



Image by Espen Mills / Hurtigrute

Alfa Laval

PureVent makes a healthy change in the engine room

Service product
Retrofit

Equipment
PureVent

Customer
Hurtigruten, Norway

↓ 99.9%

Oil mist in vented air

↓ 50%

Manual engine room cleaning

Norway's Hurtigruten carries passengers on a coastal route between Bergen and Kirkenes, renowned for its peaks and fjords. The company works to avoid harming the dramatic coastline, and it treats crew wellbeing with the same care. That's why two Alfa Laval PureVent separators were installed on MS Nordlys for crankcase gas cleaning – making a top-notch working environment even better.

Taking clean to a safer level

On MS Nordlys, Chief Engineer Roy Inge Holand and his team maintain the engine room to a rigorous standard. Twice a week, year after year, the crew washes and cleans its surfaces. But until a few years ago, a certain amount of oil film was inevitable. The source was a fine mist of oil, originating in blow-by from the engine's crankcase ventilation. Oily gas from the crankcase is a fact of life on nearly all vessels. But Holand and his team were frustrated, both by the hazard of breathing it and by the excessive cleaning time needed to remove oil film and resulting workplace hazards. Statistics from the UK Marine Accident Investigation Branch show incidents like falls comprise a high percentage of reported injuries at sea – injuries Hurtigruten is keen to avoid. "It was really a health and safety decision," says Holand about the choice to install PureVent.

Better for crews and the engine as well

PureVent, which is proven in over 4,200 installations worldwide, uses high-speed centrifugal separation to remove up to 99.9% of the oil mist from crankcase gas. The processed air can be vented to atmosphere without concern, and the captured oil is possible to reuse. Since two PureVent units were retrofitted on MS Nordlys in 2018, the air in the engine room feels fresher and surfaces stay cleaner. The reason, Holand explains, is that PureVent breaks a vicious cycle. "While the engine needs to breathe, that leakage creates mist, which in turn creates pressure – and more leakage," he says. "By getting rid of the mist and the resulting pressure build-up, we get less leakage and a cleaner working environment."



"There's never been a downside to using PureVent – only upsides, but we didn't do this out of economic motivation. We did it to decrease oil mist. For anyone who has problems with oil mist in the engine room, PureVent is a good improvement."

Roy Inge Holand
Chief Engineer
MS Nordlys

Easy to install, easier to live with

Achieving these benefits was remarkably simple. The compact PureVent separators were installed by the crew with only remote assistance from Alfa Laval service engineers. "The good installation manual made it easy," says Holand. "The job took around three days, mainly to rebuild some piping, and we needed nothing more than a skilled welder. No crew training was needed either – the manual was enough."

After more than seven years and 35,000 operating hours, the units are going strong with minimal upkeep: a short visual inspection and cleaning once per week, then exchange of the disc stack after 16,000 hours or every 5 years. "There's no extra cost beyond changing the disc stack," Holand says.

"The maintenance is easy and the OPEX is low."

As for maintaining the engine room itself, there's now far less to do. While the crew still washes it twice a week, Holand estimates that the cleaning time has been cut in half.



The clean engine room of Hurtigruten MS Nordlys

A healthy model for other vessels

When it comes to recovery of usable oil, PureVent returns around 2–3 litres per month, which Holand considers a bonus. While it adds to the overall cost efficiency, the limited maintenance and a safer, healthier engine room mean far more. Those are the reasons why Hurtigruten is considering wider adoption across the fleet.

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To learn more about Alfa Laval PureVent, please visit www.alfalaval.com/purevent



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