



MAN Alpha FP Kappel Design Launches 58,500-dwt Bulker into Fuel-Saving Future

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Fixed pitch propeller delivers excellent results in service

One of the first commercial applications of MAN Diesel & Turbo's new MAN Alpha Kappel FP propeller took place off the coast of China recently when the 'Elsabeth C', a 58,500-dwt Supramax bulk carrier owned by Frontmarine Co. Ltd – an affiliated and managed company of Lemissoler Navigation Co. Ltd., the Cypriot ship management group – successfully completed its sea trials. The newbuilding is the first in a series of eight sister-ships, all featuring single MAN B&W 5S60ME-C8.2 engines with an SMCR 8050 kW @ 89 rpm. The Elsabeth C's sister ship, 'Mirela', the second in the series, has since successfully completed its own sea trials.

Lemissoler reports that the Kappel propeller offers significant fuel savings compared to conventional propellers and, together with the new vessels' design and lines as well as the silyl acrylate antifouling paint, contributed to the favourable results from the first two vessels' sea trials. It reports that both vessels consumed an average 23 mtns per day at a speed of about 14.2 knots in ballast conditions during the trials. The Elsabeth C also performed a successful crash-stop test that was notable for its lack of noise and vibration.

Thomas Leander, Head of Propulsion – PrimeServ Four-Stroke – Denmark, said: "A key point during the design stage was to address the problem experienced by similar vessels that experience an overly-small light running margin (LRM). Therefore, MAN Diesel & Turbo recently introduced new light running margins for all FP propellers and two-stroke engines of 4-10%. Furthermore, the propeller layout for these 58,500-dwt vessels is 3-4% higher than normally applied to these vessel types. In doing so, MAN Diesel & Turbo has managed to ensure safe and reliable operation, while improving the vessel's efficiency and manoeuvrability during its entire lifetime."

The MAN Alpha Kappel propeller optimisation has been carried out based on the stern and wake field for the newly designed 58,500-dwt vessel, with a 58,500-dwt stock propeller.

The Elsabeth C and Mirela were constructed by New Times Shipbuilding Co. Ltd, Jiangsu, China and are scheduled for delivery in September 2015. The remaining sisters are scheduled for delivery over the following 12 months. This series of vessels was specifically designed to have the largest carrying

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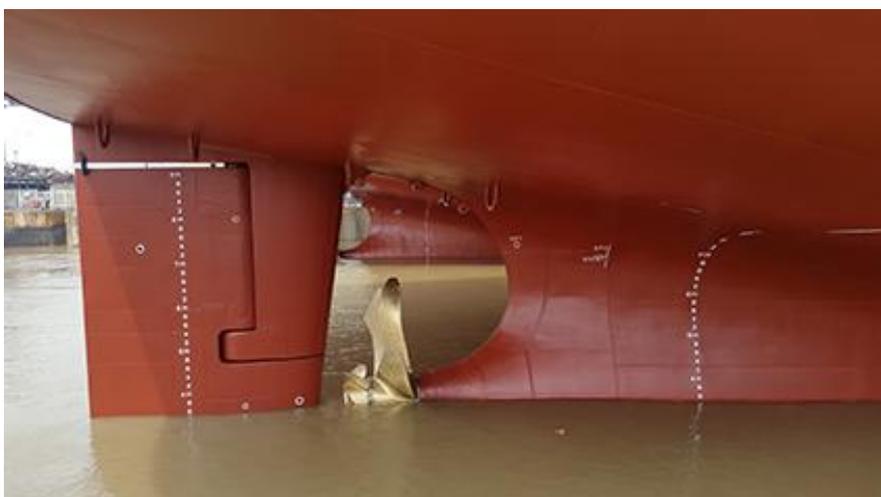
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capacity and greatest efficiency of any vessel within the 190-metre LOA range.

About Lemissoler

Over the years Lemissoler has become a diversified shipping group with activities in the business fields of liner shipping, ship owning and ship management. The group is based in Limassol, Cyprus and is represented globally through a broad network of offices.



View of the Elisabeth C and Mirela tied up in port in China; a closer view of the new Kappel FP propeller

Press Release

MAN Diesel & Turbo



Press Release
Page 3 / 3

About MAN Diesel & Turbo

MAN Diesel & Turbo SE, based in Augsburg, Germany, is the world's leading provider of large-bore diesel engines and turbomachinery. The company employs around 14,500 staff at more than 100 international sites, primarily in Germany, Denmark, France, Switzerland, the Czech Republic, India and China. The company's product portfolio includes two-stroke and four-stroke engines for marine and stationary applications, turbochargers and propellers as well as gas and steam turbines, compressors and chemical reactors. The range of services and supplies is rounded off by complete solutions like ship propulsion systems, engine-based power plants and turbomachinery trains for the oil & gas as well as the process industries. Customers receive worldwide after-sales services marketed under the MAN PrimeServ brand.

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