Expansion of the Alfa Laval Test & Training Centre for LNG and other fuels will drive environmental and energy solutions

**The Alfa Laval Test & Training Centre in Aalborg, Denmark will soon be expanded to five times its current size. This extraordinary development, focused on LNG and other alternative fuels, will address new challenges and possibilities for marine customers as they strive to meet environmental and energy targets. The expansion will create the world’s most advanced test centre for environmental and combustion technology – regardless of fuel type.**

Opened nearly two years ago, the Alfa Laval Test & Training Centre is a cornerstone of customer-focused technology development. It is already a massive facility, boasting a 250 m2 testing space where a 2 MW diesel engine and equipment from all of Alfa Laval’s marine product groups create the closest possible simulation of a full-sized commercial vessel. Now it will be expanded with an additional 1100 m2, dedicated to environmental and combustion technology in burners and heating systems for vessels using LNG and other alternative marine fuels. The wider operations are expected to begin at the turn of the year 2016-2017.

“LNG and other fuel alternatives will play a key role in meeting the marine industry’s environmental and energy challenges,” says Peter Leifland, head of Alfa Laval’s Marine & Diesel Division. “Through the expansion of the Alfa Laval Test & Training Centre, we will support this shift with cutting-edge technology development.”

**Preparing the way for LNG**

As Leifland suggests, the expansion of the Alfa Laval Test & Training Centre is in step with the new direction being taken by many ship owners. In just 15 years, it is expected that 7000 vessels will be sailing with LNG, compared with a mere 500 today.

“This is a remarkable change, driven in part by the successive tightening of NOx and SOx regulations by IMO,” says Bodil Nielsen, Test & Training Centre Manager. “LNG is an attractive solution, because it reduces NOx by 85-90% and virtually eliminates SOx.”

By moving from petroleum-based fuels to LNG, vessels can cut greenhouse gas emissions by 20% overall. However, as Nielsen points out, “Advanced technology is a prerequisite for making the switch.”

**Security through technology**

The challenges involved with gas are nearly as great as the benefits. LNG poses additional environmental difficulties due to the methane and other greenhouse gases that evaporate from it, no matter how it is stored or transported. Moreover, all gas fuels are a serious explosion hazard, requiring sophisticated equipment for safe handling and treatment.

At the Alfa Laval Test & Training Centre, existing solutions to these challenges will be refined – and new ones developed. “There are key processes that become significantly more complex when LNG is involved, which means the technologies on board must be even more advanced,” says Lars Skytte Jørgensen V.P. Product Centre Boilers at Alfa Laval. “The Alfa Laval Test & Training Centre ensures that our diesel-related equipment is the most proven on the market, and with the new expansion, it will do the same for our gas-related solutions.”

**Innovation on multiple fronts**

The expanded facility will be the only one of its kind where environmental technologies for all types of fuels can be tested. Moreover, it will promote development from a range of perspectives. As in the existing diesel testing space, interactions and synergies between process lines will be explored in the gas testing area.

As an example, Jørgensen points to the combustion of evaporated greenhouse gases from LNG. “While the gases have to be burned to minimize environmental impact, we will develop the best technology for doing it safely – and for using the energy to provide heat and propulsion,” he says. “By looking not only at the environment, but also at energy efficiency and economy, the Alfa Laval Test & Training Centre will ensure that Alfa Laval is the clear choice for customers who make the transition to gas-powered ships.”

**Cementing leadership in environmental and fuel technology**

The expansion of the Alfa Laval Test & Training Centre, which is supported by the Danish Maritime Fund, will also provide new opportunities to collaborate with customers and cooperation partners. Such collaborations have been instrumental in many areas, such as the development of flagship environmental systems like Alfa Laval PureNOx, Alfa Laval PureSOx and Alfa Laval PureBallast.

Combined with the centre’s unique physical capabilities, deepened collaboration will strengthen Alfa Laval’s position as the marine expert in environmental and fuel technology. “Alfa Laval is the only company in the world to offer the complete package of environmental and combustion-optimizing systems for the shipping industry,” says Jørgensen. “Because we contribute to so many vital aspects on board, we are fortunate to have many who wish to be involved with our research and development.”

“The Alfa Laval Test & Training Centre today is a focal point for advanced development of diesel fuel systems and related environmental technologies,” adds Bodil Nielsen. “With the new expansion for gas, it will have the same strong role when it comes to LNG and other fuels. The gas revolution is here, and Alfa Laval will be at the cutting edge.”

To learn more about the Alfa Laval Test & Training Centre and Alfa Laval’s approach to working with LNG and other gas fuels, visit www.alfalaval.com/marine

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**Editor’s notes**

About Alfa Laval

Alfa Laval is a leading global provider of specialized products and engineering solutions based on its key technologies of heat transfer, separation and fluid handling.

The company’s equipment, systems and services are dedicated to assisting customers in optimizing the performance of their processes. The solutions help them to heat, cool, separate and transport products in industries that produce food and beverages, chemicals and petrochemicals, pharmaceuticals, starch, sugar and ethanol.

Alfa Laval’s products are also used in power plants, aboard ships, in oil and gas exploration, in the mechanical engineering industry, in the mining industry and for wastewater treatment, as well as for comfort climate and refrigeration applications.

Alfa Laval’s worldwide organization works closely with customers in nearly 100 countries to help them stay ahead in the global arena.

Alfa Laval is listed on Nasdaq OMX, and, in 2014, posted annual sales of about SEK 35.1 billion (approx. 3.85 billion Euros). The company has about 18 000 employees.

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