

# International Regulation News Update

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## Marine Environment Protection Committee's 73<sup>rd</sup> Session

(22 to 26 October 2018)

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*(All Ships includes all marine craft including barges, drill rigs, submersibles, and floating platforms)*

The 73<sup>rd</sup> session of the Marine Environment Protection Committee met in London from 22 to 26 October 2018. This Update provides additional information to that reported in the MEPC 73 Brief, issued on 26 October 2018.

## MARPOL AMENDMENTS ADOPTED

### MARPOL Annex VI (Non-Compliant Fuel Oil)

Concluding long-term efforts to limit sulphur concentration in fuel oils used onboard ships, the Committee adopted resolution MEPC.305(73) containing amendments to MARPOL Annex VI, Regulation 14, to prohibit the carriage of non-compliance fuel oil for combustion purposes for propulsion or operation onboard a ship, with regard to the global 0.50% sulphur limit standard for fuel oil by 2020. Related amendments were made to the Supplement to the IAPP Certificate which correlate with the 2020 sulphur limit including a specific entry to be used when it has been confirmed that the fuel oil carried for use on board a ship (not fitted with an approved equivalent arrangement) does not exceed 0.50% m/m as documented by the bunker delivery notes.

At the recent 6<sup>th</sup> session of the Sub-Committee on Pollution Prevention and Response, a draft Unified Interpretation was agreed (subject to approval at MEPC 74 in May 2019) to clarify that the carriage ban adopted in MARPOL Annex VI / Regulation 14 applies also to fuel oil for the emergency equipment onboard, such as emergency fire pumps or emergency generators.

## AIR POLLUTION AND ENERGY EFFICIENCY

For further information on compliance with the IMO 2020 Global Sulphur Cap, please visit [ABS Environmental Compliance](#)

### Ship Implementation Plans

In support of the transition to fuels which will be compliant with the 0.50% global sulphur limit, the Committee approved circular MEPC.1/Circ.878 to provide guidance for the development of a Ship Implementation Plan to address how the ship may prepare for the 1 January 2020 implementation date. The Ship Implementation Plan would also provide guidance for managing future operations involving fuel procurement, system requirements for changeover to compliant fuels, and risk assessment and mitigation plans.

The Plan should also address issues relating to the use of compliant fuel oil which include the capability of the ship's equipment to handle different fuel types and associated characteristics, heating requirements, compatibility of different types which are commingled in bunkering or fuel oil changeover and crew preparedness/training for changeover procedures during fuel switching from residual fuel oil to 0.50% compliant fuel oils.

While this plan is currently a non-mandatory document, ship owners may wish to consider the development of such a plan to ensure a smooth transition from conventional residual fuel oils to 0.50% sulphur compliant fuels. Preparation of a Ship Implementation Plan requires assessment of the changeover's impact of machinery and systems. Any system or equipment modifications, required due to a vessel's transition to use of 0.50% sulphur compliant fuels, must be submitted for approval.

### Best Practices for Fuel Oil Suppliers

In support of the effective implementation of the 2020 Global Sulphur Limit for fuel oil, the Committee also approved new MEPC.1/Circ.875/Add.1 on *Guidance on best practice for fuel oil suppliers for assuring quality of fuel oil delivered to ships*. This circular provides guidance on quality control during production, storage, and transfer of fuel oil, as well as representative sampling and documentation required to aid contracting vessels in their compliance. This guidance has been produced to clarify the supplier's role in ensuring that fuel oil being purchased will enable vessels to remain in compliance with the 0.50% sulphur limit. To afford transparency and traceability in the supply chain, records of custody transfer of cargoes, certificates of quality, sample seal numbers and quality analysis reports should be documented.

In addition, the Committee approved circular MEPC.1/Circ.880 on *Reporting of Availability of Compliant Fuel Oils in Accordance with Regulation 18.1 of MARPOL Annex VI*. Under regulation 18 of MARPOL Annex VI, signatory States are obligated to notify industry of the type and sulphur content of fuel oil available at ports and terminals within their jurisdiction. A module on the IMO GISIS database has been created for

this purpose and can be accessed at <https://gis.imo.org> .

### **EEDI Guidelines - Updates**

Through resolution MEPC.308(73), the Committee adopted the new *2018 Guidelines on the Method of Calculation of the Attained Energy Efficiency Design Index (EEDI) for New Ships*. These new 2018 Guidelines supersede the 2014 version, and also provide a paragraph renumbering to make them more user-friendly. Changes also include a revised correction factor ( $f_i$ ) for power for ice classed ships, and an alternative calculation method for ice classed ship designed and constructed based on an open water ship with same shape and size of hull with EEDI Certification.

The Committee also adopted resolution MEPC.309(73) which contains amendments to the *2014 Guidelines on Survey and Certification of the Energy Efficiency Design Index (EEDI)*. The amendments are intended to take into account the 2017 update of the International Towing Tank Conference Recommended Procedure 7.5-04-01-01.1, and the paragraphs renumbering of the 2018 EEDI calculation Guidelines. The major updates of the ITTC Recommended Procedure contain improvements of the methods for corrections of wind, waves, current, shallow water, seawater temperature and water density.

### **Phase 3 EEDI Reduction Factors**

Regarding future revisions to the Phase 3 EEDI Reduction Factors, the Committee agreed in principle to draft revisions which would bring into effect the following:

- 1) Application of Phase 3 reduction factors would be accelerated from 1 January 2025 to 1 January 2022, for the following vessel types: Container ships, General cargo ships, Gas carriers, Refrigerated cargo carriers, Combination carriers, LNG carriers, and Cruise passenger ships with non-conventional propulsion.
- 2) Phase 3 reduction factor for container ships to be increased from 30% to 40%.

Concerns have been raised about the ability of Bulk Carriers and Tankers to comply with the

current Phase 3 reduction factors, but no revision to these reduction factors has been agreed at this point.

Submission of data to MEPC 74 is needed to substantiate these proposed revisions to MARPOL Annex VI, Chapter 4.

### **BALLAST WATER MANAGEMENT**

*For further information on ballast water compliance, please visit [ABS Ballast Water Management](#)*

### **BWM System Commissioning Tests**

The Committee approved circular BWM.2/Circ.70, which provides guidance for validation of individual ballast water management systems at the time of system commissioning onboard a vessel. This guidance recommends that the International Ballast Water Management Certificate should not be issued to a vessel until such a commissioning test has been completed. The test is to be carried out using local waters, with samples taken in accordance with IMO's G2 Guidelines for sampling (MEPC.173(58)) and analyzed using, as a minimum, indicative analysis methods as listed in table 3 of BWM.2/Circ.42/Rev.1. If the local waters are not compatible with the installed system due to a system design limitation (e.g., salinity of the local waters), then an alternative commissioning testing or alternative time/location to complete the testing must be agreed upon with the Administration.

The intention of this commissioning test is not to validate the Type Approval of the system, but rather to confirm that the system's principal method of ballast water treatment (mechanical, physical, chemical and biological processes) is functioning, self-monitoring equipment is indicating correct operation, and samples obtained do not exceed the D-2 biological standard based on the indicative analysis.

### **BWM System Design Limitations**

To improve consistency in the Type Approvals issued under the Code for Approval of BWM Systems (MEPC.300(72)), the Committee approved the new circular BWM.2/Circ.69 which addresses the application of the System Design

Limitations (SDL) approach to the BWMS type-approval process. This new circular identifies 11 different ballast water treatment technologies, and it describes for each technology the SDL's that are typical of such systems, as well as the control and monitoring parameters which are part of the system's operation. The intent of this guidance is to provide a minimum scope for describing the limits and operational control features of a ballast water treatment system, which should be communicated transparently through the system's Type Approval Certificate.

### Ballast Water Contingency Measures

The Committee adopted resolution MEPC.306(73) containing an amendment to the G4 Guidelines for Development of BWM Plans. The amendment includes a recommendation that new BWM Plans may include contingency measures to be taken in the event of a ballast water management system failure, or if it is determined that the ballast water to be discharged is not compliant with the D-2 biological standard. The development of such contingency measures should be based on BWM.2/Circ.62, *Guidance on Contingency Measures under the BWM Convention*. The contingency measures should support both the crew and port States to apply practical measures in the case of a ship which is unable to manage ballast water in accordance with its Ballast Water Management Plan, so that it does not pose any unacceptable risks to the environment, human health, property and resources.

### Ballast Water System Approvals

*Final approval* was granted for the *Envirocleanse inTank™* ballast water treatment system submitted by Norway (MEPC 73/4/1). The system generates hypochlorous acid by electrochemical activation in a fully closed system, which is dosed as an Active Substance into ballast water after uptake. Hydrogen gas generated in this process is passed through a degasser before being vented to the atmosphere in a location away from potential sources of ignition. To prevent organism regrowth, residual oxidant levels in ballast water are monitored during carriage in tanks, typically 12 to 24 hours after update is complete. Prior to discharge, appropriate amounts of sodium thiosulfate are introduced to neutralize any remaining oxidant. Treatment and neutralization

time depends on tank circulation and mixing that is designed for each tank configuration.

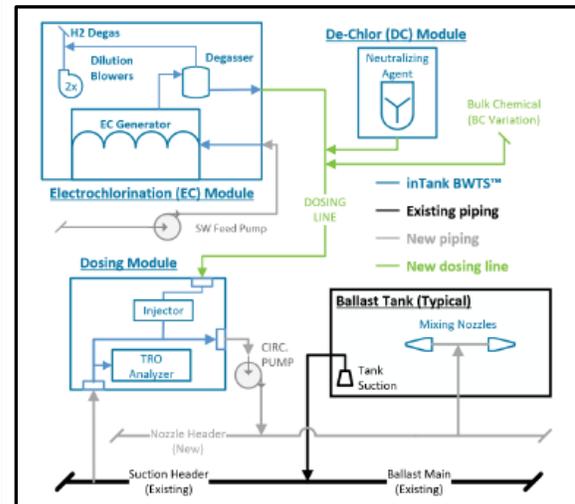


Figure 1 - Envirocleanse inTank™ BWTS

*Basic approval* was granted for the *BIOBALLAST 1000* ballast water management system submitted by Germany (MEPC 73/4). This system treats ballast water by ozone during the uptake and, when needed, neutralization with sodium thiosulfate at discharge. Compressed air is used to produce pure oxygen that is stored in a process oxygen tank and used by the ozone generator. No filtration is used other than a debris-filter at the ballast water sea chest.

### MISCELLANEOUS

#### GHG Reduction Efforts

The Committee approved a program of follow-up actions to implement the recently adopted *IMO Initial Strategy on Reduction of GHG Emissions from Ships* (MEPC.304(72)). The Initial Strategy is the first milestone set out in the Roadmap for developing a comprehensive IMO Strategy on reduction of GHG emissions from ships, and is intended to drive change by providing greater confidence to industry and send a strong signal to stimulate investment in the development of alternative fuels and new technologies.

These activities are a planning tool on the work for the Committee and Sub-Committees to undertake in meeting the timelines identified in the Initial Strategy which are to be completed in 2023. The follow-up actions include:

- “Group A” candidate short-term measures for GHG emission reduction, which can be addressed under existing IMO regulations;
- “Group B” candidate short-term measures which are not yet in progress and would be subject to data analysis;
- “Group C” candidate short-term measures which are not yet in progress and would not be subject to data analysis;
- Consideration of candidate mid-term and long-term measures for GHG reduction;
- Fourth IMO GHG Study

The Committee initiated the *4th IMO GHG Study* on emissions of six specific greenhouse gases from ships of 100GT and above engaged in international voyages. Technical and methodological aspects of the study will be subject to review by an Expert Workshop to be held in March 2019. GHG emissions from global shipping activity over a five-year period (2013 to 2018) will be estimated by two different methods: a “top-down” methodology based on fuel sales and shipping demand, subject to data availability; and a “bottom-up” methodology based on data on ship activity for that period. Additionally, emissions estimates are to be projected out to 2050 and beyond, and the results of both methodologies will be compared and any discrepancies addressed as far as possible.

#### **MARPOL Annex VI (Fuel Oil Data Collection)**

Amendments to Chapter 4 of MARPOL Annex VI have recently come into force, requiring that all ships of 5000 GT and above on international voyages collect and report specific data related to fuel consumption beginning on January 1, 2019.

The Committee approved three unified interpretations as MEPC.1/Circ.795/Rev.3 which pertain to implementation, collection and reporting ship specific data related to fuel consumption which begins on 1 January 2019 under the provisions of MARPOL Annex VI, Chapter 4, as per resolution MEPC.278(70). These three interpretations are:

- Data relating to Boil-off Gas (BOG) consumed on board the ship for propulsion or operation is to be collected and reported as

fuel consumed under the Data Collection System.

- Ships which have their keel laid prior to 1 January 2019 (the start of the initial period that fuel data is to be collected) but are delivered on or after 1 January 2019 should be provided with a Ship Energy Efficiency Management Plan (SEEMP) that includes a description of the methodology that will be used to collect the fuel consumption data required by regulation MARPOL VI, regulation 22A.
- Fuel consumption source data, which is used to provide the aggregate data to be reported to the IMO, is not required to be kept onboard the vessel on the condition that access to the source data can be provided by the Company.

For additional assistance with meeting IMO Data Collection System requirements, please contact: [environmentalperformance@eagle.org](mailto:environmentalperformance@eagle.org)

#### **Guidelines for applying MARPOL Annex I to FPSOs**

The 2018 Guidelines for the Application of MARPOL Annex I Requirements to FPSOs and FSUs were adopted by the committee at MEPC 73, through resolution MEPC.311(73). This provides an updated version of the guidelines on this subject, which was last amended in March 2006 as per resolution MEPC.142(54). This latest version of the guidelines includes updates to clarify the application of MARPOL Annex I amendments that have entered into force since the previous edition. These include requirements for stability instruments, access to stability and residual strength calculations and the transfer of oil cargo between oil tankers at sea (STS operations).

#### **Electronic Record Books**

Concerning the acceptability of using electronic record books in lieu of paper record books, the Committee approved, with a view to adoption at MEPC 74 in May 2019, several draft amendments to MARPOL to permit the use and maintenance of the following record books in electronic format:

- MARPOL Annex I - Oil Record Book, parts I and II

- MARPOL Annex II - NLS Cargo Record Book
- MARPOL Annex V - Garbage Record Book
- MARPOL Annex VI - Ozone-depleting substances record book; logbook for on/off status of marine diesel engines for NOx Code Tier Standards; and logbook for fuel oil change-over operation when entering the ECA

While the current schedule for adoption of these amendments will have them entering into force in January 2021, two issues must be clarified before the transition to electronic record books:

- 1) The need for related hardware to be type-approved; and
- 2) The acceptance of an ODS recording system which has not been approved.

Guidelines for the use of electronic record books under MARPOL have also been drafted, and this subject will be discussed further at MEPC 74.

### Marine Plastic Litter from Shipping

Recognizing the negative impacts that plastic litter has on marine life, human health, tourism and fisheries, the Committee adopted a resolution MEPC.310(73) which contains an Action Plan to Address Marine Plastic Litter from Ships.

While MARPOL Annex V already prohibits the dumping of various wastes into the sea, including plastics, it has been recognized that plastic litter in the marine environment presents a challenge due to its low degradability and likelihood to enter the human food chain, and so IMO has decided to give attention to address shipping's contribution to marine plastic litter.

The actions identified by the Plan are projected to be completed by 2025 and include:

- mandate application of the IMO Ship Identification Number Scheme for fishing vessels, and requiring that all fishing gear be marked with the vessel's associated identification number;
- revise MARPOL Annex V to require ships greater than 100 GT (currently 400 GT) to maintain on board a Garbage Record Book;
- require that Garbage Management Plans be approved under MARPOL Annex V;
- develop a mandatory system of reporting loss of containers at sea;

- improve the effectiveness of port reception and treatment facilities for marine plastic litter.

A correspondence group has been established to determine the most appropriate mechanism (literature review and/or a quantitative study) for a proposed IMO Study on marine plastic litter from ships, and to identify issues to be addressed by the Study and all international regulatory instruments and best practices associated with the issue of marine plastic litter from ships.

### Exhaust Gas Recirculation Bleed-off Water

The Committee adopted resolution MEPC.307(73) containing the *2018 Guidelines on Exhaust Gas Recirculation (EGR) Bleed-off Water*. The Guidelines apply to marine diesel engines, fitted with an EGR device having a bleed-off water discharge arrangement, that are initially certified under the NOx Code on or after 1 June 2019.

The condensate of exhaust gas is generated and discharged as bleed-off water, which is handled differently depending on the fuel oil sulphur content:

- Bleed-off water, from an EGR using fuel oil not complying with the relevant sulphur limit value in MARPOL VI, should be retained onboard in a holding tank. However, it may be discharged to the sea provided the ship is en-route outside polar waters, ports, harbors or estuaries and provided the bleed-off water meets the washwater discharge criteria under the 2015 Guidelines for Exhaust Gas Cleaning Systems (MEPC.259(68)) and that samples are provided to the Administration.
- Bleed-off water, from an EGR using fuel oil complying with the relevant sulphur limit value in MARPOL VI, should either (a) meet the same requirements for EGR using non-compliant fuel oil; or (b) or may be discharged to the sea provided its oil content is monitored to not exceed 15 ppm by an oil content meter that is type approved under resolution MEPC.107(49).

### Revised NLS Carriage Requirements

The Committee approved draft amendments to MARPOL Annex II and the IBC Code concerning carriage and discharge requirements for certain noxious liquid substances classified under Chapter 17 of the IBC Code. Subject to adoption by MEPC 74 and MSC 101 this year, the amendments are scheduled to enter into force in 2021.

Under new regulations 13.7.1.4 and 13.9 of MARPOL Annex II, products that are persistent floaters with a viscosity equal to or greater than 50 mPa•s at 20oC and/or have a melting point equal to or greater than 0oC will be subject to prewash requirements when they are unloaded at ports in the North Sea, the Irish Sea and its approaches, the Celtic Sea, the English Channel and part of the North East Atlantic immediately to the west of Ireland. Current discharge requirements for tank residues remain applicable

Under the IBC Code amendments:

- ships hauling products that are prone to H<sub>2</sub>S formation are to be fitted with H<sub>2</sub>S detection equipment (two products have been identified in Chapter 17: Offshore contaminated bulk liquid S and Sodium hydrosulphide/Ammonium sulphide solution);
- an increased number of products have been classified as Toxic and as a consequence are subjected to vapour detection and control requirements as well as tank location for such products under regulation 15.12. Of the big movers, it is noted that Methanol is exempted from the prohibition of being located adjacent to bunker tanks; and
- certain products in Chapter 17 have been identified as being required to meet the prewash and residue discharge requirements when operating in the European regions described above under MARPOL II, regulation 13.