

Recent Topics at IMO

— Outline of Discussion at IMO Committees —

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1. INTRODUCTION

This article introduces recent topics discussed at IMO (International Maritime Organization). At the previous issue, a summary of the topics discussed at 103rd Maritime Safety Committee (MSC 103) held in May of 2021 was provided.

This article provides a summary of the decisions taken at 76th Marine Environment Protection Committee (MEPC 76) held from 10 to 17 June 2021 as below. MEPC 76 was held remotely in lieu of physical session at the headquarters of IMO, due to COVID-19 situation. Please bear in your mind that, since time constraints due to remote meeting, a number of proposals and comment papers were not considered at MEPC 76 and thus postponed to MEPC 77 to be held in November.

2. OUTCOMES OF MEPC 76

2.1 Greenhouse Gases (GHG) Emission Reduction Measures

Measures to reduce GHG emissions from international shipping have been deliberated at IMO and the Energy Efficiency Design Index (EEDI), the Ship Energy Efficiency Management Plan (SEEMP) and the Data Collection System for fuel oil consumption of ships (DCS) have been introduced so far. Further, the Initial IMO Strategy on reduction of GHG emissions from ships, was adopted at MEPC 72 held in 2018, which includes the emission reduction targets and candidate measures to reduce GHG emissions from maritime.

2.1.1 Short-Term Measures for Reduction of GHG

Initial IMO Strategy on reduction of GHG emissions from ships, adopted at MEPC 72, specifies short-term target by 2030 and mid/long-term target by 2050.

At this session, amendments to MARPOL Annex VI were adopted to implement (1) Energy Efficiency Existing Ship Index (EEXI), as a technical approach, and (2) Carbon Intensity Indicator (CII), as an operational approach, to achieve the short-term target for improvement of transportation efficiency at least 40% compared to 2008.

(1) Energy Efficiency Existing Ship Index (EEXI)

EEXI is regulations for existing ships to require the same level of energy efficiency as new ships and applied to all ships^{*1} of 400 GT and above engaged in international voyage. Verification for EEXI shall take place at the first annual, intermediate or renewal survey of IAPP Certificate on or after 2023.

Attained EEXI for each existing ship should be calculated using the similar formula to EEDI, and is required to satisfy a required EEXI, which is calculated based on EEDI reference lines for each category of ships by multiplying reduction factor stipulated by ship size.

If the attained EEXI value cannot satisfy the required EEXI, the ship should implement a measurement to improve energy efficiency, such as shaft/engine power limitation etc, to satisfy the required EEXI.

For ships already applied EEDI requirements and, if the attained EEDI value also complies with the required EEXI, the attained EEDI value as indicated in IEE Certificate or EEDI technical file can be used as an alternative to the attained EEXI

(2) Operational Carbon Intensity Indicator (CII)

Operational Carbon Intensity Indicator is rating mechanism for ships based on the operational fuel consumption data. Each ship^{*2} of 5,000 GT and above engaged in international voyage should calculate attained CII every year, based on the data

^{*1} Bulk carrier, Gas carrier (LPG carrier), Tanker, Containership, General cargo ship, Refrigerated cargo carrier, Combination carrier, Ro-ro cargo ships (Vehicle carrier), Ro-ro cargo ship, Ro-ro passenger ship, LNG carrier and non-conventional propelled Cruise passenger ship (Except ships which have non-conventional propulsion such as diesel electric, turbine or hybrid propulsion system, but in this context, except LNG carrier and cruise passenger ship)

^{*2} Bulk carrier, Gas carrier (LPG carrier), Tanker, Containership, General cargo ship, Refrigerated cargo carrier, Combination carrier, Ro-ro cargo ships (Vehicle carrier), Ro-ro cargo ship, Ro-ro passenger ship, LNG carrier and Cruise passenger ship

of annual fuel consumption and annual distance travelled, which are collected under the Data Collection System for fuel oil consumption of ships (DCS). By the end of 2022, each ship should indicate on SEEMP, the calculation method of annual CII from 2023 calendar year and reporting procedure of CII.

Required CII is calculated using CII reference lines for each category of ships by multiplying reduction factor. Comparing the attained CII with the required CII, ships are rated as A to E, based on the gap between the attained CII and the required CII. If a ship is rated as D for three consecutive years or rated as E, the ship should develop a plan of corrective actions, such as speed reduction or optimal routing etc.

The reduction factor to be used for calculating the required CII will be enhanced every year as below. Reduction factor means reduction rates from CII reference lines, which is a curve representing the average CII for each category of ships in year of 2019.

Table 1 Reduction factor of CII

Year	Reduction factor
2023	5%
2024	7%
2025	9%
2026	11%
2027-2030	To be decided later

2.1.2 Other Measures for Reduction of GHG

(1) Work plan for mid/long-term measures

MEPC 76 developed work plan for development of mid/long-term measures, as a follow up of the initial IMO strategy on reduction of GHG emissions from ships. A summary of work plan is as follows:

Table 2 Work plan for development of mid/long-term measures

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

(2) IMRF and IMRB

At MEPC 75 held in November 2020, it was proposed to establish International Maritime Research Fund (IMRF). MEPC 76 agreed to continuously consider this proposal at future session.

2.1.3 Requirements of Minimum Propulsion Power and EEDI

It is required to keep sufficient propulsion power for operations in adverse weather conditions, although the Energy Efficiency Design Index (EEDI) can be easily improved by a cutdown of main engine powers. At MEPC 65, Interim Guidelines for determining minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions (MEPC.232(65)) were developed to avoid construction of extremely under-powered ships. At MEPC 71, it was agreed to extend the application period of the Interim Guidelines towards phase 2 of EEDI regulation. The application date of Phase 3 is approaching, and finalisation of the Guidelines was the urgent matter.

At this session, amendments to Guidelines for determining minimum propulsion power to maintain the manoeuvrability of ships in adverse conditions were adopted to incorporate the results of SHOPERA and JASNAOE projects.

MEPC 76 also agreed to further consider the concept of shaft/engine power limitation as measures to comply with both EEDI and minimum propulsion power requirements at MEPC 77.

2.2 Others (Underwater Noise)

Concerns on effects of underwater noise on marine mammals have been risen, since a number of marine mammal stranding were reported. MEPC 66, held in 2014, adopted non-mandatory Guidelines for the reduction of underwater noise from commercial shipping to address adverse impacts on marine life (MEPC.1/Circ.833).

At this session, it was agreed to establish new work program to undertake a review of the Guidelines. The review will be started at SDC Sub-Committee next year.

2.3 Amendments to Mandatory Instruments

MEPC 76 adopted amendments to mandatory instruments as follows:

(1) Short-term measures for reduction of GHG: EEXI and CII

As the above 2.1.1, amendments to MARPOL Annex VI to implement EEXI and CII regulations to achieve short-term target by 2030, -i.e. 40 % improvement of energy efficiency of international shipping, were adopted.

(2) Heavy fuel oil in Arctic waters

Amendments to MARPOL Annex I to prohibit the use, and carriage for use as fuel of heavy fuel oil by ships in Arctic waters were adopted. This prohibition will be applied on or after 1 July 2024. For ships to which regulation 12A of this Annex or regulation 1.2.1 of chapter 1 of part II-A of the Polar Code applies, the application date is on or after 1 July 2029. The carriage of heavy fuel oil as cargo will not subject to the prohibition.

(3) Application of MARPOL Annex I, IV and VI for UNSP barges

Amendments to MARPOL Annex I, IV and VI for the exemption of unmanned non-self-propelled (UNSP) barges were adopted.

(4) Control of Harmful Anti-fouling Systems on Ships (AFS Convention)

Amendments to AFS Convention to prohibit the use of anti-fouling paints that contains cybutryne were adopted.