
No. 34
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IACS Procedural Requirement on Application of the IMO Performance Standard for Protective Coatings (PSPC), Resolution MSC.215(82), under IACS Common Structural Rules for Bulk Carriers and Oil Tankers

1. IACS Procedure for Coating System Approval

Type Approval Certificate showing compliance with the PSPC section 5 shall be issued if the results of either method A+D, or B+D, or C+D are found satisfactory by the Society.

Method A: Laboratory Test

- 1.1 Coating pre-qualification test shall be carried out by the test laboratory which is recognized by the Society and meets the requirements set out in IACS UR Z17 paragraphs 4, 5, 6 and 7 (except for 4.6 & 5.3) as below.
- 1.2 Results from satisfactory pre-qualification tests (PSPC table 1, paragraph 1.3 of the PSPC) of the coating system shall be documented and submitted to the Society.

Method B: 5 years field exposure

- 1.3 Coating manufacturer's records are to be examined to confirm coating system has 5 years field exposure.
- 1.4 A joint (coating manufacturer/Society) survey of all ballast tanks of a selected vessel is to be carried out for the purpose of verification of compliance with the requirements of sections 1.3 and 1.7. The coating manufacturer's representative is to be qualified as defined in 2.2.
- 1.5 The selected vessel is to have ballast tanks in regular use, of which:
 - At least one tank approx 2000 m³
 - At least one tank shall be adjacent to heated tank and
 - At least one tank underdeck exposed to sun.
- 1.6 In the case that the selected vessel does not meet the requirements in 1.5 then the limitations shall be clearly stated on the type approval certificate. For example, the coating cannot be used in tanks adjacent to heated tanks or underdeck or tanks with volume greater than the size surveyed.

Note:

This Procedural Requirement is to be applied by IACS Societies to ships subject to the IACS CSR for Bulk Carriers and for Oil Tankers which are contracted for construction on or after 8 December 2006 and until the date of application referred to in para.1 of SOLAS Chapter II-1, Part A-1, Reg.3-2, as adopted by resolution MSC.216(82).

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- 1.7 All ballast tanks to be in "GOOD" condition, without touch up or repair in the prior 5 years.
- 1.7.1 "Good" is defined as: *Condition with spot rusting on less than 3% of the area under consideration without visible failure of the coating. Rusting at edges or welds, must be on less than 20% of edges or welds in the area under consideration.*
- 1.7.2 Examples of how to report coating conditions with respect to areas under consideration are to be as those given in IACS Recommendation 87* Appendix 1.

Method C: Existing Marintek B1* Approvals.

- 1.8 Epoxy Coatings Systems with existing satisfactory Marintek test reports minimum level B1 issued before Dec 8th 2006 can be accepted.
- 1.9 Such coatings are to be applied in accordance with Table 1 of the PSPC rather than the application conditions used during the approval test which may differ from the PSPC, unless these are more stringent than table 1 of the PSPC.

Method D: Coating Manufacturer

- 1.10 The coating manufacturer shall meet the requirements set out in IACS UR Z17 paragraphs 4, 5, 6 and 7, (except for 4.6), which is to be verified by the Society.
- 1.11 In the case that a manufacturer wishes to have products which are manufactured in different locations under the same name, then infrared (IR) identification and specific gravity shall be used to demonstrate that they are the same coating, or individual approval tests will be required for the paint manufactured in each location.

2. IACS Procedure for Assessment of Coating Inspectors' Qualifications

- 2.1 Coating inspectors required to carry out inspections in accordance with the IMO PSPC section 6 are to be qualified to NACE Coating Inspector Level 2, FROSIO Inspector Level III, or an equivalent qualification. Equivalent qualifications are described in 2.3 below.
- 2.2 However only coating inspectors with at least 2 years relevant coating inspector experience and qualified to NACE Coating Inspector Level 2 or FROSIO Inspector Level III, or with an equivalent qualification, can write and/or authorise procedures, or decide upon corrective actions to overcome non-compliances.
- 2.3 **Equivalent Qualification:**
- 2.3.1 **Equivalent** qualification is the successful completion, as determined by course tutor, of an approved course.
- 2.3.1.1 The **course tutors** shall be qualified with at least 2 years relevant experience and qualified to NACE Coating Inspector Level 2 or FROSIO Inspector Level III, or with an equivalent qualification.

* IACS Recommendation 87 is not mandatory.

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2.3.1.2 **Approved Course:** A course that has a syllabus based on the issues associated with the PSPC including the following:-

- Health Environment and Safety
- Corrosion
- Materials and design
- International standards referenced in PSPC
- Curing mechanisms
- Role of inspector
- Test instruments
- Inspection Procedures
- Coating specification
- Application Procedures
- Coating Failures
- Pre-job conference
- MSDS and product data sheet review
- Coating technical file
- Surface preparation
- Dehumidification
- Waterjetting
- Coating types and inspection criteria
- Specialized Application Equipment
- Use of inspection procedures for destructive testing and non destructive testing instruments.
- Inspection instruments and test methods
- Coating inspection techniques
- Cathodic protection
- Practical exercises, case studies.

Examples of approved courses may be internal courses run by the coating manufacturers or shipyards etc.

2.3.1.3 Such a course shall have an acceptable measurement of performance, such as an examination with both theoretical and practical elements. The course and examination shall be approved by the Society.

2.3.2 Equivalent qualification arising from practical experience: An individual who:

- has a minimum of 5-years practical work experience as a coating inspector of ballast tanks during new construction within the last 10 years, and
- has successfully completed the examination given in 2.3.1.3.

3. IACS Procedure for Inspection Agreement (the PSPC 3.2)

- 3.1 The procedure for inspection of surface preparation and coating processes shall be agreed upon, between the shipowner, the shipyard and coating manufacturer. It should be presented by the shipyard to the Society for review and as a minimum shall comply with the PSPC. It is to be included in the Coating Technical File.
- 3.2 Any deviations in the procedure relative to the PSPC noted during the review shall be raised with the shipyard, which is responsible for identifying and implementing the corrective actions.

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3.3 A class certificate is not to be issued until all required corrective actions have been closed out to the satisfaction of the Society.

4. IACS Procedure for Verification of Application of the PSPC

4.1 The verification requirements of section 7 of the PSPC are to be carried out by the Society.

4.1.1 Monitoring implementation of the coating inspection requirements, as called for in section 7.5 of the PSPC means checking, on a sampling basis, that the inspectors are using the correct equipment, techniques and reporting methods as described in the inspection procedures reviewed by the Society.

4.2 Any deviations found under 4.1.1 are to be raised initially with the coating inspector, who is responsible for identifying and implementing the corrective actions.

4.3 In the event that corrective actions are not acceptable to the Society or in the event that corrective actions are not closed out then the shipyard shall be informed.

4.4 A class certificate is not to be issued until all required corrective actions have been closed out to the satisfaction of the Society.

5. IACS Procedure for Coating Technical File Review

5.1 The shipyard is responsible for compiling the Coating Technical File (CTF) either in paper or electronic format, or a combination of the two.

5.2 The CTF is to contain all the information required by the PSPC section 3.4.

5.3 The CTF shall be reviewed for content in accordance with the PSPC section 3.4.2.

5.4 Any deviations found under 5.3 are to be raised with the shipyard, which is responsible for identifying and implementing the corrective actions.

5.5 A class certificate is not to be issued until all required corrective actions have been closed out to the satisfaction of the Society.

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