



Kockums Launch High Performance Range of Carbon/Sandwich Commercial Vessels

Sweden's leading shipbuilder Kockums AB (a part of Thyssen Krupp Marine Systems) in conjunction with FINTRY Marine is now offering a range of commercial catamaran vessels that set new standards in terms of performance, fuel utilization and through-life economy. Currently the vessels range in size from 18 to 60 meters (60-197 ft.) and are built using advanced carbon fiber sandwich technology based on Diab structural cores resulting in a weight reduction by 30 % compared to aluminium. Called CarboCAT® the flexibility of the catamaran platform allows them to be readily configured as offshore support vessels, ambulance boats and fast passenger ferries.

The use of advanced sandwich composite technology and infusion molding has enabled Kockums to reduce the structural weight by 30% compared to aluminium vessel of the same capacity. This saving in weight can cut fuel costs by more than 20% and reduce the CO₂ footprint of the vessel. At the same time the low maintenance requirements of sandwich composites compared to aluminium means that Kockums would expect operators to see a 25% reduction in maintenance costs and an increase in the service life of the vessel. Other benefits of the sandwich approach include excellent safety characteristics, built-in buoyancy and good thermal and acoustic insulation.

The first DNV approved CarboCAT is already in service following an 'order to launch' build program that took just 13 months. Called the 'CarboClyde' it is the first of a series of 23.4 meter (77 ft.) long offshore support vessels that will be initially deployed to service the Baltic 1 offshore wind farm. This is the first commercial offshore wind farm in the German sector of the Baltic Sea. It covers an area of seven square kilometers (2.7 sq. miles) and features 21 turbines that will yield 48.3 megawatts.

At its service speed of approximately 25 knots the 'CarboClyde' is capable of transporting up to eight tons of material and 12 to 24 technicians.

Cargo can be transported on its large sheltered cargo deck and a large crane, forward of the cargo area, makes the 'CarboClyde' partially independent of external lifting facilities. The combination of two water jets and bow thrusters enable the craft to offer excellent maneuverability at close quarters and at slow speeds. The forecastle deck features a docking system for the safe transfer of service personnel between the vessel and offshore wind turbines.

Diab is now working on a development project with Kockums to quantify the benefits of moving to 3D infusion kits for future CarboCAT vessels. With 3D kits, components such as stringers are included as part of the one shot infusion process rather than being added later as a separate manufacturing operation.

www.kockums.se