Inert gas production joins applications at the Alfa Laval Test & Training Centre

**An Alfa Laval Smit Combustion system (FU type) is now installed at the Alfa Laval Test & Training Centre in Aalborg, Denmark. The system, which adds inert gas production to the centre’s already comprehensive range of full-scale vessel applications, will ensure that Alfa Laval remains at the forefront of developing and optimizing inert gas systems.**

Inaugurated in 2014, the Alfa Laval Test & Training Centre is essentially a full-sized machine room on land, with equipment from all of Alfa Laval’s marine product groups installed in process lines as they would be on a commercial vessel. To support a focus on gas applications and combustion technology, the testing space underwent a major expansion in 2017, which added 1100 m2 and a gas fuel supply. The new Smit Combustion system fits neatly into that expansion, where flame tests and other activities are underway with the Alfa Laval Gas Combustion Unit (GCU) and multi-fuel Alfa Laval Aalborg burner systems.

**Leading innovation in a safety-critical application**

Inert gas production is needed on ships that carry oil and gas products, where the inert gas replaces oxygen in the cargo space to ensure a non-combustible atmosphere. The gas is pumped into the cargo tanks during offloading, for tank inspections or in order to maintain tank overpressure. Alfa Laval has produced inert gas generators for marine use since 1967, and their built- scrubber technology – used for cleaning the inert gas – laid much of the groundwork for today’s Alfa Laval PureSOx exhaust gas cleaning systems.

Most versatile among Alfa Laval’s different inert gas generators, the Smit Combustion system is a low-pressure inert gas solution based on the unique Smit Ultramizing® principle, which produces soot-free inert gas even when operating below stoichiometric conditions. The system installed at the Alfa Laval Test & Training Centre is capable of running at full load, producing up to 2500 m3/h of inert gas with low (5%) oxygen content. It is also fitted with the Automatic Fuel Efficiency Module (AFEM), which provides up to 40% fuel savings by adjusting the amount of fuel oil and combustion air to the current demand.

**Realistic opportunities to push the technology**

In preparing the new permanent installation, Alfa Laval has made every effort to recreate onboard conditions and simulate tank pressure. The Smit Combustion system is complete with seawater cooling, delivery valve, purge valve and deck water seal, and it allows stepless adjustment of parameters such as oxygen content, supply pressure and capacity.

“Having a Smit Combustion system at the Alfa Laval Test & Training Centre is an opportunity to test product innovations and improvements in a true-to-life environment, where we can simulate things like high seawater temperatures or variations in tank pressure,” says Marko Van der Smitte, Sales Director Inert Gas Systems at Alfa Laval. “In addition, it lets us provide hands-on training or present and explain the system to customers in a real operating context.”

“One of the main ideas behind the centre is to examine not just individual equipment, but all of the complex interactions on board a vessel,” Van der Smitte continues. “So adding an inert gas production system is a key step that makes the centre even more complete.”

To learn more about the Alfa Laval Smit Combustion system and Alfa Laval’s approach to inert gas production, 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, 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 2018, posted annual sales of about SEK 40.7 billion (approx. 4.0 billion Euros). The company has about 17 200 employees.

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