	WEIGHT 100% FULL (Tonnes)	L. C. G. FROM A.P (M)	V. C. G. ABOVE B.L (M)	
S/T C. W. TK. (P)	8-18	65.4	-	11.783	3.452	8
S/T C. W. TK. (S)	8-18	65.4	-	11.783	3.452	8
C.C.P.OIL RES TK. (P)	24-26	3.3	-	22.000	2.320	1
C.C.P.OIL RES TK. (S)	24-26	3.3	-	20.000	2.320	1
BILGE HOLDING TK. (P)	33-53	82.3	-	36.176	1.571	50
SEP. BILGE OIL TK. (P)	33-47	44.8	-	32.521	1.706	10
F.O. OVERF. TK. (C)	49-53	34.9	-	40.800	2.270	273
F.O. DRAIN TK. (P)	47-49	2.2	-	38.400	2.320	0
F.O. DRAIN TK. (S)	47-49	2.2	-	38.400	2.320	0
S/T L.O. DRAIN TK. (P)	35-36	3.4	-	28.400	2.070	2
S/T L.O. DRAIN TK. (S)	35-36	3.4	-	28.400	2.070	2
G/E L.O. OVERF. TK. (P)	16-18	2.1	-	13.600	8.780	1
G/E L.O. OVERF. TK. (S)	16-18	2.1	-	13.600	8.780	1
GRAY W. HOLD. TK. (P)	35-38	49.0	-	29.215	18.560	30
L.O. DRAIN TK. (S)	32-34	4.9	-	26.400	2.070	1
B/W (E/R AFT) (P)	18-20	4.4	-	15.215	2.423	6
B/W (E/R AFT) (S)	18-20	4.4	-	15.215	2.423	6
B/W (E/R MID) (P)	31-33	1.7	-	26.615	2.426	0
B/W (E/R MID) (S)	31-33	1.7	-	26.615	2.426	0
B/W (E/R FORE) (P)	50-53	6.0	-	41.200	2.320	3
B/W (E/R FORE) (S)	51-53	2.3	-	41.614	2.347	1
T O T A L		415.5	-			

## LUBRICATING OIL TANKS S.G.: 0.900

M/E L.O. SUMP. TK. (P)	38-49	19.3	17.0	34.950	1.818	6
M/E L.O. SUMP. TK. (S)	38-49	19.3	17.0	34.927	1.819	6
G/E L.O. STOR. TK. (P)	19-23	18.0	15.9	16.800	19.163	1
G/E L.O. SETT. TK. (P)	23-27	18.0	15.9	20.000	19.163	1
M/E L.O. STOR. TK. (P)	19-23	34.7	30.6	16.800	19.223	10
M/E L.O. SETT. TK. (P)	23-27	34.7	30.6	20.000	19.223	10
NO.1 CYL. O. STOR. TK. (S)	46-50	31.8	28.0	38.400	19.270	10
NO.2 CYL. O. STOR. TK. (S)	46-50	31.8	28.0	38.400	19.270	10
T O T A L				207.6	183.0	

### LIGHTSHIP DATA

LIGHTWEIGHT : 27870.1 T.  
 DEO : 3.228 M.  
 L.C.G. : 120.506 M. ( FROM A.P )  
 V.C.G : 12.351 M. ( ABOVE B.L )

## CARGO OIL TANKS

COMPARTMENT	LOCATION (FR. NO.)	CAPACITIES		98% FULL		MAX. MOMENT OF INERTIA (M <sup>4</sup> )	
		VOLUME 100% FULL (M <sup>3</sup> )	VOLUME 98% FULL (M <sup>3</sup> )	L . C . G . FROM AP (M)	V . C . G . ABOVE B.L. (M)		
NO. 1	C. O. TK. (P)	102 - 110	7,746.6	7,591.7	225.585	13.095	7,137
NO. 1	C. O. TK. (S)	102 - 110	7,746.6	7,591.7	225.585	13.095	7,137
NO. 2	C. O. TK. (P)	93 - 102	11,769.8	11,534.4	196.460	12.991	18,624
NO. 2	C. O. TK. (S)	93 - 102	11,769.8	11,534.4	196.460	12.991	18,624
NO. 3	C. O. TK. (P)	86 - 93	12,289.5	12,043.7	165.615	12.977	20,860
NO. 3	C. O. TK. (S)	86 - 93	12,289.5	12,043.7	165.615	12.977	20,860
NO. 4	C. O. TK. (P)	79 - 86	12,289.5	12,043.7	134.325	12.977	20,860
NO. 4	C. O. TK. (S)	79 - 86	12,289.5	12,043.7	134.325	12.977	20,860
NO. 5	C. O. TK. (P)	72 - 79	12,289.5	12,043.7	103.035	12.977	20,860
NO. 5	C. O. TK. (S)	72 - 79	12,289.5	12,043.7	103.035	12.977	20,860
NO. 6	C. O. TK. (P)	65 - 72	11,916.2	11,677.9	71.992	13.201	20,860
NO. 6	C. O. TK. (S)	65 - 72	11,916.2	11,677.9	71.992	13.201	20,860
S L O P	TK. (P)	63 - 65	1,858.8	1,821.6	53.390	14.421	3,800
S L O P	TK. (S)	63 - 65	1,858.8	1,821.6	53.390	14.421	3,800
T O T A L			140,319.8	137,513.4			

## WATER BALLAST TANKS

S.G.: 1.025

COMPARTMENT	LOCATION (FR. NO.)	CAPACITIES		100% FULL		MAX. MOMENT OF INERTIA (M <sup>4</sup> )	
		VOLUME 100% FULL (M <sup>3</sup> )	WEIGHT 100% FULL (Tonnes)	L . C . G . FROM AP (M)	V . C . G . ABOVE B.L. (M)		
FORE PEAK	TK. (C)	110 - F.E	6,148.9	6,302.6	247.497	14.018	25,284
NO.1	W. B. TK. (P)	102 - 110	5,127.5	5,255.6	226.691	9.932	13,537
NO.1	W. B. TK. (S)	102 - 110	5,127.5	5,255.6	226.691	9.932	13,537
NO.2	W. B. TK. (P)	93 - 102	4,580.7	4,695.2	197.898	7.383	30,682
NO.2	W. B. TK. (S)	93 - 102	4,431.5	4,542.3	198.416	7.328	29,484
NO.3	W. B. TK. (C)	86 - 93	8,229.0	8,434.7	165.615	6.645	253,804
NO.4	W. B. TK. (P)	79 - 86	4,114.5	4,217.4	134.325	6.645	31,725
NO.4	W. B. TK. (S)	79 - 86	4,114.5	4,217.4	134.325	6.645	31,725
NO.5	W. B. TK. (P)	72 - 79	4,041.0	4,142.0	103.226	6.738	29,834
NO.5	W. B. TK. (S)	72 - 79	4,041.0	4,142.0	103.226	6.738	29,834
NO.6	W. B. TK. (P)	63 - 72	3,905.9	4,003.5	69.859	7.809	15,683
NO.6	W. B. TK. (S)	63 - 72	3,905.9	4,003.5	69.859	7.809	15,683
AFTER PEAK	TK. (C)	A.E - 15	2,184.1	2,238.7	5.152	13.652	31,929
T O T A L			59,952.0	61,450.5			

## FRESH WATER TANKS

S.G.: 1.000

DIST.	W. TK. (OUT = P)	8 - 15	103.6	103.6	9.200	20.196	18
DIST.	W. TK. (IN = P)	8 - 15	105.8	105.8	9.200	20.254	18
POTABLE	W. TK. (OUT = S)	8 - 15	103.6	103.6	9.200	20.196	18
POTABLE	W. TK. (IN = S)	8 - 15	105.8	105.8	9.200	20.254	18
FWD	F.W.T (S)	152 - 156	10.1	10.1	258.950	24.567	2
T O T A L			428.9	428.9			

## HEAVY FUEL OIL TANKS

S.G.: 0.980

COMPARTMENT	LOCATION (FR. NO.)	CAPACITIES		98% FULL		MAX. MOMENT OF INERTIA (M <sup>4</sup> )	
		VOLUME 100% FULL (M <sup>3</sup> )	WEIGHT 98% FULL (Tonnes)	L . C . G . FROM AP (M)	V . C . G . ABOVE B.L. (M)		
NO. 1	H.F.O. STOR. TK. (P)	58 - 63	725.2	696.5	48.410	15.665	781
NO. 1	H.F.O. STOR. TK. (S)	58 - 63	725.2	696.5	48.410	15.665	781
NO. 2	H.F.O. STOR. TK. (P)	39 - 58	917.5	881.2	38.750	17.372	334
NO. 2	H.F.O. STOR. TK. (S)	39 - 58	917.5	881.2	38.750	17.372	334
H. F. O.	SERV. TK. (P)	49 - 53	54.2	52.1	40.800	14.571	33
H. F. O.	SERV. TK. (S)	49 - 53	54.2	52.1	40.800	14.571	33
H. F. O.	SETT. TK. (P)	53 - 58	67.8	65.1	44.400	14.571	41
H. F. O.	SETT. TK. (S)	53 - 58	67.8	65.1	44.400	14.571	41
T O T A L			3,529.4	3,389.8			

## DIESEL OIL TANKS

S.G.: 0.900

D. O.	STOR. TK. (S)	31 - 39	203.3	179.3	27.434	16.985	37
D. O.	SERV. TK. (S)	35 - 39	105.2	92.8	29.627	19.664	41
T O T A L			308.5	272.1			