

FLINTER STOP'S STERN TUBE LEAKAGE

Dutch company Flinter marks its commitment to the environment by specifying pollution free Thordon COMPAC stern tube bearings for a 20th newbuild.

Stern tube oil pollution has always been an issue for the shipping industry, but with ever increasing rules and regulations it has become law. Every day occurrences 10 years ago can now land multimillion dollar lawsuits or jail time for shipowners and managers



Martijn Berends, has been the prevention of oil leaks. “Spills always come at times when you do not need them, and they must be resolved as soon as possible,” he says. Prior to the switch to these seawater lubricated bearings, Flinter, like others, had been fined for oil pollution, especially in US ports. So far, all the installations have been on new ships and there have

been no retrofits.

Several concepts are on the market to avoid such problems but one which takes the simplest path of using no oil at all is the COMPAC seawater lubricated bearings developed by Thordon Bearings. Thordon forward and aft COMPAC bearings are an elastomeric polymer alloy, but the key feature is that all lubrication is pumped seawater. To promote early formation of a hydrodynamic film between the shaft and bearing, the lower loaded portion is smooth while the upper half incorporates grooves for flow of the combined water lubricant and coolant.

This design feature has been shown to result in less friction at service speeds than oil-based technology. Research has also revealed that COMPAC bearings are 50 times more elastic than white metal and three times more compliant than other non-metallic shaft bearings; thus, edge loading is spread and local pressure is reduced, eliminating any incidents of bearing wiping.

Bearing wear data has been recorded over ten years for several ships with shaft diameters above 600 mm (23.62 in.), including Princess Cruises and Disney Cruise Lines. Results show that COMPAC bearings should be satisfactory for 15 to 25 years service life.

FLINTER CUTS POLLUTION

The enterprising and vibrant Flinter group – the Netherlands’ fifth largest owner with a fleet (including tonnage on order) of more than 50 ships – is based at Barendrecht near Rotterdam and is more than just an owner of ships. This company is also involved in ship management, crewing, supervision of new ship construction, finance, brokering and onward transport of cargoes by land. Its youthful multipurpose dry cargo fleet (plus four 800 TEU cellular container ships added in 2008) ranges from 1,200 dwt to 11,000 dwt, and nearly all vessels are strengthened for ice navigation, although operations are worldwide.

A recent newbuilding programme is nearing its end, with the last ships of three classes now being delivered by Ben Kien Shipyard in Vietnam (four ships of 9,120 dwt), Chowgule & Co in India (two ships of 4,450 dwt) and five further vessels of 11,047 dwt from the Ferus Smit yard in northern Holland.

Flinter has been a regular user of Thordon COMPAC bearings since 2002 – all its newbuildings since that time have been specified with this elastomeric type stern tube bearing. The principal catalyst, reports Flinter’s newbuilding manager,

As a user of eight years standing of the Thordon COMPAC system, Flinter is clearly convinced of its merits and Mr Berends says the ship owning group intends to continue with the same selection policy in the future.

Shaft diameters in the new Flinter-fitted fleet have varied from approximately 350 mm (13.77 in) to 500 mm (19.68 in) diameter, and all the vessels feature controllable pitch propellers of the Wärtsilä Propulsion, Rolls-Royce or Berg types.

Since 2008, Thordon has been offering a 15 year wear life guarantee that COMPAC bearings will meet class society wear standards on commercial vessels with shaft diameters of 300mm (11.8 in) or greater. Mr. Berends sees this as “good news”, but adds that it is still possible that the tailshaft itself will be affected by corrosion or cavitation. As tailshafts have, in any case, to be withdrawn at a second special survey (10 years), and since the price for new bearings is relatively low compared to the total costs of a shaft withdrawal and inspection operation, he says that Flinter will probably renew the COMPAC bearings on the ships in its fleet at this interval. 