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Fishing Vessel Stern Tube Lubricating Oil Analysis.

Introduction:

Stern Tube lubricating oil monitoring is a fundamental factor in the assessment of tailshaft condition in a non-invasive manner. Stern tube bearing lubricating oil should be analysed regularly during normal service conditions and the oil should be drawn in a manner which allows a representative sample to be tested.

Procedure:

With reference to the lubricating oil manufacturer / supplier instructions, a representative oil sample should be taken every 6 to 12 months dependant on the operational conditions of the vessel. The sample should be divided and one portion should be submitted to a recognized laboratory. The second portion should be sealed, identified and stored in a cool dark place, at least until the results have been returned.

The analysis should include testing for the following:

- i) Free water content in oil
- ii) Bearing metals content (Pb, Fe, Cu, Al, Cr, Sn, Si, Ni)
- iii) Viscosity at 40°C
- iv) Total Base Number (Ph)

Recording and Analysis:

The Oil Sample laboratory analysis and reports should be maintained on board including information on the maintenance of the stern tube, its operational condition and lubricating oil consumption figures. In the case of oil replacement, a record containing the reason for replacement of the oil is to be maintained.

The shipboard record should be presented in an easy to read format and contain conclusions regarding the condition of the oil and whether it remains suitable for further use. Conclusions are to be supported by comparative parameters. It should also contain an assessment of wear metals and advice where results have exceeded guidance limits.

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