

Cold corrosion mitigated, cylinder lubrication optimised and engine protected

Container vessel | MAN S90ME-C8.2-TII



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A switch to Mobilgard™ 5100 marine diesel engine cylinder oil protected the fully de-rated engine of a container vessel from cold corrosion and deposit buildup. Cylinder oil feed rates were also reduced by 40 per cent.

Situation

Mounting financial pressures are driving operators to run their vessel's main engines at significantly reduced operating loads. To do this more efficiently engines can be de-rated, which can inadvertently cause cold corrosion as a result of reduced engine liner temperatures. The operators of a 95,390 gross tonnage container vessel worked with ExxonMobil to conduct field trials to investigate its concerns around cold corrosion and overall engine cleanliness.

Recommendation

The field trials, conducted onboard the vessel by ExxonMobil engineers, aimed to identify the optimum cylinder oil and cylinder oil feed rate for the fully de-rated 47,430 kilowatt MAN S90ME-C8.2-TII engine. The testing initially focused on an 85 BN cylinder oil. However, results showed that it failed to provide the necessary cylinder and liner protection. A second trial was conducted using Mobilgard 5100 cylinder oil, a 100 BN cylinder oil.

Impact

The results from the field trials clearly showed that Mobilgard 5100 oil can protect against cold corrosion while enhancing engine cleanliness. This resulted in a reduction in maintenance and downtime. The lubricant also operated effectively at 40 per cent of the feed rate of the previous cylinder oil, cutting lubrication costs.

By switching to Mobilgard 5100 oil, cold corrosion was tackled and feed rates were cut by

40%