

**Title: Reliability Prediction of Steerable Thruster Systems based on Condition Measurements**

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**Abstract**

The reliability of steerable thrusters is investigated based on RAMS techniques. The analysis shows the functional breakdown: main system, subsystems and critical components with the expected life expectancy of these components. For critical components such as gears and bearings the (minimal) design criteria and maintenance tasks are explained and explored.

A sensitivity analysis shows the main influence parameters. By combination of the theoretical model of the life expectancy calculations these data can be matched to in situ vibration measurements. Initial results are shown and a generic approach of how to combine the life expectancy prediction with the vibration levels.

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