



SUB-COMMITTEE ON BULK LIQUIDS AND
GASES
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Agenda item 11

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**REVIEW OF RELEVANT NON-MANDATORY INSTRUMENTS AS A CONSEQUENCE OF
THE AMENDED MARPOL ANNEX VI AND THE NO_x TECHNICAL CODE**

**Observations and comments relating to the revised marine fuel specification
ISO 8217:2010**

Submitted by Norway and INTERTANKO

SUMMARY

<i>Executive summary:</i>	This document provides comments and suggestions in response to the discussions at MEPC 61 as reflected in paragraph 4.24 of the final report MEPC 61/24		
<i>Strategic direction:</i>	7.3		
<i>High-level action:</i>	7.3.1		
<i>Planned output:</i>	7.3.1.1		
<i>Action to be taken:</i>	Paragraph 19		
<i>Related documents:</i>	MEPC 61/24,	MEPC 61/4/7,	MEPC 61/4/9; MEPC 59/4/3; MEPC 60/4/42 and MEPC 61/4/1

Introduction

1 The Marine Environment Protection Committee, at its sixty-first session, agreed to instruct the BLG Sub-Committee to review the revised specification of marine fuels ISO 8217:2010, taking into account the proposals made in documents MEPC 61/4/7 (Norway and INTERTANKO), MEPC 61/4/9 (OCIMF) as well as the comments raised at that session. This document provides comments to the related documents and includes suggestions and recommendations for the review that the Sub-Committee will undertake.

2 The co-sponsors would first want to congratulate ISO on their successful and quick development of the new standard for marine fuels – ISO 8217:2010. New parameters and new limit values for some of the existing parameters of ISO 8217:2010 should improve the standard defining the quality of marine fuels.

3 In addition to an improved standard for marine fuels, the co-sponsors are of the opinion that there should be an effective monitoring/control system which should ensure that marine fuels delivered to ships do indeed comply with the standard. A proper monitoring of bunkers can be achieved by controlling certain of the "appropriate parameters" prior to delivery to ships.

4 To avoid any confusion, the "appropriate parameters" addressed are those recorded in annex 2 to document MEPC 59/4/3 (ISO) which includes the "appropriate parameters considered by ISO to be pertinent to fuel oil quality with respect to air quality, ship safety, crew health and engine performance". The co-sponsors see this list as jointly acknowledged by IMO and ISO. For easy reference, the list of these appropriate parameters is set out in the annex to this document.

5 The co-sponsors would like to offer the following comments on some of the issues that the BLG Sub-Committee was requested to consider (ref. document MEPC 61/24, paragraph 4.24), which were:

- .1 fuel oil quality is mainly a matter between the seller and the buyer, while regulations should be focussed on harmful emissions as well as health and safety;
- .2 fuel oil specification is only one element in a number of measures to secure the overall performance of marine diesel engines and to prevent harmful emissions;
- .3 fuel quality and ignition characteristics are a safety issue; and
- .4 a problem of measurement of H₂S in the vapour phase.

6 The co-sponsors consider that indeed the fuel oil quality is a matter between the seller and the buyer. However, at the same time, there are a number of "appropriate parameters" of the fuel oil specifications that have a significant health, safety and environmental impact. The co-sponsors suggest that there is a need and also a means for proper enforcement of regulations so that fuels delivered to ships do not harm the health of crews, do not risk the safety of the ship and its operations and do not result in harmful emissions.

7 The fuel oil specification is only one element in a number of measures to secure the overall performance of marine diesel engines but the veracity of the data in the fuel oil specification is an extremely important factor which secures the performance of marine diesel engines. Unfortunately, marine diesel engines are sometimes acutely damaged by the fuels they use. This is experienced every year by shipowners and such a fact can no longer be ignored.

8 Ship operators are responsible for maintenance and repair of engines. This is under their direct control and it is controlled by PSC and Administrations/ROs. But the composition and the quality of the bunkers delivered to ships is not under the ship operator's control. It is therefore important to give proper consideration to have an effective control mechanism for bunker quality as delivered to ships. The co-sponsors would strongly suggest that such a control mechanism should be mandated by the IMO regulations and it should cover all criteria identified by the joint ISO/IMO listing.

9 Fuel quality and ignition characteristics are indeed an important safety issue. Therefore, compliance with the limits on the appropriate criteria should be controlled. Currently, there is no internationally agreed system requiring authorities to control the quality of the bunkers delivered to ships and there is no evidence of such a control being performed by suppliers. Currently, the Bunker Delivery Note (BDN) contains only two appropriate parameters: the density of the bunker and its sulphur content as well as a general declaration by the supplier that the fuel is in conformity with the applicable paragraphs of regulations 14 and 18 of MARPOL Annex VI. This data is of little use with regard to safety as evidence is

neither required nor provided as to how such data was ascertained (e.g., test results) prior to fuel delivery on board. In addition, SOLAS regulation II-2/4.2.1.1 requires that the fuel used on board shall have a flashpoint of not less than 60°C, however, this parameter is not included in the BDN.

10 To address this matter, the co-sponsors would first like to make it clear that it is not our intention to propose that ISO 8217:2010 be made mandatory under Annex VI. Rather, we would suggest that only those parameters in ISO 8217:2010 which have been listed by ISO contained in the annex to this document or a selection from those, should be included in the BDN. The suggestion is not to require minimum or maximum limit values, but, to record in the BDN the actual values of these appropriate parameters for each bunker delivery.

11 There are a few important reasons to include some of these appropriate parameters in the BDN. ISO 8217 is a commercial standard and has no mandatory character. So, currently there are no control mechanisms to ensure that bunkers delivered to ships meet the expected criteria for the appropriate parameters jointly listed by IMO and ISO. Therefore, the fact that these relevant parameters are listed in ISO 8217 standard alone does not provide preventive means against possible negative impacts on crew health, ship safety and environmental protection, which were the primary scope of the IMO/ISO list of appropriate parameters.

12 The current enforcement system required by MARPOL Annex VI needs to be improved. In practice, there is no quality control of bunkers delivered to ships except for the testing arranged by ship operators. Test laboratories do their job promptly, but the results of the fuel analysis are released long after the bunkers have been delivered on board ships. In addition, the tests are done on the so-called commercial samples and are part of ship owners'/buyers' commercial arrangements with laboratories. Sometimes, the validity of such test results is contested by port authorities. Further, some suppliers do not always accept results from tests performed even by these reputable laboratories although the sample tested is derived as a sub-sample from the same primary sample from which the "MARPOL" sample is obtained.

13 Consequently, the co-sponsors invite the Sub-Committee to consider actions which could promote a new approach to the control of bunkers with two-fold objectives: to propose a mechanism, which will ensure preventive/defence measures in case the bunker supplied is off spec and to prevent supply of off-spec bunkers.

14 The co-sponsors believe that marine fuel's compliance with IMO requirements should be the responsibility of the suppliers and under the control of local authorities. To that extent, the co-sponsors suggest the Sub-Committee considers possible actions to ensure both stricter enforcement and improvement of regulation 18 of MARPOL Annex VI. Some concrete suggestions are:

.1 Stricter enforcement of regulation 18 of MARPOL Annex VI:

- .1 Port Authorities should introduce specific criteria and requirements for the operation of local bunker suppliers with the objective to ensure that suppliers have in place, procedures to confirm that fuel supplied to vessels is in compliance with the IMO requirements. Excellent examples to follow are the Singapore MPA Code of Practice for Bunkering (SS600:2008) and their Accreditation Scheme for Bunker Suppliers which require suppliers to have a system compliant with the MPA's Quality Management for Bunker Supply Chain (SS524:2006);

- .2 Port Authorities should make registries of locally recognized bunker suppliers available to the IMO and the IMO should publish these on its website;
 - .3 Port Authorities should audit/inspect the local suppliers and report the results of investigations and follow-up actions in response to any Note of Protest from ships of non-compliant fuel delivered in their jurisdiction; and
 - .4 Port Authorities should forbid fuel blending on board supply barges and during delivery to the ship. When such practices are undertaken (currently in majority of ports), it is impossible to issue actual data for a BDN and to guarantee compliance of the blend with regulations 14 and 18 of MARPOL Annex VI.
- .2 Improvement of regulation 18 of MARPOL Annex VI:
- .1 Include in the BDN selected parameters from the list of appropriate parameters ISO considers relevant to seafarers' health, safety of the ship and air emissions; and
 - .2 Port Authorities set up an effective control system for checking the registered bunker suppliers' performance and particularly for compliance of bunkers prior to delivery to ships. This should ensure that off-spec bunkers are not delivered to ships and, if that still happens, ships are not held responsible but, bunker suppliers apply corrective measures to avoid such a repetition.

15 The co-sponsors would suggest the Sub-Committee considers an additional step to improve quality of bunkers delivered to ships with an immediate and significant environmental benefit. Residual fuels should be treated onshore (i.e. purification) prior to delivery to ships and delivered to a ship as an immediately usable product. Such a measure will also result in a significant reduction of onboard waste, a better sludge management for water pollution prevention and thus a significant reduction of the risk of operational discharges at sea. In practice, all ships could minimize their waste to such an extent that ships could get close to attaining a potential zero operational pollution.

16 The co-sponsors agree with the view expressed by OCIMF in document MEPC 61/4/9 that the level of H₂S in supplied marine fuels should be kept as low as possible, and it should be measured in the vapour phase using a prescribed standard method reflecting normal operational conditions of pressure and temperature. ISGOTT makes all references of H₂S concentration in gas phase rather than in liquid phase as stated in the ISO 8217:2010. Since ISGOTT is primarily the tanker industry publication that addresses the safety and handling of H₂S, such guidance may not be known by all types of ships. The co-sponsors will suggest that general guidance be produced for general shipboard use to satisfy the information and recommendations from ISO in document MEPC 61/4/1 that "it is critical that shipowners and operators continue to maintain appropriate safety processes and procedures designed to protect the crew and others (e.g., surveyors) who can be exposed to H₂S vapour" (ISO 8217:2010, section 6.1 a).

17 The co-sponsors are strongly of the view that some of the values of the relevant parameters of marine fuel oils under discussion are of vital importance to crew health, ship safety and environmental protection. Therefore, the Sub-Committee should recognize the need for an effective control system which will ensure that marine fuels delivered to ships do

meet these relevant parameters. Retroactive testing performed by shipowners after the fuel is delivered to ships is not the adequate solution. Bunker suppliers have the responsibility to ensure that the fuel delivered to ships complies with the required standards and States should have in place an effective mechanism to control this activity.

18 In this regard, the co-sponsors invite the Sub-Committee to consider making the following recommendations to MEPC 62:

- .1 strengthen the current provisions in regulation 18 of MARPOL Annex VI as suggested in paragraph 14.1 of this document;
- .2 improve the control on marine fuels prior to delivery to ships as suggested in paragraph 14.2 of this document;
- .3 consider the significant environmental benefit if residual fuels are treated on shore installations as it is suggested in paragraph 15 of this document; and
- .4 consider the inadequacy of the H₂S limit provided in ISO 8217:2010 (in liquid phase) which could impose serious risks to crew health and therefore, suggest MEPC 62 may consider the need to set a requirement for the maximum H₂S limit in the vapour phase and to develop guidance as now provided by ISGOTT.

Action requested of the Sub-Committee

19 The Sub-Committee is invited to consider the comments and the suggestions in this document summarized in paragraph 18 and take action as appropriate.

ANNEX

"APPROPRIATE PARAMETERS CONSIDERED BY ISO TO BE PERTINENT TO FUEL OIL QUALITY WITH RESPECT TO AIR QUALITY, SHIP SAFETY, CREW HEALTH AND ENGINE PERFORMANCE"

extracted from annex 2 to document MEPC 59/4/3 (ISO)

Density at 15°C
Kinematic Viscosity (marine fuels with viscosities higher than 700 m²/s should be allowed)
Vanadium
Aluminium plus Silicon
Cetane Index
Ignition Quality (CCAI)
Fuel Stability
Flash Point *
Pour Point
Water
Sodium
Acid Number
Lubricity HFRR
Micro Carbon Residue
Ash
Sulphur**
Appearance (for transparent fuels)
Used lubricating oil (ULO)***

- Zinc
- Phosphorus
- Calcium

Hydrogen Sulphide****

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- * - minimum value required under SOLAS chapter II-2, regulation 4.2.1.1.
** - maximum value required under MARPOL Annex VI, regulation 14.
*** - free of such elements as required by MARPOL Annex VI, regulation 18.
**** - value required to be given by SOLAS regulation VI/5-1.
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