

Filtration Group application example – Marine Industry

Lubrication oil filtration at the T²RECS gearboxes of RENK



Marine Industry

Initial situation

Working ships are constantly exposed to high loads and have to operate reliably, with a minimum of wear and without interruptions.

Hydraulically switchable reduction-gearboxes ensure a reliable operation. **A failure of the drive can have devastating consequences for the environment, for humans and machines on the ship.** A failure or a shutdown of the gearbox would cause a shutdown of the complete ship.



Solution statement

- The lubrication oil is filtered by a Filtration Group duplex filter of the **Pi 210 or Pi 241** series with a **10 µm Premium Select** filter element
- Thanks to the duplex design of the Filtration Group Filters the elements **can be changed at full load** by a simple switch of the operating filter
- The Premium Select Technology ensures high cleanliness levels of the lubrication oil and extends the lifetime of bearings
- The Inline filter could be installed easily **directly at the gearbox housing**



Customer value

- Every filter was **adapted** to the different requirements of the **different gearbox sizes**
- Filtration Group Premium Select elements provide an up to **30% higher dirt holding capacity** at reduced differential pressure in combination with a well-defined high retention rate
- This leads to **significantly reduced maintenance requirements**
- The element change can be performed at any time, if required at full load
- **Operating pressure up to 32 bar** possible
- The Filtration Group **Pi 210 and Pi 241 Series** are approved by the established certification offices in the marine industry



Challenge

- Only one shared filter unit shall be installed for the filtration of the lubrication oil and the oil for the hydraulic transmission shifts
- The filter unit shall be easily accessible from the outside and the maintenance has to be possible without interruption of operation
- The filter unit has to be approved by the established certification offices in the marine industry

Technical Data

Viscosity: up to 220 mm²/s at 60 °C

Filtration Rate: 10 µm

Operating pressure: 28 bar



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