# MESSINA – LAST BEFORE THE BRIDGE?

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Newbuilding train ferries are a rarity, at least in Europe. Ever since the "iron wheel" revolution in the 1800's, train ferries were part of the logical expansion of the rail network. However, their popularity has waned in the last decades, as road highways have become the dominant transport system. In recent years, train ferries have only been built to serve Russian and Chinese networks.

In Western Europe, fixed links have become the preferred choice, gradually replacing many rail ferries. Despite the often resurrected project to build a bridge across the Straits of Messina, the Italian Sate Railways, RFI, decided to build a new train ferry for its "Bluvia" Sicily connection between Villa San Giovanni and Messina, eventually awarding the EUR 49.5 million contract to Nuova Cantieri Apuania (NCA) at a critical time when the yard had no orders.

Having operated train ferries for many decades, RFI's ideas for new tonnage were hardly surprisingly closely tied to their long experience. Like any state owned company, change comes painfully slowly. On the other hand, one of Italy's most innovative Naval Architects, NAOS, were appointed by NCA as the designers. While NAOS did their best to introduce new thinking into the project, some areas were already "set in stone" before NAOS became involved in the project.

The infrastructure in both Villa San Giovanni and Messina is antiquated. The linkspans and berth slots date from many years ago and there is no money or desire to update them given the possibility of a bridge being built in the next decade. Any new ships therefore have to fit into the existing facilities and therefore cannot be different from previous generations especially as far as the bow shape and beam are concerned. The last vessels were built for the route in 1985-88!

Despite the very short crossing, a double ender configuration was not even considered. Instead, a bow and stern loading ferry with very fine hull-form follows the pattern of vessels used on the route for many decades. Fitted with substantial fenders, the MESSINA's berthing procedure is designed to be fast and efficient with the bow wedged into the linkspan slot.

## WHEELS OF STEEL

Four flush train tracks are incorporated in the Maindeck which is open at the aft end to allow rail wagons containing IMO class cargoes to be parked there. Passenger and freight wagons are shunted through the single-track bow entrance only. The bow visor, designed by NAOS to be simpler and lighter than on existing vessels, also affords better sightlines from the bridge to the linkspan. There is no separate bow door or ramp as the main deck is considered an open space with large area freeing ports on both sides.

The stern entrance, with 6.2m long plus 1.5m flaps x 8.1m wide ramp, is available for drive through loading of cars and trucks when the vessel is not transporting trains. Up to 138 cars or 24 trucks can be parked on the 4.78m high Maindeck.

Folding buffers are incorporated at the aft end with the flush rail tracks designed with a specific track length corresponding to the length of standard passenger and freight wagons. A total of 16 x 26.4m long passenger wagons can be transported. Access from the Maindeck up to the passenger decks is via


PHOTOS: GUALTIERO PALERMO FOR ASSOCIAZIONE FERROVIE SICILIANE - AFS MESSINA - WWW.A-F-S.IT


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narrow stair casings on the centreline and on both sides. Unusually, side ramps are provided on both sides at the stern. However, these are only used for maintenance and access purposes when the vessel is not in regular service.

## UNUSUAL PROPULSION SYSTEM

The propulsion system is highly unusual. Three azimuthing Schottel STP 1515 thrusters with twin 2.4m diameter propellers are incorporated aft, directly driven by Wärtsilä 6L26 main engines via the worm gear housings, each having a maximum rating of 2,040kW at 1,000rpm.The engines run on gasoil.

The inclined shaft lines are quite long, the centre shaft piercing three transverse bulkheads. One of the thrusters is located on the centreline while the other two are positioned slightly forward on the port and starboard sides. The genset room is immediately forward of the main engine room and houses four Wärtsilä 6L20 gensets each with a 1,140kW output.

Forward, the MESSINA is equipped with a pair of 470kW bow thrusters as well as a bow rudder. The bow rudder is handy for use when going astern at speed but the Schottel thrusters themselves give the vessel an unprecedented level of manoeuvrability. The vessel has an 18-knot service speed. When compared with many highly successful fjord ferries which are equipped with azimuthing thrusters fore and aft, the combination of three azimuthing thrusters, two bow thrusters and bow rudder seems overly complex and redundant.

To cope with the large heeling moments associated with loading trains on board, two Brunvoll FU37LTC1000 9,000m³/hour capacity pumps transfer ballast water between the two pairs of anti-heeling tanks.

## PASSENGERS

Typical for a railway operation, the passenger facilities are rather basic. Foot passengers access the MESSINA via gangways landing on the poop deck. The main saloon area forward has 428 seats including a dedicated area for 29 special needs passengers. A small cafeteria/bar is all that is available for the short crossing. A smaller saloon with 88 seats is located aft with a protected outside area with 208 seats. Viking have supplied their MES evacuation system with large 100 person capacity liferafts.

Unlike the many modern Norwegian fjord ferries with one central command bridge, RFI have specified two command centres, one for forward operation with fully enclosed overhanging bridge wings and a second smaller docking station at the aft end of the accommodation for use when sailing astern. Only four officer class cabins are provided, the local crew operating on shifts with no need for accommodation on board.

## YACHT BUILDING

The MESSINA is the last commercial vessel to be built at NCA. After a long history of building ferries and ro-ro ships, despite the best efforts of the management to get a sistership for the MESSINA approved, the yard could not continue in its present form. The shipyard has been purchased by the Admiral Technomar group and will now switch its focus to mega yacht construction as well as commercial repair and conversion work. ■

## MAIN PARTICULARS

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|---|---|
| SHIPYARD | Nuovi Cantieri Apuania (C.129) |
| OWNER | RFI |
| IMO | 9631797 |
| LOA | 147.0 |
| BEAM | 18.7 |
| DEPTH TO MAINDECK | 7.9 |
| DESIGN DRAFT | 5.25 |
| DWT | 2,679 |
| GT | 5,600 |
| MAIN ENGINES | 3 x Wärtsilä 6L26 |
| MCR | 6,300kW |
| SPEED | 18 knots |
| LANEM | 440m (trucks) |
| PASS | 900 |

SHIPPAXDATABASE