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Alfa Laval PureBallast: a decade at the forefront

Now that the IMO Ballast Water Management (BWM) Convention has been ratified, ship owners are beginning to look seriously at ballast water treatment. As of September 2017, newbuilds will need treatment systems and existing vessels will have until their next renewal survey to retrofit. For Alfa Laval and PureBallast, this is a journey that began more than ten years ago.

With its marine-specific enhanced UV technology, Alfa Laval has long been a pioneer in ballast water treatment. Since the earliest days of discussion, the company has been selected to provide biological and technical competence on key panels involved in developing standards and educating the market. Alfa Laval PureBallast, the company's ballast water treatment system, was rapidly approved by IMO and has now been submitted for U.S. Coast Guard type approval.

On the commercial front as well, Alfa Laval took an early lead. PureBallast was world's very first commercially available ballast water treatment system, launched originally in 2006. Since then more than 1200 PureBallast systems have been sold for container ships, tankers, bulk carriers, offshore supply vessels, naval vessels and more, hundreds of which have already been delivered and installed.

Superior performance in any waters

Meanwhile, PureBallast has continued to develop. Today's PureBallast 3.1 is a mature system with unmatched biological disinfection performance and a unique combination of capabilities.

The system is a three-water solution, certified for use in fresh water as well as brackish and marine. This includes water in liquid form at frigid temperatures. Likewise, it is an ideal solution for low-clarity waters, where many other UV-based systems struggle. Even where UV transmittance is as low as 42%, PureBallast 3.1 can operate at full flow.

As a result, the system offers effective power management. It can run at just 50% of its potential operating power in most situations, then ramp up to full power for the most difficult operating scenarios.

PureBallast 3.1 is fully enclosed, fully automated and thoroughly integrated with the ballast water system. It requires no salt or chemicals, even when operating in fresh water, and no tanks or ventilation systems are needed to manage consumables or residuals. It is also an inline solution, in which the major components (filter and reactor) are incorporated into the ballast water piping for a minimal footprint.

A complete offering in ballast water treatment

Beyond the technical strengths of PureBallast are the strengths that Alfa Laval has accumulated in a decade of supplying it. In addition to the newbuild installations performed over the years, Alfa Laval has worked with over 300 PureBallast retrofits.

Building on the system's overall compactness and flexibility, Alfa Laval has developed hands-on knowledge and proven working procedures for incorporating it into a vessel, even when there are EX requirements. Likewise, the company has learned to navigate the complex partnerships involved in a retrofit, providing both flexible project management and a network of competencies for engineering support, 3D laser scanning, class approval and more.

All this will be of huge advantage to ship owners as the BWM Convention enters into force, just like Alfa Laval's delivery capabilities and global presence. Having long since made the transition into large-scale production, Alfa Laval is well prepared for the heavy ramp-up in years to come – and has a well-developed service offering to keep PureBallast systems going strong.

[/Fact box or caption/](#)

Much more about Alfa Laval PureBallast 3.1 and Alfa Laval's work with ballast water treatment can be found on the company's PureBallast website. For videos, selection tools and other interactive content, visit www.alfalaval.com/pureballast3

For further information, please contact:

Anders Lindmark

General Manager, Business Centre PureBallast, Alfa Laval

Phone: +46 70 104 29 19

E-mail: anders.lindmark@alfalaval.com

Sofia Erichs

Marine Trade Press Manager and Communication Coordinator

Marine & Diesel Division, Alfa Laval

Phone: +46 8 53 06 53 57

E-mail: sofia.erichs@alfalaval.com

www.alfalaval.com/marine

Editor's notes

About Alfa Laval PureBallast

PureBallast, which was the first commercially available ballast water treatment system, is a chemical-free system sold and serviced by Alfa Laval. A vital component of the system is the Enhanced UV Reactor, which was developed jointly by Alfa Laval and Wallenius Water based on Wallenius Water Technology.

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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