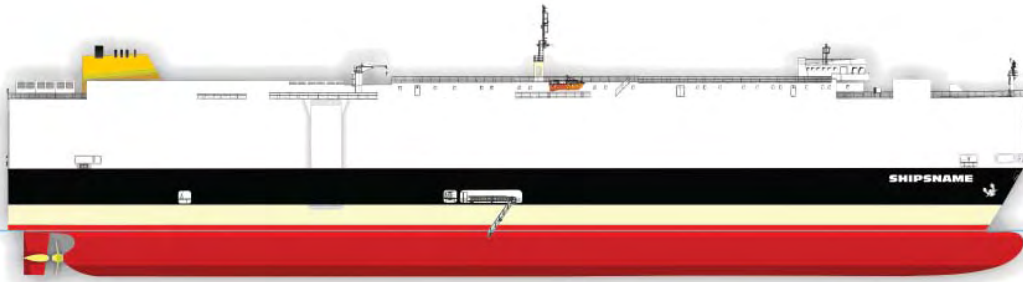


OPERATIONAL SAFETY FOR REEDEREI F. LAEISZ' CAR CARRIERS

MARITIME



When the German shipping company Reederei F. Laeisz gets its eight new state-of-the-art car carriers in 2009, 2010 and 2011, they will all be delivered with an OPENpredictor™ Bearing Wear Monitoring system on their 9-cylinder MAN B&W engine. The 13.398 dwt vessels are pure car and truck carriers (PCTCs), able to transport 5,000 vehicles on 11 car decks between the Far East, Europe and America. These car carriers are the first PCTCs in the Laeisz fleet and form a new segment in the diversified fleet. The vessels are not the largest car carriers, but are categorized in the upper region sizewise.

"We decided to install continuous bearing wear monitoring on our new car carriers for two reasons," says Harald Schlotfeldt, Managing Technical Director of Reederei F. Laeisz. "First and foremost we want to ensure operational safety by avoiding breakdown due to bearing damage. With OPENpredictor™ we can detect developing wear well in advance and plan corrective actions in due time, thereby limiting off-hire and out of service time. A car carrier's time in port is very short with less than a day to move all vehicles in or out. So it is crucial that we reach

ports in time with roll-on/roll-off equipment ready when the planned berthing slot is free at the car terminal."

Secondly, OPENpredictor™ will be used to closely monitor and collect data about the operation of the 9-cylinder engines from the commissioning and through their entire lifetime. This is felt especially important as the 9S50MC-C engine is a relatively long one, which is normally built with a maximum of 7 cylinders only. The selection of the main engine type was of course influenced by the need to have an engine with limited building height underneath the car decks.

"Later we will look into the opportunity to use the predictive maintenance information to avoid open-up inspections. We have therefore initiated a dialogue with our classification society

Germanischer Lloyd about the possibility to change from a time based to a condition based maintenance strategy."

Integration with ship management system

The shipping company has another future vision: "We also chose OPENpredictor™ because of the possibility to integrate information from the condition monitoring system with our GL ShipManager system, used on all our vessels for maintenance and material management, and for administrative tasks."

Reederei F. Laeisz manages a fleet of 50 vessels of different types: Container vessels, car, bulk and gas carriers, but also Ro-Ro/pax and research vessels. The company puts great emphasis on safety, quality and environmental protection standards, and was the first German shipping company to adhere to the ISO 14001

environmental management system. In February this year Reederei F. Laeisz was awarded with the GL Excellence 5 Stars certification, as the first shipping company with a diversified fleet.

"We own or manage our vessels for many years and have a long term interest in keeping our fleet in excellent condition," Mr. Schlotfeldt explains. "To ensure this, we always make sure to have enough highly qualified seafarers onboard. We are in the happy position to still have sufficient very qualified shipping people available. Out of our 1600 seafarers more than 500 are Germans. Nearly half of our fleet is flying the German flag."

According to Mr. Schlotfeldt, "the shipping community is often quite conservative and takes long time to adopt new technologies. Why make investments and change things that work, people seems to think. But at Reederei Laeisz we find the idea of condition monitoring and condition based maintenance very interesting, not only to improve our bottom line but more for safer vessel operation."

Reederei Laeisz' 8 new car carriers will transport 5,000 vehicles on 11 car decks. OPENpredictor™ will monitor bearing wear on the carriers' special 9-cylinder engines to ensure safe operation.

