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To:	Ms Thérèse BLANCHET, Secretary-General of the Council of the European Union
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Subject:	COMMISSION STAFF WORKING DOCUMENT Union submission to the 10th session of the International Maritime Organization's Sub-Committee on Carriage of Cargoes and Containers proposing the development of mandatory regulations for the safety of ships using methyl/ethyl alcohols as fuel

Delegations will find attached document SWD(2024) 151 final.

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Brussels, 19.6.2024
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COMMISSION STAFF WORKING DOCUMENT

Union submission to the 10th session of the International Maritime Organization's Sub-Committee on Carriage of Cargoes and Containers proposing the development of mandatory regulations for the safety of ships using methyl/ethyl alcohols as fuel

Union submission to the 10th session of the International Maritime Organization's Sub-Committee on Carriage of Cargoes and Containers proposing mandatory requirements for the safety of ships using methyl/ethyl alcohol as fuel

PURPOSE

This Staff Working Document contains a draft Union submission to the International Maritime Organization's (IMO) 10th Sub-Committee on Carriage of Cargoes and Containers (CCC 10). The IMO has indicatively scheduled CCC 10 from 16 to 20 September 2024.

CCC, at its ninth session, updated the work plan as set out in Annex 1 of the meeting report (CCC 9/14), stating that if time allowed the 10th CCC meeting would address "the development of mandatory instruments regarding methyl/ethyl alcohols" under the IGF code.

This draft submission contains proposals for the development of mandatory requirements for the safety of ships using Methyl/Ethyl alcohol as fuel. For reasons of clarity the proposals are presented in the form of amendments to the text of the interim guidelines in MSC.1/Circ.1621 (*Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel*).

The proposals are based on the the lessons learned and the experience gained applying the draft interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel, presented in CCC 10/3/X by Denmark. In view of this experience, it is considered that the provisions contained in MSC.Circ.1621 should be further elaborated and/or adjusted when developing mandatory requirements.

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. As the IGF Code is a mandatory Code under SOLAS, it 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 requirements for the use of methyl/ethyl alcohol as fuel, once adopted, could be incorporated in the IGF Code and, hence, would alter 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 12 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
10th session
Agenda item 3

CCC 10/3/XX
xx July 2024
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AMENDEMENTS TO THE IGF CODE AND DEVELOPMENT OF GUIDELINES FOR ALTERNATIVE FUELS AND RELATED TECHNOLOGIES

Input to the development of mandatory requirements for the safety for ships using methyl/ethyl alcohol as fuel based on the interim guidelines in MSC.1/Circ.1621.

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 includes proposals for the development of mandatory requirements for the safety of ships using Methyl/Ethyl alcohol as fuel based on the interim guidelines in MSC.1/Circ.1621.
Strategic direction, if applicable:	2
Output:	2.3
Action to be taken:	8
Related documents:	CCC 9/3/7, CCC 9/3/6, CCC 9/14, MSC.1/Circ.1621

Introduction

1 The Sub-Committee on Carriage of Cargoes and Containers (CCC), at its ninth session, updated the work plan as set out in Annex 1 to the report (CCC 9/14), stating that if time permits the development of "mandatory instruments" for the safety of ships using methyl/ethyl alcohol as fuel can take place during the 10th CCC meeting.

2 The co-sponsors consider that MSC.1/Circ.1621 (*Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel*) provides a sound basis for the Flag state approval of methanol-fuelled ships. Furthermore, the guidelines with its focus on risk assessments also helps to ensure the safety of the ship, crew and environment. However, the co-sponsors, based on the lessons learned and the experience gained using the draft interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel, generally presented in CCC 10/3/X by Denmark, consider that the provisions contained in MSC.Circ.1621 could be further elaborated and/or adjusted when developing mandatory requirements. However, pending the timing for the periodical SOLAS and IGF code revision cycle, the IMO subcommittee

CCC could consider revising the interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel if needed.

3 In Annex I, the proposed mandatory requirements are presented in the form of highlighted amendments to existing paragraphs in MSC.1/Circ.1621. Further to those, the co-sponsors provide, in the following paragraphs, additional considerations that should be taken into account when developing the mandatory requirements.

4 When revising the existing section 8 *Bunkering* the following items should be further assessed:

.1 Ensure that the methanol hose connection is incompatible with the diesel manifolds and correct colour coding of methanol hose.

.2 Consider installing arrangements for O_2 measurement within bunker supply piping and fuel tank to enable detection of potentially flammable/explosive atmosphere prior to bunkering.

.3 Investigate whether the closing time requirements of remotely operated valves may cause water hammering effects. In such cases the closing time should be delayed preventing water hammer effects in the bunkering line.

.4 Consider safety relief valve upstream of the ship bunkering valve.

5 When revising the existing section 17.4 *Provisions for bunkering operations*, the following items should be further assessed:

.1 Consider prohibiting internal transfer of fuel in bunker barge during bunkering to prevent imposing hazardous zone onto receiving vessel in areas not fitted with EX equipment.

.2 Recommend sampling of fuel upon delivery to ensure compatibility (reference is made to ISO/DIS 6583 Specification of methanol as a fuel for marine applications).

.3 Investigate whether it is required for vessels to have a mooring plan which includes mooring during bunkering. (Relevant for STS bunkering).

.4 Bunkering procedures are to consider simultaneous operation, and no activity is to take place in established safety zones.

.5 Consider physical/visual barriers to limit passengers access into safety zone to be defined while bunkering.

.6 Ensure that sufficient nitrogen supply is available prior to bunkering to ensure purging of system.

.7 Investigate if electrical bonding (earthing) of bunkering hose to reduce potential electrostatic discharge could be introduced as a requirement to reduce the risk of ignition in case of a leakage.

.8 Consider having a target tank pressure in bunker barge before bunkering to ensure pressure control and avoid imposing hazardous zones onto receiving vessel in areas not fitted with EX equipment.

6 When revising the existing section 15.7 *Provisions for gas detection*, further consider reviewing the thresholds for gas detection.

7 Consider also adding provisions for personal protective equipment (PPE) from the health effects of methanol exposure as also mentioned in CCC 10/3/X.

Action requested of the Sub-Committee

8 The Sub-Committee is invited to consider the proposal in paragraph 3 to 6 and take action, as appropriate.

Annex I - Proposals for mandatory requirements for the safety of ships using methyl/ethyl alcohol as fuel based on the interim guidelines (MSC.1/Circ.1621)

Proposed requirements are presented in the form of amendments to the interim guidelines:

1 2.2.5 Gas freeing is the process carried out to achieve a safe ~~tank~~ atmosphere **in confined spaces**. It includes two distinct operations:

.1 purging the hazardous ~~tank~~ atmosphere **in the confined space** with an inert gas or other suitable medium (e.g. water) to dilute the hazardous vapour to a level where air can be safely introduced; and

2 5.3.2 Integral fuel tanks should be surrounded by protective cofferdams, except on those surfaces bound by shell plating below the lowest possible waterline, other fuel tanks containing methyl/ethyl alcohol, **open deck,** or fuel preparation space.

5.3.2.bis Ballast water tanks can be used as protective cofferdams provided that 5.11.3 is fulfilled.

3 Revision of 5.3.3 according to IGF code to allow for tanks on deck aft of the collision bulkhead:

5.3.3 The fuel containment system should be ~~abaft of the collision bulkhead and forward of the aft peak bulkhead.~~ **located according to IGF code 5.3.3.4**.

4 Revision of 5.10.3 to allow non-inerted collection tank in the drain system for drip trays:

5.10.3 Each drip tray should be provided with means to safely drain spills or transfer spills to a dedicated holding tank. Means for preventing backflow from the tank should be provided **e.g. a system with a small non-inerted collection tank [max 30 l] between the drip-tray and the dedicated holding tank.**

5 Revision of 6.3, 6.4 and addition of 6.4bis to align with IGF code structure:

6.3 Provisions for pressure relief system ~~fuel tanks venting and gas freeing system~~

6.4 ~~Inerting and a~~Atmospheric control within the fuel storage system

6.4bis Inerting within the fuel storage system

6 Consequential renumbering is proposed as follow:

MSC.Circ.1621	New 6.3	MSC.Circ.1621	New 6.4	MSC.Circ.1621	6.4bis
6.3.4	6.3.1	6.3.1	6.4.1	6.4.1	6.4bis.1
6.3.5	6.3.2	6.3.2	6.4.2	6.4.2	6.4bis.2

6.3.6	6.3.3	6.3.3	6.4.3	6.4.3	6.4bis.3
6.3.7	6.3.4	6.4.9	6.4.4	6.4.4	6.4bis.4
6.3.8	6.3.5	6.4.10	6.4.5	6.4.5	6.4bis.5
6.3.9	6.3.6	6.4.11	6.4.6	6.4.6	6.4bis.6
6.4.7	6.3.7				
6.4.8	6.3.8				

7 Revision of 9.4.2 on the minimum air changes per hour in annular spaces:

9.4.2 The annular space between inner and outer pipe should have mechanical ventilation of underpressure type with a capacity of minimum ~~30~~**10** air changes per hour **[during normal operation]** and be ventilated to open air. Appropriate means for detecting leakage into the annular space should be provided. [**In case of a detected leakage, additional ventilation with a capacity of not less than 20 air changes per hour should be automatically activated. The emergency ventilation capacity may include the redundancy of regular ventilation.]** The double wall enclosure should be connected to a suitable draining tank allowing the collection and the detection of any possible leakage.

8 Revision of 11.7.2:

11.7.2 An approved alcohol-resistant foam system covering the tank top and bilge area under the floor plates should be arranged for **both** machinery space category A and fuel preparation space containing methyl/ethyl alcohol.

9 Revision of 12.3.1 according to general classification of areas and addition of 12.3.2bis to allow access for crew in hazardous areas on open deck under special considerations:

12.3.1 Hazardous areas on open deck and other spaces not addressed in this section should be analysed and classified based on a recognized standard.[4] The electrical equipment fitted within hazardous areas should be according to the same standard.

[4] Refer to IEC standard ~~60092-502:1999, part 4.4: Tankers carrying flammable liquefied gases, as applicable.~~ **600079-10-1:2020, Classification of areas - Explosive gas atmospheres**

12.3.2 All hazardous areas should be inaccessible to passengers and unauthorized crew at all times.

12.3.2bis Access to hazardous areas on open deck may be accepted by means of risk reducing measures for personnel i.e. early warning, alarm and secondary barriers based on special consideration by the Administration.

10 Revision of 13.4.1 on the minimum air changes per hour for fuel preparation spaces:

13.4.1 Fuel preparation spaces should be provided with an effective mechanical forced ventilation system of extraction type. During normal operation the ventilation should be at least ~~30~~**10** air changes per hour. [**In case of a detected leakage, additional ventilation with a capacity of not less than 20 air changes**

per hour should be automatically activated. The emergency ventilation capacity may include the redundancy of regular ventilation.]

11 Revision of 13.6.1 on the minimum air changes per hour for ducts:

13.6.1 Ducts and double wall pipes containing fuel piping fitted with a mechanical ventilation system of the extraction type should be provided with a ventilation capacity of at least ~~30~~**10** air changes per hour. [**In case of a detected leakage, additional ventilation with a capacity of not less than 20 air changes per hour should be automatically activated. The emergency ventilation capacity may include the redundancy of regular ventilation.]**

12 Addition of 13.6.3bis to allow inerting of annular space as alternative to ventilation:

13.6.3**bis** **Inerting of the annular space might be accepted as an alternative to ventilation. Appropriate means of detecting leakage into the annular space should be provided. Suitable alarms should be provided to indicate a loss of inert gas pressure between the pipes.**

13 Revision of table 15.1 to enable high-high alarm and redundancy of high-high alarm:

Revised text in first 3 rows of table 15.1:

Parameter	**Alarm**	**Automatic shutdown of tank valve** (valve(s) referred to in 9.6.2)	**Automatic shutdown of master fuel valve** (valve(s) referred to in 9.6.3)	**Automatic shutdown of bunkering valve**	**Comments**
High-level fuel tank	X			~~**X**~~	See 15.4.2.1
Redundant (2x) high-high-level fuel tank	X			X	See 15.4.2.2 and 15.5.1

14 Revision of 15.7.7 to allow sequential sampling as alternative:

15.7.7.bis Alternative to 15.7.7 sequential sampling gas detection can be used [for confined spaces such as ballast tanks and cofferdams but not limited to] when equivalence are demonstrated by a risk assessment.