HANSEATIC TANKERS

25,000 dwt Product Oil/Chemical/IMO II tankers

Description

The vessel is to be designed, constructed and equipped as an IMO Type II Chemical/Product Tanker for worldwide service carrying chemical and petroleum products with special coating in cargo tanks and slop tanks.

The vessel to be of single screw diesel-driven, with double hull, have one (1) centre line longitudinal bulkhead in cargo tank area, one (1) complete upper deck with camper of 300 mm, without sheer at centre line, raked stem with bulbous bow and vertical transom with stern bulb. A semi-spade type rudder and a bow thruster to be provided.

The vessel has 12 tanks for cargo, 2 tanks for slops, 14 water ballast tanks (including fore peak and after peak tanks). Accommodation, navigation space and machinery space to be located aft. Double bottom to be arranged in engine room and cargo/slop tanks area. Three (3) longitudinal bulkheads to be provided to form port/starboard cargo/slop tanks and wing water ballast tanks in cargo tank area.

The cargo handling system shall consist of 14 hydraulic type submersible deep well cargo pumps and slop pumps. The vessel has 11 segregations in total. It shall be suitable for carrying liquid product oil, vegetable oil and IMO II chemicals up to S.G 1.53 in accordance with Class Notation, technical specification and which are not harmful to vessel's cargo system. Unlimited heavy liquid strengthening will be carried in cargo tanks Nos. 1,3,5 and slop (P&S) tanks only according to the trim and stability calculation. Partial loading of heavy density cargoes in Nos. 2, 4 and 6 P&S cargo tanks is possible. Cargo and slop tanks are fully coated with MarineLine with fibreglass tanktops and up to half meter above tanktop level. Underwater hull provided with a five-year tin-free SPC A/F system.

The vessel will be provided with the following DNV Notations:
1A1, Tanker for Chemicals and Oil Products ESP CSR HL(1.53) E0 SPM BIS.

Dimensions

Length overall:	abt. 176.40 m
Length between perpendiculars:	168 m
Breadth moulded:	27.40 m
Depth moulded:	15.00 m
Summer draught[1] moulded:	9.20 m
Dwt at summer draught:	abt. 25,000 tonnes

Estimated Capacities (full 100%)

Cargo capacity (including two slop tanks total abt. 1,800 m3)	abt. 35,000 m3
HFO tanks (including F.O settling and service tanks)	abt. 1,100 m3
MDO tanks (including D.O service tank)	abt. 100 m3
FWT tanks	abt. 180 m3
CWT tank (after peak tank)	abt. 260 m3
Segregated WBT tanks (including fore peak and after peak tanks)	abt. 14,000 m3
Residual tank:	abt. 15 m3

Tonnage – preliminary figures

International	GRT	NRT
	19,541	6,993

Speed, Fuel Consumption and Endurance

Service speed to be about 15.5 knots at CSR of main engine viz. 7,420 kW x 120.3 r/min without sea margin at the designed draught (moulded) = scantling draught of 9.20 m.

The speed trial to be conducted in deep waters and calm sea with wind force not exceeding Beaufort scale 4 and with clean bottom and results to be corrected to "no wind and no current condition" according to ITTC or other international recognised standard.

As determined at shop test, the fuel oil consumption of main engine to be 167 g/kW.h at CSR 7,420 kW x 120.3 r/min excluding tolerance margin of +5% at ISO condition and burning the fuel with a lower calorific value of 42,700kJ/kg and abt. 29.8 t/day.

Endurance at the design draught of 9.20 m and service speed of 15.5 knots and at above fuel consumption is about 12,000 nautical miles.

[1] Design = scantling = 9.20 m

Main Engine

Wartsila	MCR	CSR
NSD 6RTA48T-B	8,730 kW x 127 rpm	7,420 kW x 120.3 rpm

Electricity

Diesel generators: 3 x abt. 1,050 kW

Pumps

Cargo pumps: twelve (12) with 350 m3/h total head 120 mLc capacity for each, deep well SUS 316L submersible pumps, hydraulic motor driven. Two (2) cargo pumps in slop tanks with 125 m3/h total head of 120 mLc capacity for each, deep well SUS 316L of the same type.

Portable cargo pump: one (1) of capacity 100 m3/h total head 70 mLc

Ballast pumps: two (2) stainless steel hydraulic motor driven deep well type x 600 m3/h total head 0.25 MPa.

Maximum discharge rate: 2,120 m3/h at 120 mLc, S.G 0.8 t/m3

Tank Cleaning

Tank cleaning pump: one (1) stainless steel hydraulically submerged motor driven deep well type of 150 m3/h capacity total head 1.1 MPa.

Tank cleaning sea water heater: One (1) shall be provided for hot water cleaning on the upper deck, which can raise the sea water temperature from 20°C to 70°C. Capacity: 150 m3/h, with cleanliness factor of 85%.

Tank cleaning machines: 28 fixed single nozzle, programmable type stainless steel AISI 316L sets (2 for each cargo tank and slop tank).

Steam Plant

Two (2) sets of automatic vertical cylindrical oil fired type auxiliary boilers of abt. 10,000 kg/h each – the capacity of which to be adjusted according to steam balance calculation, and one (1) set of forced circulating type gas boiler with capacity of abt. 1,000 kg/h at CSR load of M/E, ISO condition.

Hose Handling Crane

One (1) set of electro-hydraulic motor, with capacity of 10 tonnes, with an outreach according to the requirements of OCIMF to be provided on upper deck, near mid ship.

Steering Gear

One (1) set of electro-hydraulic rotary-vane type or cylinder piston type steering gear to be provided in the steering gear room.
The steering gear system to be of 2 x 100% hydraulic power unit.

Fire Fighting System

Cargo tank deck area:	a) Fixed low expansion deck foam according to SOLAS b) Sea water
Engine room, Purifier room:	a) Fixed high pressure CO_2 system b) Sea water and water mist system

Nitrogen Generator System

Nitrogen generator with capacity of 2,650 m3/h, purity 95%.

<u>Special Features</u>

- MarineLine coating with fibreglass tanktops and up to half meter above tanktop level.
- Dual Fuel System in engine room (high sulphur, low sulphur).
- Double Hull Protection in way of bunker tanks
- Fixed Gas Detection System in ballast tanks and void spaces
- Bow Thruster 900 kW electric motor driven controllable, pitch propeller type
- Fixed Gas Freeing Fan with capacity of 200 m3/min 1300 Pa
- De-humidifier System for drying cargo tanks
- 2 fixed Tank Cleaning Machines (single nozzle, programmable) per tank
- Stern Manifold for two groups of segregations (1,3,5 and 2,4,6).
- Fresh Water Generator: 25 tonnes/day
- Compliance with CSR and PSPC standards
- Glass Reinforced Plastic Ballast Pipes
- 2 Gyro Compasses
