

Newbuilding M/T 'BERGEN NORDIC' M/T 'CRESCENT CUILLIN'

3.500 Dwt Ice 1B s.g 1.9



OZMARIN GEMİ PROJE & DANIŞMANLIK

Postahane Mah. Barbaros Hayrettin Cad. Ayazma Sitesi

H Blok D : 1 81700 TUZLA

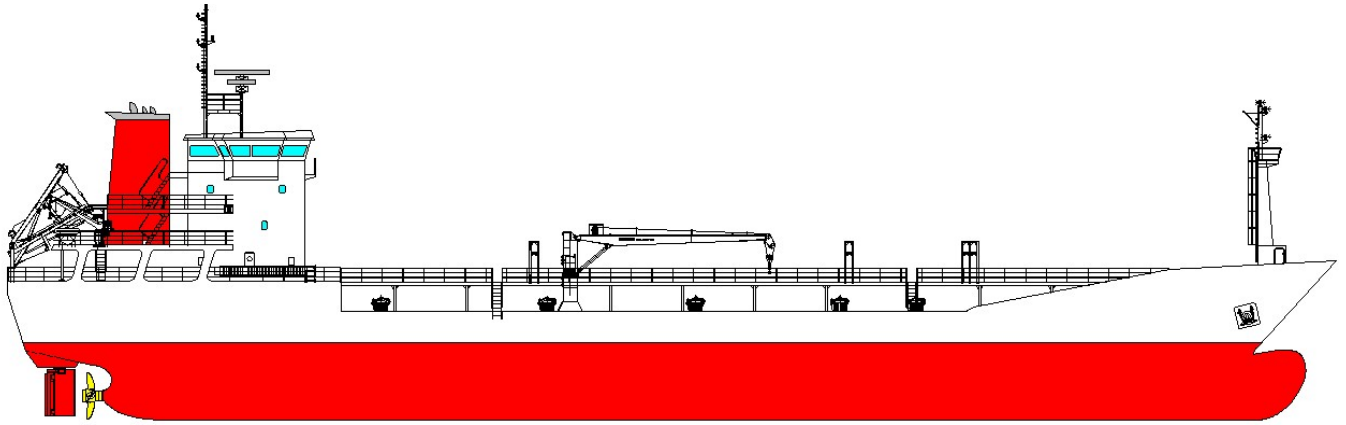
İSTANBUL / TÜRKİYE

Tel : +(90 216) 3952556

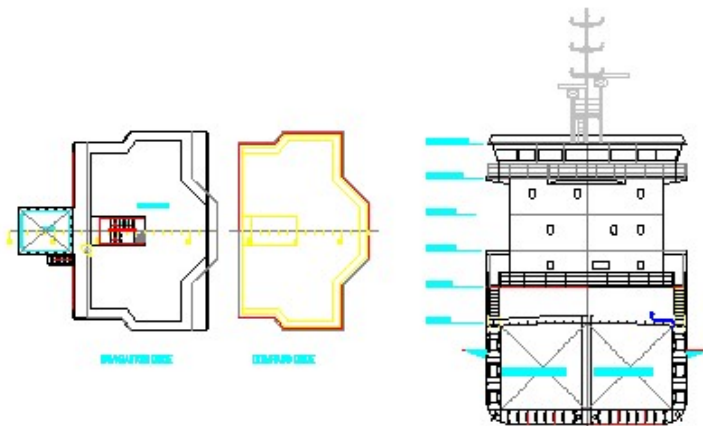
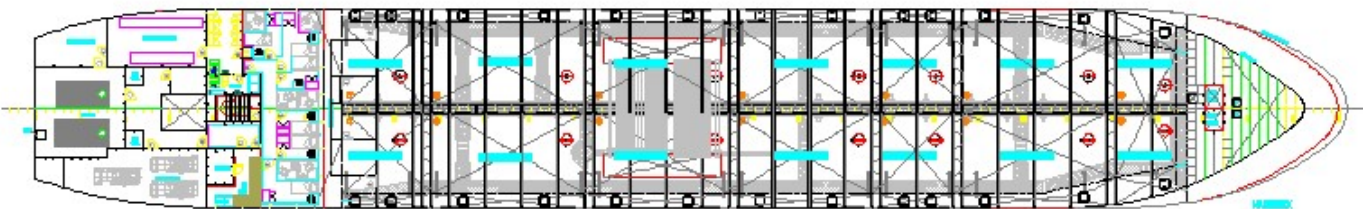
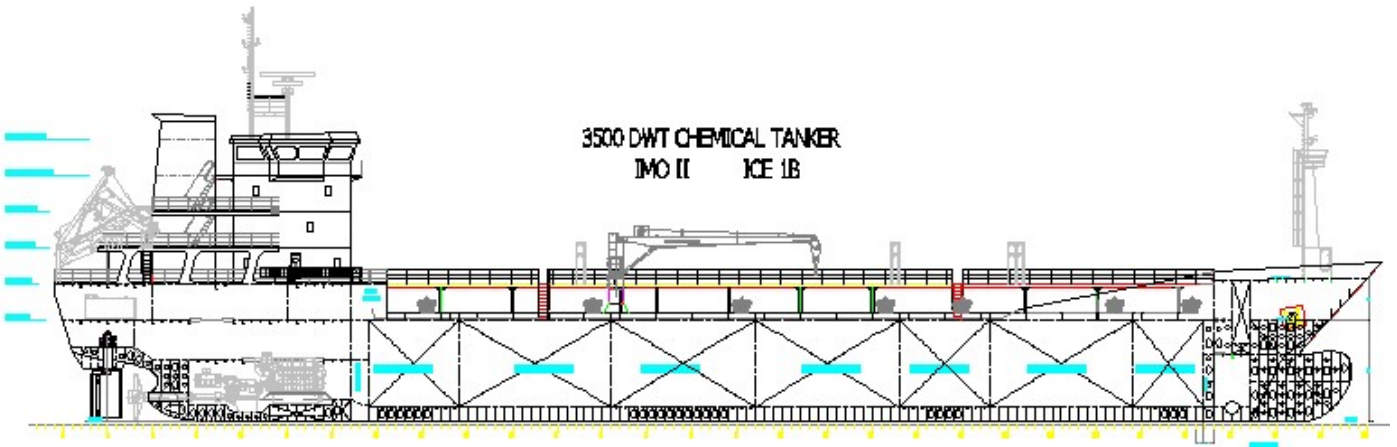
Fax : +(90 216) 3954484

E-Mail : ozmarin@ozmarin.com

Web : www.ozmarin.com



3500 DWT CHEMICAL TANKER
IMO II ICE 1B



PRINCIPAL PARTICULARS

MAIN DIMENSIONS

Lenght Overall	95.39 m.
Lenght Betwen Perp.	87.22 m.
Breadth (mld)	14.40 m.
Depth to Main deck (mld)	7.00 m.
Draught (Summer load)	5.75 m.

TONNAGE

Deatweight (at Summer load)	3.512 t.
Displacement (at Summer load)	5.386 t.
Gross tonnage (abt)	2.490 t.
Net tonnage (abt)	1.128 t.

CAPACITY

Cargo capacity	4.142 cbm.
Marine Diesel oil	74 cbm.
Heavy Fuel oil	182 cbm.
Fresh water	60 cbm.
Water Balast	1.597 cbm.
L.Oil tanks	35 cbm.

MACHINERY PLANT

Main engine	MAN B&W 6L27/38 2040 Kw, 800 rpm.
Aux. Engine	3x470 Kw.
Boiler	2x1800 Kw, thermal fluid heater
Bow thruster	300 Kw, hydraulic driven

SPEED AND CONSUMPTION

Speed (90% mcr)	13.5 kts Laden
Fuel consumption	7.7 t.

CARGO EQUIPMENT

Cargo Tanks	14 Tanks Coated with MarineLine Sg 1.9 t. Fit for carriage of Phosphoric acid
Cargo Discharce Capacity	1.000 cbm/h
Cargo Pumps	12x200 cmb/h Frank Mohn, Deep well 2x100 cbm/h Frank Mohn, Deep well 1x 70 cbm/h Frank Mohn, Poetable
Heating system	Stainless steel coils with thermal oil
Fixed Tank Washing system	28 pcs Fully programmable and Fixed

GENERAL

The ship to be build in accordance to this outline specification and general arrangement drawing no. 3500 01 01.

The ship to be an IMO II with specific gravity of 1.9 double bottom and double sides.

2x7 cargo tanks to be arranged. It will be possible to load fourteen (14) segregations. Two slop tank on deck.

The water ballast to be carried in combined double bottom and wing tanks and in the fore peak.

Superstructure with deckhouse aft to be arranged for accommodation.

The deadweight to include fuel oil bunker, freshwater, crew and store and spare parts beyond the requirements of the Class. The deadweight is calculated in salt water with a specific gravity of 1.025 ton Per m³.

Class and regulation

The vessel to be build according to the regulations and under the survey of Bureau Veritas with following notations:

- HULL
- MACHINERY
- BOULDERS
- AUT-UMS

Oil Tanker / Chemical Tanker- ESP,IMO Type 2

Unrestricted navigation

Ice class 1B

AVM-APS

Speed

The vessel is designed for a trial speed of 13.5 knots under ideal conditions, with no wind upto Beauford 2, no waves or swell, in deep and current water with the main propulsion plant developing 85% of MRC without shaft generator and at a draught of 5.60 m.

Propeller speed to be abt 200 rpm.

HULL STRUCTURE

Hull material to be of mild steel. No steel structure to be inside cargo tanks.

Hull in way of cargo area to be transverse framed except for deck, inner skin and bottom where longitudinal framing to be used. Stiffeners and webs on upper deck to be placed on the exposed weather side. Hull at ends to be transverse framed.

Bulkheads in cargo tanks to be of corrugated type with no stringers except foremost and aftmost bulkheads.

Metarial Protection

Cargo tanks : To be of MarineLine coated
Balast tank : To be of Jotun's Balloxy HB Coated in thickness of
2x150 microns + cathodic protection by Jotun
F. water tank : To be of Jotun's Jotacote 412 coated in thickness of 2x200 microns.
TYPE OF COATING : Tin free and fit for ice class 1b for 60 months of drydock intervals.

EQUIPMENT FOR CARGO

Deck Crane

1 SWL 3.0 tons, outreach 16.5 m.
Electro hydraulic driven system

1 SWL 1.5 tons outreach 3.5 m.
Electro hydrolic, self-acting-Life raft / rescue boat / provisions

Cargo pumps

Number : 15
Type : FRANK MOHN AS-Deep well pumps
Capacity : 12 X SD125-200 CubM/h
2 X SD100-100 CubM/h
1 X portable TK80 – 70CubM/h at
Pressure : 14 X at 120 mic. with spg. Between 0.8 and 1.0 cSt.
1 X at 70 mic. with spg. Of 1.0 cSt (portable)
Drive : Hydraulic driven
Material against cargo : Frame seal (teflon basis)
Total discharging capacity : abt 2480 CuM/h + 70 CuM/h

Total loading capacity also to be abt m³/h

Heating system for cargo

Stainless Steel AISI 316 L.

Cargo control system

One cargo and ballast control system to be installed with the following layout.

1 TANK AYATEM – Norway

Cargo (as well as balast, HFO, MDO and LO) tanks level gauging and monitoring system.

IG pressure trandmitter.

High and high high level (overflow) alarm system.

Draft sensons

Control cabined PLC.

Back – up display units PC.

Cargo tank cleaning system

Machines by SCANJET

28 off SC30T (fixed) of single nozzle, 4 programs, with cap of 10-12 CubM/h at 8-10 bars.

2 off SC15TW (portable) with cap. of 10 CubM/hr at 8-10 bars.

Tank wash heater by S-MAN, Sweden.

1 off 3.600 kW.

44 cubM (primary system) / 164 CubM (secondary system)

Tank wash pump by BOMBAS AZCUE, Spain

1 off type AN-50/315-FR

100 CubM/h at 10.3 bars, horizontal centrifugal / impeller and casing are of bronze. ABB motor of 2900 rpm.

Whit bulkhead sealing.

SHIP INSTALLATION

Rudder – steering gear

ULSTEIN Tenfjord type SR 662

Rotary vane, torque 170 knm.

Bow thruster

ULSTEIN Transverse thruster.

Type 45 – TV, 300 kW, electrical motor driven.

Gearbox and thrust bearing

1 x ALPHA, AMG 40 vertical offset, typ 47V040

Ratio : 1 / 4.7

PTO 1500 kW at 1500 rpm

Bollers

S-MAN

2 x 1.800 Kw thermal fuel heater

HFO / MDO fired system

1 x 400 kW economiser (incl. Dump cooler)

Bot hare fully automated control system

Diesel generator

3 x 470 kWe by Lindenberg Anlage GmbH (engines : D2842LE 301 from MAN; alternators DGS 62M 2-4 of AvK)

Emergency generator

1 x 99 kWe by Lindenberg Anlage GmbH (engine: D2866 E from Man: alternator ; DSG 43 M1-4 from AvK)

Shaft generator

1 x 840 kWe shaft alternator by AvK at 1500 rpm. Power take home available. Auto transformer and its control panel by MOCOTECH (Germany)

SYSTEM FOR MACHINERY MAIN COMPONENTS

Piping material generally all system:

Pipes	Material
Seawater cooling pipes	Galvanised steel
Freshwater cooling pipes	Galvanised steel
MDO in engine room	Galvanised steel
Fuel oil pipes	Stell
Lub oil pipes	Stell
Air, filling and sounding pipes	Galvanised steel
Bilge pipes	Galvanised steel
Ballast pipes	Galvanised steel
Fire pipes	Galvanised steel
Hydraulic pipes	Stell
Compressed air 30 bar	Seamless steel
Compressed air 7 bar	Steel
Cargo piping generally	Stainless steel 316L

Main engine

1 x M.A.N. B&W Diesel Engine
Type 6 L 27/38, four stroke
2.040 Kw at 800 rpm. Rotating clockwise
With Vulkan coupling.

Popeller

1 x ALPHA CP propeller
Propeller / Shaft / Stemtube
Medium skewed with 4 blades, Dia : 3300mm
Rotating anti-Clockwise
Propeller hub type VB980 in Ni-al-bronze

Fuel oil system

Fuel system consists of;

- 2 HFO and 1 DO purifiers, by Alfa Laval
- booster module, by Alfa Laval
- 2 HFO and 1 DO transfer pumps, by Bombas Azcue
- day and settling tanks and sludge tank.

Lub oil system

Lub oil system consist of;

- 1 LO purifier, by Alfa Laval
- 1 LO transfer pump, by Bombas Azcue
- 1 LO pump for M/E, by Bombas Azcue

Cooling system

Cooling system consist of;

- 1 x M10 BFM (for M/E LT), 1 x M10 MFM (for M/E HT) and 1 x M10 BFM (for R/G) coolers
- Cooling pump (type CM - 100/33) 2 x 100 CubM/h at 3.1 bars, 450 rpm.
- FW HT cool.pump (type VM - 80/33) 1 x 70 CubM/hr at 2.5 bars, 1500 rpm.
- FW LT cool.pump (type VM - 80/33) 1 x 70 CubM/hr at 2.5 bars, 1500 rpm.
- Preheating circ.pump (type CP - 50/130) 1 x 20 CubM/hr at 2.05 bars, 2900 rpm.
- Pump of Aux D/G SW cooling pump (type VM-50/16) 1 x 50 CubM/h at 3.0 bars, 2850 rpm.

Coolers from Alfa Laval are of titatium plate type and the pumps from Bombas Azcue are of bronze impeller/casing.

Compressed air system

SAUER

2 x WP 33L start air compressor

30.2 cbm/hr at 30 bars, air bottles

Navigation equipment

The following navigation equipment to be delivered and installed;

- JRC Gyro / Autopilot
- 2 x ARPA, of which one will be of S band
- Speed log, Wing speed & direction, Echo sounder, DGPS
- Voyage data recorder, Weather fax receiver, Navtex, etc.

Windlasses

2 * 80 kN electo hydraulic windiasses

Mooring winches

2 * 80 kN electro hydraulic mooring winches equipped with warping drum / rope storing drum

EQUIPMENT FOR CREW

Accomadation located at aft aith the following rooms / compartements

Wheelhouse at bridge deck (combine navigation / communication)

- (1) Wheelhouse module wet unit
- (11) Single cabin with module wet unit
- (1) Single cabin for hospital with module wet unit
- (1) Mess room at accommodation deck 1
- (1) Cargo control room at poop deck
- (1) Public module wet unit at accommodation deck 1
- (1) Galley with cocking apparatus at accommodation deck 1
- (1) Pantry with washing / servicing apparatus at main deck
- (2) Fridge rooms for meat / vegetable at poop deck
- (1) Dry provisions room with climate ventilation at accommodation deck

Life saving equipmant

One free fall life boat- GEPA type. G-RB1, with CE marking
Capacity: 19 persons

One rescue boat GEPA type. G-RB1, with CE marking

Other safety and emergency equipment to be fitted according to SOLAS 74 Regulations.

Ventilation air condition and heating system

Heinen Hoppmann - The Netherlands

Compiying with Solas, BV and DMA rules / regulations

Design condition.....Summer -35 deg C, 70% relative humidity (RH)-
(OUTSIDE)

-28 deg C, 50% RH-(INSIDE)

-Sea water temp. 32 deg C

.....-Winter -Minus 20 deg C-(OUTSIDE)

-20 degr D-(INSIDE)

-Sea water temp. 0 deg C

-Wind speed 16m/s

Sanitar system

AQUAMAR – UK

1 X AEROB 18/36 BG

Equipped with vacuumerators.

M/T 'BERGEN NORDIC' NORWAY
Ex. (M/T 'TALIPLI' TURKIYE)

**SHIPYARD :GİSAN SHİPYARD / ISTANBUL/
TURKIYE**

HULL NO :29

OWNER :UFUK DENİZCİLİK SANAYİ ve TİC. A.Ş.

CONT.DATE :05-04-2001

LAUNCHING DATE :03-08-2002

DELIVERY DATE :28-04-2003

PORT OF REGISTRY :ISTANBUL

IMO No :9257591

B.V.Class No :02731V

M/T 'CRESCENT CUILLIN' NASSAU
Ex. (M/T 'NASİBLİ' TURKIYE)

**SHIPYARD :GİSAN SHİPYARD / ISTANBUL/
TURKIYE**

HULL NO :30

OWNER :YARDIMCI GEMİ SAN.A.Ş.

CONT.DATE :12-03-2002

LAUNCHING DATE :04-04-2003

DELIVERY DATE :03-06-2005

PORT OF REGISTRY :ISTANBUL

IMO No :9275842

B.V. Class No :03409H