External Affairs Department
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Preliminary Report of MEPC 79

The 79th session of the IMO Marine Environment Protection Committee (MEPC 79) was held from 12 to 16 December 2022. A summary of the outcome is given hereunder for your information.
Please note that this summary has been made based on informal information obtained from participants from ClassNK and Working Papers developed during MEPC 79 with priority given to disseminating the information as early as practicable.

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.

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 (C_F) of ethane.

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).

Provided that the 2017 ITTC Procedure was amended in 2021, MEPC 79 adopted 2022 Guidelines to refer to the amended 2021 ITTC Procedure as well as 2017 ITTC Procedure.

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 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.

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:

- 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 such rating.

1.5 Data Collection System for fuel oil consumption of ships (IMO DCS)

MEPC 79 approved the following unified interpretation related to the IMO DCS:

- 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.

1.6 Onboard Carbon Capture Systems

There have been initiatives to develop methods for reducing GHG emissions by segregating and capturing carbon dioxide (CO_2) from exhaust gases onboard ships.

At this session, a proposal was made that the amount of CO_2 captured by CO_2 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.

1.7 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.

1.8 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 as follows:

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

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

- IMO Maritime Research Fund (IMRF)
  US$2 per tonne of marine fuel are funded to IMRF, which is used for development of low/zero carbon technologies.
- 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.
- 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.
- 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. BWM Convention

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 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 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 confirmed that the temporary storage of treated sewage and grey water would not be subject to the BWM Convention. 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.

2.3 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.

2.4 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.

3. Air pollution

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 NOx emission limits to biofuels and a biofuel blend with fossil fuels. According to the unified interpretation, additional confirmation of NOx emission is not required, if the blend ratio of biofuel and fossil fuel is below 30% and if no changes to NOx 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 NOx emission.

4. Amendments to mandatory instruments

MEPC 79 adopted amendments to mandatory instruments as follows:

4.1 Designation of SOx emission control area

Amendments to MARPOL Annex VI to add the Mediterranean Sea as SOx- Emission Control Areas (ECAs) were adopted. Requirements on 0.10% sulphur limit in marine fuel oil will be applied to ships operating in the Mediterranean Sea on or after 1 May 2025.

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.

Entry into force: 1 May 2024

4.3 Information to be included in Bunker Deliver Note (BDN)

Amendments to Appendix V of MARPOL Annex VI were adopted to require that a bunker delivery note for the fuel delivered to the ship shall contain the flashpoint information.

Entry into force: 1 May 2024

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 under Data Collection System for fuel oil consumption of ships (IMO DCS).

Entry into force: 1 May 2024

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For any questions about the above, please contact:

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