

#### Press release

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MAN Energy Solutions SE Teglholmsgade 41, 2450 Copenhagen SV, Denmark

www.man-es.com

Group Communications Nils Søholt P +45 33 85 26 69 Nils.Soeholt@man-es.com

# **Wes Amelie Eyes Next Milestone**of Running on Synthetic Natural Gas

First dual-fuel retrofit now set to be first vessel globally to use SNG derived from renewable energy in furtherance of Maritime Energy Transition

MAN Energy Solutions and Wessels Marine GmbH have announced a technical showcase whereby the 2017-retrofitted 'Wes Amelie', a 1,036-teu feeder container ship, will use liquefied SNG (Synthetic Natural Gas) produced from renewable electrical energy as drop-in fuel. The companies are cooperating on the Wes Amelie project with Nauticor, the LNG transportation company, and Unifeeder, the charter company.

To demonstrate that SNG can successfully be used as shipping fuel, 20 of the 120 tons of LNG that the Wes Amelie typically uses per round trip will be replaced by climate-neutral SNG. As a result,  $CO_2$  emissions are expected to decline by 56 tons for this trip.

Automobile manufacturer Audi's Power-to-Gas facility in Werlte, where a liquefaction plant is currently under construction, will provide the SNG, which will be generated by wind energy and is thus 100% climate-neutral. The SNG trip will take place after the completion of the liquefaction plant in Q2 2020.

The Wes Amelie, owned and managed by Wessels Reederei (Haren/Ems), previously made headlines in 2017 when its MAN 8L48/60B main engine was retrofitted to its current, four-stroke MAN 51/60DF unit that enables dual-fuel operation – the first such conversion of its type the world had ever seen.

Stefan Eefting – Head of MAN PrimeServ in Augsburg – said: "This is another important milestone and proof of concept for the Maritime Energy Transition, the initiative we have been driving since 2016. We strongly believe that a roadmap based on LNG and SNG as fuels can lead the way to a decarbonised future for shipping and, in Wessels Marine, we have the perfect partner."

"The Wes Amelie project has always been about demonstrating the technologically doable while pointing out the regulatory actions necessary to make it possible," said Christian Hoepfner, Managing Owner of Wessels Marine, Hamburg. "The initial retrofit to LNG took support from the German Government to be financially viable, but it was a huge success for the environment in that it drastically reduced emissions. As a consequence, there now is a retrofit programme in place to make more retrofits happen."

He continued: "In another world-first, we will now demonstrate that SNG can successfully be used to reduce harmful emissions even further as the fuel is climate-neutral. However the costs are still way too high. Going forward, governments and regulators will have to work together to make this a viable and available option for ship owners."

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Stefan Eefting added: "To bring down future emissions generated in the global-trade supply chain, synthetic fuels play a crucial role. Especially in shipping, the use of batteries alone is not a viable option and any successful decarbonisation efforts need to address the fuel. Power-to-X technology allows the generation of 100% climate-neutral natural gas from renewable energy. This technology has tremedous potential and needs to be freed from regulatory burdens and to be developed on an industrial scale to bring down costs."

A pioneer of this technology, MAN Energy Solutions commissioned the Werlte-based methanation plant, in partnership with Audi, in 2013. While the 6 MW methanation unit is still the largest of its kind in Europe today, MAN now offers a 50 MW EPC Power-to-X solution to ramp up the generation of synthetic fuel: "We need Power-to-X out of the labs and into the market in order to produce more competitive, renewable fuels by using scaling effects", concluded Eefting.

#### The Maritime Energy Transition

MAN Energy Solutions believes that it is time for what it calls a 'Maritime Energy Transition' to find clean, decarbonised solutions for seaborne trade and transportation. Essentially, it is the company's call to action to reduce emissions and establish natural gases as the fuels of choice in global shipping. It strongly promotes a global 'turn to gas', driven by the IMO, and a common approach by the shipping industry and politics to invest in infrastructure development and retrofits.

"Industry and Government need to make an effort now and to invest in LNG infrastructure to free the way for SNG-based, climate-neutral shipping tomorrow", concluded Eefting. "Any LNG-retrofitted ship can also run on SNG – that's what we want to demonstrate:"

To date, MAN Energy Solutions' entire portfolio of dual-fuel engines has won almost 400 projects in total, all running on clean fuels such as LNG and LPG, testament to its leadership within this critical market segment.

#### Wes Amelie conversion

The ship-owning company from Haren/Ems, Wessels Reederei, initiated the pioneering conversion of the Wes Amelie to dual-fuel running in 2017. A milestone within the development of the European container-feeder market, the conversion showed that existing engines could be converted to LNG operation with a tremendous effect on exhaust emissions and the environment.

MAN Energy Solutions reports that the retrofit enabled the Wes Amelie to significantly reduce its  $SO_x$  emissions by >99%,  $NO_x$  by approximately 90%, and  $CO_2$  by up to 20%. As a result, the vessel now meets both Tier II and Tier III emission requirements set by the International Maritime Organisation (IMO).

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#### **About Wessels Marine**

Wessels Marine GmbH, an independent company that emerged from Wessels Reederei, is a consulting and project-development company for the use of LNG as a maritime fuel. Its range of services covers technical, operational and commercial topics for the use of LNG and serves shipping companies, companies in the shipbuilding supply industry, and LNG providers.

#### About Wessels Reederei

With a current fleet of 28 ships, Wessels Reederei is one of the largest managers of coastal vessels globally. It has a fleet of some 21 coasters, four container and five multipurpose vessels and is based in Haren/Ems, Germany.



The Wes Amelie (picture courtsey Wessels)

MAN Energy Solutions enables its customers to achieve sustainable value creation in the transition towards a carbon neutral future. Addressing tomorrow's challenges within the marine, energy and industrial sectors, we improve efficiency and performance at a systemic level. Leading the way in advanced engineering for more than 250 years, we provide a unique portfolio of technologies. Headquartered in Germany, MAN Energy Solutions employs some 14,000 people at over 120 sites

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