

SUB-COMMITTEE ON SHIP SYSTEMS AND
EQUIPMENT
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Agenda item 12

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**UNIFIED INTERPRETATION OF PROVISIONS OF IMO SAFETY, SECURITY, AND
ENVIRONMENT-RELATED CONVENTIONS**

**Application of the design temperature for piping, fittings and related components
(paragraph 11.3.6 of the IGC Code)**

Submitted by IACS

SUMMARY

Executive summary: This document provides the understanding of IACS with respect to the application of the design temperature for piping, fittings and related components as required by paragraph 11.3.6 of the IGC Code; with a view to facilitating the global and consistent application of these mandatory provisions

Strategic direction: 6

High-level action:

Output: 6.1

Action to be taken: Paragraph 9

Related documents: None

Introduction

1 IACS seeks clarification on the application of the design temperature for piping, fittings and related components of water-spray systems as required by paragraph 11.3.6 of the IGC Code, taking into account paragraph 11.1.4 of the Code.

2 The requirements for water-spray systems are stated in paragraph 11.3.6 of the IGC Code, as follows:

"11.3.6 All pipes, valves, nozzles and other fittings in the water-spray system shall be resistant to corrosion by seawater. Piping, fittings and related components within the cargo area (except gaskets) shall be designed to withstand 925°C. The water-spray system shall be arranged with in-line filters to prevent blockage of pipes and nozzles. In addition, means shall be provided to back-flush the system with fresh water."

The definition of "cargo area" is provided in 11.1.4 of the IGC Code, as follows:

"11.1.4 For the purposes of firefighting, any weather deck areas above cofferdams, ballast or void spaces at the after end of the aftermost hold space or at the forward end of the forwardmost hold space shall be included in the cargo area."

3 In this regard, the question as to whether the weather deck areas above "F.O. tanks" are regarded as part of the "cargo area" and, consequently, whether the piping, fittings and related components of a water-spray system in such an area are to be designed to withstand 925°C has been raised.

Discussion

4 Noting paragraphs 3.1.2 and 3.1.3 of the IGC Code, it is normal that a "cofferdam" is installed between the accommodation space and the hold space, or forward spaces, on a LNG carrier. In that case, the weather deck areas above the cofferdams are regarded as the cargo area and are protected in accordance with paragraphs 11.1.4 and 11.3.6 of the IGC Code.

5 On the other hand, in cases where "F.O. tanks" are installed at the after end of the aftermost hold space or at the forward end of the forwardmost hold space and there are no such cofferdams, IACS concludes that, based on a literal reading of the IGC Code, the weather deck areas above such "F.O. tanks" are not regarded as part of the cargo area, as defined in paragraph 11.1.4, and thus the water-spray system in those areas is not required to be "protected".

6 However, taking into account the protection needed in the event of a fire occurring in way of an arrangement as identified in paragraph 5 above, IACS is of the view that the piping, fittings and related components of water-spray systems located on the weather deck areas above the F.O. tanks arranged at the after end of the aftermost hold space or at the forward end of the forwardmost hold space, should also be required to be designed to withstand 925°C. In this regard, IACS considers that the weather deck areas above "F.O. tanks" should be interpreted to be part of the "cargo area" for the purpose of fire-fighting.

7 Based on the above analysis, IACS considers that paragraph 11.3.6 of the IGC Code should be applied as follows:

"Where 'F.O. tanks' are installed at the after end of the aftermost hold space or at the forward end of the forwardmost hold space and there are no cofferdams as allowed for in paragraphs 3.1.2 and 3.1.3 of the IGC Code, the weather deck area above these tanks shall be regarded as a 'cargo area' for the purpose of applying paragraph 11.3.6 of the IGC Code, i.e. piping, fittings and related components of water-spray systems shall be designed to withstand 925°C."

8 If the Sub-Committee agrees with the proposal in paragraph 7 above, and if it considers that this issue can be addressed by a unified interpretation, IACS is prepared to draft such an interpretation with a view to submitting it to the Sub-Committee's next session for consideration.

Action requested of the Sub-Committee

9 The Sub-Committee is invited to consider the proposal in paragraphs 7 and 8 above and to take action as appropriate.