

FINNECO I – RO-RO FERRY



Shipbuilder: **China Merchants Jinling Shipyard**
 Vessel's name: **Finneco I**
 Owner/Operator: **Finnlines Plc**
 Country: **Finland**
 Designer: **Knud E. Hansen**
 Country: **Denmark**
 Flag: **Finland**
 IMO number: **9856830**
 Total number of sister ships already completed (excluding ship presented): **2**
 Total number of sister ships still on order: **Nil**

Designed by Knud E Hansen and built by China Merchants Jinling Shipyard, Finneco I's first hybrid ro-ro was delivered to Finnlines on 28 April 2022. The ship is one of a trio with *Finneco II* and *Finneco III* also delivered in 2022. The trio have Ice Class 1A Super and are a modified version of parent company Grimaldi's Eco Valencia class of nine ships altered to suit trading on the Baltic services operated by Finnlines.

The Finneco name was well chosen given the vessel's innovative use of multiple technologies to increase efficiency and reduce emissions. To begin with, at 238m long and with a capacity for 400 trailers in its 5,800 lane metres, the ship can carry 40% more cargo than the previous largest vessel in the owner's fleet. Freight trailers are accommodated in three holds and on the weather deck. There is a fixed car deck in the forward part of number two deck and a hoistable deck in number three. Access is by three stern ramps. The tank top and main deck are designed free of pillar areas to accommodate paper and sto-ro concept. The flexibility offered permits the vessel to be able to load high and heavy and long and wide cargoes. This will make them attractive propositions for project cargoes destined for wind farm construction for example. High cargoes up to 7m high can be accommodated. A total of 520TEU can be loaded on the weather deck further increasing the flexibility of the ship.

Main engines are a pair of Hyundai-built MAN B&W 9S50ME-C9.6 super long stroke engines each producing 12,780kW directly connected to a pair of Kongsberg supplied Promas Lite rudder/propeller systems with controllable pitch propellers.

Outwardly the ship is a typical ro-ro other than the messages HYBRID RORO and ZERO EMISSIONS IN PORT emblazoned on the superstructure and hull respectively. These indicate that the vessel is equipped with a Corvus Energy storage system comprising two 2,500kWh battery packs.

Other energy saving and environmental equipment includes 600m² of solar panels installed on the vessel to provide clean energy for use and storage onboard, a Silverstream Technologies air lubrication

system and a waste heat recovery system. Each main engine has its own Langh Tec open loop exhaust gas cleaning system to remove SOx.

Finneco I has three auxiliary engines with a power output of 1,540kW each. The vessel is also equipped with two Wärtsilä shaft generators with a power rating of 2,000kW each which can charge the battery system. Wärtsilä also provided the hybrid power conversion system, energy management system, PTO/PTI converters and transformers and the bow thrusters. The two-stroke hybrid shaft generator system was the first devised by Wärtsilä and the first in the Finnlines fleet.

TECHNICAL PARTICULARS

Length oa:238.0
 Length bp:229.75
 Breadth moulded:34.0
 Depth moulded
 to main deck:9.30
 to upper deck:25.6

Draught
 design:7.20

Gross:60,515
 Deadweight
 design:17,358tons

Speed, service (–%MCR output):19.0

Bunkers (m³)
 Heavy oil:1,764
 Diesel oil:280.1

Water ballast (m³):110,44.6

Daily fuel consumption (tonnes/day)
 Main engine only:abt 54.7 when speed 18kts
 Auxiliaries: When working abt 7.0 MGO

Classification society and notations:Rina
 C+, ro-ro cargo ship, inwatersurvey, BWM-T, AUT-UMS, SYS-NEQ-1, SYS-IBS, Green Plus, unrestricted navigation, mon-shaft, Ice 1A Super

Propulsion
 Main engine(s)
 Design:Hyundai-MAN 2x12,780kW
 Model:Hyundai-MAN B&W 9S50ME-C9.6
 Number:2
 Type of fuel:HFO
 Output of each engine:12,780kW @117rpm
 Is this a diesel-electric or hybrid?:Hybrid

Propeller(s)
 Designer/Manufacturer:Kongsberg
 Number:2 x Promas Lite
 Fixed/Controllable pitch:Controllable pitch

Exhaust-gas scrubbing equipment
 Manufacturer:Langh Tec

Type:Open loop
 On main engines?:yes
 On auxiliary engines?:no

Bow thruster(s)
 Number:2
 Output (each):1,800kW

Special lifesaving equipment
 Number of each and capacity:2 x Lifeboats, for 38 persons
 Type:Enclosed

Vehicles
 Number of vehicle decks (fixed/moveable):4
 including weather deck plus 1 fixed deck for cars in forward part of Deck 2 and hoistable deck on Deck 3
 Total lane length:5,800
 Total freight units (specify size):400

Container capacity:520TEU on weather deck

Doors/ramps/lifts/moveable car decks
 Number of each:3 stern ramps – port, starboard and centre

Ballast water treatment system
 Make:Alfa Laval Aalborg

Complement
 Single/double/other rooms:Single
 Passengers
 Total:12
 Number of cabins:12

Waste disposal plant
 Sewage plant
 Make:Gertsen & Olufsen A/S
 Model:BR 7400BG

Efficiency
 Attained EEDI value:9.18
 Required EEDI value:10.32
 Energy Saving Technologies*:Air lubrication, battery pack 2*2,500kWh, waste heat recovery, solar panels 600m²
 Hull coatings:TBT-Free Self-Polishing Copolymer Antifouling

Contract date:26 April 2018
 Launch/float-out date:26 April 2021
 Delivery date:28 April 2022

