

MARITIME SAFETY COMMITTEE
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Agenda item 8

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**POLLUTION PREVENTION AND RESPONSE (MATTERS EMANATING FROM THE FIFTH
SESSION OF THE SUB-COMMITTEE)**

**Effective Implementation of Existing Provisions for Fuel Quality and Safety in IMO
Conventions**

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SUMMARY

Executive summary: At the Intersessional Meeting on Consistent Implementation of Regulation 14.1.3 of MARPOL Annex VI (ISWG-AP 1) it was agreed to recommend that MEPC 73 refer fuel oil safety related concerns to MSC 100 for further consideration. This document provides proposals to assist the Maritime Safety Committee to address these concerns and to improve safety. Importantly the co-sponsors emphasise that this is an existing safety matter, however it is expected to become more acute as a result of amendments to MARPOL Annex VI regulation 14 which enter into force on 1 January 2020.

Strategic Direction, if applicable:

Output:

Action to be taken: Paragraph 31

Related documents: MSC 98/23, MSC 99/22, MEPC 73/5, ISWG-AP 1/2/12, MEPC.1/Circ.875.

Introduction

1 At MSC.99 the Committee noted that MEPC 71 had instructed the PPR Sub-Committee to report safety issues related to low sulphur fuel oil to MSC and that an Intersessional Meeting on Consistent implementation of regulation 14.1.3 of MARPOL Annex VI had been scheduled for July 2018. The Committee further noted that the outcome of consideration of this matter at MEPC 73 would be reported to MSC 100 (MSC 99/22 2.2 – 2.3). The Committee had already taken an interest in fuel safety at MSC 97, and had invited the MEPC to provide it with relevant information on the matter with a view to ensuring that safety aspects were adequately covered (MSC 98/23 22.28).

2 The Intersessional Meeting on Consistent implementation of regulation 14.1.3 of MARPOL Annex VI considered a range of fuel oil safety related matters and recommended that MEPC 73 invite MSC 100 to consider the outcome of the meeting (MEPC 73/5 16 – 24).

3 The co-sponsors welcome the interest being taken by the Committee in fuel safety related matters, and the recognition of MEPC that safety issues related to fuel oils are within the purview of MSC. Although the Committee's interest is a response to safety concerns related to low sulphur fuels which will be used in order to comply with the revised MARPOL Annex VI regulation 14.1.3, the co-sponsors consider that fuel safety is an existing concern. However, these concerns will become more acute as a result of the expected diversification of fuel types which are expected to enter the market in response to these changes, as a result of which it has become a matter of urgency requiring the attention of the Committee.

Background

4 Fuel oil quality is a safety critical matter, this is already recognised in both the MARPOL and SOLAS Conventions. Document ISWG-AP 1/2/12 provided a summary of the effects of fuel quality on safety. Whether or not a fuel oil is safe will be determined by the physical composition and qualities of a particular fuel oil, by the requirements of machinery and by arrangements for fuel handling and treatment onboard.

5 MARPOL Annex VI regulation 18.3 prohibits adding any substance or chemical waste to fuel oil which:

- jeopardizes the safety of ships or adversely affects the performance of the machinery;
- is harmful to personnel; or
- contributes to additional air pollution.

This clearly establishes a framework for parties to MARPOL Annex VI under which they have jurisdiction with respect to the safety of fuel oil supplied within their territory.

6 SOLAS II-2 regulation 4.2 requires that fuel oils must have a flash point of 60°C or higher in order to reduce the risk of fires onboard. Ships are not allowed to use fuel with a flash point lower than 60°C unless they have been certificated in accordance with the IGF Code.

7 In addition to these provisions of the MARPOL and SOLAS Conventions, the international standard ISO 8217:2017 *Petroleum products -- Fuels (class F) -- Specifications of marine fuels* defines standard marine fuel oil grades and quality parameters.

8 If a fuel oil purchaser correctly specifies fuel of the desired grade within ISO 8217 then the fuel as delivered should be of an appropriate quality and safe to use. Unfortunately, experience indicates that this is not always the case.

9 Most fuel oil supplied to ships is of a satisfactory quality and safe to use, however the size of the market for marine fuel oil (approximately 300 million tonnes per annum) means that even a very small percentage of this total is still a significant issue.

10 For example, the co-sponsors draw attention to a series of linked problems reported this year in which a batch of off specification fuel oil in the US Gulf ports initially affected over 100 ships crewed by approximately 2000 seafarers. The effects included engine failure and damage to machinery and fuel handling equipment. The cause is believed to have been use of inappropriate cutter stock material, which was not identified by the standard fuel analysis

tests. It appears that some of this fuel oil was exported to bunker suppliers in Panama and Singapore, and by August it was estimated that over 200 ships had been affected.

11 Most of the major bunker ports are located within countries which are parties to MARPOL Annex VI, but this is not the case for all of them. For example, Fujairah can be expected to supply over 20 million tonnes of bunker fuel per annum and is located in a state (the United Arab Emirates) which is not a party to Annex VI. Had fuel oil safety been regulated via the SOLAS Convention may have provided wider coverage of bunker suppliers.

12 The standard fuel oil tests cannot identify all possible contaminants, this means that by the time the crew is aware of a problem the engine and fuel systems may already have been damaged and/or suffer degraded performance, presenting a risk to safety.

13 The consequences of a ship losing power as a result of blocked fuel filters, fuel pump failure, and failure of fuel separators or damage to the engine will be determined by the position of the ship and proximity to other ships or structures when power is lost. Even in cases where the engine continues to operate but with degraded performance, this may have the same consequences as a complete loss of power if the ship is in proximity to land in an area of strong currents or adverse weather. Although in most cases ships are able to safely anchor, or continue at reduced power while repairs are made or fuel systems reconfigured, in slightly different circumstances these incidents could have resulted in allision, collision or grounding.

14 Whether or not a particular fuel is appropriate for a ship is determined to some extent by the onboard arrangements, however, in all cases fuel oil must meet certain quality requirements and the fuel specifications provided by machinery suppliers. Classification society approvals for machinery and equipment are predicated on operators using fuel of appropriate quality.

15 Although safety is regulated by the SOLAS Convention, supported by other associated codes and classification society rules, aspects of fuel safety are regulated by the MARPOL Convention. Responsibility for this safety critical matter is therefore divided between two Committees.

Discussion

16 Concerns related to safety in no way affect the obligations to comply with any applicable environmental requirements. Fuel oil is to meet the requirements of MARPOL VI regulation 14, it is also to meet the requirements of MARPOL VI regulation 18 and SOLAS II-2.

17 The co-sponsors recognize the responsibility of fuel oil purchasers to correctly specify fuel oils they purchase, recognizing onboard fuel handling and treatment arrangements. Where a fuel oil purchaser correctly specifies the fuel oil to be supplied they should have confidence that it will meet the agreed specification and be compliant with applicable requirements of MARPOL and SOLAS. It is the responsibility of the fuel supplier to ensure that the fuel which is delivered complies with the agreed specification and applicable statutory requirements. This principle underpins the IMO *Guidance on Best Practice for Fuel Oil Purchasers/Users for Assuring the Quality of Fuel Oil Used on Board Ships* (MEPC.1/Circ.875, paragraph 1.2).

18 Fuel quality and safety is addressed in SOLAS II-2 and MARPOL Annex VI regulation 18. If satisfactorily applied these provisions would ensure that fuel supplied to ships is safe to use.

19 In spite of MARPOL Annex VI regulation 18 and the responsibility this places on parties to the annex there appears to be a widely held view that fuel oil quality is purely a commercial matter.

20 The co-sponsors recognize that IMO regulates ships, not fuel refiners and blenders, however parties to MARPOL Annex VI have accepted obligations under regulation 18 of the annex which extend their responsibilities to regulating the fuel supply chain. The safety of seafarers and ships requires these obligations to be properly fulfilled.

21 Addressing some aspects of fuel oil safety in the SOLAS Convention and others in the MARPOL Convention has resulted in a fractured regulatory structure for this safety critical matter, with a split of responsibility between the MEPC and MSC.

22 A lack of granularity in the IMO Global Integrated Shipping Information System (GISIS) module for MARPOL Annex VI regulation 18.9.6 means that in order to identify reports of unsafe fuel it is necessary to go through each report in turn.

23 MARPOL Annex VI regulation 18.9.1 requires parties to maintain a register of bunker suppliers, these registers are generally just supplier directories with no quality checks applied to gain admission to the register.

24 Fuel oil fuel quality could be improved and the safety risks associated with poor quality fuel oil mitigated if member states implemented fuel oil supplier licensing schemes. This would impose quality requirements on, and promote more effective regulation of, fuel oil suppliers. Such a scheme has been implemented in Singapore and it considered to have improved fuel oil supply chain assurance in that country.

25 Information regarding cases where unsafe fuel has been supplied should be more readily available, this could be addressed by making changes to GISIS to provide greater granularity and a search function.

26 As the organizations competent body for safety the co-sponsors consider that MSC should be responsible for decision making on fuel safety matters. This could be achieved either by amending the procedures of the Organization so as to make MSC responsible for those elements of MARPOL VI regulation 18 concerned with safety, or by inserting all fuel safety related requirements in the SOLAS Convention. Either of these approaches would separate safety and environmental matters by enabling a single Committee, MSC, dealing with all fuel safety matters. Conversely, a similar mechanism could be used in any potential cases where it could be necessary for MEPC to take responsibility for matters currently within the purview of MSC. This would, however, require a new work output to be agreed and extensive work to complete. Recognizing the urgency of the matter an alternative solution could be to issue an MSC circular providing guidance to Member States, pending a longer term solution. The co-sponsors would highlight that there are already precedents for the two Committees acting on matters of joint interest by means of issuing joint MSC-MEPC circulars.

Proposal

27 The co-sponsors propose that IMO should review MARPOL Annex VI regulation 18 to identify those requirements which are concerned with safety. The Organization could then consider either:

- Development of a mechanism to assign responsibility for these provisions to the MSC;
 - or
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- Appropriate regulatory amendments to incorporate these provisions within the SOLAS Convention.

Adopting either of these mechanisms would separate fuel oil safety from emissions to air and ensure that fuel safety matters were considered by MSC. MEPC would continue to regulate fuel oil matters which are related to environmental protection and emissions to air. Although this document is concerned with fuel safety, it is recognized that this is a wider issue, and there may be examples of other matters where either MSC or MEPC should be assigned responsibility for a matter currently within the purview of the other Committee.

28 The Organization should consider amending current requirement to maintain a register of bunker suppliers, replacing it a requirement that parties to the Annex establish bunker supplier licensing schemes. Details for these schemes, including fuel oil suppliers with the necessary accreditation could then be provided in GISIS.

29 GISIS should be improved to provide greater granularity of fuel quality and safety reports which are uploaded onto the system by creating a new GISIS module for fuel oil safety matters.

30. The co-sponsors recognize that the above proposals would take time to implement and would not solve immediate safety. The co-sponsors would therefore propose that, in the interim, the MSC adopts a MSC Circular which recommends that all Member States should take appropriate action to ensure that fuel supplier under their jurisdiction deliver fuels that comply with the agreed specifications and applicable statutory requirements as outlined in IMO Guidance on Best Practice for Fuel Oil Purchasers/Users for Assuring the Quality of Fuel Oil Used on Board Ships.

Action requested of the Committee

31 The Committee is invited to consider the proposals in paragraphs 27 – 30 and take action as appropriate.

