



SUB-COMMITTEE ON CARRIAGE OF
CARGOES AND CONTAINERS
12th session
Agenda item 3

CCC 12/3/3
10 July 2026
Original: ENGLISH
Pre-session public release: ☒

**AMENDMENTS TO THE IGF CODE AND DEVELOPMENT OF GUIDELINES
FOR ALTERNATIVE FUELS AND RELATED TECHNOLOGIES**

**Draft amendments to paragraphs 5.9.2, 5.12.3, 6.5.10, 8.5.5, 13.3, 13.4.1, 13.6.3 and 13.8
of the IGF Code**

Submitted by IACS

SUMMARY

<i>Executive summary:</i>	This document proposes amendments to paragraphs 5.9.2, 5.12.3, 6.5.10, 8.5.5, 13.3, 13.4.1, 13.6.3 and 13.8 of part A-1 of the IGF Code to promote uniform implementation of the IGF Code and to maintain its safety objectives.
<i>Strategic direction, if applicable:</i>	2
<i>Output:</i>	2.3
<i>Action to be taken:</i>	Paragraph 34
<i>Related documents:</i>	None

Introduction

1 The IGF Code, as amended by resolution MSC.567(109), provides an international standard for ships using low-flashpoint fuel, other than ships covered by the IGC Code. Part A-1 of the IGF Code addresses specific requirements for ships using natural gas as fuel.

Background

2 The proposed amendments are based on discussions within IACS, drawing on practical experience gained in the application of the IGF Code. These discussions have identified areas where clarification of requirements and terminology would support a more consistent understanding across stakeholders. The proposals therefore aim to promote a universal and uniform implementation of the IGF Code and to maintain its safety objectives.

Discussion

Draft amendments to paragraphs 5.9.2 and 5.12.3 of the IGF Code to clarify the term "safe space"

3 Paragraphs 5.9.2 and 5.12.3 of part A-1 of the IGF Code include requirements to prevent the release of gas to "safe spaces" in connection with drainage arrangements and air lock design, as follows:

"5.9.2 Where fuel is carried in a fuel containment system requiring a secondary barrier, suitable drainage arrangements for dealing with any leakage into the hold or insulation spaces through the adjacent ship structure shall be provided. The bilge system shall not lead to pumps in safe spaces. Means of detecting such leakage shall be provided."

"5.12.3 The airlock shall be designed in a way that no gas can be released to safe spaces in case of the most critical event in the gas dangerous space separated by the airlock. The events shall be evaluated in the risk analysis according to 4.2."

4 While paragraph 12.5 of part A-1 of the IGF Code defines the terms "hazardous" and "non-hazardous" for area classification, paragraphs 5.9.2 and 5.12.3 refer to "gas safe" without providing a definition. As a result, the term "safe spaces" may be interpreted as a gas-safe machinery space or as a non-hazardous space, or both.

5 This lack of clarity and misalignment may lead to inconsistent interpretation and application of the requirements, particularly with respect to the spaces to which gas release must be prevented.

6 To address the above and align the references, IACS proposes the following amendments:¹

"5.9.2 Where fuel is carried in a fuel containment system requiring a secondary barrier, suitable drainage arrangements for dealing with any leakage into the hold or insulation spaces through the adjacent ship structure shall be provided. The bilge system shall not lead to pumps in ~~safe non-hazardous~~ spaces. Means of detecting such leakage shall be provided."

"5.12.3 The airlock shall be designed in a way that no gas can be released to ~~safe non-hazardous~~ spaces in case of the most critical event in the ~~hazardous space gas dangerous space~~ separated by the airlock. The events shall be evaluated in the risk analysis according to 4.2."

Draft amendments to paragraph 6.5.10.1 of the IGF Code for cross-reference correction

7 Paragraph 6.5.10.1 of part A-1 of the IGF Code states:

"6.5.10 After connection to the ship's fuel piping system,

.1 with the exception of the pressure relief system in 6.5.6 each portable tank shall be capable of being isolated at any time;"

8 Paragraph 6.5.6 of part A-1 of the IGF Code states:

"6.5.6 Arrangements shall be provided to limit the quantity of fuel spilled in case of inadvertent disconnection or rupture of the non-permanent connections."

9 Paragraph 6.5.7 of part A-1 of the IGF Code states:

"6.5.7 The pressure relief system of portable tanks shall be connected to a fixed venting system."

¹ Throughout the document tracked changes are indicated using "grey shading" to highlight new insertions and "strikethrough" to highlight deletion of the existing text.

10 Paragraph 6.5.10.1 cross-references paragraph 6.5.6 in relation to the pressure relief system. However, IACS understands that paragraph 6.5.6 is related to arrangements for limiting the quantity of fuel spilled and does not relate to the pressure relief system of portable tanks. On the other hand, paragraph 6.5.7 explicitly addresses the pressure relief system and its connection to a fixed ventilation system.

11 In light of the above and understanding that the correct cross-reference should be to paragraph 6.5.7, IACS proposes the following amendment:

"6.5.10 After connection to the ship's fuel piping system,

.1 with the exception of the pressure relief system in ~~6.5.6~~ 6.5.7 each portable tank shall be capable of being isolated at any time;"

Draft amendments to paragraph 8.5.5 of the IGF Code to clarify gas-freeing of bunkering lines

12 Gas fuel bunkering lines are required to have means to purge natural gas between the bunkering manifold and the fuel containment system, where appropriate. It is also a standard industry practice to gas-free bunker hoses during connection and disconnection to mitigate the release of natural gas, reducing safety risks during bunker operations.

13 Paragraph 8.4.1 of part A-1 of the IGF Code addresses the connections at the bunkering station, as follows:

"8.4.1 The bunkering manifold shall be designed to withstand the external loads during bunkering. The connections at the bunkering station shall be arranged in order to achieve a dry-disconnect operation in one of the followings ways: ..."

14 Paragraph 8.5.3 of part A-1 of the IGF Code addresses the valves fitted in each bunkering line, close to the connection point, for controlling and isolating the bunkering flow, as follows:

"8.5.3 A manually operated stop valve and a remote operated shutdown valve in series, or a combined manually operated and remote valve shall be fitted in every bunkering line close to the connecting point. It shall be possible to operate the remote valve in the control location for bunkering operations and/or from another safe location."

15 Paragraph 8.5.5 of part A-1 of the IGF Code requires bunkering lines to be free of gas when not engaged in bunkering, as follows:

"8.5.5 Bunkering lines shall be arranged for inerting and gas freeing. When not engaged in bunkering, the bunkering pipes shall be free of gas, unless the consequences of not gas freeing are evaluated and approved."

16 A possible broad interpretation of paragraph 8.5.5 could result in the gas-freeing requirement being applied to the entire bunkering line up to the fuel containment system. Since gas freeing is normally carried out by purging with nitrogen, such an interpretation may result in the unnecessary introduction of nitrogen into the fuel containment system during bunkering operations. As nitrogen cannot be consumed by internal combustion engines, it may accumulate and create challenges in safely displacing it from the fuel containment system.

17 The safety objective of paragraph 8.5.5 is, however, primarily related to preventing gas release from those parts of the bunkering line which are involved in connection and disconnection. Therefore, it is suggested to clarify that a gas-free condition is required for the relevant piping section at the bunkering station, bounded by the connection at the bunkering station required by paragraph 8.4.1 and the valve(s) required by paragraph 8.5.3.

18 Accordingly, IACS considers that there is a need to clarify the extent of the bunkering line segment which should be maintained in a gas-free condition after bunkering operations.

19 To address the above, IACS proposes the following amendment:

"8.5.5 Bunkering lines shall be arranged for inerting and gas freeing. When not engaged in bunkering, the ~~bunkering pipes~~ piping between the connections at the bunkering station required by 8.4.1 and the valve(s) required by 8.5.3 shall be free of gas, ~~unless the consequences of not gas freeing are evaluated and approved.~~"

Draft amendments to paragraphs 13.3.5 and 13.3.7 of the IGF Code to clarify ventilation openings

20 The IGF Code specifies the location of ventilation openings in relation to hazardous areas.

21 However, paragraphs 13.3.5 and 13.3.7 only address the positioning of ventilation openings with respect to hazardous area classification, as follows:

"13.3.5 For ships constructed on or after 1 January 2028, air inlets for hazardous enclosed spaces shall be taken from areas that, except for the inlets, would be non-hazardous. Air inlets for non-hazardous enclosed spaces shall be taken from non-hazardous areas at least 1.5 m away from the boundaries of any hazardous area."

"13.3.7 Air outlets from hazardous enclosed spaces shall be located in an open area that, in the absence of the considered outlet, would be of the same or lesser hazard than the ventilated space."

22 The above-mentioned paragraphs do not specify how such openings should be arranged to ensure that they remain continuously operable under all operating and environmental conditions.

23 At the same time, paragraph 13.3.1 requires that ventilation systems for hazardous spaces shall function under all environmental conditions in which the ship will be operating, and paragraph 9.3.1 indicates that essential systems, including those supporting fuel supply arrangements, are to remain available, as follows:

"9.3.1 For ships constructed on or after 1 January 2026, for single fuel installations the fuel supply system shall be arranged with redundancy and segregation, so that a leakage in one system, or failure of one of the fuel supply essential auxiliaries, does not lead to an unacceptable loss of power. In the event of a leakage or failure, and in accordance with SOLAS regulation II-1/26.3, the Administration, having regard to overall safety considerations, may accept a partial reduction in propulsion capability from normal operation."

"13.3.1 Any ducting used for the ventilation of hazardous spaces shall be separate from that used for the ventilation of non-hazardous spaces. The ventilation shall function at all temperatures and environmental conditions the ship will be operating in."

24 As a result, the continuous availability of ventilation is implicitly required. However, the current requirements do not ensure that ventilation openings are located such that they can remain open at all times. In practice, some arrangements may require closing appliances due to exposure to weather, which could interrupt ventilation when it is needed to control gas hazards.

25 Regulation 17(3) of chapter II of Annex I of the International Convention on Load Lines, 1966, as amended, requires ventilation openings serving machinery spaces to be arranged sufficiently high above the deck to avoid the need for weathertight closing appliances, thereby ensuring continuous ventilation, as follows:

"(3) Coamings of any fiddley, funnel or machinery space ventilator in an exposed position on the freeboard deck or superstructure deck shall be as high above the deck as is reasonable and practicable. In general, ventilators necessary to continuously supply the machinery space shall have coamings of sufficient height to comply with regulation 19(3), without having to fit weathertight closing appliances. Ventilators necessary to continuously supply the emergency generator room, if this is considered buoyant in the stability calculation or protecting opening leading below, shall have coamings of sufficient height to comply with regulation 19(3), without having to fit weathertight closing appliances."

26 In view of the above, IACS considers that the IGF Code should clarify that ventilation openings serving spaces requiring continuous ventilation are to be located sufficiently high above the deck so that they remain operable at all times, without the need for weathertight closing appliances, in order to maintain continuous ventilation under all operating and environmental conditions.

27 To address the above, IACS proposes the following new paragraph:

"13.3.12 Inlets and outlets of ventilation systems serving hazardous spaces requiring continuous ventilation shall be located sufficiently high above the deck as to not require closing appliances according to Regulation 19(3) of the International Load Line Convention."

Draft amendments to paragraphs 13.4.1, 13.6.1 and 13.8 of the IGF Code to clarify requirements for continuous ventilation

28 Paragraph 13.3.1 of part A-1 of the IGF Code requires separation of ventilation systems for hazardous spaces from those serving non-hazardous spaces and that they shall be capable of functioning under all temperatures and environmental conditions in which the ship operates (see paragraph 23 above).

29 However, the Code does not clearly specify when such ventilation systems are required to be in operation, in particular in relation to the condition of the fuel system. While requirements such as paragraph 13.6.3 require ventilation for the fuel preparation room to operate when pumps or compressors are running, they do not address situations where fuel piping remains pressurized without active fuel flow, or where fuel pressurization is provided from sources located outside the fuel preparation room.

30 Similarly, paragraph 13.8.1 establishes ventilation requirements for ducts and double-walled piping systems; however, it does not clarify whether ventilation is required to be continuously operating when fuel piping contains gas under pressure. As a result, scenarios may arise where the ventilation system is not in operation despite the continued presence of pressurized gas and the associated risk of gas release.

32 To address the above, IACS proposes the following amendments:

"13.6.3 Ventilation systems for fuel preparation rooms, shall be in continuous operation when fuel piping is containing gas pressure ~~pumps or compressors are working.~~"

"13.8.5 Ventilation systems for ducts and double pipes shall be in continuous operation when the fuel piping contains gas under pressure."

33 Draft amendments to the IGF Code, part A-1, are proposed in paragraphs 6, 11, 19, 27
and 32 for the consideration of the Sub-Committee to ensure clarity and consistency in the
implementation of the requirements and to promote safety in the application of the Code.

Action requested of the Sub-Committee

34 The Sub-Committee is invited to consider the foregoing, in particular the proposal in paragraph 33 and to take action, as appropriate.