



Technical Circular

No.: 058/2021

Date: 07th December 2021

Subject: DGS M.S. Notice No. 07 of 2021 Reg. Application of IMO Resolution MEPC. 328 (76) to Indian Ships – Amendments to Chapter 4 of MARPOL Annex VI (2021 revised MARPOL Annex VI).

1. Amendments to MARPOL Annex VI were adopted vide MEPC Resolution 328(76), regarding requirements on Energy Efficiency Existing Ships Index (EEXI) and Carbon Intensity Indicator (CII). The amendments will enter into force **on 1st November 2022**.
2. Indian Administration has provided its requirements for implementation of above amendments to MARPOL Annex VI Ch. 4, vide MS Notice No.07 of 2021.
3. To consolidate all the requirements related to Chapter 4 of MARPOL Annex VI under one Circular, the aforementioned MS Notice 07 of 2021 supersedes Engineering Circular 9 of 2012 dated 10.12.2012 (Regulations on Energy Efficiency for Ships) and Engineering Circular 2 of 2018 dated 30th July 2018 (IMO Data Collection System).
4. Application of Chapter 4 of MARPOL Annex VI as amended to Indian Ships:
 - a. These requirements are applicable to all Indian Ships of 400 GT and above registered under MS Act 1958, irrespective of whether the ship has coastal or worldwide GTL or whether certified under RSV (Ref. DGS Order No. 18 of 2013) or ICV (Ref. DGS Order No. 1 of 2014) Notification with the exception on following ship types:
 - Ships not propelled by mechanical means, and platforms including FPSOs and FSUs and drilling rigs, regardless of their propulsion.
5. **Requirements related to implementation of Regulation 22 {Attained Energy Efficiency Design Index (attained EEDI)} & Regulation 24 (Required EEDI) on Indian Ships:**
 - a. The attained EEDI is to be calculated taking into account IMO Resolution MEPC.308 (73), as amended by resolutions MEPC.322 (74) and MEPC.332 (76), as may be amended.
 - b. Upon verification of Attained EEDI, IRS H.O will report to the Competent Authority in Directorate via electronic communication, the required and attained EEDI values and relevant information for onward submission to IMO at eedi@imo.org
 - i. Within 7 months of completing the initial survey prior issuing IEE certificate
or



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. While we have taken utmost care to be as factual as possible, readers/ users are advised to verify the exact text and content of the Regulation from the original source/ issuing Authority.

- ii. Within 7 months following 1st April 2022 for a ship delivered prior to 1st April 2022
- c. The required and attained EEDI values and relevant information submitted to the Directorate will be included in the Survey Status of the vessel.

6. Requirements related to implementation of Regulation 23 {Attained Energy Efficiency Existing Ship Index (attained EEXI)} & Regulation 25 (Required EEXI) on Indian Ships:

- a. The attained EEXI and required EEXI is to be calculated for each new and existing ship, which falls into one, or more of the categories given in respective Regulation 23.1 and Regulation 25.1 of MARPOL Annex VI or after it has undergone a major conversion as defined in regulation 2.2.17 of MARPOL Annex VI.
- b. The attained EEXI is to be calculated taking into account 2021 Guidelines on the Method of Calculation of the Attained EEXI (Resolution MEPC. 333 (76)) developed by the Organization. Following guidelines have been issued by IMO, but these are under review and in case, amendments have been released by IMO; same to be used:
 - i. Resolution MEPC. 333 (76): 2021 Guidelines on the Method of Calculation of the Attained EEXI.
 - ii. Resolution MEPC. 334 (76): 2021 Guidelines on Survey and Certification of the Attained EEXI.
 - iii. Resolution MEPC. 335 (76): 2021 Guidelines on The Shaft/Engine Power Limitation System to Comply with the EEXI Requirements and Use of a Power Reserve.
- c. The Ship-owner/Manager is to forward a copy of verified EEXI Technical File to Indian Register of Shipping (IRS) within one month from the date of verification of EEXI Technical File and issuance of relevant International Energy Efficiency Certificate electronically for compilation of required and Attained EEXI records of all Indian Ships to be forwarded to Competent Authority in Directorate by 1st August every year.

7. Requirements related to implementation of Regulation 26 {Ship Energy Efficiency Management Plan (SEEMP)} & Regulation 27 (Collection and reporting of ship fuel oil consumption data) on Indian Ships:

- a. Each ship of 400 GT and above is to keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP), developed taking into account Guidelines adopted by the Organization {Refer to the 2016 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP Guidelines) (resolution MEPC.282 (70)) or as amended / revised}. This may form part of the ship's Safety Management System (SMS).

b. Fuel Consumption Data:

- 1) For each ship covered under para '4-a' and of 5000 GT and above, the SEEMP is to include a description of the methodology that will be used to collect the data specified in appendix IX to MARPOL Annex VI for each calendar year or portion thereof, as appropriate according to the methodology included in the SEEMP. This part of the SEEMP is required to be reviewed by a RO of Owners/Managers choice. Upon satisfactory review, Confirmation of Compliance is to be issued which is to be retained on-board, the ship.
- 2) Collection and Submission of Fuel Consumption Data by ships covered under para '4- a' and of 5000 GT and above:
 - i. At the end of each calendar year, each ship is to aggregate the data collected in that calendar year or portion thereof, as appropriate. By 28th/29th February every year, the ship is to report the aggregated value of the previous calendar year in the format as per appendix IX to MARPOL Annex VI to a RO, which has reviewed SEEMP.
 - ii. By 30th April of each calendar year thereafter - Upon receipt of data, the RO is to verify the submitted data taking into account Resolution MEPC 292(71): 2017 (Guidelines for Administration verification of ship fuel oil consumption data) and on completion of satisfactory verification is to issue a Statement of Compliance related to fuel oil consumption reporting and operational carbon intensity rating (for each ship, except those ships certified as per RSV and ICV notification, for which the data is reported and verified and requirements related to operational carbon intensity rating is complied with, if applicable for that ship category) valid till 31st May of the calendar year next to the data reporting year (next to next of data collecting calendar year).
 - iii. By 31st May of every calendar year thereafter: Company is to submit the verified data to IRS for each ship in an extensible mark-up language (XML) format with a copy of Statement of Compliance issued by the RO. IRS is to acknowledge receipt of data promptly to the reporting Company identifying the ships for which data have been received.
- 3) Collection and Submission of Fuel Consumption Data by ships less than 5000 GT: By 31st May of every year, all ships covered under para '4-a' and of less than 5000 GT is to submit following data to IRS; however there is no requirement related to description of the methodology that will be used to collect the data in the SEEMP for ships of 400 GT and above but less than 5000 GT:
 - i. Name of the Ship
 - ii. IMO No. /Official No.
 - iii. Type of Ship
 - iv. GT, Deadweight, NT

- v. Total Fuel Consumption (All types of Fuel)
 - vi. Aggregated Distance travelled
 - vii. Aggregated Hours underway
 - viii. Rated Power of Main and Auxiliary Engine in KW.
 - ix. Whether the particular ship is supplied with Shore Electric Power during port stay, and is yes number of hours in port when supplied with shore power.
- 4) All ships of less than 400 GT is to submit following data to IRS:
- i. Total Fuel Consumption for each type of fuel and GT of ship.
 - ii. Total hours in Port.
 - iii. Number of hours in port, when supplied with shore power.
- 5) IRS to submit the data by 30th June every year to IMO fuel oil consumption database on GISIS for all ships of 5000 GT and above except those certified under RSV or ICV Notification and submit a compliance report to the Directorate by 15th July every year.
- 6) **Responsibilities of IRS:** A report detailing various permutation and combination on the fuel oil consumption data and trend analysis basis age of vessel, category of vessel, size of vessel etc. and in the format approved by Competent Authority in the Directorate is to be prepared and forwarded to the competent authority in the Directorate in confidentiality by 1st August of every Calendar Year thereafter, for the previous Calendar Year.
- c. **Each ship covered under para '4-a' and of 5000 GT and above and which fall under one of the following categories of ships:** Bulk carrier as defined in Regulation 2.2.5 of MARPOL Annex VI; Combination carrier as defined in Regulation 2.2.7 of MARPOL Annex VI; Containership as defined in Regulation 2.2.9 of MARPOL Annex VI; Cruise passenger ship as defined in Regulation 2.2.11 of MARPOL Annex VI; Gas Carrier, General Cargo Ship and LNG Carrier defined in Regulation 2.2.14-16 respectively of MARPOL Annex VI; Refrigerated cargo carrier as defined in Regulation 2.2.22 of MARPOL Annex VI; Ro-ro cargo ship, Ro-ro cargo ship (vehicle carrier), Ro-ro passenger ship & Tanker defined in Regulation 2.2.26-29 respectively of MARPOL Annex VI:
- 1) On or before 1st January 2023, the SEEMP is to include:
- i. A description of the methodology that will be used to calculate the ship's attained annual operational CII required by regulation 28 of MARPOL Annex VI and the processes that will be used to report this value to the Administration;

- ii. The required annual operational CII, as specified in regulation 28 of MARPOL Annex VI, for the next 3 years;
 - iii. An implementation plan documenting how the required annual operational CII will be achieved during the next 3 years; and
 - iv. A procedure for self-evaluation and improvement.
- 2) This part of the SEEMP is required to be reviewed by a RO which has reviewed SEEMP covered vide para '7-b'. The SEEMP is to be subjected to verification and Company audits taking into account the Guidelines to be developed by IMO.
 - 3) The SEEMP is to be further required to be revised to include requirements of Paragraph '7/c/1) –ii, iii & iv' and reviewed by RO every 3-Years or earlier for cases which fall under Paragraph '8/a/v', unless the Competent Authority in the Directorate advises otherwise, based on the amendments to MARPOL Annex VI.
 - 4) Upon satisfactory review, a Confirmation of Compliance is to be issued, which is to be retained on-board, the ship.

8. Requirements related to implementation of Regulation 28 {Operational carbon intensity} on Indian Ships:

- a. Ship of 5,000 gross tonnage and above covered under para '4-a', which falls into one or more of the categories defined in Paragraph '7-c' above:
 - i. Each ship is to calculate the attained annual operational CII over a 12-month period from 1st January to 31st December with effect from calendar year 2023 and every calendar year thereafter, using the data collected in accordance with Paragraph '7-b' above, taking into account Resolution MEPC.336 (76) – 2021 Guidelines on Operational Carbon Intensity Indicators and the Calculation Methods (CII Guidelines, G1).
 - ii. The ship is to report to the RO, which has reviewed the SEEMP under Paragraph '7-c-2)', the attained annual operational CII, via electronic communication and using a standardized format to be developed by the Organization by 29th February 2024 for Calendar year 2023 and thereafter by 28/29th February every year for previous calendar year.

- iii. The Attained annual operational CII is to be documented and verified against the required annual operational CII to determine operational carbon intensity rating A, B, C, D or E, indicating a major superior, minor superior, moderate, minor inferior, or inferior performance level, by the RO, taking into account Resolution MEPC. 339 (76) -2021 Guidelines on the Operational Carbon Intensity Rating of Ships (CII Rating Guidelines, G4).
 - iv. After satisfactory completion of the verification, the Recognized Organisation is to issue a Statements of Compliance related to fuel oil consumption reporting and operational carbon intensity rating (for each ship, except those Certified as per RSV and ICV Notification, for which the data is reported and verified and requirements related to operational carbon intensity rating is complied with, if applicable for that ship category) valid till 31st May of the calendar year next to the data reporting year (next to next of data collecting calendar year).
 - v. In case a ship is rated as D for three consecutive years or rated as E, the ship is to develop and submit by 30th April to RO issuing Statement of Compliance, a plan of corrective action objectively stating as to how the energy efficiency is to be enhanced to meet the CII rating. The RO after a review is to submit the plan of corrective action to the Competent Authority in the Directorate by 15th May for its approval and once approved, RO to ensure that SEEMP is revised reflecting the same.
 - vi. By 31st May of every calendar year thereafter: Company is to submit the verified CII data to IRS for each ship in an extensible mark-up language (XML) format with a copy of Statement of Compliance issued by the RO. IRS is to acknowledge receipt of data promptly to the reporting Company identifying the ships for which data have been received.
- b. All other Ships including those Certified as per RSV and ICV Notification of 5,000 gross tonnage and above, which do not fall into one or more of the categories defined in Paragraph '7-c' above and those less than 5000 GT and above 400 GT: IRS in consultation with Competent Authority in Directorate is to devise a way to calculate carbon intensity of these ships and will calculate the same every year based on submitted fuel oil consumption data.
- c. **Responsibilities of Indian Register of Shipping:** By 1st August every year, IRS is to submit following report to Directorate in confidence:
- i. Ships falling under Paragraph '8-a & 8-b':
 - a) Complete Indian Fleet: Category wise trend of CII based on age distribution, size distribution and age and size distribution Fuel Oil Consumption Reporting agreed between IRS and Directorate.
 - b) Each Company: For each ship category operated by the Company as above.

- d. The latest amended versions of following Resolutions issued by IMO to be taken into account while complying with Regulation 28 of MARPOL Annex VI:
 - i. Resolution MEPC.336 (76) -2021Guidelines on Operational Carbon Intensity Indicators and the Calculation Methods (CII Guidelines, G1).
 - ii. Resolution MEPC. 337 (76) -2021Guidelines on the Reference Lines for Use with Operational Carbon Intensity Indicators (CII Reference Lines Guidelines, G2).
 - iii. Resolution MEPC. 338 (76) -2021Guidelines on the Operational Carbon Intensity Reduction Factors Relative to Reference Lines (CII Reduction Factor Guidelines, G3).
 - iv. Resolution MEPC. 339 (76) -2021Guidelines on the Operational Carbon Intensity Rating of Ships (CII Rating Guidelines, G4).
- e. Inclusion of CII Rating as part of Risk Matrix Calculation for Port State and Flag State Inspections: The Directorate will endeavour to include attained CII rating as part of Risk Matrix for calculating the frequency of Port State Inspection through IOMOU and Flag State Inspection, only for those ships, which under Annex VI are needed to attain a required CII.

9. Certification Requirements:

- a. The following amendments have been carried out to Chapter 4 of MARPOL Annex VI which will necessitate re-issuance of all Certificates required under this Chapter:
 - i. The whole Chapter 4 is re-numbered, resulting in changes in Regulation numbers.
 - ii. The new requirements related to SEEMP and EEXI are coming into effect from 1st January, 2023 resulting in re-issuance of International Energy Efficiency Certificate.
 - iii. The renaming of Statement of Compliance for Fuel Oil Consumption Reporting to Statement of Compliance for Fuel Oil Consumption Reporting and Operational Carbon Intensity rating.
- b. The EEXI requirements are applicable from the first annual, intermediate or renewals IAPP survey whichever is the first after 1st January 2023.
- c. The revision of the SEEMP applicable to ships as stated in Paragraph '7-c' above is due by 1st January, 2023.
- d. For Ships of 400 GT and above on which EEXI or Operational CII requirements do not apply, a revised IEEC in the new format attached to MARPOL Annex VI is to be issued without any additional visit.

- e. For other ships to which only EEXI requirements are applicable but not Operational Carbon Intensity requirements: IEEC Certificate in the new format is to be issued as and when compliance is achieved by for ship but not later than first annual, intermediate or renewal IAPP survey whichever is the first after 1st January 2023.
- f. For other ships to which both EEXI and Operational carbon Intensity requirements are applicable: IEEC Certificate in new format is to be issued by 1st January 2023 based on compliance with Paragraph '7-c' in case only SEEMP requirements are met and then again IEEC Certificate when EEXI requirements are met but, in this case, not later than first annual, intermediate or renewal IAPP survey whichever is the first after 1st January, 2023.

10. **Entry of Existing Ships to Indian Flag:** With effect from 1st July 2024, no ship meeting the following criterion is to be registered under Indian Flag without permission of the Director General of Shipping and no IEEC to be issued during Change of Flag unless said permission is received:

- a. Rated E as per Operational Carbon Intensity for any of the previous years.
- b. Rated D for three previous years in any order.

11. **Procedures related to Change of Flag, ISM Company, Ownerships, demolition etc.:**

a. Change of Owners/Manager without change of Flag:

- i. In this event, the ship is to on the day of completion of the change or as close as practical thereto report to its Administration or any organization duly authorized by it, the aggregated data for the portion of the calendar year corresponding to the Company.
- ii. New Owners/Manager is to, after the end of the calendar year in which the transfer takes place, calculate and report the attained annual operational CII for the ship for the full 12-month period from 1st January to 31st December in the calendar year during which the transfer took place.

b. Existing ships coming to Indian Flag:

- i. While carrying out change of flag surveys it is to be ensured that fuel consumption data and/or data related to operational CII (reviewed by previous RO, in case of change of RO) has been submitted by previous Owners (in case of change of owners/ managers) prior issuance of IEEC.

- ii. With effect from 1st July 2024, in case a ship has been rated "D" in the previous year, it will be ensured that prior issuing IEEC Certificate, owners/managers plans to enhance the CII rating and get its approval from the competent authority in the Directorate.
- iii. With effect from 1st July 2024, no ship will be given IEEC Certificate, if it meets the criterion specified in Paragraph 10 and has been registered under Indian Flag and the case to be reported to competent authority in the Directorate.

c. Indian Ship being demolished/Change of Flag:

- i. No Ready for Recycling Certificate in accordance with Ship Recycling Act, 2019 will be issued unless Company has submitted fuel consumption data and attained annual CII to RO till the date on which Ready for Recycling Certificate is planned to be issued and further the ship has plans to submit complete data till the date of handing over the ship to recycling facility.
- ii. Until the time Ship Recycling Act comes into force, no ship will be de-registered after demolition unless the data related to fuel consumption and attained CII has been submitted to RO and verified by RO.

12. Ship owners/ operators and masters of Indian flagged vessels are advised to be guided by above and ensure compliance.

Enclosure:

- 1. DG shipping MS Notice No. 07 of 2021, dated 10 November 2021.

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भारत सरकार / GOVERNMENT OF INDIA
पत्तन, पोत परिवहन और जलमार्ग मंत्रालय
MINISTRY OF PORTS, SHIPPING AND WATERWAYS

नौवहन महानिदेशालय, मुंबई
DIRECTORATE GENERAL OF SHIPPING, MUMBAI

File No: 13-20011/2/2021-ENGG - DGS

Date: 10.11.2021

M.S. Notice No. 07 of 2021

Subject : Application of IMO Resolution MEPC.328 (76) to Indian Ships - Amendments to chapter 4 of MARPOL Annex VI (2021 revised MARPOL Annex VI)

1. Purpose:

1.1. The purpose of this notice is to advise all concerned, viz., ship owners/managers/operator/builders/seafarers/Recognised Organisations (ROs), etc., on the adoption of the amendments at MEPC 76 to MARPOL Annex-VI vide Resolution MEPC. 328(76), specifically on the requirements of ships complying with EEXI (Energy Efficiency Existing Ship Index) and CII (Operational Carbon Intensity Indicator), and to provide instructions regarding revised compliance requirements for reduction of carbon intensity in respect of these amendments, entering into force from 1st November, 2022. Following Regulations, have been included in Annex-VI of MARPOL, which are goal, based short-term measures with EEXI and in-service carbon intensity management as functional requirements:

1.1.1. Regulation-23: Attained EEXI

1.1.2. Regulation-25: Required EEXI

1.1.3. Regulation-28: Operational Carbon Intensity (Attained & Required Annual Operational CII).

1.2. To consolidate all the requirements related to Chapter 4 of MARPOL Annex VI under one Circular and accordingly supersedes following Circulars:

1.2.1. Engineering Circular 9 of 2012 dated 10.12.2012: Regulations on Energy Efficiency for Ships.

1.2.2. Engineering Circular 2 of 2018 dated 30th July 2018: IMO Data Collection System.

2. Application of Chapter 4 of MARPOL Annex VI as amended to Indian Ships:

2.1. These requirements shall be applicable to all Indian Ships of 400 GT and above registered under MS Act 1958, irrespective of whether the ship has coastal or world-wide GTL or

whether certified under RSV (Ref. DGS Order No. 18 of 2013) or ICV (Ref. DGS Order No. 1 of 2014) Notification with the exception on following ship types:

2.1.1. Ships not propelled by mechanical means, and platforms including FPSOs and FSUs and drilling rigs, regardless of their propulsion.

2.2. Regulations 22{Attained Energy Efficiency Design Index (attained EEDI)}, 23 {Attained Energy Efficiency Existing Ship Index (attained EEXI)}, 24 (Required EEDI) and 25 (Required EEXI) of amended Chapter 4 of MARPOL Annex VI shall not apply to ships which have non-conventional propulsion with the following exceptions:

2.2.1. Regulations 22 and 24 shall apply to cruise passenger ships having non-conventional propulsion and LNG carriers having conventional or non-conventional propulsion, delivered on or after 1st September 2019, as defined in paragraph 2.1 of Regulation 2 of amended MARPOL Annex VI.

2.2.2. Regulations 23 and 25 shall apply to cruise passenger ships having non-conventional propulsion and LNG carriers having conventional or non-conventional propulsion.

2.2.3. Regulations 22, 23, 24, 25 and 28 shall not apply to category A ships as defined in the Polar Code.

3. Requirements related to implementation of Regulation 22{Attained Energy Efficiency Design Index (attained EEDI)} & Regulation 24 (Required EEDI) on Indian Ships

3.1. The attained EEDI shall be calculated taking into account guidelines developed by IMO [Refer to the 2018 Guidelines on the method of calculation of the Energy Efficiency Design Index for new ships as per Regulation 19.5 {resolution MEPC.308 (73), as amended by resolutions MEPC.322(74) and MEPC.332(76)}] as may be amended and can be verified based on the EEDI technical file by any of the Recognized Organization with which the ship is classed.

3.1.1. For each ship to which Regulation 22 and 24 applies, the RO verifying the attained EEDI shall report to the Competent Authority in Directorate via electronic communication, the required and attained EEDI values and relevant information, taking into account the guidelines developed by the Organization {Refer to the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships as per Regulation 19.5 (resolution MEPC.308(73)), as amended by resolutions MEPC.322(74) and MEPC.332(76) of the Organization}. The Competent Authority in Directorate after a review will forward the same to IMO at eedi@imo.org.

3.1.2. within 7 months of completing the survey required under regulation 5.4 of Annex VI;
or

3.1.3. Within 7 months, following 1st April 2022 for a ship delivered prior to 1st April 2022.

Note: Each RO should insert a Memo in the survey status after forwarding the information to Competent Authority in Directorate giving details of the information supplied.

4. Requirements related to implementation of Regulation 23 {Attained Energy Efficiency Existing Ship Index (attained EEXI)} & Regulation 25 {Required EEXI} on Indian Ships

4.1. The attained EEXI and required EEXI shall be calculated for each new and existing ship, which falls into one, or more of the categories given in respective Regulation 23.1 and Regulation 25.1 of MARPOL Annex VI and again after it has undergone a major conversion. Major Conversion is defined in Regulation 2.2.17 of MARPOL Annex VI and shall be determined taking into account Unified Interpretation to MARPOL Annex VI issued via MEPC.1/Circ.795/Rev.4, as amended or revised.

4.2. For each ship to which Regulation 25 applies:

Attained EEXI \leq Required EEXI = (1-Y/100) \times EEDI Reference line value

Where Y is the reduction factor specified in table 3 of MARPOL Annex VI for the required EEXI compared to the EEDI reference line.

4.3. The attained EEXI shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency, and be accompanied by the EEXI technical file that contains the information necessary for the calculation of the attained EEXI and that shows the process of the calculation.

4.4. The attained EEXI shall be calculated taking into account 2021 Guidelines on the Method of Calculation of the Attained EEXI (Resolution MEPC. 333 (76)) developed by the Organization.

Explanation: Following guidelines have been issued by IMO, but these are under review and in case, amendments have been released by IMO; same to be used:

- Resolution MEPC. 333 (76): 2021 Guidelines on the Method of Calculation of the Attained EEXI.
- Resolution MEPC. 334 (76): 2021 Guidelines on Survey and Certification of the Attained EEXI.
- Resolution MEPC. 335 (76): 2021 Guidelines on The Shaft/Engine Power Limitation System to Comply with the EEXI Requirements and Use of a Power Reserve

4.5. The attained EEXI shall be verified, based on the EEXI technical file by any Recognized Organization with which the ship is classed. However, the ship-owner shall forward the data related to attained and required EEXI electronically to IRS for maintaining a central database.

4.6. The Ship-owner/Manager shall forward a copy of verified EEXI Technical File to Indian Register of Shipping (IRS) within one month from the date of verification of EEXI Technical File and issuance of relevant International Energy Efficiency Certificate electronically for

compilation of required and Attained EEXI records of all Indian Ships to be forwarded to Competent Authority in Directorate by 1st August every year. Directorate shall develop a database for putting the information in the same.

5. Requirements related to implementation of Regulation 26 {Ship Energy Efficiency Management Plan (SEEMP)} & Regulation 27 {Collection and reporting of ship fuel oil consumption data} on Indian Ships

5.1. Each ship of 400 GT and above shall keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP). This may form part of the ship's Safety Management System (SMS). The SEEMP shall be developed and reviewed, taking into account Guidelines adopted by the Organization {Refer to the 2016 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP Guidelines) (resolution MEPC.282 (70)) or as amended / revised}.

5.2. Fuel Consumption Data:

5.2.1. For each ship covered under para 2.1 and of 5000 GT and above the SEEMP shall include a description of the methodology that will be used to collect the data specified in appendix IX to MARPOL Annex VI for each calendar year or portion thereof, as appropriate according to the methodology included in the SEEMP. This part of the SEEMP is required to be reviewed by a RO of Owners/Managers choice. Upon satisfactory review, Confirmation of Compliance is to be issued by the RO for the ship, which is to be retained on-board, the ship.

5.2.2. Collection and Submission of Fuel Consumption Data by ships covered under para 2.1 and of 5000 GT and above:

5.2.2.1. At the end of each calendar year, each ship shall aggregate the data collected in that calendar year or portion thereof, as appropriate. By 28th/29th February every year, the ship shall report the aggregated value of the previous calendar year in the format as per appendix IX to MARPOL Annex VI to a RO, which has reviewed SEEMP.

5.2.2.2. By 30th April of each calendar year thereafter - Upon receipt of data, the RO shall verify the submitted data taking into account Resolution MEPC 292(71): 2017 (Guidelines for Administration verification of ship fuel oil consumption data) and on completion of satisfactory verification shall issue a Statement of Compliance related to fuel oil consumption reporting and operational carbon intensity rating (for each ship, except those ships certified as per RSV and ICV notification, for which the data is reported and verified and requirements related to operational

carbon intensity rating is complied with, if applicable for that ship category) valid till 31st May of the calendar year next to the data reporting year (next to next of data collecting calendar year).

5.2.2.3. By 31st May of every calendar year thereafter: Company shall submit the verified data to IRS for each shipping in an extensible mark-up language (XML) format with a copy of Statement of Compliance issued by the RO. IRS shall acknowledge receipt of data promptly to the reporting Company identifying the ships for which data have been received.

5.2.3. Collection and Submission of Fuel Consumption Data by ships less than 5000 GT: By 31st May of every year, all ships covered under para 2.1 and of less than 5000 GT shall submit following data to IRS; however there is no requirement related to description of the methodology that will be used to collect the data in the SEEMP for ships of 400 GT and above but less than 5000 GT:

5.2.3.1. Name of the Ship

5.2.3.2. IMO No./Official No.

5.2.3.3. Type of Ship

5.2.3.4. GT, Deadweight, NT

5.2.3.5. Total Fuel Consumption (All types of Fuel)

5.2.3.6. Aggregated Distance travelled

5.2.3.7. Aggregated Hours underway

5.2.3.8. Rated Power of Main and Auxiliary Engine in KW.

5.2.3.9. Whether the particular ship is supplied with Shore Electric Power during port stay, and is yes number of hours in port when supplied with shore power.

5.2.4. All ships of less than 400 GT shall submit following data to IRS:

5.2.4.1. Total Fuel Consumption for each type of fuel and GT of ship.

5.2.4.2. Total hours in Port.

5.2.4.3. Number of hours in port, when supplied with shore power.

5.2.5. IRS to submit the data by 30th June every year to IMO fuel oil consumption database on GISIS for all ships of 5000 GT and above except those certified under RSV or ICV Notification and submit a compliance report to the directorate by 15th July every year.

5.2.6. Responsibilities of IRS: A report detailing various permutation and combination on the fuel oil consumption data and trend analysis basis age of vessel, category of vessel, size of vessel etc. and in the format approved by Competent Authority in the

Directorate shall be prepared and forwarded to the competent authority in the directorate in confidentiality by 1st August of every Calendar Year thereafter, for the previous Calendar Year.

5.3. Each ship covered under para 2.1 and of 5000 GT and above and which fall under one of the following categories of ships: Bulk carrier as defined in Regulation 2.2.5 of MARPOL Annex VI; Combination carrier as defined in Regulation 2.2.7 of MARPOL Annex VI; Containership as defined in Regulation 2.2.9 of MARPOL Annex VI; Cruise passenger ship as defined in Regulation 2.2.11 of MARPOL Annex VI; Gas Carrier, General Cargo Ship and LNG Carrier defined in Regulation 2.2.14-16 respectively of MARPOL Annex VI; Refrigerated cargo carrier as defined in Regulation 2.2.22 of MARPOL Annex VI; Ro-ro cargo ship, Ro-ro cargo ship (vehicle carrier), Ro-ro passenger ship & Tanker defined in Regulation 2.2.26-29 respectively of MARPOL Annex VI:

5.3.1. On or before 1st January 2023, the SEEMP shall include:

5.3.1.1. A description of the methodology that will be used to calculate the ship's attained annual operational CII required by regulation 28 of MARPOL Annex VI and the processes that will be used to report this value to the Administration;

5.3.1.2. The required annual operational CII, as specified in regulation 28 of MARPOL Annex VI, for the next 3 years;

5.3.1.3. An implementation plan documenting how the required annual operational CII will be achieved during the next 3 years; and

5.3.1.4. A procedure for self-evaluation and improvement.

5.3.2. This part of the SEEMP is required to be reviewed by a RO which has reviewed SEEMP covered vide para 5.2. The SEEMP shall be subjected to verification and Company audits taking into account the Guidelines to be developed by IMO.

5.3.3. The SEEMP shall be further required to be revised to include requirements of Paragraph 5.3.1.2, 5.3.1.3 & 5.3.1.4 and reviewed by RO every 3-Years or earlier for cases which fall under Paragraph 6.1.5, unless the Competent Authority in the Directorate advises otherwise, based on the amendments to MARPOL Annex VI.

5.3.4. Upon satisfactory review, a Confirmation of Compliance is to be issued by the RO for the ship, which is to be retained on-board, the ship.

6. Requirements related to implementation of Regulation 28 {Operational carbon intensity} on Indian Ships:

6.1. Ship of 5,000 gross tonnage and above covered under para 2.1, which falls into one or more of the categories defined in Paragraph 5.3 above:

- 6.1.1.** Each ship shall calculate the attained annual operational CII over a 12-month period from 1st January to 31st December with effect from calendar year 2023 and every calendar year thereafter, using the data collected in accordance with Paragraph 5.2 above, taking into account Resolution MEPC.336 (76) - 2021Guidelines on Operational Carbon Intensity Indicators and the Calculation Methods (CII Guidelines, G1).
- 6.1.2.** The ship shall report to the RO, which has reviewed the SEEMP under Paragraph 5.3.2, the attained annual operational CII, via electronic communication and using a standardized format to be developed by the Organization by 29th February 2024 for Calendar year 2023 and thereafter by 28/29th February every year for previous calendar year.
- 6.1.3.** The Attained annual operational CII shall be documented and verified against the required annual operational CII to determine operational carbon intensity rating A, B, C, D or E, indicating a major superior, minor superior, moderate, minor inferior, or inferior performance level, by the RO, taking into account Resolution MEPC. 339 (76) -2021Guidelines on the Operational Carbon Intensity Rating of Ships (CII Rating Guidelines, G4).
- 6.1.4.** After satisfactory completion of the verification, the Recognized Organisation shall issue a Statements of Compliance related to fuel oil consumption reporting and operational carbon intensity rating (for each ship, except those Certified as per RSV and ICV Notification, for which the data is reported and verified and requirements related to operational carbon intensity rating is complied with, if applicable for that ship category)valid till 31st May of the calendar year next to the data reporting year (next to next of data collecting calendar year).
- 6.1.5.** In case a ship is rated as D for three consecutive years or rated as E, the ship shall develop and submit by 30th April to RO issuing Statement of Compliance, a plan of corrective action objectively stating as to how the energy efficiency shall be enhanced to meet the CII rating. The RO after a review shall submit the plan of corrective action to the Competent Authority in the Directorate by 15th May for its approval and once approved, RO to ensure that SEEMP is revised reflecting the same.
- 6.1.6.** By 31st May of every calendar year thereafter: Company shall submit the verified CII data to IRS for each ship in an extensible mark-up language (XML) format with a copy of Statement of Compliance issued by the RO. IRS shall acknowledge receipt of

data promptly to the reporting Company identifying the ships for which data have been received.

6.2. All other Ships including those Certified as per RSV and ICV Notification of 5,000 gross tonnage and above, which do not fall into one or more of the categories defined in Paragraph 5.3 above and those less than 5000 GT and above 400 GT: IRS in consultation with Competent Authority in Directorate shall devise a way to calculate carbon intensity of these ships and will calculate the same every year based on submitted fuel oil consumption data.

6.3. Responsibilities of Indian Register of Shipping: By 1st August every year, IRS shall submit following report to Directorate in confidence:

6.3.1. Ships falling under Paragraph 6.1& 6.2:

6.3.1.1. Complete Indian Fleet: Category wise trend of CII based on age distribution, size distribution and age and size distribution Fuel Oil Consumption Reporting agreed between IRS and Directorate.

6.3.1.2. Each Company: For each ship category operated by the Company as above.

6.4. The latest amended versions of following Resolutions issued by IMO to be taken into account while complying with Regulation 28 of MARPOL Annex VI:

6.4.1. Resolution MEPC.336 (76) -2021Guidelines on Operational Carbon Intensity Indicators and the Calculation Methods (CII Guidelines, G1).

6.4.2. Resolution MEPC. 337 (76) -2021Guidelines on the Reference Lines for Use with Operational Carbon Intensity Indicators (CII Reference Lines Guidelines, G2).

6.4.3. Resolution MEPC. 338 (76) -2021Guidelines on the Operational Carbon Intensity Reduction Factors Relative to Reference Lines (CII Reduction Factor Guidelines, G3).

6.4.4. Resolution MEPC. 339 (76) -2021Guidelines on the Operational Carbon Intensity Rating of Ships (CII Rating Guidelines, G4).

6.5. Inclusion of CII Rating as part of Risk Matrix Calculation for Port State and Flag State Inspections: The Directorate will endeavour to include attained CII rating as part of Risk Matrix for calculating the frequency of Port State Inspection through IOMOU and Flag State Inspection, only for those ships, which under Annex VI are needed to attain a required CII.

7. Certification Requirements:

7.1. The following amendments have been carried out to Chapter 4 of MARPOL Annex VI which will necessitate re-issuance of all Certificates required under this Chapter:

7.1.1. The whole Chapter 4 is re-numbered, resulting in changes in Regulation numbers.

- 7.1.2.** The new requirements related to SEEMP and EEXI are coming into effect from 1st January, 2023 resulting in re-issuance of International Energy Efficiency Certificate.
- 7.1.3.** The renaming of Statement of Compliance for Fuel Oil Consumption Reporting to Statement of Compliance for Fuel Oil Consumption Reporting and Operational Carbon Intensity rating.
- 7.2. The EEXI requirements are applicable from the first annual, intermediate or renewals IAPP survey whichever is the first after 1st January 2023.
- 7.3. The revision of the SEEMP applicable to ships as stated in Paragraph 5.3 above is due by 1st January, 2023.
- 7.4. Ships of 400 GT and above on which EEXI or Operational CII requirements do not apply:**
The RO shall issue a revised IEEC in the new format attached to MARPOL Annex VI without any additional visit.
- 7.5. For other ships to which only EEXI requirements are applicable but not Operational Carbon Intensity requirements:** The RO shall issue IEEC Certificate in the new format as and when compliance is achieved by for ship but not later than first annual, intermediate or renewal IAPP survey whichever is the first after 1st January 2023.
- 7.6. For other ships to which both EEXI and Operational Carbon Intensity requirements are applicable:** The RO shall issue IEEC Certificate in new format by 1st January 2023 based on compliance with Paragraph 5.3 in case only SEEMP requirements are met and then again IEEC Certificate when EEXI requirements are met but in this case not later than first annual, intermediate or renewal IAPP survey whichever is the first after 1st January, 2023.
- 8. Entry of Existing Ships to Indian Flag:** With effect from 1st July 2024, no ship meeting the following criterion shall be registered under Indian Flag without permission of the Director General of Shipping and no IEEC to be issued during Change of Flag unless said permission is received:
- 8.1. Rated E as per Operational Carbon Intensity for any of the previous years.
- 8.2. Rated D for three previous years in any order.
- 9. Procedures related to Change of Flag, ISM Company, Ownerships, demolition etc.:**
- 9.1. Change of Owners/Manager without change of Flag:**
- 9.1.1.** In this event, the ship shall on the day of completion of the change or as close as practical thereto report to its Administration or any organization duly authorized by it, the aggregated data for the portion of the calendar year corresponding to the Company.

9.1.2. New Owners/Manager shall, after the end of the calendar year in which the transfer takes place, calculate and report the attained annual operational CII for the ship for the full 12-month period from 1st January to 31st December in the calendar year during which the transfer took place.

9.2. Existing ships coming to Indian Flag:

9.2.1. The RO carrying out change of flag surveys shall ensure that fuel consumption data and/or data related to operational CII (reviewed by previous RO, in case of change of RO) has been submitted by previous Owners (in case of change of owners/managers) prior issuance of IEEC.

9.2.2. With effect from 1st July 2024, in case a ship has been rated "D" in the previous year, the RO shall ensure prior issuing IEEC Certificate, owners/managers plans to enhance the CII rating and get its approval from the competent authority in the Directorate.

9.2.3. With effect from 1st July 2024, no ship to be given IEEC Certificate, if it meets the criterion specified in Paragraph 8 and has been registered under Indian Flag and the case to be reported to competent authority in the Directorate

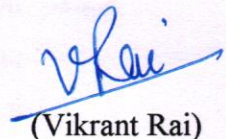
9.3. Indian Ship being demolished/Change of Flag:

9.3.1. No Ready for Recycling Certificate in accordance with Ship Recycling Act, 2019 shall be issued unless Company has submitted fuel consumption data and attained annual CII to RO till the date on which Ready for Recycling Certificate is planned to be issued and further the ship has plans to submit complete data till the date of handing over the ship to recycling facility.

9.3.2. Until the time Ship Recycling Act comes into force, no ship shall be de-registered after demolition unless the data related to fuel consumption and attained CII has been submitted to RO and verified by RO.

This is issued with the approval of the Director General of Shipping and Additional Secretary to the Govt. of India.

Sd/-


(Vikrant Rai)

Engineer & Ship Surveyor

To,

1. The Principal Officers/ Mercantile Marine Department, Mumbai /Kolkata/ Chennai/ Kandla /Cochin.
2. Surveyor-in-charge, Mercantile Marine Department Office Noida, Jamnagar, Mormugao, Mangalore, Tuticorin, Visakhapatnam, Haldia, Paradip, Port Blair.
3. All Recognized Organizations
4. All Shipping Companies

Copy to:

1. INSA / FOSMA /MASA
2. Chief Surveyor with the Govt. of India
3. Nautical Adviser(I/C)to the Govt. of India
4. Chief Ship Surveyor with the Govt. of India
5. Surveyors of Engineering /Nautical and Naval Architecture wings of DGS.
6. Hindi Cell
7. Guard file.
8. Computer Cell