



## **World's First Conversion of Container Ship to Dual-Fuel Operation Concludes Successfully**

Retrofit to LNG highlights potential for cleaner emissions within maritime sector

At a recent event at the Hamburg offices of MAN Diesel & Turbo, Dr Uwe Lauber – CEO of MAN Diesel & Turbo – presented Gerd Wessels, Managing Owner of Wessels Reederei with a take-over certificate marking the formal conclusion of the 'Wes Amelie' LNG conversion project.

Gerd Wessels said: "This pioneering project marks a milestone in the European container feeder market, and MAN has impressively proven that existing engines can be converted to LNG operation with a tremendous effect on exhaust emissions and the environment."

The project involved the retrofitting of the 1,036-teu feeder container ship's MAN 8L48/60B main engine to a multi-fuel, four-stroke MAN 51/60DF unit that enables dual-fuel operation – the first such conversion of its type the world has ever seen.

Christian Hoepfner, General Manager of Wessels Reederei, said: "The 'Wes Amelie' operates in the highly regulated Nordic and Baltic Seas. Since they are both within Emission Control Areas, the ship needs to meet the highest environmental standards and strictest limits for emissions. By converting to a low emission fuel, we are safeguarding the future of this container ship as well as our own competitiveness in the market."

Stefan Eefting – Head of MAN PrimeServ in Augsburg – also attended the ceremony and said: "We are very happy to have successfully completed this project with the great cooperation of our partner, Wessels Reederei. In doing so, we trust that the dramatic reduction in emissions will mark the beginning of a trend towards the adoption of LNG as an environmentally friendly fuel within the maritime sector."

"By providing customers with the technology to retrofit their existing fleet, we are driving what we call the maritime energy transition", adds Dr Uwe Lauber, CEO of MAN Diesel & Turbo. "There are roughly 40,000 cargo vessels in operation worldwide. If we are serious about decarbonisation and want the shipping industry to be climate neutral by 2050, we need to take action today."

The dual-fuel conversion has enabled the 'Wes Amelie' to significantly reduce its SO<sub>x</sub> emissions by >99%, NO<sub>x</sub> by approximately 90%, and CO<sub>2</sub> by up to

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20%. The vessel now meets both the Tier II and Tier III emission requirements set by the International Maritime Organisation (IMO).

Works were carried out at German Dry Docks in Bremerhaven in cooperation with gas-specialist, TGE Marine Engineering, who provided tank and LNG components. Bureau Veritas, the international classification society based in France, classed the conversion.

Wessels and MAN Diesel & Turbo originally signed the retrofit contract at the Europort exhibition for maritime technology in November 2015. The 'Wes Amelie' was constructed in 2011 and has already re-entered service on its usual route between the North and Baltic Seas.

### **Multiplier effect**

When selecting a suitable vessel for conversion, special attention was paid to the scalability of the engineering services as well as the development costs, reducing significantly the costs for follow-up projects. In this respect, the 'Wes Amelie' has 23 sister ships, 16 of them structurally identical, which would allow follow-up projects to be easily implemented. This ship therefore facilitates a multiplier effect, with multiple, other, 'conversion-capable' vessels also found around the European continent.



### **About Wessels Reederei**

With a current fleet of 37 ships, Wessels Reederei is one of the largest managers of coastal vessels. It has a fleet of some 28 coasters, four container and five multipurpose vessels and is based in Haren/Ems, Germany.



*The 'Wes Amelie' (picture courtesy Wessels Reederei)*

### **About MAN Diesel & Turbo**

MAN Diesel & Turbo SE, based in Augsburg, Germany, is the world's leading provider of large-bore diesel and gas engines and turbomachinery. The company employs around 15,000 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.