

From black water to clean water

Lauritzen Kosan newbuildings fitted with next-generation biological sewage treatment plants.



Readers of *Lauritzen News* will be familiar with the series of 10 advanced ethylene carriers contracted by Lauritzen Kosan at Sekwang Heavy Industries in South Korea. Seven have been delivered to Lauritzen Kosan, one has gone to Lauritzen Kosan's partner Allocean and the final two will go to LGR Navigazione. All ten vessels are commercially managed by Lauritzen Kosan. These vessels incorporate many environmental innovations, and are the first gas carriers designed to comply with the International Maritime Organisation's (IMO) Green Passport concept and the CLEANSHIP class notation for pollution prevention. All the ships are also equipped with new IMO-approved biological sewage treatment systems that provide early compliance with new IMO guidelines – effective January 2010 – on black water treatment.

“These bioreactor systems are enclosed units that use bacteria to clean waste water,” says Nicolas Grantzan, Lauritzen Kosan superintendent. “Black water from toilets and grey water from sinks and showers are piped into the units, which process the water and pump clean water into a holding tank, which discharges automatically when it's full.” In fact, the entire process is automatic and requires virtually no crew involvement. The bio-

reactor units can handle waste water from up to 30 people; typical Lauritzen Kosan crew size is about 15.

Well-tested solution

Rolf Andersen, compliance manager for Lauritzen Kosan, explains that the units put Lauritzen Kosan well in the forefront of maritime sewage treatment. “Under current regulations it's still permissible to ‘commute’ waste water by separating solids and treating the water with chemicals, then discharging it three miles from shore – or to carry raw sewage in a holding tank and pump it out 12 miles from shore. The water created by our bioreactors is considered by the IMO clean enough to be discharged at any distance from shore. The systems also help us meet our ISO 14000 goals.”

This sewage treatment system is well tested, as more than 250 have been installed onboard ships. According to the manufacturer, Gertsen & Olufsen, the system exceeds any known or expected future environmental demands in any waters.

“It is our ambition to provide all our new-buildings with systems like these in the future,” says Peter Justesen, vice-president and head of Fleet Management for Lauritzen Kosan. “They are very environmentally friendly, as no solids are released and no chemicals are used in treatment. For comparison, you could say that the clean water produced by the eight ships we've already equipped with bioreactors is the environmental equivalent of providing a sewage treatment plant for a small village.”

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