

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 ship-

ping industry to be climate neutral by 2050, we need to take action today."

The dual-fuel conversion has enabled the 'Wes Amelie' to signifi-

Works were carried out at German Dry Docks in Bremerhaven in cooperation with gas-specialist, TGE Marine Engineering, who provided tank and LNG compo-

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 multi-purpose vessels and is based in Haren/Ems, Germany. ■



The 'Wes Amelie' (picture courtesy Wessels Reederei)

cantly reduce its SO_x emissions by >99%, NO_x by approximately 90%, and CO₂ by up to 20%. The vessel now meets both the Tier II and Tier III emission requirements set by the International Maritime Organisation (IMO).

nents. 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

Wessels Signs Letter of Intent for Further LNG Conversions

MAN Diesel & Turbo's ability to retrofit existing fleets drives Maritime Energy Transition

In connection with the Europort 2017 exhibition for maritime technology in Rotterdam, Wessels Reederei – the well-known German shipping company – signed a letter of intent with MAN Diesel & Turbo regarding the conversion of three of its fleet to dual-fuel gas operation.

The three ships are sisters to the 'Wes Amelie', a 1,036-teu feeder container ship with an MAN 8L48/60B main engine that was retrofitted to a multi-fuel, four-stroke MAN 51/60DF unit earlier in 2017. The retrofit enables dual-fuel operation and is the first such conversion of its type the world has ever seen.

Stefan Eefting – Senior Vice President, MAN Diesel & Turbo and Head of MAN PrimeServ Diesel in Augsburg – said: "The Wes Amelie project was really a pioneering moment in the European container-feeder market and shows clearly that existing MAN engines can be converted to LNG operation with a tremendous effect on exhaust emissions and the environment."

Indeed, MAN Diesel & Turbo reports that the dual-fuel conversion has

enabled the Wes Amelie to significantly reduce its SO_x emissions by >99%, NO_x by approximately 90%, and CO₂ by up to 20%. The vessel now meets both the Tier II and Tier III emission requirements set by the International Maritime Organisation (IMO).

Eefting praised Wessels' cooperative spirit and concluded: "One of the key reasons the Wes Amelie was selected for conversion was its 'multiplier effect', that is, its many sister ships that would facilitate follow-up projects at reduced costs owing to the experiences gained from the first project. I believe the signing of this letter of intent validates our approach and points a realistic way towards decarbonisation and a climate-neutral shipping industry by 2050."

The Maritime Energy Transition

The term 'Maritime Energy Transition' stems from the German expression 'Energiewende' and encapsulates MAN Diesel & Turbo's call to action to reduce emissions and establish natural gas as the fuel of choice in global shipping. It promotes a global 'turn to gas', driven by the IMO, and a com-

mon approach by the shipping industry and politics to invest in infrastructure development and retrofits.

Launched in 2016 after COP 21, the initiative has since found broad

support within the shipping industry and German politics. Stemming from the success of the 'Wes Amelie' project, and to encourage more shipowners to follow its example, MAN

Diesel & Turbo pledged a total discount of 2 million euro for 10 such LNG-retrofits at the international Our Ocean 2017 conference in Malta recently. ■



Pictured at the signing of the Letter of Intent between Wessels and MAN Diesel & Turbo were (from left) Marcel Lodder (MAN Diesel & Turbo, Project Leader, Upgrade & Retrofits), Rainer Runde (Reederei Wessels GmbH & Co. KG, Project Leader), Stefan Eefting (MAN Diesel & Turbo, Senior Vice President, PrimeServ Augsburg), Dr Thomas Spindler (MAN Diesel & Turbo, Head of Upgrade & Retrofits), Gerd Wessels (Reederei Wessels GmbH & Co. KG, Managing Owner), and Christian Hoepfner (Reederei Wessels GmbH & Co. KG, General Manager)