

M.V. PROVIDANA



Signal Letter : S6BB7
IMO No : 9380788
Flag : Singapore
Official No : 392930
DnV Id No : 26604

Owners:
MASTERBULK PTE LTD.
Singapore

Managers:
MASTERBULK PTE LTD.
Singapore

Charterers:

Builders:
Oshima Shipbuilding Co., Ltd.
Nagasaki Japan
Hull No: 10508
Keel laying: 17th November 2005
Delivered: September 2007

Class:

Det Norske Veritas, +1A1 General Cargo Carrier CONTAINER, HC-B* E0
DK(+) HA(+) IB(+) 2506TEU T-MON NAUTICUS (Newbuilding)

General description;

Open hatch general cargo / container carrier with 2 x 70 MT gantry cranes on deck and 12 box-shaped holds intended for the carriage of baled pulp, ore, grain, cement, paper, packaged lumber, coal, project cargoes and other solid bulk cargoes. Containers in holds and on deck.
Max load on tank top: 28 MT/m² (Max. 10 MT/m² in hold No.12).
The vessel is of flush deck type without forecastle and poop.
Accommodation aft for 30 persons.
Water ballast in peak tanks and 16 tanks in double hull and double bottom. No ballast in cargo holds.
H.F.O. deep tanks port and starboard forward and aft.
One store for cargo equipment at ship's forward.
Ballast control room for remote operation of valves for ballast and bilge. Remote start/stop of ballast, fire and general service pumps. Remote indication of level in ballast tanks.
High level alarm for bilge wells in cargo holds.
Bunkering valve remote operation from engine control room.
Level indication and high level alarm for bunker tanks.
Electric connections on deck at hatch No.12 for total of 22 refrigerated containers.
Underdeck passage at ship's both side. Fixed floodlights in all cargo holds.
Hold inspection hatches for each hold from under deck passageway.
Connections for SW, FW and compressed air in the underdeck passage, and on weather deck in cargo area.
Pilot access doors in ship's sides port and starboard.
Enclosed bridge wings. Breakwater located forward.
Access to cargo holds from underdeck passages.
Retractable container brackets and guides in cargo holds nos.4 and 9.
Retractable container guide in other holds.
Container sockets in all cargo hold tank top and on hatch covers.
Portable tween decks in cargo holds nos.4 and 9.
Helicopter drop platform for pilot on top of forward crane, access to bridge by through doors on E-deck front.

Deadweight;

Summer draft, extreme 12.328m	54,694 MT
Design draft, extreme 11.528m	49,512 MT

Dimensions;

Length O.A.	212.50 m
Length B.P.	207.50 m
Breadth (mld)	32.26 m
Depth (mld)	19.00 m
Draft (design)(mld)	11.50 m
Draft (scantling)(mld)	12.30 m
Max. air, draft	47.00 m

Tonnage;

	International	Suez	Panama
Gross:	39,258	-	-
Net:	16,079	-	-

Speed and Main Engine F.O. consumption;

About 15.9 knots at design draft, 11,040 kw (15,010 bhp) with 15% sea margin and about 48.2 MT/day (oil of 40,195 KJ/kg).
About 16.9 knots at ballast draft with 15% sea margin.

Auxiliary F.O. consumption;

(Aux. Engine & Boiler)
At sea; about 3.6 MT/day (42,707 kJ/kg)
In port; about 5.6 MT/day (42,707 kJ/kg)

Main engine;

One-6-cylinder, 2-cycle, single acting, cross head marine diesel engine, KAWASAKI MAN B&W type 6S60MC. Output 12,268 kW at 105.0 r/min, 11,039 kW at 101.4 r/min. Burning 600 cst/50°C fuel.

Propeller and Stern tube seal;

One propeller, 5-bladed, right handed, Ni-A1 Bronze NAKASHIMA PROPELLER CO., LTD. dia 6,200 mm. Stern tube sealing, WARTSILA JAPAN type Stand-By seal 4BL.

Boilers;

One aux. Boiler Osaka type OEVC2-170/135-22 (COMPOSITE TYPE). Working pressure 6.0 bar. Capacity, oil fired side : 1,700 kg/h / Exh. Gas side 1,350 kg/h, Burning 600 cst/50°C fuel.

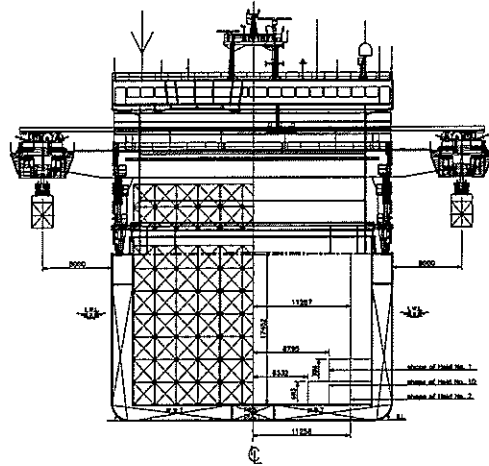
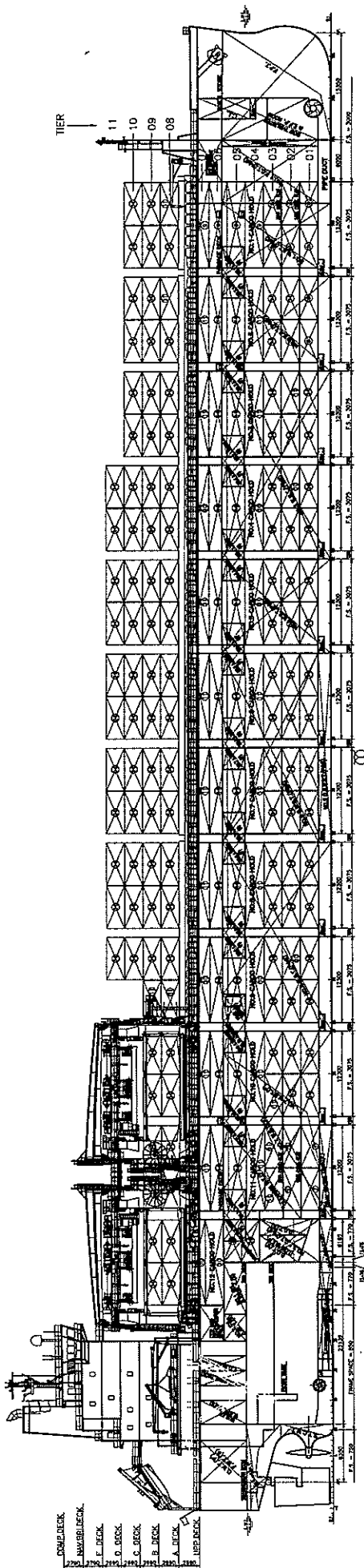
Diesel generators;

4 cycle, trunk piston diesel engines built by STX CORP. directly coupled to HYUNDAI generators 450 V, 60 Hz, 720 r/min. Three 6-cyl., MAN B&W Holeby type 6L28/32H, Gen. Capacity 1,199 kW.

Burning 600cst/50°C fuel.
One emergency generator, supplied by MITSUI ZOSEN MACHI. & SERV, INC. Capacity 120 KVA.

Pumps;

Made by NANIWA PUMP.
One Fire & G.S. pump, capacity 90/230 m³/h at 70/20 m.
One Fire & Bilge pump, capacity 90/230 m³/h at 70/20 m.
Two ballast pumps, capacity each 1000m³/h at 25 m.
One ballast eductor 250 m³/h driven by the ballast pumps.



CARGO HOLD							
ITEM	LOCATION	BALE CAPACITY			CENTER OF GRAVITY (m)		
		FR. No.	HOLD	HATCH	TOTAL	TOTAL	NO. G.
No. 1 CARGO HOLD	98 - 102	4,340	512	4,852	171,347	-76.25	12.13
No. 2 CARGO HOLD	93 - 97	5,700	629	6,329	223,613	-62.76	11.61
No. 3 CARGO HOLD	88 - 92	5,862	629	6,491	229,228	-49.25	11.40
No. 4 CARGO HOLD	83 - 87	5,860	629	6,489	229,157	-35.76	11.41
No. 5 CARGO HOLD	78 - 82	5,862	629	6,491	229,228	-22.25	11.40
No. 6 CARGO HOLD	73 - 77	5,862	629	6,491	229,228	-8.75	11.40
No. 7 CARGO HOLD	68 - 72	5,862	629	6,491	229,228	4.75	11.40
No. 8 CARGO HOLD	63 - 67	5,862	629	6,491	229,228	18.25	11.40
No. 9 CARGO HOLD	58 - 62	5,860	629	6,489	229,157	31.75	11.41
No. 10 CARGO HOLD	53 - 57	5,862	629	6,491	229,228	45.25	11.40
No. 11 CARGO HOLD	48 - 52	5,385	629	6,014	212,383	58.75	11.99
No. 12 CARGO HOLD	31 - 47	2,076	629	2,705	95,526	71.25	16.58
TOTAL		64,326	7,431	71,757	2,536,549	-	-

CARGO HOLD							
ITEM	LOCATION	GRAIN CAPACITY			CENTER OF GRAVITY (m)		
		FR. No.	HOLD	HATCH	TOTAL	TOTAL	NO. G.
No. 1 CARGO HOLD	98 - 102	4,373	512	4,885	172,512	-76.24	12.12
No. 2 CARGO HOLD	93 - 97	5,758	629	6,387	225,555	-62.76	11.61
No. 3 CARGO HOLD	88 - 92	5,915	629	6,544	231,099	-49.25	11.40
No. 4 CARGO HOLD	83 - 87	5,912	629	6,541	230,993	-35.76	11.41
No. 5 CARGO HOLD	78 - 82	5,915	629	6,544	231,099	-22.25	11.41
No. 6 CARGO HOLD	73 - 77	5,915	629	6,544	231,099	-8.76	11.41
No. 7 CARGO HOLD	68 - 72	5,917	629	6,546	231,170	4.74	11.40
No. 8 CARGO HOLD	63 - 67	5,916	629	6,545	231,135	18.24	11.40
No. 9 CARGO HOLD	58 - 62	5,912	629	6,541	230,993	31.74	11.41
No. 10 CARGO HOLD	53 - 57	5,915	629	6,544	231,099	45.24	11.41
No. 11 CARGO HOLD	48 - 52	5,435	629	6,064	214,148	58.73	11.98
No. 12 CARGO HOLD	31 - 47	2,101	629	2,730	96,409	71.22	16.56
TOTAL		64,984	7,431	72,415	2,557,314	-	-

NOTE: THE TRAFFIC SPACES IN TRANSVERSE BULKHEAD TO BE INCLUDED IN GRAIN CAPACITY.

WATER BALLAST TANK						DENSITY = 1.025	
ITEM	LOCATION	VOLUME	WEIGHT	CENTER OF GRAVITY (m)		MAX. F. S. I. MOMENT	
				NO. G.	K. G.		
FORE PEAK TANK	104 - F.E.	1,121.6	1,150	-95.15	9.55	5,130	
No. 1 W.B.T.	(P)	752.2	771	-74.11	6.60	1,136	
No. 2 W.B.T.	(S)	728.1	746	-74.05	7.06	575	
No. 3 W.B.T.	(P)	676.9	694	-82.12	5.35	1,871	
No. 4 W.B.T.	(S)	677.2	694	-61.80	5.35	1,871	
No. 5 W.B.T.	(P)	1,419.8	1,455	-42.00	5.10	5,558	
No. 6 W.B.T.	(S)	1,419.8	1,455	-41.69	5.10	5,558	
No. 7 W.B.T.	(P)	716.7	735	-21.67	5.06	2,859	
No. 8 W.B.T.	(S)	716.7	735	-21.57	5.06	2,859	
No. 9 S.W.B.T.	(P)	604.8	627	-1.77	6.27	30	
No. 10 S.W.B.T.	(S)	604.8	627	-1.24	6.27	30	
No. 11 D.B.W.B.T.	(P)	626.1	642	-1.43	0.91	5,718	
No. 12 D.B.W.B.T.	(S)	626.1	642	-1.43	0.91	5,718	
No. 13 W.B.T.	(P)	1,431.4	1,467	25.36	5.07	5,693	
No. 14 W.B.T.	(S)	1,407.9	1,443	25.48	4.92	5,693	
No. 15 W.B.T.	(P)	578.5	600	48.75	4.42	2,765	
No. 16 W.B.T.	(S)	1,437.0	1,474	52.70	5.45	3,916	
CLEANSING W.T.	(P)	390.7	400	53.82	8.93	125	
AFT PEAK TANK	A.E. - 11	758.9	775	100.34	10.95	19,166	
TOTAL		17,395.1	17,833	-	-	-	

GRAY WATER TANK						DENSITY = 1.000	
ITEM	LOCATION	VOLUME	WEIGHT	CENTER OF GRAVITY (m)		MAX. F. S. I. MOMENT	
				NO. G.	K. G.		
GRAY WATER TANK	(P)	145.2	145	59.10	0.94	413	
TOTAL		145.2	145	-	-	-	

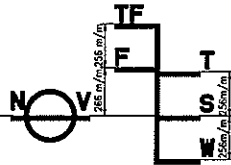
FRESH WATER TANK						DENSITY = 1.000	
ITEM	LOCATION	VOLUME	WEIGHT	CENTER OF GRAVITY (m)		MAX. F. S. I. MOMENT	
				NO. G.	K. G.		
DRINKING WATER TANK	(P)	177.3	177	100.81	15.81	52	
FRESH WATER TANK	(S)	177.3	177	100.61	15.81	52	
TOTAL		354.6	354	-	-	-	

UPPER DECK
DECK LINE

6.740 m/m

DEADWEIGHT SCALE		SALT WATER	
DEAD-WEIGHT	DRAFT	SALT WATER	
		TPC	MTC
MT	M	MT	MT-M
1025			
1020			
1015			
1010			
1005			
51000			1030
50000			
49000			65
48000			1020
47000			
46000			1010
45000			
44000			1000
43000			
42000			990
41000			64
40000			980
39000			970
38000			63
37000			960
36000			950
35000			62
34000			940
33000			930
32000			61
31000			920
30000			910
29000			60
28000			900
27000			890
26000			880
25000			60
24000			870
23000			860
22000			61
21000			850
20000			840
19000			830
18000			60
17000			820
16000			810
15000			60
14000			800
13000			790
12000			800
11000			60
10000			780
9000			770
8000			60
7000			760
6000			59
5000			750
4000			58
3000			740
2000			730
1000			60
0			720
			710
			60
			700
			690
			680
			60
			670
			660
			60
			650
			640
			50
			630
			620
			50
			610
			600
			40
			590
			30
			580
			50
			570
			50
			560
			30
			550
			540
			50
			530
			520
			510

~SUMMER DRAFT 12.328 M ABOVE BOTTOM OF KEEL



ITEM	LOCATION	VOLUME (m³)		WEIGHT (MT)	CENTER OF GRAVITY (m)		MAX. F.S.I. MOMENT (m³)
		FR. No.			X.C.	K.G.	
		100% FILL	90% FILL				
No.1 FUEL OIL TANK (F)	101 - 104	1,003.8	903.6	915	84.76	9.26	1,775
No.1 FUEL OIL TANK (S)	101 - 104	983.2	943.9	897	84.75	9.22	1,737
No.2 FUEL OIL TANK (F)	39 - 47	711.4	682.9	649	69.12	6.54	2,151
No.2 FUEL OIL TANK (S)	39 - 47	573.8	550.8	523	69.15	6.22	733
SUM		3,272.2	3,141.2	2,884	-	-	-
H.F.O. SETT. TANK (S)	12 - 13 ^{1/2}	59.0	56.6	54	92.04	15.46	10
H.F.O. SERV. TANK (S)	17 ^{1/2} - 23 ^{1/2}	59.4	58.0	55	87.01	15.51	10
SUM		118.4	114.6	109	-	-	-
TOTAL		3,390.6	3,255.8	3,093	-	-	-

TANK CAPACITY MARKED * INDICATES UP TO THE OVERFLOW PIPE LINE.

ITEM	LOCATION	VOLUME (m³)		WEIGHT (MT)	CENTER OF GRAVITY (m)		MAX. F.S.I. MOMENT (m³)
		FR. No.			X.C.	K.G.	
		100% FILL	90% FILL				
DIESEL OIL TANK (S)	44 - 47	57.3	55.0	48	67.23	7.63	22
DIESEL OIL TANK (LOW SULPHUR) (S)	39 - 44	79.2	76.0	67	70.24	8.62	37
SUM		136.5	131.0	115	-	-	-
D.O. SERV. TANK (S)	21 ^{1/2} - 23 ^{1/2}	17.6	16.9	15	85.65	15.08	1
D.O. SERV. TANK (LOW SULPHUR) (S)	20 ^{1/2} - 21 ^{1/2}	5.3	5.1	4	87.15	15.05	0
SUM		22.9	22.0	19	-	-	-
TOTAL		159.4	153.0	134	-	-	-

TANK CAPACITY MARKED * INDICATES UP TO THE OVERFLOW PIPE LINE.

ITEM	LOCATION	VOLUME (m³)		WEIGHT (MT)	CENTER OF GRAVITY (m)		MAX. F.S.I. MOMENT (m³)
		FR. No.			X.C.	K.G.	
		100% FILL	90% FILL				
LUB. OIL SUMP TANK (C)	50 - 52	21.3	20.4	19	82.69	1.06	12
LUB. OIL STOR. TANK (S)	17 ^{1/2} - 20	43.8	42.0	39	88.81	15.74	6
LUB. OIL SETT. TANK (S)	20 - 22 ^{1/2}	43.9	42.1	39	86.69	15.73	6
No.1 OIL STOR. TANK (S)	29 ^{1/2} - 39	55.7	53.5	49	75.97	14.01	8
No.2 OIL STOR. TANK (S)	25 - 29 ^{1/2}	30.9	29.7	27	81.70	14.04	6
G/E L.O. STOR. TANK (S)	14 ^{1/2} - 17 ^{1/2}	5.5	5.3	5	90.95	14.15	0
G/E L.O. SETT. TANK (S)	13 ^{1/2} - 14 ^{1/2}	3.4	3.3	3	93.05	14.15	0
G/E L.O. OVER. TANK (C)	13 - 15	3.2	3.1	3	92.85	16.05	3
TOTAL		207.7	199.4	184	-	-	-

ITEM	LOCATION	VOLUME (m³)		WEIGHT (MT)	CENTER OF GRAVITY (m)		MAX. F.S.I. MOMENT (m³)
		FR. No.			X.C.	K.G.	
		100% FILL	90% FILL				
BILGE TANK (F)	32 - 37	36.7	36.7	33	77.60	1.22	32
BILGE SEP. OIL TANK (S)	22 - 43	62.9	62.9	57	75.14	1.17	121
HEAVY F.O. OVERFLOW TANK (F)	37 - 46	40.8	40.8	37	69.82	1.07	93
BOILER WATER STOR. TANK (S)	11 - 15	67.3	67.3	61	93.68	15.78	8
F.O. / L.O. SLUDGE TANK (S)	2* - 37	4.2	4.2	3	77.36	6.03	0
F.O. DRAIN TANK (S)	26 ^{1/2} - 27 ^{1/2}	0.5	0.5	0	81.90	3.25	0
No.1 WASTE OIL SERV. TANK (S)	13 ^{1/2} - 14 ^{1/2}	*	1.0	0	92.95	26.17	0
No.2 WASTE OIL SERV. TANK (S)	13 ^{1/2} - 14 ^{1/2}	*	1.0	0	92.95	26.17	0
S.T. COOLING WATER TANK (C)	8 ^{1/2} - 11	10.3	10.3	9	95.19	3.43	1

NOTE: SIGN FOR DISTANCE TO BE AS FOLLOWS.

(-) SIGN: FORWARD FROM MIDSHIP

NO SIGN: AFT FROM MIDSHIP

TANK CAPACITY MARKED * INDICATES UP TO THE OVERFLOW PIPE LINE.

Stack / Hold No.	No. 12	No. 11	No. 10	No. 9	No. 8	No. 7	No. 6	No. 5	No. 4	No. 3	No. 2	No. 1	Total
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
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Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
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Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
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Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48	48	48	48	48	48	48	48	48	576
Hold	48	48	48	48	48	48	48	48	48	48	48	48	576
Deck	48	48	48	48									

Air compressors;

Two main air compressors, capacity each 200m³/h (FA) at 25 bar, maker Tanabe Pneumatic machinery type H-74.

One ship service air compressors, capacity 500 m³/h (FA) at 9 bar, maker Tamrotor Marine. type TMC-65-10.

Fresh water generator;

One fresh water generator Alfa-Laval type JWP-26-C100.

Capacity 25 t/day.

Purifiers and Separators;

Two heavy fuel oil purifiers : Alfa-Laval type SU846.

Capacity each 2,950 l/h.

Two lub. oil purifiers : Alfa-Laval type SU826. Capacity each 2,150 l/h.

One oily water separator SASAKURA ENG. type SHT-10.

Capacity 10 m³/h, Auto oil discharge type, ability below 15 ppm.

Sewage plant;

One sewage treatment unit Taiko type SBT-40.

Capacity for 40 persons/day.

Incinerator;

One incinerator Golar Team Tec AS. GS500 C.

Capacity 730,000 kcal/h, burning sludge oil and solid waste.

Air conditioning plant;

One central of medium pressure type made by Ushio Reinetsu.

One refrigerating compressor of reciprocating type of Carrier make.

Cooling capacity 216 kW. Heating capacity 262 kW.

Separate air conditioning for wheel house and galley.

Hold dehumidification ventilation units;

Two central units with ducts to top and bottom of each cargo hold.

Capacity 7,600 m³/h each. Type, Munters MX-7600-SA, supplied by Namirei-showa.

Possibilities for dehumidification with or without re-circulation of hold air, or ventilation only with outside air. Remote indication of humidity.

Side thruster;

Two electric motor driven side thrusters with 4-bladed NiAlBr controllable pitch propeller. Made by Rolls-Royce AB.

Forward; type TT2400 AUX CP, dia 2,400 mm. El. motor 1,800 kW,

Aft; type TT1650 AUX CP, dia.1,650 mm. El. motor 740 kW.

Deck machinery;

Nippon Pusnes electro-hydraulically high pressure operated winches. Two windlasses combined with mooring winch

on fore deck. Two mooring winches on aft deck.

Each with three 13 MT hawser drums and one warping head.

Rated speed 15 m/min. Slack rope speed 45 m/min.

Gantry cranes;

Two 70 MT electrically operated gantry crane of Konecranes-Munekloader design, with turn-table ($\pm 190^\circ$), shifting trolley and shifting cabin. Rain protection with fixed roof above crane and sliding roofs above the jibs. Retractable curtains at fore and aft ends. The jibs are swinging in and parked between the main beams, enabling jibbing out without moving the cranes from the parked position. The jib and hatch cover operation is remotely controlled from the hatchmans platform on the crane leg.

Outreach from ship's side	8.0 m
Lifting height	27.0 m
Hoisting speed with 70/40/20 MT load	24/40/80 m/min
Lowering speed with 70/40/20 MT load	30/45/80 m/min
Trolley speed	90 m/min
Gantry speed	30 m/min
Shift trolley speed	20 m/min

Hatch covers;

12 one-panel, pontoon type hatch covers of Tsuji design, each 12.30 m x 27.50 m, operated by 2 hydraulic cylinders on the gantry crane. Max distributed load 3.0 MT/m² on top of hatch cover.

Two hatch covers can be stored on top of another covers

Portable tween deck;

Each 2 portable tween deck (4-panel) for hold nos.4 and 9 of Tsuji design, each 12.30 m x 27.5 m, operated by Gantry crane. Max distributed load 5.5 MT/m²

Container socket arranged on tween deck.

Steering gear;

Electro-hydraulic rotary vane type steering gear. Japan Hamworthy type RV 1400-2, capacity 1533 kNm. 2 x 70° traveling.

Rudder;

One semi spade schilling type rudder. Working angle 70° each side.

Life saving equipment;

One Shigi make, type GARS6.7 free fall lifeboat for 30 persons and one Shigi make, type VOX46 rescue boat for 6 persons.

Two inflatable life rafts (16 persons) on each side of superstructure and one inflatable life raft for 6 persons near wave breaker. All rafts supplied by Viking.

Fire fighting appliances and Smoke detecting system;

Engine room	CO ₂ system and Local fire fighting system (fresh water)
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Accommodation	Portable fire extinguisher and sea water
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Cargo hold	CO ₂ system and smoke detection system
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EDG room	Portable fire extinguisher
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Paint Store	Sea water
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Lifting gear;

One 2 MT/6 m, cargo equip. handling crane for forward equip. store.

Two 4 MT/12 m, mach.parts/provision/FO hose/Suez boat cranes on upper deck.

One 3.2 MT double jib type engine room crane.

Personnel elevator between 2nd platform deck in engine room and E-deck of accommodation.

Hatch on upper deck at front of accommodation for transportation of spares to engine room.

Accommodation ladders can be turned 180 deg. by means of provision cranes.

Engine control room;

Equipped for unmanned (acc to DNV E0) engine room with TERASAKI type WE300HG two-LCD displays with central process unit.

Nabtesco M-800 III remote control system for main engine.

Radio, Navigation, Communication equipment;

DNV/GMDSS installation.

Radars with ARPA (S-band and X-band)	FURUNO ELECTRIC TYPE FAR-2837S TYPE FAR-2827
Gyro compass	YOKOGAWA TYPE CMZ-700S
Auto pilot	YOKOGAWA TYPE PT-500D-S-N2
GPS navigators	FURUNO TYPE GP-150
Navtex receiver	FURUNO TYPE NX-700A
Doppler speed log	FURUNO TYPE DS-50
Echo sounder	FURUNO TYPE FE-700
Satellite communicator; Std.-F;	FURUNO TYPE FELCOM70
Satellite communicator; Std.-C;	FURUNO TYPE, FELCOM15