

INTO THE FUTURE

Baltic **SO₂**lution



LOW EMISSION 15K DWT TANKER SPECIALLY DESIGNED FOR TRADING IN ECA



TERNTANK

Shipping, Chartering &
Ship Management

Tanker for Oil and Chemicals IMO II (Edward version 2.0)

Design: Rolls-Royce Marine AS, Type NVC 615 CT

DnV Ice Class 1A1, Tanker for Oil ESP, Tanker for Chemicals ESP, E0, Ice 1A, NAUT-OC, GAS FUELLED, CLEAN, TMON, BIS, VCS-2, IMO PSPC(B)

Principal Dimensions

Length overall :	147.00 m
Length between perpendiculars :	143.50 m
Breadth, mld. :	22.00 m
Depth, mld. :	11.70 m
Draft design, mld. :	8.70 m
Draft scantling, mld. :	9.00 m
DWT:	15000 tonnes

Tank Capacities (100% full)

Cargo tanks : abt.	16.800 m ³
Slop tanks : abt.	200 m ³
Cargo drain tanks : abt.	50 m ³
Ballast water tanks : abt.	5.800 m ³
Technical fresh water tanks : abt.	330 m ³
Potable fresh water tanks : abt.	200 m ³
LNG fuel storage tanks : abt.	630 m ³
Marine gas oil, : abt.	550 m ³
Lubrication oil : abt.	20 m ³
Cylinder oil : abt.	50 m ³
Urea : abt.	40 m ³

Cargo Segregations: (98 % Filling)

1550 m³ + 2100 m³ + 2780 m³ + 2180 m³ + 2700 m³ + 2354 m³ + 2800 m³.

General design criteria for discharge and loading

Design discharge time Abt. 8 hours at design criteria with 7 cargo pumps running simultaneously, Maximum loading rate 800 m³/h per tank / total 5600 m³/h.

Cargo heating design criteria

Condition / Cargo Full cargo of HFO Maximum holding temperature 70°C. Temperature raising capacity, cargo Tanks From 44°C to 66°C in 96 hours Temperature raising, slop tanks From 15°C to 66°C in 24 hours Ambient air temp -20°C Sea water temperature 0°C

Nitrogen system

Is provided for cargo stripping, purging of cargo piping and creating nitrogen layer on top of cargo. A N₂ generator, cap. abt. 100 Nm³/h @ 96% N₂ to be installed in ER. A N₂ buffer tank of abt. 10m³ to be A buffer tank serving dual fuel machinery in ER also to be installed in ER. arranged on main deck.

Combined heater and Inert Gas Generator

Combined heater and inert gas generator with heat recovery before cargo tanks. Capacity approx. 3.950 m³/h.

Ballast Water Treatment Plant

A Water Ballast Treatment (WBT) system to be installed. The system to fulfill IMO International Convention for the Control and Management of Ship's Ballast Water and Sediments (BWM) Regulation B-3. Capacity at least same as total capacity of the WB pumps serving WB tanks in cargo area.

Main Engine

Wärtsilä 5RT-flex 50 DF 5.850 kW 108 RPM 2-stroke, low pressure, LNG dual-fuel engine .
Bore 500 mm, Stroke 2050 mm, MEP 16.1 bar, Piston speed 7.4 m/s, Length 6213 mm, Weight dry 200 t, System oil consumption 5.0 kg/cyl per day, Cylinder oil consumption (Pulse lubricating system) *1) 0.6 g/kWh guide feed rate, Turbocharger ABB 1 x A100-L, Scavenge air cooler 1 x SAC261F & Governor type (electronic) Integrated in UNIC.

Service speed

Service speed of 14.5 knots with the main engine developing about 3800 kW at 65% MCR on 8,70 m draught with approx. 10% service allowance and the shaft generator under 500 kW load.

Cruising range

LNG crusing range is 6600 Nm
830 m³ dual fuel capacity /10000 Nm calculated with maximum constant sailing speed.

Bowthruster

1 off Tunnel Thruster 1650 AUX CP 865 kW 60Hz
DNV Class notation Ice 1A

LNG Fuel Consumption

Speed 10 Knots, LNG Fuel Consum	5,9 ton/day
Speed 11 Knots, LNG Fuel Consum	7,3 ton/day
Speed 12 Knots, LNG Fuel Consum	8,9 ton/day
Speed 13 Knots, LNG Fuel Consum	11,1 ton/day
Speed 14 Knots, LNG Fuel Consum	13,9 ton/day
Speed 14,5 Knots, LNG Fuel Consum	15,5 ton/day
Speed 15 knots, LNG Fuel Consum	17,4 ton/day

Auxiliary diesel generator set data

Number of units : Three (3) Output, engine : abt. 790 kW

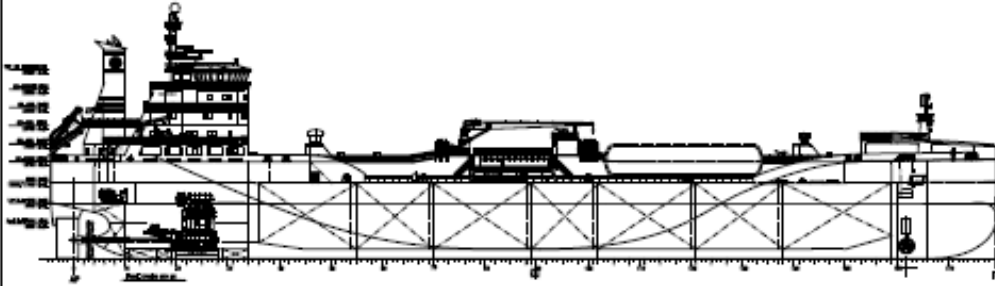
Shaft generator particulars

Rated output shaft generator : Abt. 600 kW

New technology for low emissions

- **The more environmentally friendly and energy efficient supply chain of oil products**
 - totally new innovative low-speed two-stroke dual-fuel engine of Wärtsilä running on LNG as fuel
 - the first installation of engine technique globally
 - new environmentally friendly technology for the inert gas system of Swedish Gesab
 - energy efficient vessel design (Rolls-Royce Marine AS from Norway)
 - **Engine is able to meet IMO's lower NO_x Tier III limit without additional exhaust after-treatment**
 - **Emission reduction obtained by using LNG:**
 - SO_x 99 %
 - NO_x 85 %
 - CO₂ 25 %
 - Particles 99 %
 - **Energy efficiency and emission reduction from new vessel design***
 - Consumption for propulsion 38 %
 - Consumption for auxiliary 21 %
 - Extra reduction of CO₂ 15 %
 - Extra reduction of NO_x 12 %
- *compared to a vessel with same size built around 2005





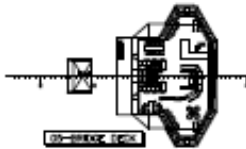
TRANSVERSE SECTION



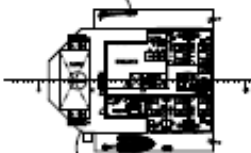
01-DECK PLAN



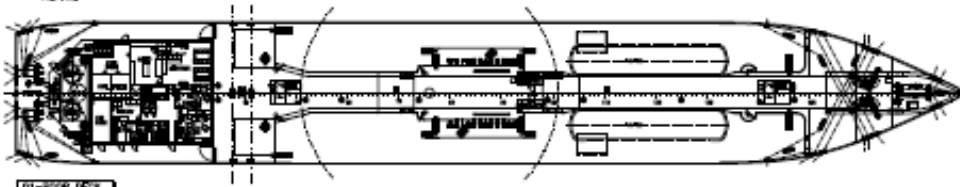
02-DECK PLAN



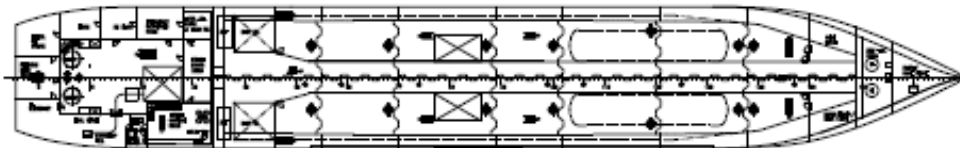
03-DECK PLAN



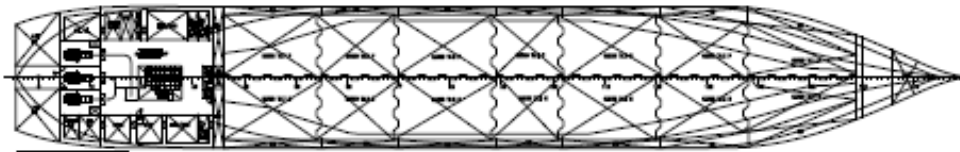
04-DECK PLAN



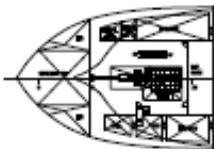
05-DECK PLAN



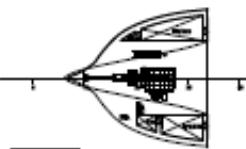
MAIN DECK



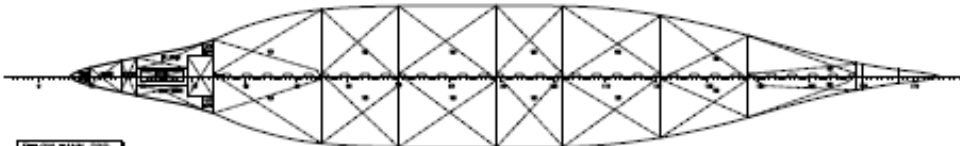
1st PLATFORM DECK



2nd PLATFORM DECK



TANK TOP



3rd PLATFORM DECK

MAIN PARTICULARS

LENGTH OVER ALL	04	167.00
DR	02	143.00
B. BLD.	04	23.00
T. BLD. WL.	04	17.20
DECKET HGT.	04	8.00
DECKET STL.	04	3.00

DESIGNER	HYUNDAI	CLASSIFICATION	ABS
OWNER	HYUNDAI	REGISTRY	LIBERIA
COLLATERAL	HYUNDAI	MANAGER	HYUNDAI
CONTRACT NO.	11-0288-101-01	DATE	1/71
General Arrangement 15000 DWT Product & Chemical Carrier			
HYUNDAI		HYUNDAI	
HYUNDAI		HYUNDAI	