

Grimaldi Group signed contract with CSC Jinling for six GG5G Class short-sea ro-ros

The Grimaldi Group has signed a contract for the construction of the first six in a series of twelve 7,800-lanetre hybrid ro-ro vessels that will all be built in China. Three ships will be operated by Grimaldi Lines in the Mediterranean and three modified versions will be purchased by Finnlines, a Grimaldi Group subsidiary.

This expansion and modernisation programme was first announced in October 2016 with the signing of the contract taking longer than first expected. The six-ship order at CSC Jinling represents an investment of over USD 400 million. The new, 64,000gt vessels will have a length of 238 metres and 34-metre beam, making them dimension-wise the world's largest short-sea ro-ros. The 7,800 lanetre or 500-trailer intake is close to that of CLdN's CELINE and DELPHINE and double that of Grimaldi's Eurocargo Class ro-ro freighters that were built by Hyundai Mipo. At the same speed they will consume the same quantity of fuel, meaning a 100% increase in efficiency when measured in terms of consumption/lanetre of freight transported.

GG5G stands for Grimaldi Green 5th Generation, a design developed by the Technical and Energy Saving Department of the Grimaldi Group in conjunction with KNUD E. HANSEN, the Danish naval ar-

chitects behind ACL's G4 Class. According to Grimaldi, the design incorporates many innovative elements that are partly already patented and protected by copyright.

The scrubber-equipped hybrid vessels will burn HFO during navigation. When alongside in port, the ships will emit zero emissions thanks to mega lithium batteries – equivalent to 90 Tesla cars or 9,000kWh – which will produce the required 'hotel load' electricity while at berth. These batteries will be recharged during navigation, via shaft generators using peak shaving, and with the aid of 600m² of solar panels.

The other main technical innovation of these ships is the air lubrication system under the flat bottom which creates a layer of bubbles which reduces friction and hydrodynamic resistance and consequently the emissions deriving from fuel consumption. The vessels' hulls will also be covered with special non-toxic silicon paints characterized by low surface roughness which will reduce friction with the sea and does not release any toxic substances into the water.

As stated above, Finnlines' three GG5Gs will be modified versions, with a smaller trailer intake but with a larger on-deck container capacity and car decks for new vehicle stowage. While the twin screw hull form and two-stroke machinery will

be identical, the vessels will be strengthened to ice class 1A standards and will have 17,400dwt, higher than the trailer-orientated Grimaldi Lines trio because the vessels will be transporting sto-ro paper cargo. Their trailer capacity will be only 5,800 lanetres (compared with 7,800 lanetres). The vessels will also incorporate 5,600m² of car decks, sufficient for a 600-vehicle intake. Weather deck space for up to 300 TEUs will give the vessels unprecedented flexibility. Despite the differences, the Finnlines trio will keep all the green features of the Grimaldi GG5G Class.

The vessels are due to be delivered by Jinling Shipyard from 2020/21 onwards and the Grimaldi Group will reportedly order six more ships of the same class.

Up to 12 GG5Gs will be built, three of which will sail under the Finnlines banner.



ILLUSTRATION: GRIMALDI GROUP