

CONTRACT SIGNATURE OF NEOLINER PROJECT, FIRST SAILING CARGO DESIGNED BY MAURIC

After nearly 80 years of existence, MAURIC, an EXAIL Group company, is today proud to return to its origins with the NEOLINER project. After accompanying NEOLINE start-up in the concept design of this innovative 136m Ro-Ro sailing cargo vessel since 2015, MAURIC is today proud to announce the signature of its own contract for the basic and detailed design of the first NEOLINER with RMK Marine.

NEOLINER a project which continues the MAURIC tradition of sailing vessels design

Since the 30's, André Mauric made himself known for drawing and designing iconic sailing boats such as the First 30 of Bénéteau or Kriter V, VIII and the famous Pen Duick VI for Eric Tabarly. Mauric also designed the Alcyone, one of the renowned research vessel of Commandant Cousteau in the 80's. Building of this heritage, of years of naval architecture practice and of hundreds of references, MAURIC refreshes the sailing vessel in a new style and unprecedented size: Néoliner is a modern and environmentally-friendly solution for Ro-Ro transport and maritime shipping, based on an innovative architecture of wind propelled commercial vessel.



MAURIC at the forefront of maritime transport decarbonization

MAURIC is collaborating with NEOLINE since 2015, when the company has been founded. NEOLINE wanted to develop new innovative sailing ships with real cargo capacities and performances to ensure a service suited to global market needs. Thanks to a close cooperation and emulative partnership, MAURIC and NEOLINE have developed a new and

more responsible service for shipping, opening the minds to the possible decarbonation of maritime transport. During the last years, MAURIC has spent more than 5 000 hours of engineering studies for this project, in order to confirm the feasibility, optimize the definition of the vessel and develop this new innovative sailing ship with real capacities and suitable performances.

The objective is to develop a Ro-Ro cargo vessel with sails as main propulsion systems reducing the greenhouse gas emissions by 80% to 90% in comparison with standard Ro-Ro vessels. The development studies led by MAURIC have ensured the compliancy with industrial and regulatory constraints considering the cargo space requirements driven by the future end-users of this vessel. Indeed, in the meantime, NEOLINE has prepared and secured his business plan and signed multiple LOI with French top industrial actors engaged in decarbonizing their supply chain (cars: Renault, manufactured goods: Michelin, Clarins, luxury: Jas Hennessy & Co., Longchamps and outsized packages: Beneteau leisure boats, Manitou forklifts, etc.).

As a result, this Ro-Ro sailing cargo will be 136 meter long with two Solid Sail rigs (1500 square meters each) from Chantiers de l'Atlantique. She provides a rolling lane capacity of 1130 meters and 265 Twenty-foot Equivalent Units for a total of 5 300 tons of cargo capacity. Solid Sail rig can be folded for passing under bridges. It has been selected as being the best technical solution among the other wind-powered technologies, for this Ro-Ro project. Preliminary designs have also been assessed in terms of performances (velocity according to the wind direction, leeway drifting, drag) and optimized to improve both performance and environmental impact. With the commercial speed of 11 knots under sails, the fuel consumption will be reduced by 80% on her cross-Atlantic route. This MAURIC design will overpass all the wind assisted propulsion vessels currently in operations. One hybrid propulsion is still present as a spare mechanical propulsion and in case of light wind situation.



The ship building, the beginning of a new reference

For the first time since decades, a commercial vessel has been designed for and with sailing as primary propulsion system. After years of perseverance, MAURIC is glad to be the naval architect of this new concept in the forefront of the future Zero Emission cargo vessels.

With the announcement of the start of the Néoliner construction at RMK Marine Shipyard in Turkey, the 18th of January marks a key date of the scheme. The agreement is now effective and plan the delivery of the first Ro-Ro sailing cargo by mid-2025. This is, for NEOLINE and all the partners, a culmination of the project handled since almost 12 years. MAURIC will provide to the shipyard, all the design studies (basic and detailed) and assistance in construction phase, as Naval Architect of the Néoliner. The ship building will be ensured by RMK MARINE, one of the leading companies of the Turkish Shipbuilding Industry.

With several French experts and industrial companies involved in this project, besides MAURIC team, a significant part of the Néoliner construction price will benefit to French companies such as:

- Chantiers de l'Atlantique, of course, for the rigging system and sails of the ship, also well known for its cruise ships, naval vessels and electrical substations,
- D-ICE engineering to provide autopilot and weather routing system onboard,
- Fouré Lagadec for their engineering and supply of the anti-drift foldable and orientable fins, indispensable to balance the sails effect and ensure straight roads.

Challenges remain to be tackled for MAURIC together with RMK Marine. Our teams are now focus to ensure the first milestones (as towing tank tests, structural studies, rig detailed integration, etc.) and the first steel cutting after summer.

In 2025, with Néoliner, we will benefit from a SEA PROVEN design, in operation, on the northern Atlantic Ocean to convince the shipping community about the sails suitability for large merchant vessels. Based on these tried and tested data we will be able to confirm, improve our models and raise the general quality of our sailing ship designs in order to make them performing, manoeuvrable with reduced crew, on time for stopovers, but, above all, energy efficient, sustainable and more environmentally friendly.

The MAURIC strategy: larger but also greener ships for the coming years

Since 1945, MAURIC is designing efficient vessels, specifically optimized for the Owner's requirements. For more than a dozen of years now, we offer low environmental footprint solutions based on hybridization, alternative fuel integration such as LNG, CNG, hydrogen or more recently methanol on newbuild and ship modernization. Those R&D works are based on users and professional crew requirements to offer, onboard MAURIC ships, the latest available technological advances. Thanks to his strong know-how in naval architecture and solutions for decarbonization of maritime transport, MAURIC has developed an efficient and operational cargo vessel, adapted to the NEOLINE's specifications. As naval architect, we are continuously developing our expertise in the integration of low carbon energy and propulsion systems onboard newbuilding or refit projects.

In this way, the first Zero Emission ship dedicated to the fishing sector is nowadays being designed and engineered by MAURIC (20m fishing training vessel equipped with electro-hydrogen system for energy and propulsion based on H2 fuel cells to serve the Lycée Professionnel Maritime et Aquacole de Bastia). Our general approach is totally agnostic regarding the technology to be used to reach our decarbonization goal on each project. This led us to introduce

hybridization on naval fleets (5 programs over the last 6 years), study alternative fuels on windfarm fields operation (ongoing R&D programs), wind propulsion on maritime freight and passenger transportation (including NEOLINER) or by imagining the engine room of the future in an international partnership.

Néoliner project is a new milestone in the development of MAURIC's company towards larger and more complex vessels. After years of preliminary studies, the project will become a reality in the MAURIC workload for the coming year. The scaling up is taking place year after year since 2016 and introducing hybrid offshore patrol vessels in the French Navy fleet (3 sisterships between 2016 and 2019), then in 2021 the new biggest MAURIC design was launched: the ROPAX Tereveau Piti, and finally in 2022 the first OPV POM Auguste Bénébig has successfully joined the French Navy fleet (first out of a series of 6 ships). For now, Néoliner project is a unique world premiere and iconic ongoing realization for the decarbonization of the shipping and maritime sector and a unique opportunity to be committed in



Conférence de presse à l'occasion du lancement de la construction de Neoliner, au premier rang Adnan Nefesoğlu DG de RMK Marine à gauche et Jean Zanuttini Président de Neoline à droite, 18 janvier 2023

MAURIC in a nutshell:

MAURIC, subsidiary of EXAIL TECHNOLOGIES, is a Naval Architecture and Marine Engineering company providing ship design and marine engineering services to shipowners, shipyards, and elaborating innovative maritime solutions. We are one of the European leader company, and independent from any shipyard. MAURIC developed since its creation a company culture oriented towards excellence. MAURIC has developed several line of products for ship designs such as passenger vessels, fishing vessels, coastal and offshore patrol vessels, naval vessels, survey and research vessels, offshore supply vessels, offshore wind farm vessels and fast crafts.

For discovering Mauric more in detail or getting specific information about his last ship references, decarbonization projects or its strategy in the coming years please contact Fabrice Ghozlan, Sales and Business Development Director, fabrice.ghozlan@mauric.com, 02 51 86 49 49.