

Radical hull redesign is paying dividends

Windcat Workboats has launched its second vessel in its new MK3.5 series: *Windcat 41*. The company says the new hull shape, which is the basis for this vessel type, shows radical improvements in performance, comfort and efficiency compared with present vessel design.

Netherlands-based Windcat has put significant effort into developing cost effective vessels that fit to the ever-evolving demands for higher comfort and performance. However, the approach to make radical changes in the hull design for its new generation of vessels was a considerable risk.

However, the management team had full confidence in the new vessel after designer Pete Melvin presented the concept, saying

it would reduce fuel consumption and give added comfort at high speeds.

After extensive computer modelling, the decision was made to invest in a new generation of Windcat vessel types, known today as the Windcat MK3.5. Managing director Neil Clarkson said: "The result has surpassed the design expectations. The hull shape of the vessel, which has been optimised for efficiency, comfortable sea keeping and performance, has resulted in a highly efficient 23m vessel, with a top speed of 31 knots using only two 720kW engines, setting a new industry standard for efficiency."

He said the result is high performance with low emissions and low fuel consumption, which creates cost savings for the end user.

The Windcat MK3.5 has been built according to the latest technologies, rules and regulations to create a state-of-the-art vessel capable of carrying 26 technicians.

Clarkson said: "As the wind farm industry matures and is becoming less dependent on governmental support, we feel that we have to play our part in reducing the operating costs for the charterer. At Windcat we believe that this should be achieved by reducing the fuel consumption as we are convinced that reducing costs on the crew, maintenance or safety is not the correct approach as this will result in a reduction of the level of service we aim to supply."

The company says that the result of the high performance and efficient hull shape, together with its Windgrip transfer system, means it is looking at a reduction of fuel consumption and the associated CO₂ and NO_x emissions of up to 40 per cent compared to conventional designs commonly used in the industry at the moment.

Clarkson said: "You don't have to be a great mathematician to calculate how much money can be saved over the 25 years operational life of a windfarm."

Windcat currently has two vessels of this type – *Windcat 40* is operating in Germany while *Windcat 41* is working out of Barrow, UK. The company is building at least three more vessels of this type, with *Windcat 42* due to be available this summer.

◀ *Windcat Workboats' Windcat 41*



Close proximity navigation safety project moves ahead

Hull to Hull (H2H), an EU-funded research project established to develop technical solutions for safer navigation in close proximity to other stationary or moving vessels and objects, is in its concept definition phase and will move on to the technology adaptation and work package integration stages this summer.

H2H was established in November to develop solutions using the European Global Navigation Satellite System (EGNSS), European Geostationary Navigation Overlay Service (EGNOS) and Galileo, the European global navigation satellite constellation, that can enhance safety in busy waters and during close manoeuvring, helping mariners to take the correct navigation decisions and creating the fundamental conditions for autonomous vessel navigation.

H2H aims to create a system that will allow proximity zones to be set for own vessels as well as neighbouring objects, with high precision and high integrity.

The project focuses on solutions for measuring the location and orientation of a vessel and creating a 3D digital twin

representing the vessel's hull, which is linked to a co-ordinate system. This data can then be used as an input to an autonomy controller. H2H will also support manual navigation, providing reliable input for the captain or navigator to make better informed decisions. This could potentially be achieved, for example, by displaying the digital twin on the ECDIS or other display systems.

The project is co-ordinated by Kongsberg

Seatech, a subsidiary of Kongsberg Maritime, developing solutions for maritime sensing and connectivity. Expert project partners include SINTEF Ocean and SINTEF Digital for broad research-based expertise; KU Leuven, a leading European university and expert on inland waterways navigation; and Mampaey Offshore Industries, a Dutch company specialised in towing, berthing and mooring systems.

Stabilisation expert opens office in Europe

US-based marine stabilisation company Seakeeper has opened its first European office in Lavagna, Italy, after seeing European sales increase by an average of 30 per cent annually over the past three years and a 40 per cent growth forecast for the 2017-18 financial year.

Not only will the new office location serve to help with increased growth in the region, it will also act as a spare parts distribution centre. The service team will

be able to assist customers more quickly in Europe, Asia and the Middle East, cutting shipping time and costs. Previously, all parts were shipped from the company's Mohnton, Pennsylvania, factory.

Andrew Semprevivo, Seakeeper president and CEO, said: "The European market has been vital to Seakeeper's success. The new office is going to allow our team to provide an even higher level of support to the region."