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SHIP DESIGN AND EQUIPMENT

Draft MSC circular on Unified Interpretations of the PSPC for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers

Submitted by Greece, INTERTANKO and INTERCARGO

SUMMARY

<i>Executive summary:</i>	This document comments on document DE 57/25/Add.1, annex 2, prepared by the Secretariat in order to update MSC.1/Circ.1378
<i>Strategic direction:</i>	1.1
<i>High-level action:</i>	1.1.2
<i>Planned output:</i>	1.1.2.1
<i>Action to be taken:</i>	Paragraph 9
<i>Related documents:</i>	MSC.1/Circ.1378; DE 56/13/5, DE 56/25; DE 57/3/1, DE 57/25/Add.1 and DE 57/3/10

Introduction

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 of the *Guidelines on the organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.4/Rev.2) and comments on document DE 57/25/Add.1. The co-sponsors express their appreciation to the Secretariat for preparing this consolidated document with proposed revisions to MSC.1/Circ.1378 in an easily read manner.

2 DE 56 considered document DE 56/13/5 (IACS), providing the latest changes to IACS Unified Interpretation UI SC 223, relating to the application of SOLAS regulation II-1/3-2 and resolution MSC.215(82) – PSPC for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers, and requested the Secretariat to prepare a draft amendment to MSC.1/Circ.1378. The draft amendment was submitted as document DE 57/3/1 (Secretariat).

3 During the last two DE sessions, some delegations expressed concerns over IACS' latest changes to their Unified Interpretations relating to PSPC (UI SC 223) while several delegations noted that any revision to MSC.1/Circ.1378 will require careful consideration.

Greece has submitted document DE 57/3/10 with concrete comments and suggestions. Due to the lack of time, DE 57 did not entirely address these concerns, therefore, this document reiterates comments and observations submitted and expressed at DE 57. The comments and the proposed revisions make reference to the paragraph numbering in document DE 57/3/1.

Comments on proposed revisions

4 Annex, page 11, Interpretation of paragraph "2.2 Water soluble salt limit equivalent to $\text{NaCl} \leq 50 \text{ mg/m}^2$ of sodium chloride". The co-sponsors suggest the last sentence of the proposed interpretation is a serious unwarranted relaxation of the standard. Consequently, a modified text for this Interpretation is proposed as follows:

Interpretation

"The conductivity of soluble salts is measured in accordance with ISO 8502-6 and ISO 8502-9, and compared with the conductivity of 50 mg/m^2 NaCl. If the measured conductivity is less than or equal to, then it is acceptable. Minimum readings to be taken are one (1) per plate in the case of manually applied shop primer. In cases where an automatic process for application of shop primer is used in conjunction with a verified Quality Control System, the process should include specific methods to ensure soluble salt removal before coating (e.g. high pressure fresh water washing). In such a case, the conductivity measurement may be limited to once per day.

Reason: Currently, almost all primer coating is carried out by automatic process. Yet this does not in itself ensure the required cleanliness. Under section 6.2 – "Inspection Items" of MSC.215(82), item 2 of the primary surface preparation requires that: "2. The surface of steel plates shall be tested for soluble salt and checked for oil, grease and other contamination". A common source of plate contamination is the lubricating oil dripping from roller machines. Furthermore, the plates themselves are regularly stored seaside for days and that primer coating may occur at a different plant than the building shipyard. Any failure to remove salt or other contaminants before primer application cannot be detected at any later stage and thus cannot be corrected. This is the reason for the emphasis inserted in section 6.1.2 "... Emphasis shall be placed on initiation of each stage of surface preparation and coatings application as improper work is extremely difficult to correct later in the coating progress." The co-sponsors also strongly advise that the primary surface preparation is the foundation of the system and it shall not be unduly diluted to the point of a token "monthly" test.

5 Annex, page 11, Interpretation of paragraph "2.3 Shop primer: Zinc containing inhibitor free zinc silicate based or equivalent. Compatibility with main coating system shall be confirmed by the coating manufacturer." The co-sponsors propose an additional sentence at the end of this Interpretation. While proposing following two options, the co-sponsors prefer Option 1:

Option 1: Epoxy based shop primers should not be used; or

Option 2: In case epoxy based shop primers are used, special care should be taken to ensure substrate steel plate's cleanliness in accordance with PSPC regulation requirements as well as total removal of shop primer from welds to Sa 2 ½ as per regulation table 1, paragraph 3.2. In addition a schedule of weld inspection by pointed hammer or ultrasound is recommended to check for weld voids (eggshell effect) known to occur when welding in the vicinity of epoxy-based coats.

Reason: The co-sponsors consider that epoxy-based primers should not be used with PSPC. There are several technical reasons for this position including IACS members' general view that an epoxy-based shop primer is inferior. (IACS UI SC 223, part B, annex 1, page 5, 5.4: "General view of the Group was that, while a shop primer (e.g., an epoxy-iron based shop primer in this instance) may pass the pre-qualification test, a zinc silicate shop primer is more durable than an epoxy-iron-based shop primer.") Furthermore, since epoxy-based shop primers are hard to remove, they tend to hide defects and contaminants of the substrate steel. In this context, it should be noted that irrespective of primer condition-damaged or good-all welds must be totally primer free to Sa 2½ – as per regulation paragraph 3.2. A major problem with epoxy primers is that they interfere with the good penetration of the weld. While the surface of the weld may look good, void areas underneath are common (eggshell effect). If a shipyard or paint maker insists on using epoxy-based primer, a good programme should be established for hull inspectors to check welds (by use of pointed hammer).

6 Annex, page 12, Interpretation to paragraph "3.4 In case of full or partial blasting 30-75 µm, otherwise as recommended by the coating manufacturer", which reads:

Interpretation

1 Methods such as, but not limited to, UHP Water Jetting may be considered for Secondary Surface Preparation, where it can be demonstrated that the surface conditions specified by PSPC table 1, section 3, can be achieved before the application of the main coatings.

The co-sponsors cannot accept the above suggested Interpretation for the whole of secondary surface preparation, namely for cases of full or partial blasting. Under the PSPC concept, it was agreed that "full blasting" means the total removal of damaged primer to Sa 2½ and "partial blasting" means 70 per cent removal of the non-qualified intact shop primer. The sentence "otherwise as recommended by the coating manufacturer" is applicable to cases other than full or partial blasting (i.e. butts and small damages St 3).

Reason: UHP water jetting is not defined (e.g. how many psi, etc.). It is a fact that UHP water jetting cannot be as effective as grit blasting. The suggested Interpretation would also require the need to demonstrate that using UHP water jetting would lead to same good results as using grit blasting. The co-sponsors believe that the suggested Interpretation would not lead to the same good results but rather weaken if not degrade the standard for surface preparation. There are also concerns that, while UHP jet cannot comply/create the required profile, it may destroy the profile created during primary surface preparation. Coatings adhering to very smooth surfaces have not been reliably developed to date. Therefore, UHP or other methods should not be allowed to replace grit blasting in the absence of technical data and field history. In any case, the profile of the bulk of steel plate should be as the regulation requires (30-75 µm), irrespective of blasting method used, since the profile requirement has to do with the coating attachment and not with the blasting method used.

7 Annex, page 15 – Coating inspection and requirements. According to paragraph 6.1.1 of resolution MSC.215(82) coating inspection should be carried out by NACE 2 of FROSIO III qualified inspectors. Paragraph 4 in PSPC 6 of MSC.1/Circ.1378 stipulates that part of the coating inspection can be done by assistant inspectors, not qualified but under the supervision of the qualified coating inspector. The co-sponsors understand that "supervision" requires the

physical presence of the qualified coating inspector. However, reports from shipowners indicated that assistants to coating inspectors can perform a significant part of the coating inspections without the presence of a qualified inspector. The co-sponsors believe this is not in the spirit of, and it was not the intent of, the PSCP and therefore suggest some amendments to paragraphs 4.1 and 4.3 of PSPC 6 of MSC.1/Circ.1378:

"4.1 If the coating inspectors require assistance from other persons to perform part of the inspections, those persons should perform the inspections under the coating inspector's supervision and should be trained to the coating inspector's satisfaction."

"4.3 Training records should be available for verification."

8 Annex, page 16, Procedures for verification and application of PSPC. The co-sponsors suggest a new paragraph 2.*bis* to the current Interpretation on PSPC 7, as follows:

Interpretation

PSPC 7 - 2.*bis* Verification reports should be available upon request of any Party to the PSPC agreement. The verification activity reports should include data defined in the tripartite agreement such as paint material (e.g. certification, storage, expiration date), application equipment, measurement equipment and records of calibration, inspection and reporting procedures as required in the Construction Technical File and, if relevant the name of the paint applicator subcontractor.

Reason: According to reports from shipowners, there is no uniformity in the way ROs and Administrations consider this an important aspect of the PSPC. Some do not even issue a report on their verification process or, if such a report exists, it is not made available to the shipowner's representative. The suggested additional text would create the obligation that such reports exist and are made available. The co-sponsors would also invite IACS to consider developing a standardized template for such reporting.

Action requested of the Committee

9 The Committee is invited to consider the proposals described in this document and decide as appropriate.
