New Alfa Laval HCO filter with groundbreaking technology approved for validation testing

**A major manufacturer of two-stroke engines has agreed to validation tests of an Alfa Laval hydraulic control oil (HCO) filter based on unique technology. The approval to test the final HCO filter design comes after successful concept testing on the crude oil tanker Stena Suède.**

The Alfa Laval HCO filter is a high-performance solution for the new generation of two-stroke engines where traditional camshafts have been replaced by hydraulic control systems. The hydraulic control system core components are dedicated valves fed with oil from the main system flow, which must be very finely filtered with minimal pressure drop. Due to the sensitivity of the large centrifugal main pumps used to move the oil, additional pressure drop across the HCO filter would ultimately risk engine damage.

The Alfa Laval HCO filter, now set to begin validation testing, easily achieves this balance of fine filtration and excellent flow passage. “Between its high performance and its compact nature, the Alfa Laval HCO filter will remove much of the cost and installation complexity associated with hydraulic control system protection,” says Herve Gourdon, Business Manager, Filters at Alfa Laval.

**Fine filtering without pressure losses**

Extensive filter area is critical for filtration at 6 μm, the very fine grade required for hydraulic control oil. Using new Alfa Laval Atrium technology, the Alfa Lava HCO filter provides a tremendous increase in filtering surface – with virtually no impact on pressure drop. This is possible through the special patented shape of the Atrium filter elements, as well as their smaller and highly optimized flow distribution system.

“With Alfa Laval Atrium technology, the Alfa Laval HCO filter reliably achieves the 6 μm filtering needed to protect hydraulic control valves,” says Gourdon. “Yet the flow and pressure through the filter remain practically unaffected, which ensures a safe margin for the engine.”

**High-performance backflushing**

A further advantage of the ample flow through the Alfa Laval HCO filter is the ability to backflush continuously. Unlike sequential backflushing, continuous backflushing prevents even temporary accumulation of pollutants. This, too, ensures there is no increase in pressure drop.

Because the backflushing is treated in a diversion chamber in the filter, it also contributes to a compact and easily installed solution. No additional tank or separator is required, nor is any air or electrical connection needed, since backflushing is driven by the hydraulic motor.

**Proven at sea and ready for validation**

With approval from a major manufacturer of two-stroke engines, the Alfa Laval HCO filter will now undergo validation tests. The final design will be evaluated in three installations, each to be put through 3000 hours of testing. This follows 14,000 hours of concept testing aboard the tanker Stena Suède, whose chief engineer Paul Ash confirms, “The filter is basically maintenance-free, the backflush cleaning works well and the operating pressure is steady.”

“The effectiveness of the Alfa Laval HCO filter and its Atrium filter technology are already clear,” says Alfa Laval’s Gourdon. “In fact, we see potential for the Atrium technology across multiple filter applications. Hydraulic control oil is only the beginning.”

To learn more about Alfa Laval filters and Alfa Laval’s approach to filtration, 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 2015, posted annual sales of about SEK 39.7 billion (approx. 4.25 billion Euros). The company has about 17 500 employees.

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