

Recent Topics at IMO

— Outline of Discussion at IMO Committees —

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1. INTRODUCTION

This article introduces recent topics discussed at International Maritime Organization (IMO). At the previous issue, a summary of the topics discussed at 78th Marine Environment Protection Committee (MEPC 78) held in June 2022 and 105th Maritime Safety Committee (MSC 105) held in April 2022 was provided.

This article provides a summary of the decisions taken at 79th Marine Environment Protection Committee (MEPC 79) held from 12 to 16 December 2022 and 106th Maritime Safety Committee (MSC 106) held from 2 to 11 November 2022 as below.

2. OUTCOMES OF MEPC 79

2.1 Greenhouse Gases (GHG) Emission Reduction Measures

Reduction of greenhouse gas (GHG) emissions to address global warming is a universal challenge, and the measures to reduce GHG emissions from international shipping have been deliberated at IMO. Such measures introduced at the IMO so far include the regulation of “Energy Efficiency Design/Existing Ship Index” (EEDI/EEXI), retaining of the “Ship Energy Efficiency Management Plan” (SEEMP) onboard, and rating by “Carbon Intensity Indicator” (CII).

Furthermore, taking the adoption of the Initial IMO Strategy on the reduction of GHG emissions from ships, which includes the emission reduction target and the candidate measures to reduce GHG emissions, the IMO continues to discuss on measures to reduce GHG emissions in order to decarbonize the international shipping.

2.1.1 Amendments to the Guidelines on the Method of Calculation of the Attained EEDI for New Ships

Taking the increasing demand for using ethane as a ship fuel, particularly for ethane carriers, 2022 Guidelines on the method of calculation of the attained EEDI for new ships were adopted to include the lower calorific value and conversion factor (CF) of ethane.

2.1.2 Amendments to the Guidelines on Survey and Certification of the EEDI

The calculation of EEDI requires the calculation of ship speed based on the speed trial results, by assuming that the weather is calm with no wind and no waves. The current Guidelines on survey and certification of the EEDI refers to ITTC Recommended Procedure 7.5-04-01-01.1 Speed and Power Trials 2017 (hereafter referred to as 2017 ITTC Procedure) or ISO 15016:2015 for determining ship speed taking into account the external effects (wind, current, waves, shallow water, displacement, water temperature and water density).

Since the revisions of ITTC Procedure are available, MEPC 79 adopted 2022 Guidelines to refer to the amended 2022 ITTC Procedure as well as 2017 ITTC Procedure.

2.1.3 EEDI Phase 4

Regulation 24.6 of MARPOL Annex VI keeps the IMO review the status of technological developments and, if proven necessary, amend the reduction rates etc. set out in the regulation. In accordance with the regulation, MEPC established the Correspondence Group to continue its work on the possible introduction of EEDI Phase 4.

Based on the final report of the Correspondence Group, MEPC 79 concluded that the introduction of EEDI Phase 4 should be carefully pursued at a future session, due to the fact that further investigations are required on regulations for both new propulsion technologies such as alternative fuels and wind energy that would affect application of EEDI Phase 4 and also additional regulatory scope taking into account the IMO Strategy on the reduction of GHG emissions from ships.

2.1.4 Carbon Intensity Indicator (CII)

CII is a rating mechanism for ships, which compares the attained CII, calculated based on the operational fuel consumption data collected from the IMO Data Collection System for fuel oil consumption of ships (DCS), with the CII reference lines.

MEPC 79 approved the following unified interpretations related to CII and DCS:

- If a ship is delivered in October or later, the rating based on the data between the delivery date and the end of that calendar year will not be counted for the determination of whether the ship should develop a Corrective Action Plan (i.e., a ship rated as D for three consecutive years or rated as E for one year).
- In case of a change of company, a new ship operational carbon intensity plan (SEEMP Part III) will be required to be submitted for the verification by the new company, where the year of change is the starting year of the three-year implementation plan.
- The Corrective Action Plan to achieve the required annual operational CII for a ship with an inferior rating (i.e., a ship rated as D for three consecutive years or rated as E for one year) should be developed to achieve the required CII for data collected in the second calendar year after the reporting year that resulted in such inferior rating.
- Data relating to boil-off gas (BOG) consumed onboard LNG-fueled ships or LNG carriers for propulsion or operation (including BOG burnt in a Gas Combustion Unit (GCU) for cargo tank pressure control or other operational purposes) is required to be collected and reported as fuel oil consumption as part of the IMO DCS.

2.1.5 Onboard Carbon Capture Systems

There have been initiatives to develop methods for reducing GHG emissions by segregating and capturing carbon dioxide (CO₂) from exhaust gases onboard ships.

At this session, a proposal was made that the amount of CO₂ captured by CO₂ Capture Systems should be taken into consideration when calculating the attained EEDI/EEXI and CII. Due to the time constraints, MEPC 79 agreed that the discussion will be continued at the next session.

2.1.6 Revision of the Initial IMO Strategy on the Reduction of GHG Emissions from Ships

The Initial IMO Strategy on the reduction of GHG emissions from ships (hereafter referred to as the Initial IMO Strategy), adopted in 2018, envisages to improve transportation efficiency by at least 40% by 2030, pursuing efforts towards 70% by 2050, and also aims for the total annual emissions from international shipping reduced by at least 50% by 2050 compared to 2008. The IMO Strategy is subject to a review every five years.

Up until the last session, it was recognized that the aforementioned GHG reduction target should be improved and therefore agreed that the Initial IMO Strategy is subject to a review, aiming for adoption of the revision at MEPC 80 to be held in July 2023.

At this session, there were comments advising either zero GHG emission or net-zero GHG emission (practically zero by deducting the amount of GHG absorbed by forests from those emitted) and proposals such as to introduce a new target for GHG reduction by 2040. On the other hand, there were also comments advising that setting a new goal would necessitate a valid scientific background and therefore the GHG reduction goals in the current Initial IMO Strategy should be kept. In conclusion, MEPC 79 agreed to continue the revision process of the Initial IMO Strategy, aiming for adoption at MEPC 80.

2.1.7 Mid-term Measures for Reduction of GHG

The Initial IMO Strategy contains a list of measures such as market-based measures (MBM) etc. to achieve mid- and long-term GHG reduction goals. To proceed with the consideration of such measures, MEPC 76, held in 2021, developed the work plan shown as follows:

Phase I (2021-2022):	Collation and initial consideration of proposals for measures
Phase II (2022-2023):	Assessment and selection of measures to further develop
Phase III (2023):	Development of measures for statutory requirements

At this session, there were a number of supports to the comments suggesting the adoption of GHG reduction measures that combine both regulatory and market-based measures, and therefore MEPC 79 agreed to the plan to conclude the work item in Phase II (assessment of measures) at MEPC 80. The mid-term measures proposed so far include the following:

Regulatory Measures

- GHG Fuel Standard (GFS)

Each ship calculates GFS value, expressed in the mass of GHG emissions per unit of energy used (gCO₂e/MJ). Reduction factor for GFS will be enhanced year by year.

Market-based Measures

- Feebate

Ships using fossil fuels pay for the levy and ships using zero-emission fuels receive rebate.

- GHG Levy
Ships pay GHG levy for US\$100 per tonne of marine fuel. The revenue will be funded to climate change mitigation and adaptation projects under UNFCCC, and subsidized to R&D projects for new technologies under IMO.
- International Maritime Sustainability Funding and Reward (IMSF&R)
Using CII mechanism, ships above upper benchmark level pay funding contributions and ships below lower benchmark level receive rewards.
- Funding and Reward (F&R)
Ships pay funding contributions according to the amount of CO₂ emissions from ships and ships using eligible alternative fuels receive rewards.
- Emission Cap-and-Trade System (ECTS)
Based on the annual cap on GHG emissions, each ship is required to acquire and surrender allowances for GHG emissions by auctioning.

2.2 BWM Convention

2.2.1 Application of BWM Convention to Ships Operating at Ports with Challenging Water Quality

With regard to the use of ballast water treatment systems (BWMS), as there are ports with challenging water quality that make it difficult to operate BWMS continuously, there has been a proposal to allow that ballast water is taken without passing through BWMS in such ports, and employing ballast water exchange plus treatment (BWE + BWT) at areas where the treatment system can operate normally.

At this session, it was suggested that the criteria such as for the “challenging water quality” affecting continuous normal operation of the BWMS should be clearly defined. MEPC 79 agreed to continue the discussion at the next session.

2.2.2 Temporary Storage of Treated Sewage and Grey Water

The prohibition on the discharge of treated sewage and grey water at certain ports has led to temporary storage of treated sewage and grey water in ballast tanks.

At this session, it was endorsed that the BWM Convention did not preclude the temporary storage of grey water or treated sewage in ballast tanks and this storage should be permitted. Recognizing the need for developing specific procedures to prevent contamination of ballast tanks by temporary storage of sewage and greywater, MEPC 79 agreed to consider developing a guidance for such temporary storage at future sessions.

2.2.3 Commissioning Tests of BWMS

While commissioning tests of BWMS including analysis of treated ballast water have been required for those installed on or after 1 June 2022, MEPC 79 discussed on the interpretation on whether or not it is necessary to conduct commissioning tests in cases where an installed BWMS on board a ship undergoes an upgrade or change to a major component.

As a result, MEPC 79 approved a unified interpretation that if an installed BWMS on board a ship undergoes an upgrade or change to a major component, such BWMS shall be regarded as a newly installed BWMS, so a commissioning test shall be conducted accordingly.

2.2.4 Amendments to the Format of Ballast Water Record Book

It was noted that problems have arisen during PSC inspections due to different interpretations for recording the Ballast Water Record Book (BWRB) specified in Appendix II of the BWM Convention. The necessities for a revision of the BWRB format and a guidance on how to describe it have been under discussion.

MEPC 79 approved amendments to the BWRB format to be recorded in terms of Codes (letter) and Items (number), similar to the format of the Oil Record Book, with a view to adoption at MEPC 80.

2.3 Air Pollution

2.3.1 Unified Interpretation on Use of Synthetic Fuels

With the switch to alternative fuels under consideration from the perspective of GHG emission reduction, MEPC 78, held in June 2022, approved a uniform interpretation on the application of NO_x emission limits to biofuels and a biofuel blend with fossil fuels. According to the unified interpretation, additional confirmation of NO_x emission is not required, if the blend ratio of biofuel and fossil fuel is below 30% and if no changes to NO_x critical components or setting/operating values are required in order to use biofuel or a biofuel blend.

At this session, revised Unified Interpretation was approved to treat synthetic fuels, produced from renewable sources similar

in composition to petroleum distillate fuels, which are expected to be used in the future, in the same way as biofuels in terms of NO_x emission.

2.4 Amendments to Mandatory Instruments

2.4.1 Designation of Emission Control Area for SO_x and PM

Amendments to MARPOL Annex VI to add the Mediterranean Sea as Emission Control Areas (ECAs) for SO_x and PM were adopted. Requirements regarding SO_x and PM emissions (Regulation 14 etc. of ANNEX VI) in the Mediterranean Sea Area as ECA will start being enforced on 1 May 2025.

2.4.2 Garbage Record Book

Amendments to MARPOL Annex V were adopted to expand the scope of Garbage Record Book, which has been required to be provided for vessels of 400 gross tons or more, to vessels of 100 gross tons or more. The amendments will enter into force on 1 May 2024.

2.4.3 Information to Be Included in Bunker Delivery Note (BDN)

Amendments to Appendix V of MARPOL Annex VI were adopted to include flashpoint as mandatory information in the BDN. The amendments will enter into force on 1 May 2024.

2.4.4 Information to Be Submitted under Data Collection Systems (IMO DCS)

With the introduction of CII regulations, amendments to Appendix IX of MARPOL Annex VI were adopted to add CII related information to reporting items from Flag/RO to IMO database under Data Collection System for fuel oil consumption of ships (IMO DCS). The amendments will enter into force on 1 May 2024.

3. OUTCOMES OF MSC 106

3.1 Adopted Mandatory Requirement

Mandatory requirement was adopted at MSC 106 as follows:

(1) Amendments to SOLAS Chapter II-2 for safety measures on use of fuel oil

Amendments to SOLAS Chapter II-2 to require providing with a declaration signed and certified by the oil fuel supplier's representative, that the oil fuel to be supplied is in conformity with paragraph SOLAS II-2 Reg.4.2.1 etc., and require that a bunker delivery note shall contain the flashpoint information, were adopted.

(2) The International Code of Safety for Ships Carrying Industrial Personnel (IP Code)

Newly developed IP Code and new SOLAS Chapter XV to make the Code mandatory were adopted. The Code applies to cargo ships and high-speed cargo craft, of 500 gross tonnage and upwards which carry more than 12 industrial personnel.

(3) Amendments to IGC Code

Amendments to add high manganese austenitic steel in Table 6.3 of IGC Code on plates, sections and forgings for cargo tanks, secondary barriers and process pressure vessels for design temperatures below -55°C and down to -165°C, were adopted.

(4) Amendments to IGF Code

Amendments to add high manganese austenitic steel in Table 7.3 of IGF Code on plates, sections and forgings for fuel tanks, secondary barriers and process pressure vessels for design temperatures below -55°C and down to -165°C, were adopted.

(5) Amendments to 2011 ESP Code

Amendments to 2011 ESP Code which mainly contain the following items were adopted.

1. The coating condition criteria of ballast tanks, excluding double-bottom tanks, of bulk carriers were strengthened from "POOR" to "less than GOOD", which are used for the tank examination at annual intervals.
2. For void spaces bounding cargo holds of double-side skin bulk carriers exceeding 20 years of age and of 150m in length and upwards, it is required that the spaces in question should be examined at annual intervals where a hard protective coating is found to be in POOR condition.
3. It was clarified that oil tankers carrying oil in independent tanks which did not form part of the ship's hull were outside the scope of the ESP Code.
4. Timing of tank pressure testing for oil tankers at renewal survey was clarified.

(6) Amendments to IBC Code

Amendments to IBC Code were adopted, in order to allow submersion of some hinged watertight doors considered for stability criteria at any stage of flooding, as well as the amendments to IGC Code which have been adopted at MSC 104.

3.2 Approved Mandatory Requirements

The following mandatory requirements were approved at this session, and are expected to be considered for adoption at MSC 107 in June 2023. These amendments are also expected to enter into force on 1 January 2026 in accordance with ad hoc midterm amendment cycle for SOLAS.

(1) Amendments to LSA Code

Amendments to LSA Code to add new ventilation requirements applied to totally enclosed lifeboats, in conjunction with the amendments to the recommendation on testing of life-saving appliances (resolution MSC.81(70)) which newly stipulates the relevant operation tests, were approved.

On the other hand, any compelling need for ventilation requirements for partially enclosed lifeboats and liferafts would be continuously considered at the SSE Sub-Committee.

(2) Amendments to SOLAS Chapter II-2, etc. on the prohibition of perfluorooctane sulfonic acid (PFOS)

Amendments to SOLAS Chapter II-2, and the 1994 and 2000 HSC Codes to prohibit the use of fire-fighting foams containing PFOS, were approved.

On the other hand, the prohibition of other fire-fighting foam types in addition to PFOS, such as PFOA, would be considered at the SSE Sub-Committee.

(3) Amendments to SOLAS Chapter V and format of SE Certificate

Amendments to SOLAS Chapter V to require carriage of electronic inclinometers on container ships and bulk carriers of 3,000 gross tonnage and upwards were approved. Accordingly, format of SE Certificate was also amended to add new entry of “Container ship” in Particulars of ship.

3.3 Approval of Unified Interpretations (UIs), Guidelines and Guidance etc.

The following unified interpretations (UIs), guidelines and guidance etc. were approved during MSC 106.

(1) Unified interpretation of SOLAS Chapter II-2

The following unified interpretations of SOLAS Chapter II-2 were approved;

- Unified interpretation of 9.7.3.1.2 on fire insulation of ducts passing through “A” class divisions to clarify extent of the required fire insulation; and
- Unified interpretation of 9.7.3.2 on clearance of the duct penetration of the “B” class bulkheads was approved to clarify that no clearance should be allowed between the duct and the division.

(2) Amendments to the Guidelines for the approval of fixed dry chemical powder fire-extinguishing systems for the protection of ships carrying liquefied gases in bulk (MSC.1/Circ.1315)

Amendments to the Guidelines for the approval of fixed dry chemical powder fire-extinguishing systems for the protection of ships carrying liquefied gases in bulk (MSC.1/Circ.1315) were approved. The amendments specify the details of fire tests for dry chemical powder. In addition, the definition of dry powder is revised and the statement which is related to main components of dry powder in the definition is deleted. The amendments would be applied to the systems installed on or after 1 July 2023.

(3) Amendments to MSC.1/Circ.1374 on Information on prohibiting the use of asbestos on board ships

According to MSC.1/Circ.1374 on Information on prohibiting the use of asbestos on board ships, when asbestos containing material (ACM) is found to be installed on board ships in contravention of SOLAS Chapter II-1/3-5, it should be removed within three years. In order to make the provisions more practicable, amendments to MSC.1/Circ.1374 were approved to allow ACMs such as gaskets to be removed at an appropriate timing beyond three years at discretion of an Administration subject to the implementation of risk-based maintenance and monitoring.

3.4 Consideration of Requirements for Maritime Autonomous Surface Ships (MASS)

Taking into account recent investigation of automation surrounding a ship, it has been discussed at MSC on conventional requirements of safety and environmental protection relating to MASS.

At the previous session, the road map for developing goal-based MASS Code was endorsed, in which non-mandatory MASS guidelines will be developed in 2024 and mandatory goal-based MASS Code will be developed targeting entry into force in

2028.

At this session, development of non-mandatory MASS guidelines mainly on goal and functional requirements has been initiated, based on the report by the intersessional correspondence group and the meeting outcome arranged by the related working group.

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