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UNIFIED INTERPRETATION OF PROVISIONS OF IMO SAFETY, SECURITY, ENVIRONMENT, FACILITATION, LIABILITY AND COMPENSATION-RELATED CONVENTIONS

IACS unified interpretation UI GF 22 of paragraph 9.6.1 of the IGF Code

Submitted by IACS

SUMMARY

Executive summary:	This document provides IACS unified interpretation UI GF 22 on paragraph 9.6.1 of the IGF Code in respect of gas fuel vent pipes of single-walled construction in machinery spaces.
Strategic direction, if applicable:	7
Output:	7.1
Action to be taken:	Paragraph 9
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) and amended by resolution MSC.551(108), 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 (the IGC Code).

2 IACS members, acting as recognized organizations, identified requirements of the IGF Code in need of further clarification to facilitate their universal and uniform implementation.

Discussion

3 Paragraph 9.6.1 of the IGF Code states:

> "9.6.1 Fuel piping in gas-safe machinery spaces shall be completely enclosed by a double pipe or duct fulfilling one of the following conditions:
>
> .1 the gas piping shall be a double wall piping system with the gas fuel contained in the inner pipe. The space between the concentric pipes shall be pressurized with inert gas at a pressure greater than the gas fuel pressure. Suitable alarms shall be provided to indicate a loss of inert gas pressure between the pipes; or

.2 the gas fuel piping shall be installed within a ventilated pipe or duct. The air space between the gas fuel piping and the wall of the outer pipe or duct shall be equipped with mechanical under pressure ventilation having a capacity of at least 30 air changes per hour. This ventilation capacity may be reduced to 10 air changes per hour provided automatic filling of the duct with nitrogen upon detection of gas is arranged for. The fan motors shall comply with the required explosion protection in the installation area. The ventilation outlet shall be covered by a protection screen and placed in a position where no flammable gas-air mixture may be ignited; or

.3 other solutions providing an equivalent safety level may also be accepted by the Administration."

4 The IGF Code does not specify whether the vent piping for gas fuel is included in the fuel piping. However, from the requirements of paragraph 9.5.2 of the IGF Code below, it is understood that the vent piping is subject to the requirements for fuel piping:

"The requirement in 9.5.1 need not be applied for fully welded fuel gas vent pipes led through mechanically ventilated spaces."

5 On the other hand, over several years of application of the IGF Code, engine manufacturers have been proposing single-walled vent piping which were widely accepted.

IACS unified interpretation GF 22

6 Considering the present state of affairs, IACS considers that the minimum requirements for such vent piping are necessary for the purpose of ensuring the safe distribution of fuel to the consumers. Therefore, IACS adopted unified interpretation UI GF 22, which was developed from the viewpoint of containment of gas fuel and ventilation, as set out in the annex of this document.

7 Noting that the work on the IGF Code as related to the LNG as fuel will not start until 2026 (annex 3 of document CCC 10/WP.6), but the explanations to the industry need to be provided, the Sub-Committee and Member States are invited to note that IACS members intend to implement UI GF 22 from 1 July 2026, 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.

Safeguards

8 IACS UI GF 22 is considered to meet the three safeguards for consideration of interpretations, as established by MSC 108 (MSC 108/20, paragraph 19.6.3), for the following reasons:

.1 UIs are not meant to amend mandatory requirements in conventions and associated instruments: Based on the discussion provided in paragraphs 4 and 5, the proposed UI is found not to amend the mandatory requirements in the IGF Code. This conclusion is drawn from the fact that the UI serves to clarify the application of existing requirements rather than introduce new requirements or alter the obligations set forth in the original text. As outlined in the referenced paragraphs, the UI provides uniform interpretation to ensure consistent implementation without modifying the intent, scope or substance of the mandatory requirements established by the IGF Code.

.2 UIs should not go beyond the interpretation of requirements: The proposed UI is considered as an interpretation without going beyond the intended scope of interpretation. As outlined in the discussion, the UI remains within the boundaries of clarifying existing requirements without introducing new requirements or altering the original intent of the IGF Code. The core objective of the UI is to ensure uniform and consistent application of the requirements, aligning with the established principles of interpretation rather than expanding or modifying the obligations set forth in the IGF Code.

.3 UIs should not contradict the text of requirements: Paragraphs 1 to 5 of the UI GF 22 in the annex provide necessary clarification that supports the IGF Code without contradicting the requirement text. These interpretations are developed to ensure consistent application and understanding of the existing requirements, aligning with the intent and scope of the original requirements. They serve to facilitate uniform implementation without altering, overriding or conflicting with the established mandatory requirement. The clarifications provided remain within the interpretative framework, ensuring coherence with the text of the IGF Code while avoiding any contradiction with the prescribed requirements.

Action requested of the Sub-Committee

9 The Sub-Committee is invited to note the UI GF 22 in the annex and take action as appropriate.

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ANNEX

IACS UNIFIED INTERPRETATION GF 22 "GAS FUEL VENT PIPES – SINGLE-WALLED CONSTRUCTION IN MACHINERY SPACES"

Paragraph 9.6.1 of part A-1 of the IGF Code, as amended by resolution MSC.551(108):

"9.6.1 Fuel piping in gas-safe machinery spaces shall be completely enclosed by a double pipe or duct fulfilling one of the following conditions:

.1 the gas piping shall be a double wall piping system with the gas fuel contained in the inner pipe. The space between the concentric pipes shall be pressurized with inert gas at a pressure greater than the gas fuel pressure. Suitable alarms shall be provided to indicate a loss of inert gas pressure between the pipes; or

.2 the gas fuel piping shall be installed within a ventilated pipe or duct. The air space between the gas fuel piping and the wall of the outer pipe or duct shall be equipped with mechanical under pressure ventilation having a capacity of at least 30 air changes per hour. This ventilation capacity may be reduced to 10 air changes per hour provided automatic filling of the duct with nitrogen upon detection of gas is arranged for. The fan motors shall comply with the required explosion protection in the installation area. The ventilation outlet shall be covered by a protection screen and placed in a position where no flammable gas-air mixture may be ignited; or

.3 other solutions providing an equivalent safety level may also be accepted by the Administration."

Interpretation

Gas fuel vent pipes, i.e. pipes arranged for the purpose of purging, venting, or bleeding fuel gas lines, which are of single-walled construction and are located within gas-safe machinery spaces may be accepted, provided that, at minimum, the following conditions shall be satisfied:

.1 these pipes shall originate from a gas fuel piping system having a design pressure not greater than 1 MPa or the maximum built-up back pressure in the vent piping shall be calculated not to exceed 0.5 MPa;

.2 these pipes shall be of fully welded construction. The connection to the consumer, if not connected by welding, as well as any flexible elements, shall comply with paragraph 9.6.1 of the IGF Code;

.3 these pipes shall be open-ended;

.4 these pipes shall not contain fuel gas or a gas fuel/air mixture, except for the sole purpose of safely purging, venting and bleeding the gas fuel and/or gas fuel/air mixture when isolating gas fuel to consumers; and

.5 the gas-safe machinery space (the spaces in which gas consumers are located) shall be permanently mechanically ventilated.

Vent piping of internal combustion engines shall be of double-walled construction unless single-walled construction is justified in the safety concept of the engine.

Note

1 This unified interpretation is to be uniformly implemented by IACS Societies on ships contracted for construction on or after 1 July 2026.

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.