

Title: 10 years Overhaul Interval with Gearless Azipod Thruster

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Abstract

Driven by increasing cost pressure and remote operating locations, maintenance as a major running cost element plays crucial role on way to optimized and uninterrupted operations. Essential to station keeping in dynamically positioned vessels, underwater demountable thrusters often set the pace for maintenance intervals and related downtime. Attributed by high number of potential failure modes due to numerous critical moving parts and high oil cleanliness requirement, geared power transmission is more sensitive to wear and tear and consequently premature failures. Possible failures include also ones in support systems such as oil circulation, cleaning and cooling. Higher reliability and extended maintenance intervals are enabled by eliminating most potential root causes, namely gears and unnecessary bearings and their subsystems.

Azipod gearless thrusters have been serving in two DP rigs since 2004 and 2005. In the end of 2013, last three of 2004 installed thrusters were dismantled for scheduled maintenance after about 9 years of use. As expected based on findings from earlier overhauls, all components were in extremely good condition and showed only minimal wear even after such a long use. This paper discuss these findings in detail and explains why 10 years maintenance interval is reachable with gearless Azipod C thruster.

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