



## RollDock uses Alfa Laval PureBilge to reach 5 ppm with minimal waste

RollDock, Netherlands

Case story



For bilge water treatment on its newest semi-submersible vessels, Dutch transport specialist RollDock abandoned coalescer systems. Instead, the company chose Alfa Laval PureBilge for reliable, high-capacity bilge water treatment down to 5 ppm.

Based in the Netherlands, RollDock is a growing shipping company with deep engineering knowledge. The company is a frequent partner to demanding European customers, who place high value on RollDock's expertise in large and complicated transport projects. Five of RollDock's seven vessels are semi-submersible RoRos, which act as floating docks for transporting naval equipment, dredging equipment and even river cruise ships by sea.

In 2013, when RollDock built its second generation of heavy-lifting semi-submersibles, the company selected centrifugal separation as its means of bilge water treatment. Whereas static coalescers had been used on RollDock's older S-Class vessels, the ST-Class vessels RollDock Star and RollDock Storm were equipped with Alfa Laval PureBilge.

"When we built these new vessels, their environmental impact was very important," says Mike Driehuys, RollDock Fleet Technical Superintendent. "The ST-Class vessels were built to be as clean as possible. That's one of the reasons we chose PureBilge."

### Important to be green and reliable

On both ST-Class vessels, PureBilge systems with 5 ppm DNV Clean Design type approval were installed. For RollDock, going beyond the 15 ppm standard was a high priority. "These are green ships, where every detail is about getting it cleaner and making it ready for the future," Driehuys says. "We know for certain that 5 ppm is the future."

Equally important, however, was the capacity to process bilge water continuously – something the coalescers on the S-Class vessels have been unable to do. "We chose PureBilge because of its high capacity," Driehuys says. "Those were the number-one reasons, the capacity and the ability to meet 5 ppm. There weren't many companies able to provide both."

## Handling bilge water correctly

For the RollDock crews, working with PureBilge and the 5 ppm limit took getting used to, even though they were familiar with other Alfa Laval separators. Having grown accustomed to coalescers for bilge water treatment, they needed to understand the sensors and underlying automation. But more importantly, they needed to adjust their approach to bilge water itself.

“Going from 15 ppm to 5 ppm is a challenge,” says Driehuys. “Processing bilge water at 15 ppm is standard procedure. Meeting 5 ppm not only required an operational change, but also a change in the crew mentality.”

One key to making it work was onboard crew training, provided by Alfa Laval after PureBilge start-up and commissioning. “Even though it’s a more complicated system, it’s user-friendly and the crew can use it quite easily with the proper training,” says Driehuys. “If you handle the bilge water properly, ensuring that you have only normal contamination, 5 ppm is easy to reach.”

## Continuous performance at high capacity

In operation today, the difference between PureBilge and the static coalescers on the S-Class vessels is striking. As anticipated, the ST-Class vessels process their bilge water continuously, spending far less time maintaining their bilge water treatment systems.

“The coalescers are maintenance-demanding, involving costly man-hours that are of better use somewhere else,” Driehuys explains. “Contaminated bilge water can clog up the filters, which results in low discharge capacities.”



By contrast, he says, the PureBilge systems are efficient and user-friendly. “PureBilge gets everything out and we run it continuously,” he says. “The capacity is very high, and we can pump and discharge very fast. But above all we can keep up with the bilge water production, which is most important.”

## Minimal waste for onshore deposit

Not only does PureBilge keep pace with the bilge water accumulated on RollDock Star and RollDock Storm, it also reduces the vessels’ waste for disposal. Around 3 m<sup>3</sup> of clean water are discharged overboard per day, but only a minimum of oily waste is produced.

“With PureBilge, we can sail for half a year without having to deposit anything on shore,” Driehuys says. “The S-Class ships simply can’t keep up.”

On rough seas, where achieving 5 ppm is most challenging, the difference is particularly noticeable. “Coalescers would be totally unable to achieve 5 ppm in rough seas,” says Driehuys. “Plus the amount of filters and parts needed to keep them going would be much greater.”

## 100% convinced about PureBilge

Between the reliable performance and the minimal generated waste, RollDock is certain that PureBilge pays off. So certain, in fact, that the company demanded PureBilge even when building new vessels for their new venture BigRoll.

“We’re so convinced about PureBilge that we insisted on it for the BigRoll vessels,” Driehuys says.

## How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com).