INTERNATIONAL MARITIME ORGANIZATION

E

MARITIME SAFETY COMMITTEE
111th session
Agenda item 14

MSC 111/14/3
10 February 2026
Original: ENGLISH
Pre-session public release: ☒

CARRIAGE OF CARGOES AND CONTAINERS

Clarification on the draft new paragraph 4.19.1.7 of the IGC Code pertaining to the duplication of the heating system

Submitted by Panama, Republic of Korea and IACS

SUMMARY

Executive summary:	This document seeks clarification on the draft new paragraph 4.19.1.7 of the IGC Code, which concerns the duplication of heating systems designed to protect hull structures from exposure to low temperatures of liquefied gases. It also proposes an editorial modification to avoid misinterpretation of the scope of emergency power supply requirements.
Strategic direction, if applicable:	Not applicable
Output:	Not applicable
Action to be taken:	Paragraph 12
Related documents:	CCC 8/10/3; MSC 110/WP.7; CCC 11/WP.8 and CCC 11/16

Introduction

1 This document provides comments on documents MSC 110/WP.7 and CCC 11/16 prepared by the Secretariat.

2 Following a comprehensive review of the IGC Code, the Sub-Committee on Carriage of Cargoes and Containers developed a wide-ranging package of draft amendments, which were initially approved by MSC 109. However, during MSC 110, a significant number of comments and concerns were raised by Member States, and the Committee decided to defer adoption. The draft amendments were therefore referred back to CCC 11 for further consideration, taking into account the issues and texts set out in annexes 14 and 15 of document MSC 110/WP.7.

3 In this context, the Sub-Committee finalized the draft amendments, as contained in annex 9 to document CCC 11/16, for submission to MSC 111. It is accordingly expected that the updated draft amendments to the IGC Code will be considered for approval at MSC 111, with a view to adoption at MSC 112.

Discussion

4 Among the extensive amendments to the IGC Code, the draft new paragraph 4.19.1.7 is intended to supplement and clarify the existing paragraph 4.19.1.6, which addresses duplication of heating systems protecting the hull structure from exposure to the low temperatures of liquefied gases. This new provision originates from document CCC 8/10/3 (IACS and SIGTTO) and reflects the unified interpretations of paragraph 4.19.1.6 set out in MSC.1/Circ.1606. The draft text of this new provision, which remains almost identical to the amendment proposal in document CCC 8/10/3, is contained in annex 15 to document MSC 110/WP.7.

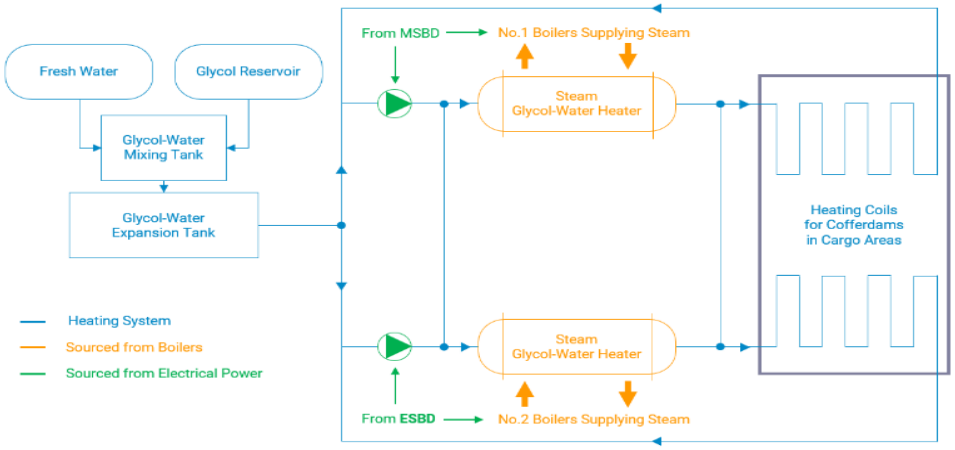
5 The submitters understand that the intent of the proposals in document CCC 8/10/3, as well as discussions within the CCC Sub-Committee, was to incorporate the existing interpretations into the IGC Code without introducing substantive changes. In this regard, a comparison between the interpretations in MSC.1/Circ.1606 and the draft new paragraph 4.19.1.7 is presented below.

Interpretations in MSC.1/Circ.1606	Draft new paragraph 4.19.1.7 of the Code
1 Cargo tank structure heating arrangement power supply (paragraph 4.19.1.6) 1.1 The heating system referred to in paragraph 4.19.1.6.1 should be such that, in case of a single failure of a mechanical or electrical component in any part of the system, heating can be maintained at not less than 100% of the theoretical heat requirement. 1.2 Where the above requirements are met by duplication of the system components, i.e. heaters, glycol circulation pumps, electrical control panel, auxiliary boilers, etc., all electrical components of at least one of the systems should be supplied from the emergency source of electrical power. 1.3 Where duplication of the primary source of heat, e.g. oil-fired boiler is not feasible, alternative proposals can be accepted such as an electric heater capable of providing 100% of the theoretical heat requirement provided and supplied by an individual circuit arranged separately on the emergency switchboard. Other solutions may be considered towards satisfying the requirements of paragraph 4.19.1.6.1, provided a suitable risk assessment is conducted to the satisfaction of the Administration. The requirement in paragraph 2 of this interpretation should continue to apply to all other electrical components in the system.	4.19.1.7 For ships constructed on or after 1 July 2028, the heating system referred to in paragraph 4.19.1.6.1 shall be such that, in case of a single failure of a mechanical or electrical component in any part of the system, heating can be maintained at not less than 100% of the theoretical heat requirement. Where the above requirements are met by duplication of the system components, i.e. heaters, glycol circulation pumps, electrical control panel, auxiliary boilers etc., all electrical components of at least one of the systems shall be supplied from the emergency source of electrical power. Where duplication of the primary source of heat, e.g. an oil-fired boiler, is not feasible, alternative means may be accepted such as an electric heater capable of providing 100% of the theoretical heat requirement provided and supplied by an individual circuit arranged separately on the emergency switchboard. Other means may be accepted as satisfying the requirements of paragraph 4.19.1.6.1, provided a suitable risk assessment is conducted to the satisfaction of the Administration. In all cases, essential electrical components shall be supplied from the emergency source of electrical power.

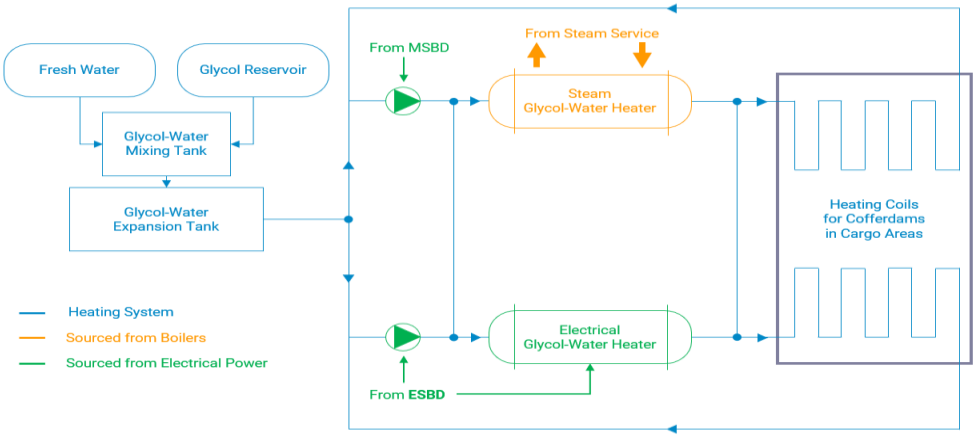
6 Upon closer examination of the draft amendments to the IGC Code, it has been noted that the wording of the draft new paragraph 4.19.1.7 slightly differs from the unified interpretations, as highlighted in the comparison table above (blue and red).

7 Specifically, interpretation 1.2 in MSC.1/Circ.1606 clarifies that, where the heating system is duplicated, all electrical components of at least one of the systems should be supplied from the emergency source of electrical power, in line with the existing paragraph 4.19.1.6.2. Interpretation 1.3 further specifies that, in cases where duplication of the primary heat source (e.g. an oil-fired boiler) is not feasible, other duplication arrangements, such as those associated with an alternative electric heater, may be accepted but should be supplied from the emergency source of electrical power. In practice, these requirements have been applied as elaborated in sub-paragraphs .1 and .2 below:

.1 When the duplicated system consists of two steam heaters, each associated with its own glycol circulation pump and auxiliary boiler, only one set of electrical components, i.e. one glycol circulation pump, one auxiliary boiler, etc., is supplied from the emergency source of power, as illustrated below:



.2 When the duplicated system consists of a steam heater and an electric heater, each with its own glycol circulation pump, only the electric heater's electrical components and one glycol circulation pump are supplied from the emergency source of power, as illustrated below:



8 In contrast, the draft new paragraph 4.19.1.7 consolidates the interpretations in MSC.1/Circ.1606 into a single paragraph and employs different wording as highlighted in red.

The final sentence could therefore be interpreted as applying universally to all cases, including those previously covered under interpretations 1.2 and 1.3 in MSC.1/Circ.1606.

9 If the last sentence of the draft new paragraph 4.19.1.7 is interpreted as observed in paragraph 8 above, the draft new provision would require that all duplicated essential electrical components of the heating system, regardless of their type, must be supplied from the emergency source of electrical power. The submitters consider that this was not the original intent of the unified interpretations and that such a reading would have significant design implications, including an increase in emergency generator capacity, enlarged generator rooms, and redesigned power distribution systems.

Proposal to clarify the draft new paragraph 4.19.1.7 of the IGC Code

10 In light of the above, the submitters propose that the draft new paragraph 4.19.1.7 be editorially clarified as follows:

> "4.19.1.7 For ships constructed on or after 1 July 2028, the heating system referred to in paragraph 4.19.1.6.1 shall also comply with the following requirements: ~~be such that,~~
>
> .1 ~~i~~In case of a single failure of a mechanical or electrical component in any part of the system, heating can be maintained at not less than 100% of the theoretical heat requirement.
>
> .2 Where the above requirements are met by duplication of the system components, i.e. heaters, glycol circulation pumps, electrical control panel, auxiliary boilers etc., all electrical components of at least one of the systems shall be supplied from the emergency source of electrical power.
>
> .3 Where duplication of the primary source of heat, e.g. an oil-fired boiler, is not feasible, alternative means may be accepted such as an electric heater capable of providing 100% of the theoretical heat requirement provided and supplied by an individual circuit arranged separately on the emergency switchboard. Other means may be accepted as satisfying the requirements of paragraph 4.19.1.6.1, provided a suitable risk assessment is conducted to the satisfaction of the Administration. In ~~all~~ such cases, essential electrical components of at least one of the systems shall be supplied from the emergency source of electrical power".

11 If the Committee confirms that the last sentence of the draft new paragraph 4.19.1.7 of the IGC Code means that the essential electrical components of at least one of the heating systems, regardless of their type, shall be supplied from the emergency source of electrical power, but it does not see a strong need for further modifications as proposed in paragraph 10 above, it is alternatively suggested, albeit not preferable, that such confirmation be recorded in the Committee's report to facilitate consistent and uniform implementation.

Action requested of the Committee

12 The Committee is invited to consider the discussions in paragraphs 4 to 9 above and the modifications proposed in paragraph 10 above, and take action, as appropriate.