



The
J.J. Uglund
Companies

M/V LIVANITA

MANAGING OWNER: UGLAND SHIPPING AS
FLAG: NORWEGIAN (NIS REGISTER)
PORT OF REGISTRY: GRIMSTAD
CALL SIGN: LAOM5

OPERATOR: UGLAND BULK TRANSPORT A/S
P.O. BOX 128
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BUILT BY: TSUNEISHI SHIPBUILDING CO., LTD.
JAPAN

YEAR BUILT: 1997



Description

TESS 45 multipurpose bulk carrier (Tsuneishi Economical Standard Ship). Single screw, diesel driven steel ship. Divided by 7 watertight bulkheads into 5 cargo holds, engine room and peak tanks. Topside ballast tanks and hoppersided double tanks are fitted continuously in way of cargo holds to give usual bulk carrier cross section configuration. Ship is fitted for carrying lumbars, grain, steel pipes, rolled steel coils and general bulk cargoes. The ship has fixed lumber's stanchions in way of crane posts and collapsible stanchions alongside the bulwark.

Class

Det Norske Veritas:  IAI. Bulk Carrier ESP(HC/E), Holds 2,4 empty, Grain(U)

Delivery

The ship was delivered from Tsuneishi Group, Hashihama Shipbuilding Co., Ltd. on November 28, 1997.

Principal Dimensions

(m = metres, ft = feet, Mt = Metric tonnes, LT = Long Tons)

Length overall	185.74 m	–	609.4 ft
Length between perpendiculars	177.00 m	–	580.7 ft
Breadth moulded	30.40 m	–	99.7 ft
Depth moulded	16.50 m	–	54.1 ft
Design Draught	10.95 m	–	35.9 ft
Draught on Summer marks	11.62 m	–	38.1 ft
Deadweight at Design Draught	2,200 Mt	–	41,536 LT
Deadweight at Summer marks	45,426 Mt	–	44,709 LT

Immersion rate at 11.0m draught about	49.42 Mt P.C	–	123.49 LT. P.I.
Air height of hatchcoaming top from ballast waterline	15.30 m	–	50.2 ft
Air height of mast top from ballast waterline	38.80 m	–	127.3 ft

Gross tonnage:	International 26,044	Suez Canal 26,830	Panama
Net tonnage :	International 14,924	Suez Canal 24,155	Panama 21,661

Freeboard particulars (provisional):

	Freeboard:	Draught:	Deadweight:
Tropical Fresh	4.408 m	12.129 m	46,614 Mt 45,878 LT
Fresh	4.650 m	11.887 m	45,430 Mt 44,713 LT
Tropical	4.675 m	11.862 m	46,635 Mt 45,899 LT
Summer	4.917 m	11.620 m	45,426 Mt 44,709 LT
Winter	5.159 m	11.378 m	44,222 Mt 43,524 LT

Speed and Consumption

With vessel loaded to Design Draught, and using fuel oil with maximum viscosity of 3,500 seconds Redwood No. 1 at 100°F and with a low calorific value of 9,800 kcal/kg, and with 15% sea margin, the following speeds and main engine fuel consumption are expected:

With Main Engine at Maximum Continuous Output (MCO)	14.6 knots	25.5 Mt/day
With Main Engine at Continuous Service Output (85% of MCO)	14.0 knots	21.7 Mt/day

Auxiliary Engines; These engines are capable of using HFO with Maximum viscosity of 3,500 seconds Redwood No. 1 at 100°F. Estimated consumption of auxiliary engines is 1.6 Mt HFO/day at sea and 4.5 MDO/day in port whilst using ship's cranes for working cargo.

Main Engine

One 6 cylinder Kawasaki-B & W diesel engine. Type 6S50MC (derated for economy) single acting two stroke with turbocharger. Max. Cont. Output 9,750 PS at 120 RPM using H.F.O. of 3,500 sec. Redwood No. 1 at 100°F.

Propeller

One right handed, solid, keyless type made by MITSUBISHI HEAVY INDUSTRIES. Material: Ni-Al-Bronze.

Auxiliaries

Three Daihatsu 6 DKB-20 6 cyl. diesel engines each developing 600 PS at 720 RPM and each coupled directly to Nishishiba Electric generators of 400 KW.

Boilers

One oil fired boiler of Osaka Boiler make. Output 1100 kgs/hr at 6 kg/cm² with main engine at 85% of MCO.

Fresh Water Generator

One Sasakura-Atlas fresh water generator with capacity of making 20 Mt/day.

Steering Gear

One Kawasaki electro-hydraulic Rapson slide steering gear with two hydraulic cylinders and two pump sets.

Fire Fighting Equipment

Accommodation: Portable extinguishers and sea water from hydrants.
Engine Room: Fixed CO² smothering system, portable extinguishers and water hydrants.
Cargo Holds: Water hydrants on deck.
Other equipment as per SOLAS 1974 with Protocol 1978.

Deck Machinery

Two Kawasaki combined windlass/mooring winches. Electro-hydraulic type. Capacity 22.4 t x 9 m/min 13 t x 15 m/min. Two Kawasaki mooring winches. Electro-hydraulic type. Capacity 13 t x 15 m/min.

Cargo Hatches

Five sets of Nakata Mac, hydraulically operated, and folding hatch covers.

Cargo Gear

Deck Cranes: Four Fukushima electric hydraulic, single deck cranes. Capacity 25MT at 18m/min. Max.slewing radius 24 m. Equipped for grab use. Grabs: Four Dual Scoop ORTS Motorgrabs, Type EHS-B 9.0 m³ for general bulk cargo including grain. Hold Ventilation: All holds fitted with natural ventilator. Hold Ladders: Australian Waterside Workers Federation requirements complied with.

Store Crane

One Sekigahara fixed type electric davit hoist crane fitted for loading stores and spare parts. Capacity 2 t x 9.5 ~ 11 m/min.

Navigation and Radio Equipment

Radars: JRC type JMA-9252-9CA & JMA 7252
Gyro Compass & Auto Pilot: Tokimec type PR-6262-E2-SS2
Echo Sounder: JRC type JFE-570S
Magnetic Log: Yokogawa Denshikiki type EML-500-HVI
MF/HF Radio Equipment: JRC type NCH-700
VHF Radios: JRC type JHS-32A, two sets
Inmarsat-C: JRC type JUE-75C
Inmarsat-B with Facsimile JRC JAX 831
Navtex Receiver: JRC type NCR-300A
GPS Navigator: JRC type JLR-6800
Weather Facsimile: JRC type JAX-9A
Power Source: Main 440V 60Hz
Light 220V 60Hz and 24V D.C.

Complement

Accommodation is arranged for the following maximum complement:

Officer	10 persons
Petty Officer	3 persons
Crew	16 persons
<u>Total</u>	<u>29 persons</u>

Hold and Hatch Particulars and Cargo Capacities

HOLD NO.	CLEAR LENGTH	HOLD CAPACITY				HATCH SIZE m	PARTICULARS
		GRAIN m ³	GRAIN ft ³	BALE m ³	BALE ft ³		
1.	27.2m	10,362	365,920	10,015	353,683	20.0 × 15.3	Tank Top throughout strengthened for following concentrated loads:- Two tiers of 15Mt Hot Rolled Steel Coils.
2.	27.2m	12,199	430,822	11,845	418,292	20.8 × 15.3	
3.	27.2m	11,731	414,284	11,392	402,308	20.8 × 15.3	
4.	27.2m	12,194	430,624	11,814	417,211	20.8 × 15.3	
5.	27.2m	10,723	378,665	10,499	370,779	20.8 × 15.3	
Total	—	57,209	2,020,315	55,565	1,962,273	—	

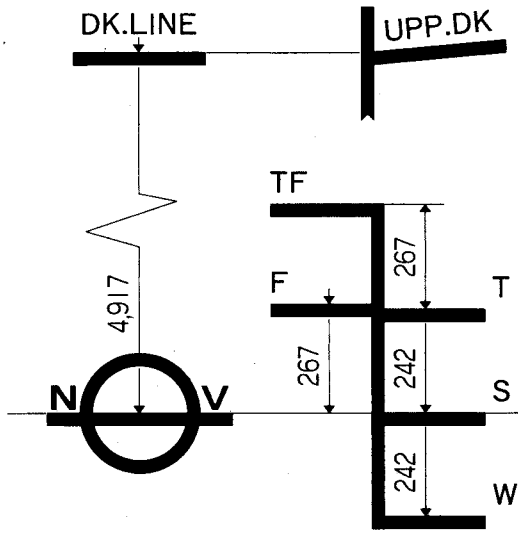
Upper Deck: Strengthened for carrying uniform load of 3.5Mt/m².

Hatch Covers: Strengthened for carrying uniform load of 2.5Mt/m².

Logs,Lumbers: Upper deck is fitted with fixed stanchions,collapsible stanchions and lashing eyes provided.

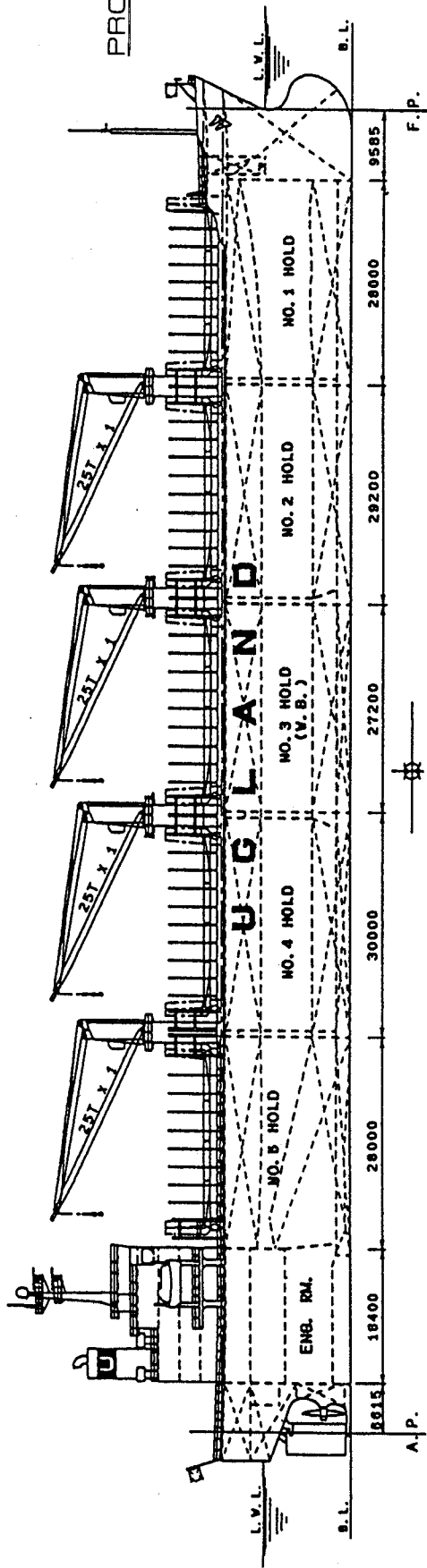
Capacities of Tanks

COMPARTMENT	FRAME NOS.	m ³	ft ³	S.W.	F.W.	H.F.O.	D.O.	L.O.	L.C.G. IN METRES	V.C.G. IN METRES
				Mt (g=1.025)	Mt (g=1.000)	Mt (g=0.935)	Mt (g=0.880)	Mt (g=0.900)		
				100% FULL		96% FULL				
Forepeak tk	211- FE	1,955	69,040	2,004					- 83.39	8.86
No.1T.S.&B.W.B.tks P&S	176-211	2,273	80,271	2,330					- 63.15	6.44
No.2T.S.&B.W.B.tks P&S	139-176	3,029	106,969	3,104					- 36.30	6.79
No.3T.S.&B.W.B.tks P&S	105-139	2,057	72,643	2,108					- 8.12	8.98
No.4T.S.&B.W.B.tks P&S	67-105	2,403	84,862	2,464					20.98	8.53
No.5T.S.&B.W.B.tks P&S	31-67	2,712	95,774	2,780					49.68	7.98
Aft peak tk	AE-9	402	14,197	412					85.92	11.50
Fresh water P tk	AE-9	195	6,886		195				86.36	15.36
Drink water S tk	AE-9	195	6,886		195				86.36	15.36
No.1D.B.F.O C tk	105-139	772	27,263			693			- 8.12	0.91
No.2D.B.F.O C tk	67-105	670	23,654			601			18.15	0.91
No.3D.B.F.O C tk	31-67	225	7,946			202			46.96	0.91
H.F.O. settling tk	25-28	16	579			15			67.89	14.00
H.F.O. service tk	28-31	18	646			16			65.47	14.12
No.1D.O.D.B. P tk	18-31	56	1,978				48		68.33	1.41
No.1D.O.D.B. S tk	26-31	30	1,059				26		66.19	1.32
D.O. service tk	28-30	7	247				6		65.79	14.60
M.E.L.O. sump tk	17-26	15	530					14	72.59	1.35
M.E.L.O. storage tk	17-21	14	494					12	73.64	14.50
M.E.L.O. settling tk	21-24	14	494					12	70.94	14.50
CYL.O. storage tk	10-13	22	776					19	79.79	14.45
totals				15,202	390	1,527	80	57	-	-
No.3 cargo hold	105-139	11,769	415,622	12,063						
Ballast grand total				27,265						

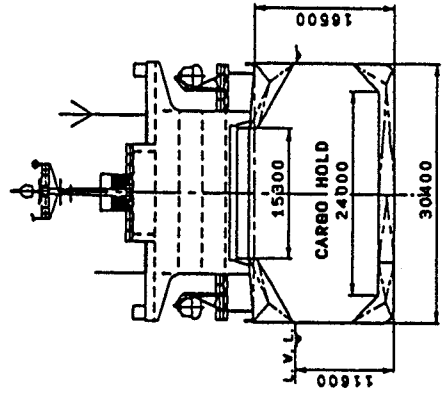
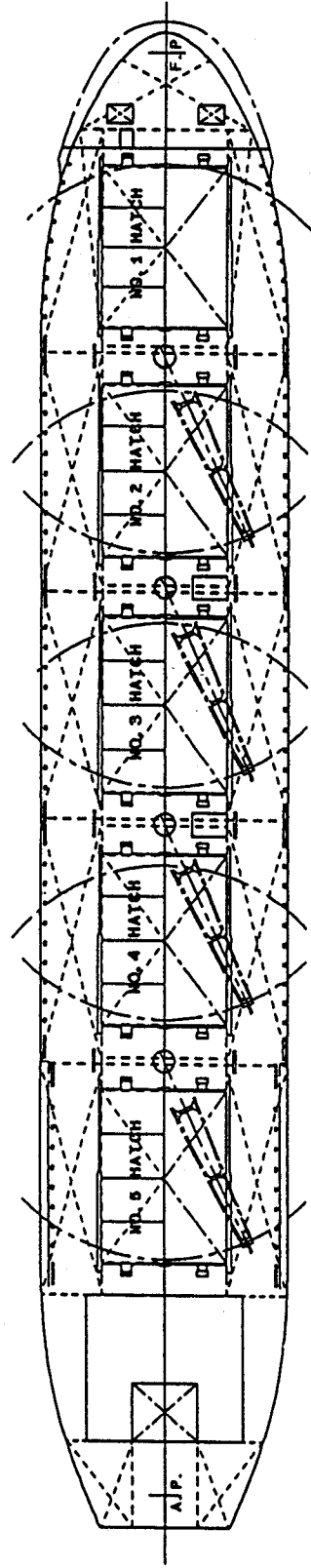


DEADWEIGHT SCALE								
DRAFT	DISPT	DEADWEIGHT IN M. TONS					TONS PER 1CM IMMERSION	MOMENT TO CHANGE TRIM 1CM
		SPECIFIC GRAVITY						
METER	M. TONS	1.020	1.015	1.010	1.005	1.000	M. TONS	MT-M
12							50	
11.620	53181							L.W.L.
11	50000							600
10							49	
9	40000						48	
8								
7	30000						47	
6								500
5	20000						46	
4								
3	10000						45	
2							44	
1.917	7755						43	LIGHT V.L.

PROFILE



UPPER DECK



M/V LIVANITA
GENERAL ARRANGEMENT