



TECHNICAL CIRCULAR No. 650 of 6th September 2020

To	All Surveyors/Auditors. All flags
Title	Tailshaft Survey
Reference	CONARINA - Instructions

Tailshaft Survey

Matching of shaft cones with propeller hubs by means of optical measurement as an alternative means to “blue dye fit up” is acceptable in repairs.

Task

Tailshafts, tubshafts and intermediate outboard shafts, where fitted, are to be examined during the drydock survey, including for multiple-screw vessels.

GRP (Glass Reinforced Plastic) Protection

Tailshafts fitted with glass reinforced plastic (fiberglass) coating between or in lieu of liners shall be examined for damage to the coating. Particular attention is to be paid to darkened covering areas, which may indicate sea water seepage through microscopic bruise fractures and consequent pitting. These pits often progress very rapidly to a considerable depth. Any repairs or replacement shall be done in accordance with an approved procedure.

Vessels with Oil-Lubricated Bearings

Tailshafts on vessels fitted with internally removable stern tube bearings (e.g., segmented tilting-pad type) or similar arrangements shall be examined at the same intervals as required for conventional stern bearing arrangements on single or multiple screw vessels. Because of the access to the shaft journal, bearing, forward and after seals, and the taper or flange fillet on this type of installation, actual removal of the shaft will not be required if the shaft can be examined in place.

Whenever the inboard or outboard ends of the bearing seal assemblies are open, examine the end of the stern bearing and check the cavities in the seal for white metal particles to confirm the condition of the bearing.

Stainless Steel, Clad and Coated Shafts

Stainless steel shafts and shafts with continuous clad welding applied, may be considered equivalent to continuously lined tailshaft. Under certain conditions, stainless steel will corrode or pit in way of the stern tube and other enclosures that trap or stagnate water flow. At time of drydocking, verify that circulating pumps or scoops for circulating water through the stern tube are in satisfactory condition.

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Stern Bearing Lubrication Oil Samples

The Surveyor should be practical when requesting a lube oil sample. A sample drawn by the crew can easily be checked for water and bearing metal. If the sample is clear, there is no reason to require further testing. If the sample is not clear, consideration should be given to further testing.

Stern Bearing Fresh Water Sample Test (Closed Circuit)

Fresh water sample test should be carried out at regular intervals not exceeding six (6) months. Samples are to be taken under service conditions and are to be representative of the water circulating within the stern tube. Analysis results are to be retained on board and made available to the surveyor. At time of survey the sample for the test must be taken at the presence of the surveyor.

Fresh water sample test shall include the following parameters: - chlorides content, - pH value, - presence of bearing particles or other particles (only for laboratory analysis, not required for tests carried out in presence of the surveyor).

Survey Interval Reduction

After examination and where the surveyor has determined that the survey interval should be reduced, a Statement/Observation is to be made.

Damage or alteration of the corrosion resistant protection that is not repaired is an example of when the survey interval should be reduced.

Replacement Tailshaft

Tailshaft survey intervals are assigned to the tailshaft and not the vessel itself. If the tailshaft for which the survey interval has been specifically considered is removed from a vessel and replaced with another, the survey interval will be determined by the status of the replacement shaft.

REFERENCES:

- CONARINA – Instructions. Courtesy of ABS.
- ATTACHMENTS: No

Kindest Regards,

Val Bozenovici
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