

SUB-COMMITTEE ON CARRIAGE OF
CARGOES AND CONTAINERS
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Agenda item 8

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

Unified interpretations of paragraphs 11.3.1, 12.5.2.1 and 15.10.1 of the IGF Code

Submitted by IACS

SUMMARY

Executive summary: The annexes to this document provide copies of IACS' Unified Interpretations (UI) to facilitate the consistent and global implementation of paragraphs 11.3.1, 12.5.2.1 and 15.10.1 of the IGF Code

Strategic direction, if applicable: 6

Output: 6.1

Action to be taken: Paragraph 18

Related documents: None

Introduction

1 The International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code), which was adopted by resolution MSC.391(95), provides an international standard for ships using low-flashpoint fuel, other than ships covered by the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code). Part A-1 of the IGF Code addresses specific requirements for ships using natural gas as fuel.

2 IACS Members, acting as recognized organizations, have discussed how to implement the requirements of the IGF Code and have found some requirements that need further clarification in order to facilitate their global and uniform implementation.

Discussion

IGF Code, part A, paragraph 11.3.1

3 Paragraph 11.3.1 of the IGF Code requires that any space containing equipment for fuel preparation, such as pumps, compressors, heat exchangers, vaporizers and pressure vessels, shall be regarded as a machinery space of category A for fire protection purposes. However, it is not clear whether the reference to "fire protection purposes" means only structural fire protection or also includes means of escape and active fire protection measures.

4 In considering this issue, IACS has concluded that fuel preparation rooms should have both structural fire protection and fire extinguishing systems in accordance with SOLAS chapter II-2 and the International Code for Fire Safety Systems (FSS Code) for machinery spaces of category A. IACS also notes that item 2 of the Unified Interpretations in the *Unified interpretations of the IGF Code* (MSC.1/Circ.1558) on fuel preparation rooms clarifies that a tank connection space that has equipment such as vaporizers or heat exchangers installed inside is not regarded as a fuel preparation room. This is on the basis that such equipment is considered to provide only potential sources of release, not sources of ignition.

5 Consequently, IACS considers that a space containing equipment such as vaporizers, or heat exchangers that provide potential sources of release but not sources of ignition is not regarded as a fuel preparation room. Also, a space that contains only potential sources of release without potential ignition sources is not required to be provided with a fixed fire-extinguishing system and means of escape, as for a machinery space of category A, but it is required to have structural fire protection. Finally, IACS considers that a fuel preparation room containing pumps or compressors or other potential ignition sources is to be provided with a fixed fire-extinguishing system that complies with the provisions of SOLAS chapter II-2 and the FSS Code.

6 On the basis of the above analysis, IACS has developed UI GF13 on paragraph 11.3.1 of the IGF Code. A copy of this UI is provided in annex 1.

IGF Code, part A, paragraph 12.5.2.1 and footnote 23

7 Paragraph 12.5.2.1 of the IGF Code specifically identifies fuel storage hold spaces as zone 1 hazardous areas. Footnote 23 states that fuel storage hold spaces for type C tanks are normally not considered as zone 1, which implies that they are normally considered zone 2 or non-hazardous. IACS considers that there is a need to have a global and common understanding of the approach to be adopted, particularly since type C tanks are the predominant form of LNG containment used on gas fueled ships.

8 In numerous locations in the IGF Code, there are certain relaxations for type C fuel containment systems. This is based on the understanding that the probability of structural failures and leakages through the primary barrier for type C tanks is extremely low. Examples of this are found in paragraphs 6.3.5, 6.4.2.4, 11.3.3, 12.5.2.9 and 15.8.1.6 of part A of the IGF Code.

9 On the basis that a type C tank is not considered to provide a source of release, IACS understands that the fuel storage hold space for type C tanks without leakage sources should be considered non-hazardous.

10 It is noted that the fuel storage hold space for a type C tank with tank connections located in the hold space is also considered a tank connection space according to paragraph 2.2.15 of the IGF Code; and is consequently a hazardous area zone 1 in accordance with paragraph 12.5.2.1 of the IGF Code.

11 It is noted that a fuel storage hold space containing a type C tank with a tank connection space, where the access to the tank connection space is from the hold space (through the required bolted hatch), is to be considered as a hazardous area zone 2 in accordance with paragraphs 5.11.3 and 12.5.3.2 of the IGF Code.

12 On the basis of the above analysis, IACS has developed UI GF14 on paragraph 12.5.2.1 and footnote 23 of the IGF Code. A copy of this UI is provided in annex 2 to this document.

IGF Code, part A, paragraph 15.10.1

13 Paragraph 15.10.1 of the IGF Code requires that any loss of the required ventilating capacity shall give an audible and visual alarm. IACS considers that there is a need for a unified interpretation to clarify what are considered acceptable arrangements to monitor "loss of the required ventilating capacity".

14 The monitoring of the ventilation fan motor only gives an indication that the ventilation fan motor is running. It does not confirm ventilation flow.

15 Typical installed arrangements include monitoring of fan motor operation and underpressure monitoring of the ventilation system, in order to ensure adequate ventilation is operational. Alternatively flow indicators combined with ventilation fan motor monitoring are also considered to provide acceptable arrangements.

16 On the basis of the above analysis, IACS has developed UI GF15 on paragraph 15.10.1 of the IGF Code. A copy of this UI is provided in annex 3 to this document.

17 The Sub-Committee is invited to note the following application provisions for the above UIs that are relevant to IACS Societies, unless they are provided with written instructions to apply a different interpretation by the Administration on whose behalf they are authorized to act as a recognized organization. These UIs will be uniformly implemented by IACS Societies on:

- .1 ships contracted for construction on or after 1 July 2019;
- .2 ships which commence conversion to using low-flashpoint fuels on or after 1 July 2019; and
- .3 ships using low-flashpoint fuels, which commence on or after 1 July 2019, undertaking to use low-flashpoint fuels different from those which it was originally approved to use before 1 July 2019.

Action requested of the Sub-Committee

18 The Sub-Committee is invited to consider the analysis provided above; the IACS UIs, as set out in the annexes; the application provisions for these UIs as explained in paragraph 17 above; and take action, as appropriate.

ANNEX 1

GF13 Fire protection of spaces containing equipment (July 2018) for the fuel preparation

IGF Code, part A-1, section 11.3.1 reads:

11.3 *Regulations for fire protection*

11.3.1 *Any space containing equipment for the fuel preparation such as pumps, compressors, heat exchangers, vaporizers and pressure vessels shall be regarded as a machinery space of category A for fire protection purposes.*

Interpretation

1 Fire protection in 11.3.1 means structural fire protection, not including means of escape.

2 Enclosed spaces containing equipment for fuel preparation such as pumps or compressors or other potential ignition sources are to be provided with a fixed fire-extinguishing system complying with the provisions of SOLAS II-2/10.4.1.1 and the FSS Code and taking into account the necessary concentrations/application rate required for extinguishing gas fires.

Note:

- 1 This Unified Interpretation is to be uniformly implemented by IACS Societies on:
- i) ships contracted for construction on or after 1 July 2019;
 - ii) ships which commence conversion to using low-flashpoint fuels on or after 1 July 2019; and
 - iii) ships, using low-flashpoint fuels, which commence, on or after 1 July 2019, undertaking to use low-flashpoint fuels different from those which it was originally approved to use before 1 July 2019.

2 The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.

3 The "commence conversion" date means the date on which the contract is placed for the conversion or in the absence of a contract, the date on which the work identifiable with the specific conversion begins.

4 The "commence undertaking to use" date is the date of the document accepted by the Classification Society as request for approval for the use of a new fuel.

End of Document

ANNEX 2

GF14 Hazardous area classification of fuel storage (July 2018) hold spaces

IGF Code Part A-1, Section 12.5.2.1 and footnote 23 reads:

12.5.2 Hazardous area zone 1 ²²

This zone includes, but is not limited to:

.1 tank connection spaces, fuel storage hold spaces ²³ and interbarrier spaces;

²³ Fuel storage hold spaces for type C tanks are normally not considered as zone 1.

Interpretation

For the purposes of hazardous area classification, fuel storage hold spaces containing Type C tanks with all potential leakage sources in a tank connection space and having no access to any hazardous area, shall be considered non-hazardous.

Where the fuel storage hold spaces include potential leak sources, e.g. tank connections, they shall be considered hazardous area zone 1.

Where the fuel storage hold spaces include bolted access to the tank connection space, they shall be considered hazardous area zone 2.

Note:

- 1 This Unified Interpretation is to be uniformly implemented by IACS Societies on:
 - i) ships contracted for construction on or after 1 July 2019;
 - ii) ships which commence conversion to using low-flashpoint fuels on or after 1 July 2019; and
 - iii) ships, using low-flashpoint fuels, which commence, on or after 1 July 2019, undertaking to use low-flashpoint fuels different from those which it was originally approved to use before 1 July 2019.
- 2 The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.
- 3 The "commence conversion" date means the date on which the contract is placed for the conversion or in the absence of a contract, the date on which the work identifiable with the specific conversion begins.
- 4 The "commence undertaking to use" date is the date of the document accepted by the Classification Society as request for approval for the use of a new fuel.

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ANNEX 3

GF15 Alarms for loss of ventilation capacity

(July 2018)

IGF Code, part A-1, Section 15.10.1 reads:

15.10 Regulations for ventilation

15.10.1 Any loss of the required ventilating capacity shall give an audible and visual alarm on the navigation bridge or in a continuously manned central control station or safety centre.

Interpretation

Acceptable means to confirm that the ventilation system has the "required ventilating capacity" in operation are, but not limited to:

- Monitoring of the ventilation electric motor or fan operation combined with underpressure indication; or
- Monitoring of the ventilation electric motor or fan operation combined with ventilation flow indication; or
- Monitoring of ventilation flow rate to indicate that the required air flow rate is established.

Note:

1. This Unified Interpretation is to be uniformly implemented by IACS Societies on:
 - i) ships contracted for construction on or after 1 July 2019;
 - ii) ships which commence conversion to using low-flashpoint fuels on or after 1 July 2019; and
 - iii) ships, using low-flashpoint fuels, which commence, on or after 1 July 2019, undertaking to use low-flashpoint fuels different from those which it was originally approved to use before 1 July 2019.
2. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.
3. The "commence conversion" date means the date on which the contract is placed for the conversion or in the absence of a contract, the date on which the work identifiable with the specific conversion begins.
4. The "commence undertaking to use" date is the date of the document accepted by the Classification Society as request for approval for the use of a new fuel.

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