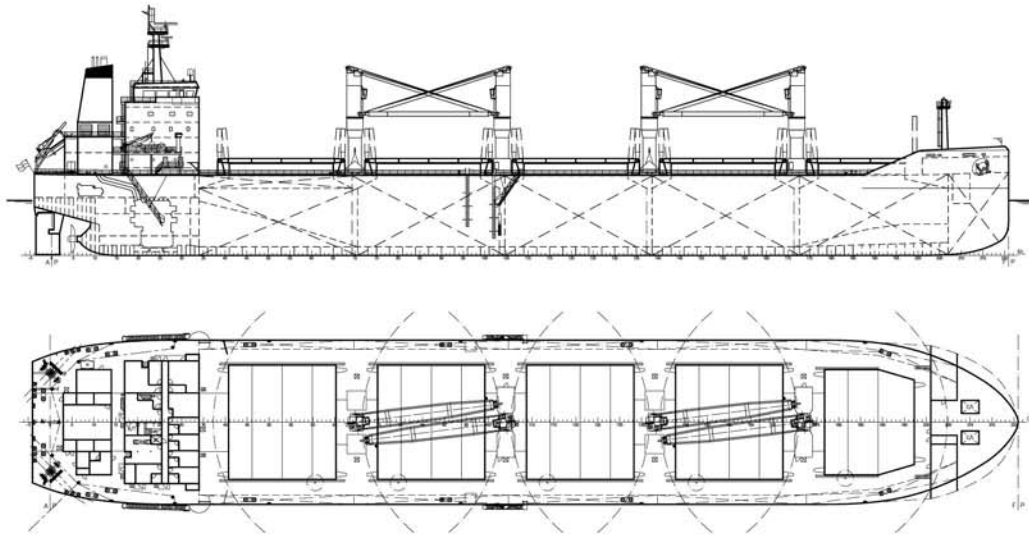


Seahorse 35

Bulk Carrier of the future



Seahorse 35



SEAHORSE 35

SEAHORSE 35 is a modern 35.000 DWT handy-size Bulk Carrier, designed in close cooperation with ship-owners with the aim to create a future-orientated handy-size Bulk Carrier incorporating all existing and known future regulations.

The SEAHORSE 35 design is developed with specific focus on:

- Economical and efficient operation
- Environmental and maintenance friendliness
- Safety
- Loading flexibility
- Latest regulations for Bulk Carriers

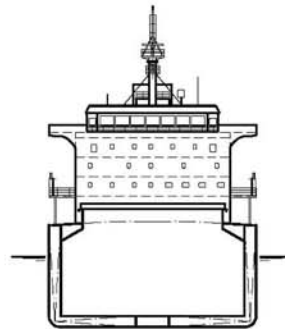
SEAHORSE 35 is shallow-drafted to maximize cargo-intake in draft-restricted ports.

SEAHORSE 35 is laid out with 5 flush double-skinned cargo holds, wide hatches and no hopper tanktops, thereby ensuring easy access and storage of cargo in all cargo holds.

SEAHORSE 35 cargo holds are equipped with CO₂ fire-fighting system, A60 fire-insulated engine room bulkhead and natural cargo hold ventilation ensuring safe carriage of a wide range of bulk cargoes.

SEAHORSE 35 is equipped with four 30 mts SWL wire-luffing cargo cranes and four motor-grabs stowed on cross-decks between hatches.

Short turn-around time is achieved by effective cargo hold cleaning by portable washing machines. Outlets of water and compressed air are arranged in all cargo holds at tanktop-level.



A permanent washing water return line is arranged in each cargo hold at tanktop level. A portable pneumatic pump can, via the return line, transfer dirty washing water to two cargo hold washing water holding tanks arranged for temporary storage to enable cargo hold cleaning in sensitive and restricted areas.

The complete double-skin configuration ensures easy access to structural inspection, even when the vessel is loaded.

Fire main line, hydraulic and FW piping and electrical cables in cargo area are arranged in upper deck pipe ducts to avoid cargo and green water damage and ensure minimum maintenance.

Main and Auxiliary Engines are all complying with IMO's NO_x Tier II requirements.

The SEAHORSE 35 is laid out to operate two HFO and MDO grades, ie low sulphur fuel operations can be ensured in SECA areas and harbors.

A slender afterbody and a high efficient NPT propeller ensures optimal performance with minimum fuel oil consumption. Furthermore a vertical stem design is adopted to improve the fuel efficiency in adverse weather conditions.

Seahorse 35

Principal dimensions

Length OA, max	180.0 m
Breadth	30.0 m
Depth	14.7 m
Scantling draft	10.1 m
Gross tonnage	24,366
Net tonnage	11,521

Deadweight and cargo hold capacity

DWT at scantling	35,000 t
TPC	50 t/cm

Cargo hold no1	7,900 m ³
Cargo hold no 2, 3, 4	9,800 m ³
Cargo hold no 5	9,400 m ³

Total cargo hold capacity, grain	46,700 m ³
Total cargo hold capacity, bale	45,800 m ³

Stowage factor	50 cuft/t
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Uniform distributed loads:

Tanktop all cargo holds	22.0 t/m ²
Weather deck	4.0 t/m ²
Hatch covers	2.5 t/m ²

Steel coil loading:	1.5 tier of 30 t/coil 2 tier of 22.5 t/coil
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(min coil length 1.75m on 5 wooden dunnage)

Class notation

Det norske Veritas +1A1 Bulk Carrier ES(D), CSR, BC-A (CH 2&4 empty), GRAB(20), ESP, E0, HA(+), DK(+), DG-B TMON, BIS, FUEL (700cSt, 991kg/m³, -15deg), BWM-E(s,f)

Option: Ice class 1C, 1B, 1A or Log-fitted

Speed and Consumption

Service speed	Fully Laden	14.0 knots
	Ballast	14.9 knots

ECO speed	Fully Laden	13.0 knots
	Ballast	13.9 knots

Main engine fuel oil consumption (MDO):

Service speed	21.9 t/day
ECO speed	16.8 t/day

Auxiliary engine consumption (MDO):

At sea	2.1 t/day
In port, idle	1.4 t/day
In port, cranes in operation	4.2 t/day

Consumption is based on scantling draft, including 15% seamargin. LCV for MDO is 42,700 kJ/kg.

Main engine fuel oil consumption (HFO):

Service speed	23.3 t/day
ECO speed	17.9 t/day

Auxiliary engine consumption (HFO):

At sea	2.2 t/day
In port, idle	1.5 t/day
In port, cranes in operation	4.5 t/day

Consumption is based on scantling draft, including 15% seamargin. LCV for HFO is 40,200 kJ/kg

IMO Energy Efficiency Design Index:

EEDI _{MDO}	5.51 g/Dwt-nm
EEDI _{HFO}	5.85 g/Dwt-nm

Endurance:

At service speed incl. Aux/E	18,000 nm
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Main machinery and equipment

Main engine	MAN B&W 5S50ME-B9.2 TII
- SMCR	6,350 kW
- CSR	5,700 kW
Aux engines	3 x 600 kW
Emergency generator	110 kW
Ballast pumps	2 x 800 m ³ /h

Complement

Senior officer class	4
Officer class	6
Petty officer / Rating class	15
Total complement	25

Cargo list

Coal, grain, iron ore, cement, alumina, bauxite, mineral sand, salt, steel coils, packaged timber, fertilizer, scrap iron, direct reduced iron (A), ammonium nitrate, sulphur, saltpetre, seed cake (a).

Cargo loading

Deck cranes:	
4 sets of wire-luffing deck cranes	
Safe working load (SWL)	30 t
Max. outreach from CL of vessel	26.2 m
Minimum outreach	4.0 m

Hatch covers:

5 sets of end-folding, double-skinned, hydraulic operated steel hatch covers with grain/cement feeder openings.

Hatch opening (LxB):

Hatch no 1	16.0m x 18.7m/15.0m
Hatch no 2, 3, 4 and 5	19.2m x 20.3m

Cargo Equipment:

Lashing points on upper deck for securing of cargo on upper deck and on hatch covers.

Lashing points on longitudinal bulkheads in cargo hold 2, 3 and 4 for securing of cargo in holds.

Permanent CO₂ fire-fighting system for all cargo holds.

Engine Room bulkhead A-60 fire-insulated.

Cargo hold cleaning:

2 portable air/water driven combi-guns and 2 portable pneumatic air driven washing water discharge pumps. Permanent SW, FW and compressed air connections in each cargo hold at tanktop level. Permanent washing water return line connected to washing water holding tanks in each cargo hold.

Tank capacities

Heavy fuel oil	1,530 m ³
Diesel oil	150 m ³
Marine gas oil	50 m ³
Lub oils	100 m ³
Fresh water	250 m ³
Ballast water (excl CH 3)	12,800 m ³
Ballast water (incl CH 3)	22,600 m ³
Washing water holding tanks	220 m ³

Fuel oil, ballast and fresh water tanks are equipped with remote tank gauging.

All HFO tanks arranged in Engine Room with cofferdams towards shipside.

GRONTMIJ

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More than 250 newbuildings has been build according to our design.

Head office of Marine department is located in Copenhagen with branch offices in Odense and Shanghai. We have long and close relationship with ship owners in Europe and combined with our local knowledge and experience with, the ship building industry in Asia, we provide first class service to our Clients.

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