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‘ME-GA-opti’ Optimises Combustion Onboard LNG Carrier Newbuilding

Innovative feature delivers optimal running during gas trials through individual cylinder control on ME-GA-powered LNG carrier

The first LNG carrier in a series currently under construction by Samsung Heavy Industries (SHI) in Korea has completed gas trials. Originally ordered in Q2 2021 and scheduled for delivery in July 2023, the ship is powered by MAN B&W ME-GA dual-fuel engines capable of running on fuel oil and LNG, and comes with Exhaust Gas Recirculation (EGR) for emission reduction. MAN Energy Solutions furthermore reports that – as a first – the engine-control system sports a new control feature called ‘ME-GA opti’ for optimal engine operation through individual cylinder control.

Bjarne Foldager, Senior Vice President and Head of Two-Stroke Business, MAN Energy Solutions, said: “MAN Energy Solutions has always played a leading role in developing groundbreaking technologies that add value to our customers’ operations. Thus we have made EGR standard for the ME-GA, thereby reducing methane slip compared to first-generation Otto-cycle engines without EGR, which simultaneously improves fuel efficiency in both gas and fuel-oil operation. ME-GA-opti continues this trend and will further boost the ME-GA’s reputation.”

Thomas S. Hansen, Head of Promotion and Customer Support, MAN Energy Solutions, said: “ME-GA-opti is the latest and most advanced control feature for the ME-GA engine and significantly improves its operation. It comprises an advanced and intelligent network of control algorithms that have been developed to optimise the combustion process on an individual-cylinder basis, and which ensure optimal operating conditions. I’m certain it will be received well by the market.”

ME-GA-opti’s intelligent functionality benefits engine performance in several ways, including by:

- ensuring optimised conditions for the combustion process by reducing the influences of ambient temperature, pressure and humidity that can influence Otto-cycle engines;
- enabling maximum and stable gas potential for the engine;
- reducing fuel-ratio control activation – MEGA-opti is able to adapt the engine’s running conditions as the combustion moves towards the pre-ignition limit.

About ME-GA

The MAN B&W ME-GA engine delivers a low CAPEX solution aimed at certain contemporary LNG carrier designs,

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.



The MAN B&W ME-GA engine

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.