

Greener Gulf of Bothnia: WE Tech delivers state-of-the-art Hybrid Electric Propulsion solution to Wasaline

WE Tech Solutions Oy (WE Tech) has been awarded the contract for delivery of an avant-garde Hybrid Electric Propulsion solution to Rauma Marine Construction Oy (RMC). The solution includes Propulsion drives, Energy Storage System (battery banks and DCDC converters), Main Propulsion Switchboards, Shore connection switchgears, Energy Management System and the Propulsion Control System. WE Tech and RMC will together bring Wasaline's new RoPax ferry to the next level of sustainable shipping. The new ferry is being built by RMC in Rauma Finland and is scheduled for delivery in May 2021. The Ice Class 1A Super ferry, with a freight capacity of 1,500 lane-metres for trucks on two cargo decks and capacity for 800 passengers, will be operating daily in the Gulf of Bothnia between the city of Vaasa in Finland and city of Umeå in Sweden.



(The first RoPax ferry in the world with a Zero-Emission Sailing Mode. Photo copyright: Kvarken Link Ab)

The Hybrid Electric Propulsion ferry will be equipped with four generators that supplies energy for propulsion and electrical power demand in normal sailing mode. A Zero Emission Sailing Mode utilises battery banks only for vessel's propulsion and electrical power demand and is initiated in harbour manoeuvring mode. While stationary in the harbour, the vessel's electrical system and re-charging of the energy storage system will be supplied by the high-power shore connection.

The Energy Storage System (ESS) which is connected to the common DC-link of the main propulsion drives provides power for peak-shaving and back-up functionality, and as a single supply when in Zero Emission Sailing Mode. WE Tech delivers the dedicated power and energy management system (DPMS) to control the energy flow and different operation modes as well as interface with the vessel's automation system. Also, as the vessel's bow thrusters are fed via dedicated inverters connected to the common DC-link, it can be said that the Hybrid Electric Propulsion solution by WE Tech truly is the heart of the vessel. This versatile and flexible solution will save tons of fuel and reduce emissions both at sea and in the harbour.

"It is an honour for WE Tech to develop and deliver the most energy efficient and reliable solution for a vessel that is built at a Finnish shipyard in close vicinity to Vaasa, and that the vessel will operate from Vaasa, which also is our home town. Our tailored solution will help Wasaline to create substantial savings as well as reduce their carbon footprint," says Mårten Storbacka, Managing Director of WE Tech Solutions, "Electrical load peak-shaving and the Zero Emission Sailing Mode will have a big impact on energy efficiency and emission reduction, and will reduce cost of operation. The solution package from WE Tech is significant and plays a major role in the construction of this next generation ferry, in terms of energy efficiency and sustainability."

"This efficient and unique solution is supporting our guidelines with the framework in the design to build the most sustainable and energy efficient ROPax ferry in the world. WE Tech Solutions supports fully the focus we have on driving sustainable innovations and to use the ferry as a platform for technology demonstrators with the intro of new products, solutions and services. WE Tech Solutions hybrid package will be a unique platform and a show case for our industry." Says Tomas Häyry, Chairman of the Board in Kvarken Link.

The call for lower emissions affecting the merchant marine is growing louder day by day. WE Tech's ambitious vision is that the global shipping industry should use 30 per cent less fuel by 2030. The cooperation with Wasaline will enable the company to further develop its innovative technologies and to achieve that goal easier.

About Rauma Marine Constructions

Rauma Marine Constructions is a shipbuilding company founded in 2014, who specialise in the construction and maintenance of multi-purpose icebreakers, car and passenger ferries, and vessels for use by the armed forces. Rauma Marine Constructions is the only domestically-owned shipbuilding company of our size range. Read more: <https://rmcfinland.fi/>

About WE Tech Solutions

WE Tech is a leading energy efficiency solution provider with a global presence in the marine industry. The company specialises in supplying solutions based on variable frequency drives, permanent magnet technology, DC-link power distribution and dedicated power management systems to control the different solutions. Our solutions, suitable for new buildings and for retrofits, bring numerous benefits to the shipping industry worldwide. Read more: www.wetech.fi

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