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**Press release**

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## Low-Speed, Dual-Fuel Engines Pass 1,000,000 Operating Hours

### Mk II ME-GI and Otto-cycle ME-GA recently added to two-stroke portfolio

MAN Energy Solutions reports that its portfolio of two-stroke, dual-fuel engines has accumulated 1 million operating hours. The milestone comes on the back of the 300 engines/6.3 GW sales the company recently announced for the segment – all running on clean fuels such as LNG, LPG, ethane and methanol.

Bjarne Foldager – Senior Vice President, Head of Two-Stroke Business at MAN Energy Solutions – said: “This significant milestone owes everything to the dual-fuel strategy we have laid over the past decade and confirms our leadership in this critical marine segment. Our engines’ efficiency is the best in the market, which gives shipowners enormous flexibility, and we note that all fuel modes are employed.”

MAN Energy Solutions’ ME-GI (-Gas Injection) and ME-LGI (-Liquid Gas Injection) engines form the core of its two-stroke, dual-fuel portfolio and have notched many notable industry-firsts since their market introduction, including the very first oceangoing ships operating respectively on LNG, methanol, ethane and LPG.

Foldager continued: “Our plan is very much to continue this dual-fuel focus. To this end, we recently released a Mk II ME-GI model and are currently, owing to market demand, developing an Otto-cycle variant – the ME-GA. With references in every major, marine segment, our dual-fuel portfolio can rightly be considered as mature technology. Our dual-fuel engines continue to act as standard bearers for environmentally friendly, reliable propulsion technology with their seamless switching between fuels and elimination of methane slip. Furthermore, their use of the Diesel combustion principle ensures that they can easily adapt to run on whatever fuels the industry may prefer in the future.”

The Mk II ME-GI engine features a number of notable innovations, including a PVU (Pump Vaporizer Unit), a standardised, compact, high-quality pump unit for the supply of LNG. Additionally, a PBIV (Pilot Booster Injection Valve) employs smaller or larger atomising holes, depending on fuel mode, to inject fuel into ME-GI engines. In gas mode, the use of smaller holes significantly reduces pilot-oil consumption to just 1.5%, approximately half of what was previously required.

With fuel prices and availability currently in flux, MAN Energy Solutions expects the choice of retrofitting to dual-fuel engines to ultimately become a necessity.

### The Maritime Energy Transition

MAN Energy Solutions believes that it is time for what it terms 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.



*View of an MAN B&W 11G90ME-GI engine during its recent shop test. MAN Energy Solutions reports that the engine successfully ran at 100% load in gas mode during testing, capably handling load changes and maintaining impeccable cylinder condition*

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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.