



TECHNICAL CIRCULAR No. 211 of 04th August 2014

To:	All Surveyors/Auditors
Applicable to flag:	All Flags
Subject:	Inspect mechanical equipment and electrical components
Reference:	USCG Ship Inspection

The Coast Guard issued a reminder for owners and operators to routinely inspect their mechanical parts and electrical components to avoid preventable casualties.

The Coast Guard suggests that owners, operators, marine engineers and others, particularly onboard or associated with older vessels, think about and identify those high risk components which if a failure or malfunction occurs will result in a casualty. High risk components include those that are subject to gradual wear, tear or loosening.

Sometimes it is the most seemingly minor thing such as a mechanical part or electrical component that can lead to a catastrophe. For example, a nearly 20 year old bulker was leaving port when its main engine throttle failed. In this case the vessel was able to drop anchor without incident. The failure occurred because a small drive belt that connected the console throttle lever components to an electrical potentiometer failed. Movement of the throttle causes the potentiometer to move and creates a variable signal to other controls which manage engine speed. When the belt failed the control from the engine room console was lost. Fortunately, the vessel had a spare belt that the engineers replaced quickly. The underside of the Bosch/Rexroth throttle was encased and the belt was not visible under normal circumstances. Routine inspection of the belt did not occur.

Other examples:

- A contact in a small electrical relay and part of the autopilot system stuck and caused a vessel to go hard to port at 24 knots;
- Three of four nuts on a propeller shaft seal loosened, went unnoticed and caused flooding of the machinery space of an Offshore Supply vessel;
- A wire chafed and grounded out cutting power to critical combustion controls while a vessel was at the dock, but not long after transiting a narrow Caribbean harbor entrance.

Customer Service Center

5201 Blue Lagoon Drive, 9TH. Floor,
Miami, Fl., 33126
Tel: 1 (305) 716 4116,
Fax: 1 (305) 716 4117,
E-Mail:

joel@conarinagroup.com

Technical Head Office

7111 Dekadine Ct.
Spring, Tx., 77379
Tel: 1 (281) 370 9363,
1 (713) 204 6380

E-Mail: tho@conarinagroup.com,

houston@conarinagroup.com

The Coast Guard recognizes that identifying every single failure mode that could possibly impact a vessel's propulsion, power generation system or steering system and developing a comprehensive preventative maintenance system for such systems, equipment and components is a very complex task

Nevertheless, the Coast Guard suggests that owner operators, marine engineers and others particularly onboard or associated with older vessels, think about and identify those high risk components which if a failure or malfunction occurs will result in a casualty. (Specifically components subject to gradual wear and tear or loosening.)

Once identified responsible personnel should refer to their respective manuals to determine proper maintenance requirements and take the necessary steps to prevent a future problem with the aim to reduce risk.

REFERENCES:

- USCG Marine Safety –Lesson Learned

ATTACHMENTS: No.

Kindest Regards,

Cosmin Bozenovici
Naval Architect – Conarina Technical Head Office

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Miami, Fl., 33126
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