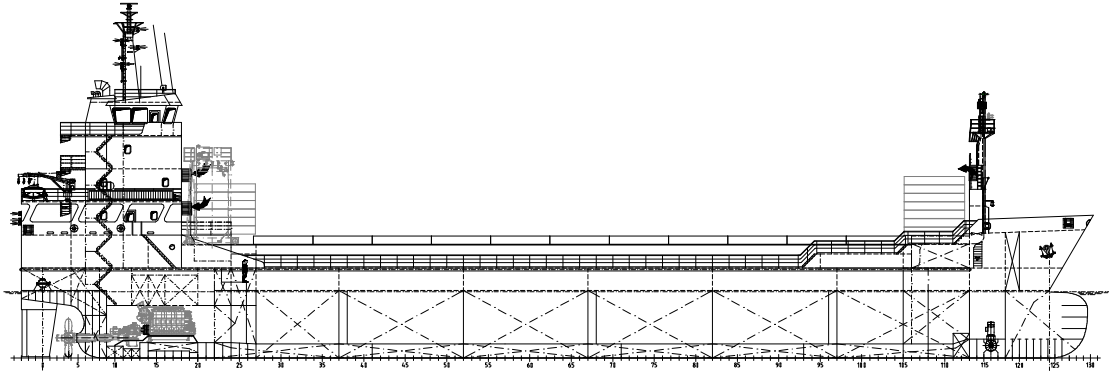


DESIGN-TYPE "abh MP General Cargo" NORBULK abt. 4.500 tdw



Design: abh INGENIEUR-TECHNIK GmbH

Type of Vessel: Multi-Purpose General Cargo Vessel

Scantling: London-Rules: abt. GT 3,300

Deadweight: abt. 4,500 tdw at D = 5.60 m

Classification: GL + 100 A5 "G" "E1", BWM
"Equipped for Heavy Cargo 15 t/m²"
"SOLAS II-2, Reg. 19"
+ MC AUT 24 "E1"

Operation Range: abt. 5,000 nm

Main Dimensions:
Length over all abt. 89.95 m
Length between perp. abt. 84.95 m
Breadth moulded abt. 15.40 m
Depth to main deck abt. 7.60 m
Design Draught abt. 5.00 m
Scantl. Draught abt. 5.60 m

Speed: abt. 11.8 kn at D = 5.60 m at abt. 85% MCR

Hold Capacity: abt. 204,000 cbf (Grain)

Hatches:
Weather deck hatches: abt. 54.60 x 12.60 m, weatherdeck load 1.75 t/m²
Hatch covers: steel pontoon hatch covers appropriate

Hold: Distributed load 15 t/m³
Reinforced for steel coils 45 t
Double Bottom 20 mm Thickness
Sidetank 1st plate 18 mm

Tank Capacities:
Ballast water abt. 2,100 m³
HFO abt. 235 m³
MGO abt. 33 m³
FW abt. 40 m³
Luboil abt. 10 m³

Deck Machinery:
2 comb. anchor winches with 1 mooring drum and 1 warping head, 50 kN pull
1 electrically driven capstan, 50 kN pull
1 electro hydr. steering gear, piston type

Deck Equipment:
2 liferafts for 8 persons each
1 rescue boat for 6 persons
1 combined provision/rescue crane, 10 kN SWL

Special Plants:
1 gantry crane for hatch cover operation, 17 t
bowthruster, fixed pitch propeller, el. driven, abt. 230 kW,
containerfootrests on hatch covers
remote controlled operated ballast water valves
semi balanced rudder/alternative flap type
2 signal masts
2 masts for radar
electr. hold air ventilation, 6-fold air changes
1 grain bulkhead, moveable
1 accommodation ladder
2 pilot ladders, 1 shore gangway

Propulsion Plant:
1 engine for HFO, power abt. 2,040 kW, 800 rpm
1 elastic coupling
1 marine reduction gear box
1 controllable pitch propeller, Dia abt. 3,5 m

Aux. Engine Plant:
2 Aux. for MGO abt. 200 kW/250 kVA, TPC const.gen. 220/400 V, 50 Hz
1 Emerg. for MGO abt. 110 kW/137.5 kVA, TPC const.gen. 220/400 V, 50 Hz
1 shaft generator of abt. 344 kW/430 kVA
2 start air compressors
1 HFO separator
1 MGO/HFO separator
2 HFO transfer pumps
2 MGO transfer pumps
1 lub.-oil separator
1 lub.-oil automatic filter
1 spare lub. oil pump for main engine
1 bilge water separator acc. MARPOL 01.10.1973
4 cooling water pumps (HT/LT)
4 coolers for main and aux. engines
2 ballastwaterpumps, 200 m³/h
1 freshwater separator, 3 t/day
1 sewage treatment plant
1 fire-fighting plant for engine room acc. rules
1 emergency fire-fighting pump
1 CO₂-fire-fighting plant for cargo hold/engine room
1 heating, incl. warm water and air-heating in accommodation
1 oil-fired hot water boiler, 500 KW, 90 °C
1 AC-plant
1 sludge pump

E-Plant:
power 400 V, 50 Hz
lighting 220/400 V, 50 Hz
emergency light 220/400 V, 50 Hz
automation 24 V, DC

Special Plant incl. Nautical Equipment:
1 signal flash light, 1 search light
1 GYRO-compass with autopilot
1 bearing compass on wheelhouse top
1 rudder indicator
2 radar units (X-Band/S-Band)
1 echosounder, 1 log
2 VHF marine radio stations
1 GPS-Receiver, 1 DGPS-Receiver
1 wireless telegraph (DSC)
1 sound powered telephone
1 radio direction finder
1 VDR, 1 AIS
1 EPIRP-sea bouy
complete GMDSS-equipment for A1 and A2

Accommodation:
8 persons

Emden, May 2007