

DON'T CURE PREVENT

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**STEERING GEAR'S HYDRAULIC OIL LOW LEVEL
ALARM INSPECTION, TESTING AND MAINTENANCE**

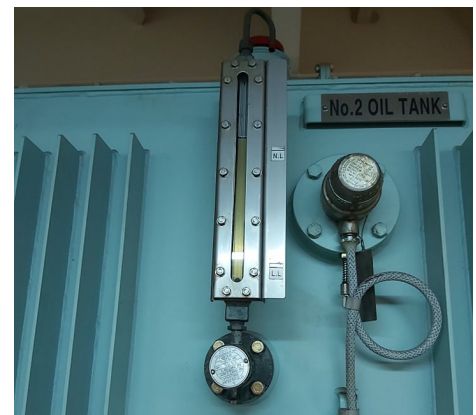


STEERING GEAR'S HYDRAULIC OIL LOW LEVEL ALARM INSPECTION, TESTING AND MAINTENANCE



During an onboard H.E.L.M.E.T. assessment, the P@S Assessor requested the crew to test the Steering Gear Low Level Alarm for each reservoir. During the test, the alarm was not activated. The P@S assessor brought into the officers' attention the significance of the low oil level alarm on a critical equipment such as the steering gear unit. A requisition was raised immediately after the observation for new sensors and spare parts.

During a vetting inspection a few weeks later, the oil level in one of the oil tanks, supplying oil to the steering gear, found to be lower than the lowest permissible level, resulting in observation.



REGULATORY FRAMEWORK

AS PER (SOLAS 74/88 CHAPTER II-1/29),

A low level alarm for each hydraulic fluid reservoir to give the earliest practicable indication of hydraulic fluid leakage. Audible and visual alarms shall be given on the navigating bridge and in the machinery space where they can be readily observed.

A fixed storage tank having sufficient capacity to recharge at least one power actuating system including the reservoir, where the main steering gear is required to be power operated. The storage tank shall be permanently connected by piping in such a manner that the hydraulic systems can be readily recharged from a position within the steering gear compartment and shall be provided with a contents gauge.



WHAT WENT WRONG?

- ⦿ The maintenance of the equipment was not following the SMS and SOLAS procedures and requirements.
- ⦿ Insufficient sensor testing.
- ⦿ Overconfidence on the steering gear's system and piping arrangement integrity.
- ⦿ Inadequate visual check of the equipment.



OUR SUGGESTION

Prevention at Sea suggests the following actions with the aim to avoid occurrence or prevent reoccurrence;

- ⦿ Assure that properly trained personnel performs the relevant inspections and maintenance.
- ⦿ Follow the, predetermined by the Company or maker, inspection and testing procedures at regular intervals.
- ⦿ Be cautious during alarm inspection and testing.
- ⦿ Do not rely on equipment's superficial good condition and integrity.
- ⦿ Cultivate a safety culture and ensure awareness.





BEST PRACTICE

- ✓ Perform regular testing of Oil Low Level Alarm for each reservoir for early indication of hydraulic fluid leakage.
- ✓ In case of malfunctioning / defective alarm sensor, condemn and decommission the subject equipment by placing proper marking on it and replace as properly according with the manufacture's instructions .
- ✓ Arrangements to maintain the cleanliness of the hydraulic fluid shall be provided.

REMEMBER: Monitoring of the oil level for each reservoir of Steering Gear and regular testing of the Oil Low Level Alarm are of high importance.



TEST YOUR KNOWLEDGE

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Q&A



SPOT THE DEFICIENCY



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FOR MORE INFORMATION,
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