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## WinGD partners with Alfa Laval to advance the development of ammonia-powered engines

**Alfa Laval and Swiss engine designer WinGD have established a partnership in which Alfa Laval will deliver two fuel supply systems (FSS) for testing WinGD's ammonia-fuelled engine in early 2024. The partnership is a significant step forward in the development of ammonia as a future fuel for marine vessels.**

### **Partners for developing ammonia as a future fuel**

Ammonia is anticipated to become a key fuel in the shipping industry's efforts to reduce its impact on carbon emissions. To advance the use of zero-carbon fuels, WinGD is at the forefront of developing ammonia-fuelled engines, with the recent achievement of the first-ever Approval in Principle (AiP) from Lloyd's Register for their X-DF-A dual-fuel range powered by ammonia.

In the next step of their ongoing ammonia test campaign, WinGD has partnered with Alfa Laval to provide two customized ammonia fuel supply systems for their Engine Research and Innovation Centre in Winterthur, Switzerland. Alfa Laval will deliver the FSS for the injector test system and FSS for the engine test bench in early 2024. The project is in the framework of WinGD's and Alfa Laval's earlier agreement for cooperation on methanol and ammonia, signed in 2022. This gives both companies the chance to optimize the overall fuel supply and use it for later application onboard.

"Strategic collaboration, like this one with WinGD, represents a definitive pathway towards achieving decarbonization and fuel transition," says **Viktor Friberg**, Head of Marine Separation & Fuel Supply Systems, Alfa Laval. "We have expanded our technological expertise to be ready with solutions for ammonia engines in alignment with our ambition. This joint research and development project is an efficient pathway to facilitate the use of one more alternative fuel."

"With each new collaboration we are one step further on the path to running engines with zero carbon emissions," says **Sebastian Hensel**, R&D Director, WinGD. "Our ammonia testing campaign began in 2021 with extensive research into the combustion characteristics of the fuel. The fuel supply system is an important next step in the technology development, keeping pace with our delivery targets of 2025. We are confident that Alfa Laval's expertise and proven experience in fuel supply applications will be valuable to help us reach our goal."

### **Technological expertise in handling different types of fuels**

Alfa Laval's role in the project will draw heavily on its vast technical know-how in fuel supply technology and experience with a wide range of fuels, both conventional and alternative. Alfa Laval FCM, the industry's leading low-flashpoint fuel supply system (LFSS), has a flexible

design and fully automated operations to ensure safe and smooth process control.

“Alfa Laval is supporting customers of all types and in all stages of the fuel transition,” says **Viktor**. “We work with a wide range of existing and future marine fuels and adapt our technology to support our customers, regardless of their fuel choice. Drawing on our expertise with LPG, we are ready to handle ammonia in a safe and effective way.”

This project will provide a testing environment to help both the companies carry out development activities of the engine and equipment associated with it. Alfa Laval will also investigate and develop a mitigation system to secure safe handling of ammonia.

### **Developing technology for future fuels**

Alfa Laval is actively engaged in leading industry initiatives towards zero-emission shipping. It has made significant progress in developing technology for using ammonia as fuel, in close collaboration with key industry stakeholders.

In 2022, Alfa Laval got approval for testing ammonia at the Alfa Laval Test & Training Centre in Aalborg. As with LNG, biofuels and methanol, the centre has deepened its knowledge of ammonia combustion to help in the development of onboard technologies, keeping safety and efficiency in mind.

Alfa Laval is also an active member of the Getting to Zero Coalition and a Strategic Corporate Partner in Maersk Mc-Kinney Møller Center for Zero Carbon Shipping, focusing on the advancement of alternative fuels. Additionally, the company has partnered with various industry pioneers to contribute to research on ammonia as fuel with its expertise, technologies and development resources.

To learn more about the Alfa Laval Test & Training Centre and Alfa Laval’s approach to marine decarbonization, please visit: <https://www.alfalaval.com/industries/marine-transportation/marine/alfa-laval-test-and-training-centre/>

Explore Alfa Laval’s sustainable solutions & technologies: [Sustainable shipping solutions and technologies | Alfa Laval](#)

For more information, please visit the Alfa Laval Marine webpage: [www.alfalaval.com/marine](http://www.alfalaval.com/marine)

To learn more about WinGD engine solutions and WinGD’s work towards shipping decarbonization, please visit: [www.wingd.com](http://www.wingd.com)

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**Editor's notes**

**This is Alfa Laval**

Alfa Laval is a world leader in heat transfer, centrifugal separation and fluid handling, and is active in the areas of Energy, Marine, and Food and Water, offering its expertise, products, and service to a wide range of industries in some 100 countries. The company is committed to optimizing processes, creating responsible growth, and driving progress to support customers in achieving their business goals and sustainability targets.

Alfa Laval's innovative technologies are dedicated to purifying, refining, and reusing materials, promoting more responsible use of natural resources. They contribute to improved energy efficiency and heat recovery, better water treatment, and reduced emissions. Thereby, Alfa Laval is not only accelerating success for its customers but also for people and the planet. Making the world better, every day.

Alfa Laval has 20,300 employees. Annual sales in 2022 were SEK 52.1 billion (approx. EUR 4.9 billion). The company is listed on Nasdaq Stockholm.

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