



SUB-COMMITTEE ON SHIP DESIGN AND  
EQUIPMENT  
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Agenda item 22

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## ANY OTHER BUSINESS

### Application of SOLAS regulation II-1/3-2 to ore carriers and combination carriers

#### Submitted by International Association of Classification Societies (IACS)

#### SUMMARY

<i>Executive summary:</i>	This document seeks clarification on a possible unintended application of SOLAS regulation II-1/3-2, as amended by resolution MSC.216(82), to void wing spaces found on ore carriers or combination carriers
<i>Strategic direction:</i>	2
<i>High-level action:</i>	2.0.1
<i>Planned output:</i>	2.0.1.25
<i>Action to be taken:</i>	Paragraph 7
<i>Related documents:</i>	Resolutions MSC.215(82); MSC.216(82); MSC 75/5/2; MSC 76/5/4 and MSC 76/5/9

#### Introduction

1 SOLAS regulation II-1/3-2, as revised by resolution MSC.216(82), requires that the double-side skin spaces arranged in bulk carriers of 150 m in length and upwards shall be coated during construction in accordance with the Performance Standard for Protective Coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers, adopted by the Maritime Safety Committee by resolution MSC.215(82), as may be amended by the Organization.

2 By definition, according to SOLAS regulation II-1/2.24 and its reference to SOLAS regulation XII/1.1, a "*bulk carrier means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers and combination carriers*".

3 Read literally, SOLAS regulations II-1/3-2 and II-1/2.24 define void wing spaces on ore carriers and combination carriers as double-side skin spaces; and therefore required to be coated during construction in accordance with the Performance Standard for Protective Coatings (PSPC), as adopted by resolution MSC.215(82).

## Discussion

4 In reviewing the impetus for the development of the PSPC as adopted by resolution MSC.215(82) and its application as per SOLAS regulation II-1/3-2, as revised by resolution MSC.216(82), to double-side skin spaces of bulk carriers, IACS recalls the following:

- .1 the Formal Safety Assessment (FSA) study presented in document MSC 75/5/2 distinguishes between ore carriers and combination carriers, which both possess wide and easily accessible wing spaces, and the narrow double-side skin spaces of double-side skin (DSS) bulk carriers. Further, the recommendations put forth in the FSA study are based solely on concerns related to such narrow double-side skin spaces;
- .2 the efforts of the international collaborative FSA study of bulk carriers, as presented in document MSC 76/5/4, focused exclusively on bulk carrier designs with very narrow DSS spaces, and did not address the wide void wing spaces of ore carriers and combination carriers. In particular, this study:
  - .1 suggests that the cavity between the inner and outer skin needs to be of an adequate dimension to allow for access for inspection and maintenance to ensure that a double-skin design provides the enhanced level of safety required;
  - .2 solely considers DSS bulk carrier designs with a DSS width of 0.76 m to 1.0 m; and
  - .3 recognizes that the existence of side ballast tanks is a new feature for the DSS vessels and that the coating of such spaces is essential to mitigate the high probability of rapid corrosion given the difficulty of inspecting the condition of such spaces, due to the very limited width, needs to be addressed as it influences the level of risk; and
- .3 in document MSC 76/5/9, an assessment of the pros and cons of DSS construction for bulk carriers (as suggested as a risk control option in the FSA study on bulk carrier safety) drew attention to the following:
  - .1 that space between the double hulls is critical and, were the space to be too small, maintenance would be a problem;
  - .2 concerns that limited experience with this new type of DSS construction would lead to even lighter side shell plating and stiffener scantlings, as opposed to the vast experience associated with the wing tanks of ore carriers and combination carriers; and
  - .3 the difficulty in maintaining coatings in narrow DSS spaces and proposed that double hull spaces be fully coated with extreme care during construction in order to address that difficulty.

## IACS' point of view

5 Upon review of the technical background to PSPC implementation, as provided in paragraph 4 above, and considering that the application of PSPC to these spaces was not discussed during the development of PSPC, it is apparent that PSPC application was considered solely for bulk carrier designs with narrow double side spaces and not for wide void wing spaces found on ore carriers and combination carriers.

6 The current text of SOLAS would seem to require that the void wing spaces of ore carriers and combination carriers be coated during construction in accordance with the PSPC as adopted by resolution MSC.215(82). However, as explained in paragraph 4 above, the application of PSPC to these spaces was, as far as it can be remembered, neither considered as part of the technical background to PSPC, nor discussed during the development of the PSPC. As such there is a discrepancy between the intended application of PSPC and the amended text of SOLAS with regards to the void wing spaces of ore carriers and combination carriers.

**Action requested of the Sub-Committee**

7 The Sub-Committee is invited to consider the discussion in paragraph 4 above, and the IACS' point of view as presented in paragraphs 5 and 6 above, and:

- .1 clarify the application of the PSPC as adopted by resolution MSC.215(82) to wide void wing spaces found on ore carriers or combination carriers; and
- .2 provide any comments that would facilitate the Maritime Safety Committee's consideration of the matter, noting that it will be raised in a submission to MSC 88 under the agenda item on "Implementation of instruments and related matters",

and decide as appropriate.

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