Council of the European Union
General Secretariat

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INFORMATION

From: To:	General Secretariat of the Council Working Party on Shipping
Subject:	Preparation of IMO/CCC 11 (London, 15-19 September 2025) - Draft Union submission to the 11th session of the International Maritime Organization's Sub-Committee on Carriage of Cargoes and Containers proposing amendments to the interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621) to allow for the use of Sandwich Structured Cofferdams - Advance copy of a Commission Staff Working Document

In view of the Shipping Working Party meeting on 16 June 2025, delegations will find attached an advance copy of a Commission Staff Working Document on the above subject.

EUROPEAN
COMMISSION

Brussels, XXX
[…](2025) XXX draft

COMMISSION STAFF WORKING DOCUMENT

Union submission to the 11th session of the International Maritime Organization's Sub-Committee on Carriage of Cargoes and Containers proposing amendments to the interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621) to allow for the use of Sandwich Structured Cofferdams.

Union submission to the 11th session of the International Maritime Organization's Sub-Committee on Carriage of Cargoes and Containers proposing amendments to the interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621) to allow for the use of Sandwich Structured Cofferdams.

PURPOSE

This Staff Working Document contains a draft Union submission to the International Maritime Organization's (IMO) 11th Sub-Committee on Carriage of Cargoes and Containers (CCC 11). The IMO has scheduled CCC 11 from 8 to 12 September 2025.

The draft submission contains proposals for amending the interim guidelines for the safety of ships using Methyl/Ethyl alcohols as fuel (MSC.1/Circ.1621).

It is based on the lessons learned and the experience gained using the guidelines for the safety of ships using methyl/ethyl alcohol as fuel.

The amendments proposed are intended to allow for the use of sandwich structured cofferdams (SSC) as an accepted means to provide an added layer of gas and liquid tightness protection against external fire, and toxic and flammable vapours between the fuel tank and other areas of the ship.

This protections in now provided by traditionally defined cofferdams, i.e. an empty structural space separating the tank from other areas of the ship.

A sandwich structured cofferdam (SSC) has two parallel steel plates and the "structural space" in between the plates is filled with methyl/ethyl alcohol resistant solid polymer core material that is permanently bonded with the steel plates.

EU COMPETENCE

Article 6(2)(a)(i) of Directive 2009/45/EC on safety rules and standards for passenger ships[1] applies SOLAS, as amended, to Class A passenger ships. The interim guidelines are part of the IGF Code which is a mandatory Code under SOLAS, and is also applicable for passenger ships under this Directive.

In light of all of the above, the present draft Union submission falls under EU exclusive competence, pursuant to article 3(2) TFEU as the mandatory regulations, which, once adopted, risks affecting or altering Union legislation and in particular Directive 2009/45/EC.[2] This Staff Working Document is presented to establish an EU position on the matter and to transmit the document to the IMO prior to the required deadline of 4 July 2024.

[1] OJ L 163, 25.6.2009, p. 1

[2] An EU position under Article 218(9) TFEU is to be established in due time should the IMO Maritime Safety Committee eventually be called upon to adopt an act having legal effects as regards the subject matter of the said draft Union submission. The concept of '*acts having legal effects*' includes acts that have legal effects by virtue of the rules of international law governing the body in question. It also includes instruments that do not have a binding effect under international law, but that are '*capable of decisively influencing the content of the legislation adopted by the EU legislature*' (Case C-399/12 Germany v Council (OIV), ECLI:EU:C:2014:2258, paragraphs 61-64). The present submission, however, does not produce legal effects and thus the procedure for Article 218(9) TFEU is not applied.

SUB-COMMITTEE ON CARRIAGE OF CARGOES AND CONTAINERS
11th session
Agenda item 3

CCC 11/X/X
8 September 2025
Original: ENGLISH
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AMENDMENTS TO THE IGF CODE AND DEVELOPMENT OF GUIDELINES FOR ALTERNATIVE FUELS AND RELATED TECHNOLOGIES

Proposed revisions of the MSC.1/Circ.1621 cofferdam requirements to promote the use of alternative fuels and related technologies

Submitted by Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands (Kingdom of the), Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the European Commission, acting jointly in the interest of the European Union

SUMMARY

Executive summary:	This document proposes amendments to the interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621) in order to allow for the use of Sandwich Structured Cofferdams as a safe alternative to the cofferdam as currently defined.
Strategic direction, if applicable:	2
Output:	2.3
Action to be taken:	Paragraph 29
Related documents:	MSC.1/Circ.1621

Introduction

1 This document is submitted in accordance with the provisions of the Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies (MSC-MEPC.1/Circ.5/Rev.5).

2 IMO MSC.1/Circ.1621 “Interim Guidelines for the Safety of Ships Using Methyl/Ethyl Alcohol as Fuel” (Guidelines) provide provisions for the arrangement, installation, control and monitoring of machinery, equipment and systems using methyl/ethyl alcohol as fuel to minimize the risk to the ship, its crew and the environment, having regard to the nature of the fuels involved.

3 The Guidelines follow the goal-based approach (MSC.1/Circ.1394/Rev.2) by specifying goals and functional requirements for each section forming the basis for the design, construction and operation of ships using methyl/ethyl alcohol as fuel.

4 As the Interim Guidelines are under review for the novelty of the substances and the operational experience gained with the application of the Guidelines, and for implementing them into mandatory instruments under the IGF Code, the possibility to use novel technologies should be included in the code.

5 Based on the experience gained so far, it has been found that the existing wording in the Guidelines is limiting the application of alternative solutions providing equivalent safety, particularly in cases where the requirements are not practicable from a design perspective. This is restricting feasible options, adding unnecessary costs, and slowing down the approval process and, by that means, the transition to alternative fuels

6 The co-sponsors wish to propose amendments that formulate design goals and methodologies providing equivalent safety in a more general manner, in order take into account other technologies and the knowledge gained so far from using alternative solutions and their monitoring. This would contribute to the safety of ship, human health and environment.

Discussion

Cofferdams

7 Paragraph 5.3.2 of the Guidelines requires that integral fuel tanks are surrounded by cofferdams, except on those surfaces bound by shell plating below the lowest possible waterline, other fuel tanks containing methyl/ethyl alcohol, or fuel preparation space.

8 Paragraph 2.2.3.2 of the Guidelines defines cofferdam as “a structural space surrounding a fuel tank which provides an added layer of gas and liquid tightness protection against external fire, and toxic and flammable vapours between the fuel tank and other areas of the ship.”

9 The functional requirements of an “added layer of gas and liquid tightness protection against external fire, and toxic and flammable vapours between the fuel tank and other areas of the ship” can also be achieved by structural arrangements other than an empty “structural space”, e.g. with sandwich structured cofferdam (SSC).

Sandwich structured cofferdam

10 A sandwich structured cofferdam (SSC) has two parallel steel plates and the “structural space” in between the plates is filled with methyl/ethyl alcohol resistant solid polymer core material that is permanently bonded with the steel plates.

11 The two steel boundaries of the SSC create an added layer of liquid and gas tightness identical to that of a normal cofferdam, and the methyl/ethyl alcohol resistant polymer core acts as a third additional layer of liquid and gas tightness.

12 In addition, based on standard fire tests, a SSC can achieve a protection against external fire and toxic and flammable vapours equivalent to a normal cofferdam with A-60 class fire insulation. SSC have also additional benefits like impact protection, increased strength, fatigue resistance and vibration dampening.

Barriers caused by the Guidelines

13 The Guidelines include several prescriptive regulations on the provision of gas and leakage detection, ventilation and access to cofferdams. SSC is a closed and filled barrier, and ventilation and gas detection cannot take place. Due to the structural characteristics of

SSC, the requirements of the Guidelines that consider the cofferdam as an empty space cannot be applied.

14 The Guidelines approach to safety requirements for spaces surrounding methyl/ethyl alcohol fuel tanks are not compatible with SSC, in particular how safety of the surrounding spaces is ensured by the ventilation requirements, and how the leakage detection should be monitored.

15 Paragraph 13.3.12 of the Guidelines states:

"13.3.12 Double bottoms, cofferdams, duct keels, pipe tunnels, hold spaces and other spaces where methyl/ethyl fuel may accumulate should be capable of being ventilated to ensure a safe environment when entry into the spaces is necessary."

16 The ventilation requirement according to Guidelines is intended to ensure a safe environment in case that entry into the space is necessary. However, ventilation is not required in a space where methyl/ethyl fuel cannot accumulate and which is not accessible.

17 The same question arises in relation to gas and leakage detection. According to the Guidelines, leakage detection is still required inside the SSC, even if the methyl/ethyl fuel cannot accumulate inside a solid material.

18 Paragraph 5.11 of the Guidelines defines prescriptive requirements for safe access to cofferdams. If gas cannot accumulate inside the barrier (SSC) because it is closed and filled, access to the *core space* is not applicable, and therefore these requirements are not relevant.

19 When a barrier is closed and filled, arrangements for purging or filling with water through a non-permanent connection are not applicable, nor those for emptying the cofferdams by a separate drainage system as required in paragraph 6.4.2

20 Furthermore, fire integrity of the cofferdams toward to high fire risk spaces is defined in paragraph 11.4.3:

> *"For fire integrity, the fuel tank boundaries should be separated from the machinery spaces of category A and other rooms with high fire risks by a cofferdam of at least 600 mm, with insulation of not less than A-60 class.*

21 The basic philosophy of the Guidelines and IGF Code follows a goal-based approach; however, the paragraphs referred above define prescriptive requirements without defining more specifically the cofferdam conditions e.g. related to ventilation.

Proposal

22 Throughout the development of IGF Code it was recognized that it must be based upon sound naval architectural and engineering principles and the best understanding available of current operational experience, field data and research and development. Due to the rapidly evolving new fuels technology, the Organization will periodically review this Code, taking into account both experience and technical developments.

23 Based on the above discussion the co-sponsors propose a revision of the cofferdam requirements in the Guidelines and adapting them into mandatory instruments under the IGF Code to promote the safe use of methyl/ethyl alcohol as a marine fuel to facilitate the green transition. The proposals intend to allow for alternative solutions, provided an equivalent

level of safety is achieved. This should include a goal-based approach avoiding possible contradictions or inconsistent requirements. It is proposed to:

.1 review the measures designed to counteract the risk of methyl/ethyl alcohol leakage into surrounding spaces by addressing potential causes such as fire, impact, or other hazards, and mitigating the risk either by protecting against the applicable cause or by limiting its effect; and

.2 remove prescriptive measures which are not applicable to alternative solutions; and

.3 specify that sandwich structured cofferdams (SSC) could be deemed as a protective cofferdam for the integral methyl/ethyl alcohol fuel tank; and

.4 define that requirements to gas and leakage detection requirements to the cofferdams are consistent to ventilation requirements; and

.5 clarify the rules related to cofferdam accessibility applicable to SSC; and

.6 enable the achievement of an equivalent level of fire integrity by other means than a minimum 600 mm cofferdam and A-60 fire insulation; and

.7 take into account the proposal for revision, as attached in the annex to this document.

Action requested of the Sub-Committee

24 The Sub-Committee is invited to note the information provided in paragraphs 7 – 21, consider the proposals in paragraph 23, and take action, as appropriate.

ANNEX

DRAFT AMENDMENTS TO THE INTERIM GUIDELIINES FOR THE SAFETY OF SHIPS USING METHYL/ETHYL ALCOHOL AS FUEL (MSC.1/Circ.1621)

1 Paragraph 2.2.3.2 is revised as follows:

"2.2.3.2 Cofferdam is a structural ~~space~~ arrangement surrounding a fuel tank which provides an added layer of gas and liquid tightness protection against external fire, and toxic and flammable vapours between the fuel tank and other areas of the ship; and"

2 Paragraph 3.2.13 is revised as follows:

"3.2.13 Fixed fuel vapour and/or leakage detection suitable for all spaces and areas ~~concerned~~ where methyl/ethyl fuel may accumulate should be arranged."

3 Paragraph 5.11.3 is revised as follows:

"5.11.3 Fuel tanks and surrounding cofferdams where methyl/ethyl fuel may accumulate should have suitable access from the open deck, where practicable, for gas freeing, cleaning, maintenance and inspection."

4 Paragraph 5.11.4 is revised as follows:

"5.11.4 Without direct access to open deck, an entry space to fuel tanks or surrounding cofferdams where methyl/ethyl fuel may accumulate should be provided and comply with the following:

.1 be fitted with an independent mechanical extraction ventilation system, providing a minimum of six air changes per hour; a low oxygen alarm and a gas detection alarm should be fitted;

.2 have sufficient open area around the fuel tank hatch for efficient evacuation and rescue operation;

.3 not be an accommodation space, service space, control station or machinery space of category A; and

.4 a cargo space may be accepted as an entry space, depending upon the type of cargo, if the area is cleared of cargo and no cargo operation is undertaken during entry to the space."

5 Paragraph 6.4.2 is revised as follows:

"6.4.2 Cofferdams where methyl/ethyl fuel may accumulate should be arranged either for purging or filling with water through a non-permanent connection. Emptying the cofferdams should be done by a separate drainage system, e.g. bilge ejector."

6 Paragraph 15.3.2 is revised as follows:

"15.3.2 Liquid leakage detection should be installed where liquid fuel may accumulate in the protective cofferdams surrounding the fuel tanks, in all ducts around fuel pipes, in fuel preparation spaces, and in other enclosed spaces containing single walled fuel piping or other fuel equipment."

7 Paragraph 15.7.1 is revised as follows:

"15.7.1 Permanently installed gas detectors should be fitted in:

.1 all ventilated annular spaces of the double walled fuel pipes;
.2 machinery spaces containing fuel equipment or consumers;
.3 fuel preparation spaces;
.4 other enclosed spaces containing fuel piping or other fuel equipment without ducting;
.5 other enclosed or semi-enclosed spaces where fuel vapours may accumulate;
.6 cofferdams and fuel storage hold spaces surrounding fuel tanks where fuel vapours may accumulate;
.7 airlocks; and
.8 ventilation inlets to accommodation and machinery spaces, if required, based on the risk assessment required in 4.2."

8 Paragraph 5.11.6 is revised as follows:

"5.11.6 For safe access, horizontal hatches or openings to or within fuel tanks or surrounding cofferdams should have a minimum clear opening of 600 mm x 600 mm that also facilitates the hoisting of an injured person from the bottom of the tank/cofferdam. For access through vertical openings providing main passage through the length and breadth within fuel tanks and cofferdams, the minimum clear opening should not be less than 600 mm x 800 mm at a height of not more than 600 mm from bottom plating unless gratings or footholds are provided. Smaller openings may be accepted provided evacuation of an injured person from the bottom of the tank/cofferdam can be demonstrated. The detail requirements in this paragraph are not mandatory for cofferdams that cannot be accessed."

9 Paragraph 11.4.3 is revised as follows:

"11.4.3 For fire integrity, the fuel tank boundaries should be separated from the machinery spaces of category A and other rooms with high fire risks by a cofferdam ~~of at least 600 mm,~~ with insulation of not less than A-60 class., or by other means to achieve equal level of fire integrity."