
No.54 GUIDELINES FOR ACCEPTANCE, APPLICATION AND SURVEY OF SEMIHARD COATINGS IN BALLAST TANKS

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1 General

A semihard coating is one that dries or converts in such a way that it stays flexible and has the ability to prevent corrosion for at least three years. It should be hard enough to be touched and walked upon without effectively reducing the protective properties of the coating.

2 Properties

2.1 International or national environmental and safety regulations are to be considered for the solvent/curing system and the final film properties.

2.2 Semihard coatings should have the following properties:

- application should be possible within a wide temperature range
- the service limit should be minimum 65 degrees C
- good penetration qualities
- where applicable suitable for bonding to moist surfaces, e.g. water jetted/hydroblasted surfaces according to manufacturer's recommendations
- flexible properties throughout the service life
- resistant to foot traffic allowing easy access for inspection purposed
- resistant to ballast water
- ability to prevent corrosion for at least three years
- the wet film thickness should have an upper limit in order to avoid covering of cracks and slipperiness caused by excessive film thickness
- light colour coating (distinguishable from rust) is preferable
- some semihard coatings may also minimize corrosion by passivating the metal surface with a corrosion inhibitor whilst also forming a film to prevent passage of moisture.

3 Thickness

Semihard coating thickness should be in accordance with the coating manufacturer's recommendations, normally within an upper limit of 700 microns.

4 Method of Preparation

4.1 The manufacturer of the semihard coating product should provide a defined procedure for surface preparation, application, curing, criteria and time intervals for renewal or reapplication. Acceptable surface preparation methods are scraping, brushing, high pressure washing, slurry blasting and the use of magnesium ribbon to descale the tanks.



No.54 5 Application and Maintenance

(Cont'd)

5.1 Prior to acceptance, semihard coatings should, as a minimum, be reviewed by the classification society for compliance with relevant provisions of this recommendation. The scheme for selection, application and maintenance of a semihard coating system specified and agreed upon by the owner, builder and coating manufacturer should be approved by the Society on the basis of IMO Resolution A.798 (19) and IACS UI SC122.

5.2 Application of semihard coatings can only be made by conventional spraying or airless spraying. For touch-ups rollers or brushes may be used. Application by floatation is not considered a suitable means in this respect.

5.3 The coating manufacturer should ensure that the product has been applied in accordance with his recommendations.

Where coating is supplemented by cathodic protection, the coating must be compatible with the cathodic protection system.

5.4 Reapplication is to be carried out when necessary for adequate corrosion protection, at intervals depending on the type of service and according to a maintenance programme recommended by the manufacturer.

6 Surveys

When semihard coatings are applied to surfaces of ballast tanks, the ballast tanks are to be examined on an annual basis.

- Prior to application of the semihard coating, the ballast tanks have been examined by the surveyor including thickness measurements as necessary and structural repairs if so required have been carried out with satisfactory result.
- Satisfactory documentation is provided confirming that the surface preparation, coating application and film thickness are in accordance with the manufacturer's specification.

