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Date 28th March 1990

Dear Sirs,

CORROSION PROTECTION OF MILD STEEL SCREWSHAFTS

1. Where the fitting of a continuous liner is impracticable, those parts of mild steel screw or tubshafts exposed to sea water have, as a means of protection, been wrapped with glass fibre or other approved coatings. This type of shaft protection has been under review.
2. For shafts having short bronze liners in way of the bearings with the shaft between wrapped for protection, the wrapping therefore being enclosed within the sterntube, the survey interval will now be 4 or 5 yearly, as prescribed in Rules 1.3.17.1, provided the following are carried out to the Surveyor's satisfaction.
 - 2.1 Coating is of a type approved by LR.
 - 2.2 In the case of glass fibre the wrapping should consist of multi layers wound oppositely, layers of resin being applied between each layer of glass fibre. Special consideration will be given to other coatings.
 - 2.3 The wrapping should be applied with the shaft rotating.
 - 2.4 Particular attention is to be paid to the method of joining the wrapping to the bronze liners and should consist of forming steps or chamfering the liners, the wrapping continuing over the steps, or chamfer and securing as required.
 - 2.5 The makers' recommendations in respect of preparations of shaft surface, minimum temperature of application, mixing, application and curing of the coating are to be strictly adhered to.
3. Applications for appraisal of screwshaft and tubshaft coatings are to be forwarded to Headquarters to ensure uniformity of approval within the Society.

Copy to all Surveyors

4. At the present time the approved glass fibre coatings are:
- 4.1 PHILYCLAD - marketed by Philadelphia Resins Corporation;
- ~~4.2 CELIOPLEX - marketed by H.M. Springer, Kiel;~~
- 4.3 RELZONA MOLECULAR, ceramic S-metal with reinforcement tape as detailed in recommendation T.S.W. 100.
5. At the next tailshaft survey, if not already shown, the Surveyor should recommend in the machinery report narrative that the sentence shown below be added as a memorandum item to the records of ships having shafts of this type:-
- QMM "Screwshaft wrapped with protective coating between liners within the sterntube."
6. Surveyors are to pay particular attention at surveys to ensure that no mechanical damage occurs to the coating during installation.
7. The 4 or 5 yearly survey period may be assigned to existing ships with shafts wrapped as described above on completion of the next tailshaft survey, provided all is found or placed in order.
8. At periodical surveys, if the Surveyor is not satisfied with the condition of the coating he may recommend its removal in whole or part to ascertain the condition of the shaft underneath.
9. If damage is apparent to coating on a shaft external to the vessel, e.g. the length of shaft between the sterntube and "A" bracket in multi-screw ships, the Surveyor may request removal of the screwshaft to inspect the coating enclosed within the sterntube. This would apply in cases where it is apparent that the damage is due to an unsatisfactory application rather than mechanical damage.
10. Until further service experience has been gained, screw or tubeshafts wrapped as described above will not be eligible for postponement surveys as prescribed in Rules 1.3.17.4.
11. The Survey Procedures Manual will be amended in due course.

Yours faithfully,



R.B. SIGGERS
Manager, Fleet Services Department

