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Capital investment in Hitachi Zosen Marine Engine Co., Ltd.

～ Establishment of manufacturing systems for methanol-compatible dual fuel engines ～

Hitachi Zosen Marine Engine (HZME), a joint venture between Hitachi Shipbuilding Corporation and Imabari Shipbuilding Co., Ltd., has decided to invest in methanol supply systems, etc. at its headquarters and factory, with the aim of producing marine engines that run on methanol. HZME is a subsidiary of Hitachi Shipbuilding Corporation, with 65% ownership held by Hitachi Shipbuilding and 35% by Imabari Shipbuilding. The decision was made in order to shift production towards marine engines that utilize methanol as a fuel.

The main propulsion engines of ships, play a crucial role in reducing GHG (greenhouse gases) in the marine transportation and shipbuilding sector, and there is an urgent need to shift from conventional heavy oil firing to new fuels such as LNG, methanol, ammonia, and hydrogen. Of these, methanol is easier to handle than ammonia or hydrogen, and therefore, after LNG, the development of methanol-compatible marine engines is being promoted mainly by MAN Energy Solutions SE (MAN, Germany), the world's largest licensor of marine engines, and other companies. Hitachi Zosen has received an order from MAN for a methanol-compatible dual fuel test engine (4S90ME-C10.5-LGIM), and HZME carries out technical verifications through manufacturing and onshore testing at its headquarters and plant. This capital investment is not only for the testing but also for establishing a production system for methanol-compatible dual fuel engines.

Methanol-compatible dual-fuel engines have already been installed in some engine types, and there are plans to convert engines installed on ships in service to methanol-fired engines, as well as numerous orders for new shipbuilding, and demand for methanol-compatible dual-fuel engines is growing worldwide.

In addition, when green methanol is used as fuel, CO₂ emissions can be reduced by more than 90% on a "Well to Wake*" basis compared to heavy oil, making a significant contribution to the carbon neutralization of marine transportation and reduction of environmental impact.

IMO (International Maritime Organization) adopted GHG Reduction Strategy in 2018, which aims to halve GHG emissions from the international marine transport sector by 2050 and to reduce emissions to zero early this century. However, in July 2023, it raised the target significantly and newly adopted the strategy to achieve net-zero emissions by around 2050.

Hitachi Zosen and HZME will actively develop technologies for the fuel-conversion of marine engines and contribute to the international shipping and shipbuilding industries.

※It is a concept used to evaluate emissions in the shipping industry and refers to the entire process from Well to Wake, i.e., from fuel production to use on board, and the sum of all emissions generated in the process.

The outline of this capital investment is as follows.

- 1.Installed equipment: : Methanol supply unit (1 unit)
Methanol storage tank (capacity: approx. 300 kL)
Service tank (1 unit), etc.
- 2.Investment amount : Approx. JPY 400 million
- 3.Location : Hitachi Zosen Marine Engine head office and factory (Nagasu-cho, Tamana-gun, Kumamoto Prefecture)

[Reference]

Press release : Received an order for a green methanol-compatible dual fuel test engine

[FY2023-31.pdf \(hitachizosen.co.jp\)](#)