# EWSLETTER



NAOS Ship and Boat Design

Issue 01, April 2018





16 March 2018, the waters of the Yangtze river are filling one of the big dry docks in **Jinling** Shipyard, Yizhen, China, to let the first of the two **TOLL** RoRo ships float out the next morning. Good achievement for the team of Jinling Shipyard, Toll superintendents and NAOS.

NAOS has been involved in the project in July 2015, in co-operation with SeaHighways, UK based consultants.

The vessel features a pair of two-strokes engines MAN for high fuel efficiency, which coupled with an highly performing hullform and propulsion systems allow the ship to achieve the EEDI (Energy Efficiency Design Index).

A "huge" stern ramp – today the biggest ever – should allow a safe undisturbed cargo flow on main deck and upgoing ramp.

Presently the biggest RoRo vessel ever designed by NAOS, she incorporates features like twin skegs and semi vertical bow for good sea keeping.

She will link Melbourne with Tasmania, on daily base.

Free height on main deck allows the loading of two tier containers on rolltrailers. The total cargo capacity is of 3060 lm, equivalent to 220 road trailers, with an additional separate space for abt 70 cars.

#### Main dimensions;

LOA 210.00 m BOA 28.00 m Draft 7.30 m DWT 12.000 t Propulsion Power 2 x 10.215 kW Service Speed 20.5 kn



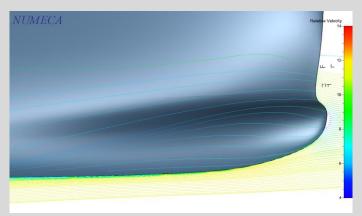
#### New Mediterranean RoPax for Siremar



In a fleet renewal program, *Siremar* contracted NAOS to perform the basic design for three different type of small RoPax.

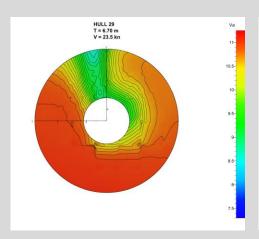
A small one, 100 m LOA, for very short crossing (Isole Egadi), one for 6-8 hour crossing at 18 knots, 130 m LOA (Pantelleria e Lampedusa), and a more "luxury" version of the same, with a "glamorous" top restaurant and bar. Some EU yards are presently quoting the project, and a short list of yards shall be ready at the time of this newsletter issue.

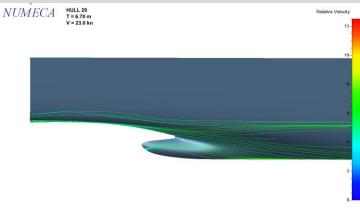
#### NUMECA FineMarine implemented at NAOS



Since April 1st, NAOS has started its commercial use of **FineMarine**, after a 3 month trial period. The code has shown great performances with a very good correlation with Towing Tank results. This allows to investigate new and sometime unusual hull shapes, foils and other fuel saving devices. Current ongoing project continues to be developed, boosted by this powerful tool for hydrodynamic optimization.







Detailed analysis of wake field is possible (and accurate!) well before the time consuming model scale experiments. This allows the shaping of stern appendages by exploring several option before the delivery of the final model to the basin. Propeller designer will be pleased to design the propeller in such wake fields!

## NAOS speech at Ferry Conference 2018



Roberto Prever will have a speech at the Ferry Conference (on board) 2018, the 19<sup>th</sup> of April, with the title "New RoPax design to tackle the challenging fuel changes in the Med".

The latest design made by NAOS will be shortly described, in conjunction with different fuel specificity.

### New RoPax design, 3000 lm

A new 3000 lm SRTP RoPax, with 250 cabins and an **additional car deck** for 90 cars is in the portfolio. The vessel will have a service speed fully loaded of 22.5 kn, including engine and sea margin, by installing 2 x 10.800 kW in line propulsion engines. The design is made considering a certain degree of flexibility, so that cabins can be decreased or increased, by multiple of zones.

More powerful "V" type engine can also be fitted, to get speed in excess of 23.5 kn. LNG tank installation has been also considered as an option, even though a oil/hybrid scrubber system will be the standard arrangement. Drive through and two level loading are also in the plans, so that the design itself may cope with different Owner requirements, even if not fitted from the beginning.



