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107th session  
Agenda item 6

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**DEVELOPMENT OF FURTHER MEASURES TO ENHANCE THE SAFETY OF SHIPS  
RELATING TO THE USE OF FUEL OIL**

**Comments on document MSC 107/6 regarding sampling location**

**Submitted by IBIA**

**SUMMARY**

*Executive summary:* This document makes proposals to the draft MSC-MEPC guidelines for the sampling of oil fuel regarding the sampling location in order to take into account critical safety considerations, as well as practicality and alignment with established industry practice.

*Strategic direction, if applicable:* 1

*Output:* 1.29

*Action to be taken:* Paragraph 20

*Related document:* MSC 107/6

**Background**

1 This document is submitted in accordance with the provisions of paragraph 6.12.5 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.4) and provides comments on document MSC 107/6 containing the report of the Correspondence Group on Development of Further Measures to Enhance the Safety of Ships Relating to the Use of Fuel Oil.

2 At MSC 105, it was agreed to develop a joint MSC-MEPC circular to set up a common fuel sampling regime under SOLAS and MARPOL Conventions, taking into account resolution MEPC.182 (59), which contains the 2009 Guidelines for the sampling of fuel oil under MARPOL Annex VI. Annex 1 to document MSC 107/6 contains draft MSC-MEPC guidelines for the sampling of oil fuel. Both contain references to collecting a primary sample at the bunker manifold of the receiving ship.

**Discussion**

3 The most important aspect of the statutory sample to be retained by the ship is that it is representative of the fuel delivered, so it is essential that the sample is drawn by skilled personnel.

4 The sampling location outlined in MEPC.182(59) has always been a bone of contention. Shipping companies want the primary sample to be drawn at the bunker inlet manifold of the receiving ship, where the ship's crew may also obtain samples for their own fuel quality testing purposes. Fuel oil suppliers want to draw a primary sample from the bunker outlet manifold of the bunker tanker during delivery for both practical and safety reasons.

5 Bunker tanker crew routinely draw samples as part of their daily work, hence are best placed to be in charge of the sampling process. Ship crew will generally be much less experienced in ensuring that the sampling process produces a representative sample – potentially carrying out sampling operations only once/twice a month. In addition, the consistency regarding the individual members from the ship crew tasked with conducting the sampling operation can vary depending on other tasks requiring attention at the time, often leaving a less experienced crew member in charge of sampling.

6 The primary sample drawn at the bunker tanker outlet manifold is divided into sample bottles (sub-samples) to provide commercial samples (supplier's and ship's retained commercial samples). Typically, the supplier will also provide the statutory sample for the ship to retain onboard from this primary sample. These seal numbers will be recorded on the bunker delivery note (BDN).

7 Most suppliers draw the primary sample at the bunker tanker for both commercial and statutory purposes, unless local regulations require the primary sample to be drawn at the receiving ship. Suppliers may agree to sign and include the seal number on the BDN of a statutory sample drawn at the receiving ship, but in most cases refuse unless a supplier representative or jointly agreed surveyor has been able to be onboard the receiving ship to oversee and/or witness the sampling process. In view of the complexity and variability of sampling options, it is recommended that the T&Cs for sampling should be agreed in advance of delivery and communicated to all relevant parties.

8 Shipping companies are frustrated that suppliers often do not follow the guidelines in MEPC.182(59) to the letter regarding the sampling location. Such instances have been reported on the IMO's GISIS platform as a breach of Regulation 18.18.1 which states: "The bunker delivery note shall be accompanied by a representative sample of the fuel oil delivered taking into account guidelines developed by the Organization." In these instances, as long as the receiving ship has been provided with a representative sample of the fuel oil delivered, the fact that the sampling location was not at the receiving ship's manifold is not a regulatory breach, as guidelines are not mandatory.

9 From the supplier's point of view, locating the appropriate sampling equipment on the bunker tanker end of the bunker hose offers several advantages, including safe access by barge personnel and independent surveyors, and will in most cases be in clear view of all interested parties. It is also more efficient as the sampling equipment is often permanently fitted, reducing connection time and risk of damage.

10 Also of great importance is that the sampling process is witnessed by representatives for both the receiving ship and the supplier. In practice, a member of the ship's crew or a surveyor acting on their behalf will come onboard the bunker tanker to witness opening and closing gauging. That representative or surveyor can readily remain onboard the bunker tanker throughout the delivery to witness the sampling process.

11 In many situations, it is neither safe nor practical for a supplier's representative to come onboard the receiving ship to undertake and/or witness the sampling process. While this may be feasible in calm waters, it represents a major risk to personnel where bunkers are delivered in exposed anchorages or during deep-sea transfers. It needs to be recognized that, just as many owners will not require receiving vessel staff to go on board the supplying tanker for reasons of safety, liability and insurance cover, the same arguments apply to bunker tanker crew.

12 If using the services of a surveyor to oversee the sampling, companies offering such services also have strict rules to safeguard their staff that may prevent them from boarding the receiving ship. Their policies mean a surveyor will not be allowed to move from the bunker tanker to the receiving ship, and vice versa, if it is deemed unsafe.

13 If movement between the receiving ship and bunker tanker is unsafe, or not possible due to other restrictions, it may be possible for the ship's crew to witness the bunker tanker manifold remotely via binoculars, while the reverse is generally not the case as the ship's bunker inlet manifold will be out of view. Naturally, suppliers are reluctant to accept a sample drawn by the receiving ship's crew if they have not been able to witness the process. The responsibility for the quality of the product at the point of delivery lies with the supplier, so it is wholly reasonable that the supplier wants to retain control of the sampling process.

14 We should also point out that when delivering to large bulk carriers via a midship bunker connection, or to large crude carriers at their cargo manifold, there may be issues with effective sampling at the receiving vessel manifold if the receiving vessel is in ballast condition and trimmed heavily by the stern. In such circumstances, the gravitational flow effect of the oil flowing down the receiving vessel bunker line to the stern may cause a negative pressure difference on the upper part of the sample tube preventing consistent flow into the sampling container attached to the sampler. This problem does not occur if the sampler is at the bunker tanker end of the bunker hose as there is sufficient head pressure to permit a consistent sample flow.

15 The guidelines in MEPC.182(59) regarding the sampling location are not widely followed because they go against long-established industry practices, and fail to take into account the practicalities and safety reasons that favour taking samples at the bunker tanker end of the bunker hose.

16 The issue boils down to a lack of either communication, understanding or confidence on both sides that the sampling will be done correctly. This can be resolved by ensuring that the sampling process is witnessed by representatives for both the receiving ship and the supplier, or by surveyors acting on their behalf. Alternatively, the entire sampling process could be undertaken by an independent surveyor mutually agreed between the supplier and receiving ship. This principle would apply at either end of the bunker hose.

17 ISO 13739:2020, procedures for the transfer of petroleum products to ships, states: "A single sample should be jointly drawn continuously throughout the delivery, using a sampling device at the receiving vessel's inlet bunker manifold, see Annex VI of MARPOL, unless otherwise specified by the authorities having jurisdiction. Samples may also be taken from the bunker tanker outlet manifold in the event that there is an agreement between all parties concerned. It is recommended that the commercial samples and the MARPOL sample be derived from this single sample."

18 Prior to the 2020 revision, ISO 13739 stated that "A single sample shall be drawn continuously throughout the delivery, from either end of the bunker hose." The changed wording in the 2020 revision reflects pressure on ISO to align with the IMO guidelines. Both versions refer to using automatic or continuous drip sampling devices.

## Proposal

19 In light of the above discussion, to better reflect well-established industry practices and standards, taking into account the safety of crew on ships and bunker tankers, we propose amendments to the draft MSC-MEPC sampling guidelines in annex 1 to document MSC 107/6, as follows:

.1 "1 **Preface**

The primary objective of these Guidelines is to establish an agreed method to obtain a representative sample of the oil fuel ~~oil for combustion purposes~~ delivered for use on board ships for combustion purposes."

Representatives for the receiving ship and the oil fuel supplier should agree on a mutually acceptable way of taking samples in a safe manner, and the sampling location, prior to commencing the bunkering operation, taking into account local conditions and regulations.

.2 "3.4 Primary sample is the representative sample of the fuel delivered to the ship collected throughout the bunkering period obtained by the sampling equipment positioned at the bunker manifold of either the receiving ship or the bunker tanker as agreed in line with paragraph 1."

.3 "6 **Sampling location**

For the purpose of these Guidelines a sample of the fuel delivered to the ship should be obtained either at the receiving ship's inlet bunker manifold or at the bunker tanker's outlet bunker manifold, agreed in line with paragraph 1, and should be drawn continuously throughout the bunker delivery period."

## Action requested of the Committee

20 The Committee is invited to consider the information in this document, the proposal in paragraph 19, and take action as appropriate.

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