

WinGD's first ammonia-fuelled engine installed on EXMAR vessels

Swiss marine power company WinGD has become the first engine designer to bring an ammonia-fuelled two-stroke marine engine to market following the delivery and installation of its X52DF-A engine on a 46,000m³ LPG/ammonia carrier being built for EXMAR. The vessel will be the first ammonia-fuelled gas carrier in service, and the engine among the first of WinGD's ammonia-fuelled X-DF-A design to enter commercial operation.

The 52-bore engine was built by HD Hyundai Heavy Industries' Engine & Machinery Business Unit (HHI-EMD) and installed on the first of four sister vessels to be built at HD Hyundai Mipo shipyard in South Korea. The results from WinGD's laboratory test engine runs were confirmed at the factory, with low emissions and efficient performance similar to diesel engines offering a robust solution for operators seeking to deploy ammonia fuel.

WinGD VP of Research and Development, Sebastian Hensel said: "With such convincing results it is clear that ammonia fuel has a vital role to play in the decarbonisation of our industry. Working with trail-blazer partners like EXMAR has been essential in bringing this technology to market. We're proud to be at the forefront of the clean-energy transition, delivering the innovative propulsion solutions the industry needs as it strives for a more sustainable future."

The X-DF-A engine features high-pressure ammonia injection supplemented by a low, targeted pilot fuel dose of around five per cent at full load. The engine delivers load handling, dynamic response and fuel efficiency on par with WinGD's equivalent diesel-fuelled X Engines in both ammonia and diesel operating modes. Further optimisation will continue for the second engine in the 52-bore series, which will be delivered later this year.

Alongside pioneering ship operators, close collaboration with engine builders has also been essential in realising a safe, reliable and commercially-viable engine from WinGD's design. Those efforts have been rewarded with an early orderbook of around 30 X-DF-A engines to date, on vessels including not only gas carriers but also bulk carriers and container ships.

Ammonia contains no carbon molecule and, when produced using renewable electricity, can reduce greenhouse gas emissions by up to 90% compared to conventional fuel. With the first engines approaching service following a robust, safety-focused development process, the X-DF-A platform offers shipowners a real choice as they navigate evolving regulatory and market demands on their journey to net zero emissions.

ENDS

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WinGD in brief

WinGD advances the decarbonisation of marine transportation through sustainable energy systems using the most advanced technologies in emissions reduction, fuel efficiency, hybridisation and digital optimisation. With their two-stroke low-speed engines at the heart of the power equation, WinGD sets the industry standard for reliability, safety, efficiency, and environmental design - supported by Global Service by WinGD, which delivers tailored 24X7 lifecycle engine support through Swiss engineering excellence, dependable maintenance, rapid global response, and genuine parts to keep engines performing at their best.

Headquartered in Winterthur, Switzerland since its origin as the Sulzer Diesel Engine business in 1893, today it is powering the transformation to a sustainable future.