Press release

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ME-GA Quick to Notch 100 Orders

MAN Energy Solutions' second-generation, Otto-cycle ME-GA engines taking over LNG carrier market with advantages in emissions and performance that establish new standard

MAN Energy Solutions has announced that its MAN B&W ME-GA engine – the latest addition to its dual-fuel portfolio – has already won 100 orders since May 2021. Simultaneously, the company revealed that the first ME-GA-powered LNG carrier will enter service in the summer of 2023.

Bjarne Foldager, Senior Vice President and Head of Two-Stroke Business, MAN Energy Solutions, said: "The speed with which the ME-GA has reached this milestone is testament to its broad acceptance by oil majors, charterers, ship yards, ship designers and ship owners as the industry's preferred, second-generation, Otto-cycle engine for LNG carriers. This achievement adds to the strong foundation and proven track record that MAN Energy Solutions already has for bringing new technologies to the market."

Each ME-GA engine comes equipped with Exhaust Gas Reduction (EGR) that reduces methane-slip emissions by up to 50%, compared to first-generation, Otto-cycle engines without EGR. The increased focus on methane-slip reduction – as well as other operational/technical benefits – has essentially established EGR as a new standard in contemporary, LNG carrier designs with Otto-cycle engines.

EGR enables the significant reduction of methane slip, while simultaneously improving fuel efficiency in both gas and fuel-oil operation. Ultimately, EGR actively reduces emissions and improves efficiency in both Tier II and Tier III.

MAN Energy Solutions' proprietary EGR system began development more than a decade ago and was applied to a commercial project for the first time in 2013. Initially focused on achieving NO_x Tier III compliance, the system has since matured into a robust, engine-tuning tool that today has accumulated orders for more than 275 engines.

Thomas S. Hansen, Head of Promotion and Customer Support, MAN Energy Solutions, said: "The ME-GA is just the latest in a series of initiatives MAN Energy Solutions has introduced to decarbonise shipping and further the maritime energy transition to sustainable fuels. Our dual-fuel engines are based on mature technology, and our ME-GA and ME-GI LNG-fueled engines set the standard for environmentally-friendly, reliable propulsion with seamless switching between fuels."

About ME-GA

The MAN B&W ME-GA engine delivers a low CAPEX solution aimed at certain vessel types and applications, such as LNG carriers, that are able to use 'boil-off' gas as a source of fuel.

Based on the well-proven MAN B&W dual-fuel design with minimal installation requirements, the MAN B&W ME-GA uses an efficient ignition concept and unique gas-admission system that delivers safe and reliable operation.

The ME-GA furthermore features minimal operational costs, simple supply and purging concepts, and low maintenance costs for its fuel-gas supply system. It joins the well-established ME-GI Diesel-cycle engine in MAN Energy Solutions' two-stroke-engine portfolio, which now offers both low- and high-pressure, dual-fuel solutions for operation on LNG.

About Exhaust Gas Reduction

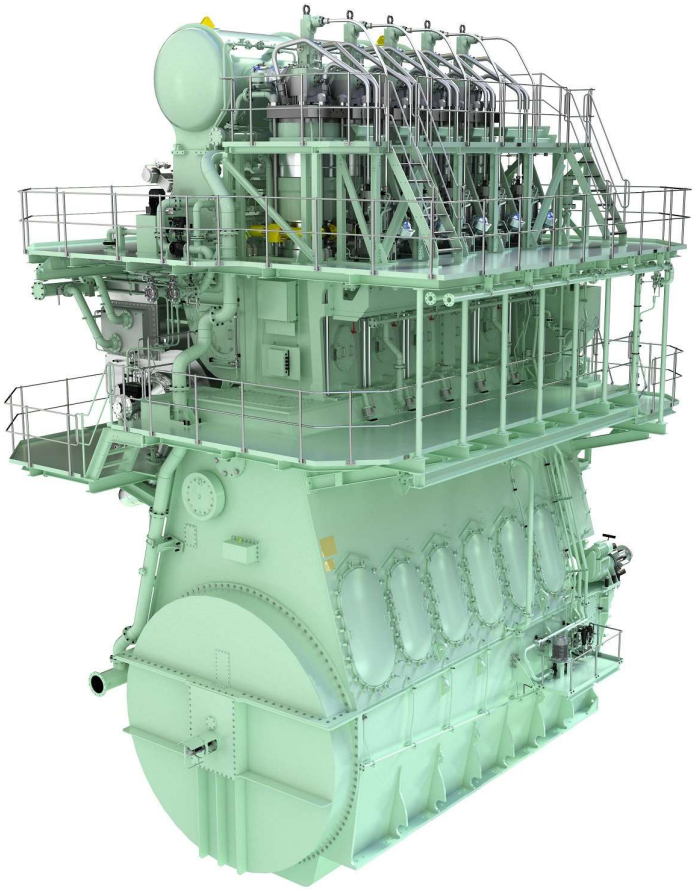
In November 2020, MAN Energy Solutions announced that it would offer its proprietary EGR system as an emissions solution for the ME-GA. EGR is a NO_x-emissions-reduction technique that, beyond emission and performance benefits, also ensures IMO Tier III-compliance in diesel mode for the ME-GA.

The company reports that EGR will enable the ME-GA to reduce specific gas consumption by ~3%, and specific fuel-oil consumption by 5%. It will also significantly reduce methane slip by up to 50%, and improve the stability of the Otto-cycle combustion process. EGR will enable the ME-GA to meet Tier III requirements in both fuel-oil and gas modes without additional aftertreatment.

The ME-GA EGR solution is an engine-integrated design that interacts with the exhaust gas before the turbocharger, and can be integrated into existing engine-room designs since the EGR unit itself does not change the engine footprint. Its design-similarity to that of ME-C engines' EGR systems will lower its price point, since the supply chain and components are already matured.

The volume requirements of the ME-GA EGR system are also significantly lower with, for example, less pipework required than for low-pressure EGR solutions.

Due to its performance and environmental benefits, each ME-GA engine comes with EGR as standard.



Graphical rendering of an MAN B&W 5G70ME-GA type

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 globally. Our after-sales brand, MAN PrimeServ, offers a vast network of service centres to our customers all over the world.