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MINISTRY OF PORTS, SHIPPING AND WATERWAYS

NOTIFICATION

New Delhi, the_____ 2026

GSR_____(E) "In exercise of the powers conferred by sections 133(2), 133(4), 133(5), 134(1), 134(2), 135(2), 136, 140, 142(1), 143(1) and 143(2)(n) under Part VII of the Merchant Shipping Act, 2025 (24 of 2025), the Central Government, hereby makes the following rules, namely

CHAPTER 1

PRELIMINARY

1. **Short title and commencement**. – (1) This rules may be called the **Merchant Shipping (Prevention of Air Pollution from Ships) Rules, 2026.**

   (2) They shall come into force on the date of their publication in the Official Gazette.

2. **Application**. —The provisions of this Rules shall apply. In accordance with the provisions of section 131 of the Act.

3. **Definitions.—**(1) In this Rules, unless the context otherwise requires,—

   (a) *a similar stage of construction"* means the stage at which:

      (i) construction identifiable with a specific vessel begins; and

      (ii) assembly of that vessel has commenced comprising at least 50 tons or one per cent of the estimated mass of all structural material, whichever is less;

   (b) "Act" means the Merchant Shipping Act, 2025 *(24 of 2025)*;

   (c) "Administration" so far as the Republic of India is concerned, means the Ministry of Ports, Shipping, and Waterways or the Director General; and in relation to foreign flag vessels, mean the respective Government or the designated authority appointed by such Government;

   (d) *"*Annex I" means Annex I to the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL), as modified by the Protocol of 1978 relating thereto, and as modified by the Protocol of 1997, as amended by the

Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the Convention;

(e) "Annex II" means Annex II to the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL), as modified by the Protocol of 1978 relating thereto, and as modified by the Protocol of 1997, as amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the Convention;

(f) "Annex VI" means Annex VI to the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL), as modified by the Protocol of 1978 relating thereto, and as modified by the Protocol of 1997, as amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the Convention*;*

(g) *"*anniversary date" means the day and the month of each year that will correspond to the date of expiry of the International Air Pollution Prevention Certificate or Indian Air Pollution Prevention Certificate;

(h) "Attained annual operational CII" means the operational carbon intensity indicator value achieved by an individual vessel in accordance with paragraph 13 and 15 of First Schedule to this Rules;

(i) "Attained EEDI" is the EEDI value achieved by an individual vessel in accordance with paragraph 9 of First Schedule to this Rules;

(j) "Attained EEXI" is the EEXI value achieved by an individual vessel in accordance with paragraph 10 of First Schedule to this Rules;

(k) "bulk carrier" means a vessel which is intended primarily to carry dry cargo in bulk, including such types as ore carriers as defined in International Convention for the Safety of Life at Sea (SOLAS), 1974 chapter XII, regulation 1, but excluding combination carriers;

(l) *"*calendar year" means the period from 1 January until 31 December inclusive;

(m)"combination carrier" means a vessel designed to load 100% deadweight with both liquid and dry cargo in bulk;

(n) *"*company*"* means the owner of the vessel or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the vessel from the owner of the vessel and who on assuming such responsibility has agreed to take over all the duties and

responsibilities imposed by the International Management Code for the Safe Operation of Ships and for Pollution Prevention, as amended;

(o) "container ship" means a vessel designed exclusively for the carriage of containers in holds and on deck;

(p) "Convention" means the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL);

(q) *"*cruise passenger ship*"* means a passenger vessel not having a cargo deck, designed exclusively for commercial transportation of passengers in overnight accommodations on a sea voyage;

(r) "Defeat device" means a device that measures, senses or responds to operating variables (e.g. engine speed, temperature, intake pressure or any other parameter) for the purpose of activating, modulating, delaying or deactivating the operation of any component or the function of the emission control system such that the effectiveness of the emission control system is reduced under conditions encountered during normal operation, unless the use of such a device is substantially included in the applied emission certification test procedures;

(s) **"**electronic record book" means a device or system, approved by the Central Government, used to electronically record the required entries for discharges, transfers and other operations as required under this Rules in lieu of a hard copy record book taking into account the guidelines developed by the Organisation;

Explanation.— the "guidelines developed by the Organisation" means "Guidelines for the use of electronic record books under MARPOL, adopted by resolution MEPC.312(74) as may be amended by the Organization";

(t) *"*emission*"* means any release of substances, subject to control by this Rules, from vessel into the atmosphere or sea;

(u) *"*emission control area*"* means an area where the adoption of special mandatory measures for emissions from vessels is required to prevent, reduce and control air pollution from NO_x or SO_x and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment and shall include those listed in rules 14 and 15;

(v) *"*existing ship*"* means a vessel which is not a new vessel;

(w) *"*fuel oil*"* means any fuel delivered to and intended for combustion purposes for propulsion or operation on board a ship, including gas, distillate and residual fuels;

(x) "gas carrier" means a cargo vessel, other than a liquefied natural gas carrier constructed or adapted and used for the carriage in bulk of any liquefied gas;

(y) Gas fuel means a fuel oil with a vapour pressure exceeding 0.28 MPa absolute at a temperature of 37.8°C;

(z) "General cargo ship" means a vessel with a multi-deck or single deck hull designed primarily for the carriage of general cargo and excludes specialized dry cargo vessels, which are not included in the calculation of reference lines for general cargo vessels, namely livestock carrier, barge carrier, heavy load carrier, yacht carrier, nuclear fuel carrier;

(aa) "gross tonnage*"* means the gross tonnage calculated in accordance with the tonnage measurement rules contained in Merchant Shipping (Tonnage Measurement of Ships) Rules 2026 as amended;

(bb) In-use sample means a sample of fuel oil in use on a vessel.

(cc) *"*installations*"* in relation to paragraph 1 of the Schedule to this Rules means the installation of systems, equipment including portable fire-extinguishing units, insulation, or other material on a vessel, but excludes the repair or recharge of previously installed systems, equipment, insulation, or other material, or the recharge of portable fire-extinguishing units;

(dd) *"*installed*"* means a marine diesel engine that is or is intended to be fitted on a vessel, including a portable auxiliary marine diesel engine, only if its fuelling, cooling, or exhaust system is an integral part of the vessel;

Explanation.— For the purposes of the above clause*,*—

(i) A fuelling system is considered integral to the vessel only if it is permanently affixed to the vessel;

(ii) "installed" includes a marine diesel engine that is used to supplement or augment the installed power capacity of the vessel and is intended to be an integral part of the vessel;

(ee) Irrational emission control strategy means any strategy or measure that, when the vessel is operated under normal conditions of use, reduces the effectiveness of an emission control system to a level below that expected on the applicable emission test procedures*;*

(ff) “Liquefied Natural Gas carrier” means a cargo vessel constructed or adapted and used for the carriage in bulk of liquefied natural gas;

(gg) Low-flashpoint fuel means gaseous or liquid fuel oil having a flashpoint lower than otherwise permitted under paragraph 2.1.1 of regulation 4 of chapter II-2 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended;

(hh) “major conversion” may be determined taking into account the interpretation developed by the Organization and means a conversion of a vessel—

(i) which substantially alters the dimensions, carrying capacity or engine power of the vessel; or

(ii) which changes the type of the vessel; or

(iii) the intent of which in the opinion of the Central Government is substantially to prolong the life of the vessel; or

(iv) which otherwise so alters the vessel that, if it were a new vessel, it would become subject to relevant provisions of the present rules, not applicable to it as an existing vessel; or

(v) which substantially alters the energy efficiency of the vessel and includes any modifications that could cause the vessel to exceed the applicable required EEDI as set out in paragraph 11 of the First Schedule to this Rules or the applicable required EEXI as set out in paragraph 12 of the First Schedule to this Rules;

(ii) *“*marine diesel engine*”* means any reciprocating internal combustion engine operating on liquid or dual fuel, to which Paragraph 2 of First Schedule to this Rules applies, including booster/compound systems if applied;

Explanation.—, a gas fuelled engine installed on a vessel constructed on or after 1st day of March 2016 or a gas fuelled additional or non-identical replacement engine installed on or after that date is also considered as a marine diesel engine;

(jj) MARPOL delivered sample means the sample of fuel oil delivered in accordance with sub paragraph (12) of paragraph 7 of First Schedule to this Rules;

(kk) "New ship" as determined taking into account interpretation developed by the Organization means a vessel —

(i) for which the building contract is placed on or after 1 January 2013; or

(ii) in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013; or

(iii) the delivery of which is on or after 1 July 2015;

(ll) *"*non-conventional propulsion*"* means a method of propulsion, other than conventional propulsion, including diesel-electric propulsion, turbine propulsion, and hybrid propulsion systems;

Explanation.—"conventional propulsion" means a method of propulsion where any main reciprocating internal combustion engine is the prime mover and coupled to a propulsion shaft either directly or through a gear box;

(mm) "NO_x Technical Code" means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by resolution 2 of the 1997 MARPOL Conference, as amended by the Organization;

(nn) Onboard sample means a sample of fuel oil intended to be used or carried for use on board that vessel;

(oo) *"*Organization" means the International Maritime Organization;

(pp) "ozone-depleting substances*"* means controlled substances defined in paragraph (4) of article 1 of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in Annexes A, B, C or E to the said Protocol, and that may be found on board vessel including, but are not limited to:

(i) Halon 1211 Bromochlorodifluoromethane;

(ii) Halon 1301 Bromotrifluoromethane;

(iii) Halon 2402 1, 2-Dibromo -1, 1, 2, 2-tetraflouroethane (also known as Halon 114B2);

(iv) CFC-11 Trichlorofluoromethane;

(v) CFC-12 Dichlorodifluoromethane;

(vi) CFC-113 1, 1, 2 – Trichloro – 1, 2, 2 – trifluoroethane;

(vii) CFC-114 1, 2 – Dichloro –1, 1, 2, 2 – tetrafluoroethane;

(viii) CFC-115 Chloropentafluoroethan;

(qq) “party” means a State which has become a party to Annex VI by signing and ratifying either instrument or by acceding to it;

(rr) “passenger ship” shall have the same meaning as assigned to it under sub-section (25) of section 3 of the Act;

(ss) “Polar Code” means the International Code for Ships Operating in Polar Waters, consisting of an introduction, parts I-A and II-A and parts I-B and II-B, adopted by resolutions MSC.385(94) and MEPC.264(68), as may be amended, provided that:

(i) amendments to the environment-related provisions of the introduction and chapter 1 of part II-A of the Polar Code are adopted, brought into force and take effect in accordance with the provisions of article 16 of the Convention concerning the amendment procedures applicable to an appendix to an annex; and

(ii) amendments to part II-B of the Polar Code are adopted by the Marine Environment Protection Committee in accordance with its Rules of Procedure;

(tt) “recognised organisation” means an organization authorised by the Central Government under section 9 of the Act, and assessed to be in compliance with Part 2 of the Code for Recognized Organizations, as adopted by the Organization through Resolution MEPC.237(65), and as subsequently amended by the Organization.’

(uu) “refrigerated cargo carrier” means a vessel designed exclusively for the carriage of refrigerated cargoes in holds and includes vessels dedicated to the carriage of fruit juice in refrigerated cargo tanks;

(vv) Required annual operational CII is the target value of attained annual operational CII in accordance with paragraph 13 and 15 of First Schedule to this Rules for the specific *vessel* type and size;

(ww) “required EEDI” is the maximum value of attained Energy Efficiency Design Index that is allowed by paragraph 11 of the first schedule to this Rules for the specific vessel type and size;

(xx) Required EEXI is the maximum value of attained EEXI that is allowed by paragraph 12 of the first schedule to this Rules for the specific vessel type and size.

(yy) “ro-ro cargo ship” means a vessel designed for the carriage of roll-on-roll-off cargo transportation units;

(zz) “ro-ro cargo ship (vehicle carrier)” means a multi deck roll-on-roll-off cargo vessel designed for the carriage of empty cars and trucks;

(aaa) “ro-ro passenger ship” means a passenger vessel with roll-on-roll-off cargo spaces;

(bbb) “schedule” means the schedule appended to this Rules;

(ccc) “shipboard incineration” means the incineration of wastes or other matter on board a vessel, if such wastes or other matter were generated during the normal operation of that vessel;

(ddd) “shipboard incinerator” means a shipboard facility designed for the primary purpose of incineration;

(eee) “ships constructed” means vessels the keels of which are laid or that are at a similar stage of construction;

(fff) ship delivered on or after 1 September 2019 means a vessel:

(i) for which the building contract is placed on or after 1 September 2015; or

(ii) in the absence of a building contract, the keel of which is laid, or which is at a similar stage of construction, on or after 1 March 2016; or

(iii) the delivery of which is on or after 1 September 2019.

(ggg) “Sludge oil” means sludge from the fuel oil or lubricating oil separators, waste lubricating oil from main or auxiliary machinery, or waste oil from bilge water separators, oil filtering equipment or drip trays

(hhh) “Standard acceptable to the Organization” means “ISO 8754:2003 Petroleum products – Determination of sulphur content – Energy-dispersive X-ray fluorescence spectrometry or equivalent;

(iii) “sulphur content of fuel oil” means the concentration of Sulphur in a fuel oil, measured in % m/m as tested in accordance with a standard acceptable to the Organization.

(jjj) “tanker” in relation to paragraph 4 of the First Schedule mean an oil tanker as defined in Regulation 1 of Annex I of the Convention or a chemical tanker as defined in Regulation 1 of Annex II of the Convention.

(kkk) “Unmanned non-self-propelled (UNSP) barge” means a barge that:

(i) is not propelled by mechanical means; .

(ii) has no system, equipment and/or machinery fitted that may generate emissions regulated by Annex VI of the Convention; and has neither persons nor living animals on board.

(2) Words and expressions used in this Rules and not defined but defined in the Act shall have the same meaning as assigned to them in the Act.

4. **Exceptions and Exemptions**.—(1) Except where the owner or the master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result, this Rules shall not apply to,—

(a) any emission necessary for the purpose of securing the safety of a vessel or saving life at sea; or

(b) any emission resulting from damage to a vessel or its equipment:

Provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the emission for the purpose of preventing or minimizing the emission.

(2) The Central Government may, in co-operation with any other Administration as appropriate, issue an exemption from specific provisions of this Rules for a vessel to conduct trials for the development of vessel emission reduction and control technologies and engine design programmes:

Provided that such an exemption shall only be provided if the applications of specific provisions of this Rules or the revised NO_x Technical Code 2008 could impede research into the development of such technologies or programmes:

Provided further that a permit issued under this rule shall not exempt a vessel from the reporting requirement under paragraph 14 of the First Schedule to this Rules and shall not alter the type and scope of data required to be reported under the same.

Provided also that a permit for such an exemption shall only be provided to the minimum number of vessels necessary and shall be subject to the following provisions, namely:—

(a) for marine diesel engines with a per cylinder displacement up to 30 litres, the duration of the sea trial shall not exceed eighteen months, and where

additional time is required, the Central Government may permit a renewal for one additional eighteen month period from the date of its expiry; or

(b)for marine diesel engines with a per cylinder displacement at or above 30 litres, the duration of the vessel trial shall not exceed five years and shall require a progress review by the Central Government at each intermediate survey;

(c) a permit may be withdrawn based on this review if the testing has not adhered to the conditions of the permit or if it is determined that the technology or programme is not likely to produce effective results in the reduction and control of vessel emissions;

(d) Where the Central Government determines that additional time is required to conduct a test of a particular technology or programme, a permit may be renewed for an additional time- period not exceeding five years from the date of its expiry.

(3) Emissions directly arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources are exempted from the provisions of this Rules, and include the following matters, namely:—

(a) emissions resulting from the incineration of substances that are solely and directly the result of exploration, exploitation and associated offshore processing of sea-bed mineral resources, including but not limited to the flaring of hydrocarbons and the burning of cuttings, muds, and/or stimulation fluids during well completion and testing operations, and flaring arising from upset conditions;

(b) the release of gases and volatile compounds entrained in drilling fluids and cuttings;

(c) emissions associated solely and directly with the treatment, handling, or storage of sea-bed minerals; and

(d) emissions from marine diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of sea-bed mineral resources.

(4) The requirements of rule 18 shall not apply to the use of hydrocarbons that are produced and subsequently used on site as fuel, when approved by the Central Government.

(5) The central government may exempt an unmanned non-self-propelled (UNSP) barge from the requirements of rule 6 (1) and 8(1) of this Rules by means of an International Air Pollution Prevention Exemption Certificate for Unmanned Non-self-propelled (UNSP) Barges, for a period not exceeding five years provided that the barge has undergone a survey to confirm that conditions referred to in rule 3 (1) (kkk) are met.

5. Equivalents.— (1) The Central Government may allow any fitting, material, appliance or apparatus to be fitted in a vessel or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Rules if such fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods are at least as effective in terms of emissions reductions as that required by this Rules, including any of the standards set forth in paragraphs 2 and 3 of the First Schedule to this Rules.

(2) The Central Government, when allowing a fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Rules, shall communicate to the Organization for circulation to the parties' particulars thereof, for their information and appropriate action, if any.

(3) The Central Government shall take into account relevant guidelines developed by the Organization pertaining to the equivalents provided for in this Rules.

Explanation: For the purpose of this sub-rule, "guidelines developed by the Organization" means Guidelines for Exhaust Gas Cleaning System via MEPC 340(77) as may be further amended by the Organization.

(4) The Central Government, when allowing the use of an equivalent under sub-rule (1) shall endeavour not to impair or damage its environment, human health, property, or resources or those of other States.

CHAPTER 2

SURVEY, CERTIFICATION AND MEANS OF CONTROL

6. **Surveys.—** (1) Every vessel of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall, to ensure compliance with the requirements of Part I of First Schedule to this Rules, be subject to the following surveys, namely:—

(1) An initial survey before the vessel is put into service or before the certificate required under Rule 8 is issued for the first time, which shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of Part I of the First Schedule to this Rules;

(2) A renewal survey at such intervals as may be specified by the Central Government, but not exceeding five years, except in case of the applicability of sub-rules (2), (5), (6) or (7) of rule 11, and which shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with applicable requirements of Part I of First Schedule to this Rules;

(3) An intermediate survey within three months before or after the second anniversary date or within three months before or after the third anniversary date of the certificate, which shall fulfil the following conditions, namely:—

(i) An intermediate survey shall take the place of one of the annual surveys specified in clause (d) of sub-rule (1); and

(ii) The intermediate survey shall be such as to ensure that the equipment and arrangements fully comply with the applicable requirements of Part I of First Schedule to this Rules and are in good working order; and

(iii) Such intermediate survey shall be endorsed on the International Air Pollution Prevention Certificate issued under rules 8 or 9; and

(4) An annual survey within three months before or after each anniversary date of the certificate, including a general inspection of the equipment, systems, fittings, arrangements and material referred to in clause (a) of sub-rule (1) to ensure that they have been maintained in accordance with sub-rule (5)and that they remain satisfactory for the service for which the vessel is

intended, and which shall be endorsed on the International Air Pollution Prevention Certificate issued under rules 8 or 9; and

(5) An additional survey, either general or partial, according to the circumstances, shall be made as specified in sub-rules (5) or (6) which shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory and that the vessel complies in all respects with the requirements of Part I of First Schedule to this Rules.

(2) In the case of vessels of less than 400 gross tonnage, fishing vessels, vessels registered under the Inland vessel act, 2021 ships certified under River Sea Vessel Notification and ships certified under Indian Coastal Vessels Notification, the Central Government shall establish appropriate measures in order to ensure that the applicable provisions of Part I and II of First Schedule to this Rules are complied with and provide the form and manner of the Certificate to be issued.

(3) Surveys of vessels with regard to the enforcement of the provisions of this Rules shall be carried out by officers of the Central Government, subject to the following matters, namely:—

(a) The Central Government may, however, entrust the surveys either to surveyors nominated for the purpose or to recognised organisation.

(b) The survey of marine diesel engines and equipment for compliance with paragraph 2 of the First Schedule to this Rules shall be conducted in accordance with the revised NOx Technical Code 2008;

(c) When a nominated surveyor or recognised organisation determines that the condition of the equipment does not correspond substantially with the particulars of the certificate, they shall ensure that corrective action is taken and shall in due course notify the Central Government:

Provided that, where such corrective action is not taken, the certificate shall be withdrawn by the Central Government:

Provided further that, where the vessel is in a port of another party, the appropriate authorities of the port State shall also be notified immediately:

Provided also that when such notification regarding foreign flag vessels at an Indian port or place is received by Central Government from an officer of the Administration of the concerned vessel, a nominated surveyor or recognised organisation, the Central Government shall give such officer, surveyor or recognised organisation any necessary assistance to carry out their obligations under this rule; and

(d) In every case, the Central Government shall fully guarantee the completeness and efficiency of the survey and shall undertake to ensure the necessary arrangements to satisfy this obligation

(4) Taking into account Guidelines adopted by the Organization, vessels to which Part II of First Schedule to this Rules applies shall also be subject to the following surveys namely:—

(a) An initial survey before a new vessel is put in service and before the International Energy Efficiency Certificate is issued, which shall verify that the vessel's attained Energy Efficiency Design Index is in accordance with the requirements in Part II of the First Schedule to this Rules, and that the Ship Energy Efficiency Management Plan required by paragraph 10 of the First Schedule to this Rules, is on board;

(b) A general or partial survey, according to the circumstances, after a major conversion of a new vessel to which this rule applies, which shall ensure that the attained Energy Efficiency Design Index is recalculated as necessary and meets the requirement of paragraph 9 of First Schedule to this Rules with the reduction factor applicable to the vessel type and size of the converted vessel in the phase corresponding to the date of contract or keel laying or delivery determined for the original ship in accordance with clause (kk) of sub-rule (1) of rule 3**;**

(c) In cases where the major conversion of a new ship as defined in clause (kk) of sub-rule (1) of rule 3 or existing ship as defined in clause (v) of sub-rule (1) of rule 3 is so extensive that the vessel is regarded by the Central Government as a newly constructed ship, the Central Government shall determine the necessity of an initial survey on attained Energy Efficiency Design Index, which shall ensure the following matters, namely:—

(i) Such initial survey shall ensure the attained Energy Efficiency Design Index is calculated and meets the requirement of paragraph 11 of the First Schedule to this Rules with the reduction factor applicable corresponding to the vessel type and size of the converted vessel at the date of the contract of the conversion, or in the absence of a contract, the commencement date of the conversion;

(ii) Such initial survey shall also verify that the Ship Energy Efficiency Management Plan required by paragraph 13 of the First Schedule to this Rules is on board and for a vessel to which paragraph 14 of the First Schedule to this Rules applies, has been revised appropriately to reflect a major conversion in those cases where the major conversion affects data collection methodology or reporting processes.

Explanation.—For the purpose of this sub-rule, "guidelines adopted by the Organization" means the 2014 Guidelines on survey and certification of the Energy Efficiency Design Index (resolution MEPC.254(67), as amended by resolutions MEPC.261(68) and MEPC.309(73)); consolidated text: MEPC.1/Circ.855/Rev.2, as may be further amended**.**

(d) For existing ships, the verification of the requirement to have a SEEMP on board according to paragraph 13 of the First Schedule to this Rules shall take place at the first intermediate or renewal survey identified in sub rule (1) of this rule, whichever is the first, on or after 1 January 2013;

(e) The central government shall ensure that for each vessel to which paragraph 14 of the First Schedule to this Rules applies, the SEEMP complies with paragraph 13 (2) of the First Schedule to this Rules. This shall be done prior to collecting data under paragraph 14 of the First Schedule to this Rules in order to ensure the methodology and processes are in place prior to the beginning of the vessel's first reporting period. Confirmation of compliance shall be provided to and retained on board the vessel;

(f) The central government shall ensure that, for each vessel to which paragraph 15 of the First Schedule to this Rules applies, the SEEMP complies with paragraph 13 (1) (a). This shall be done prior to 1 January

2023.Confirmation of compliance shall be provided to, and retained onboard, the vessel;

(g) The verification that the vessel's attained EEXI is in accordance with the requirements in paragraphs 10 and 12 of the First Schedule to this Rules shall take place at the first annual, intermediate or renewal survey identified in paragraph (1) or the initial survey identified in sub rule 4(a) and 4(g) of this rule, whichever is the first, on or after 1 January 2023; and

(h) Notwithstanding sub rule 4(g) of this rule, a general or partial survey, according to the circumstances, carried out after a major conversion of a vessel to which paragraph 10 of the First Schedule to this Rules applies. The survey shall ensure that the attained EEXI is recalculated as necessary and meets the requirement of paragraph 12 of the First Schedule to this Rules

(5) The equipment shall be maintained to conform with the provisions of this Rules and no changes shall be made in the equipment, systems, fittings, arrangements, or material covered by the survey, without the express approval of the Central Government:

Provided that the direct replacement of such equipment and fittings with equipment and fittings that conform with the provisions of this Rules shall be permitted.

(6) Whenever an accident occurs to a vessel or a defect is discovered that substantially affects the efficiency or completeness of its equipment covered by this Rules, the master or owner of the vessel shall report at the earliest opportunity to the Central Government, a nominated surveyor, or recognised organisation responsible for issuing the relevant certificate.

7. Issue or endorsement of Indian Air Pollution Prevention (InAPP) Certificate:

Upon the completion of the survey provided under rule 6, the Director General shall issue an Indian Air Pollution Prevention Certificate be issued to:

(1) Any Indian vessel of 400 GT or above, but ply only in the coastal waters of India

(2) any vessel less than 400 GT

(3) Platforms and drilling rigs platforms and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of India

(4) Non-propelled accommodation barges and other manned non-propelled vessel

8. **Issue or Endorsement of Certificates and Statements of Compliance Related to Fuel Oil Consumption Reporting.—**(1) An International Air Pollution Prevention Certificate shall be issued, after an initial or renewal survey in accordance with the provisions of rule 6 to the following types of vessels, namely:—

(a) any vessel of 400 gross tonnage and above engaged in voyages to ports or offshore terminals under the jurisdiction of India or any other party; and

(b) platforms and drilling rigs before engaged in voyages to waters under the sovereignty or jurisdiction of India or any other party.

(2) An International Energy Efficiency Certificate for a vessel shall be issued after a survey in accordance with the provisions of rule (4) of rule 6 to any vessel of 400 gross tonnage and above before that vessel may engage in voyages to ports or offshore terminals under the jurisdiction of India or any other party.

(3) The certificate issued under sub-rule (1) or (2) shall be issued or endorsed either by the Central Government or any recognised organisation:

Provided that, in every case, the Central Government shall assume full responsibility for the certificate.

(4) Upon receipt of reported data pursuant to sub-paragraph (3) of paragraph 11 of the First Schedule to this Rules and attained annual operational CII pursuant to paragraph 15(2) of the First Schedule to this Rules, the Central Government or any recognised organisation shall

(a) determine whether the data has been reported in accordance with paragraph 11 of the First Schedule to this Rules

(b) verify that the attained annual operational CII is based on the data submitted in accordance with paragraph 15 of the First Schedule to this Rules,

(c) based on the verified attained annual operational CII, determine the operational carbon intensity rating of the vessel in accordance with paragraph 15 (6) of the First Schedule to this Rules; and

(d) issue a Statement of Compliance related to fuel oil consumption reporting and operational carbon intensity rating to the vessel no later than five months from the beginning of the calendar year, upon determination and verification pursuant to sub rule (6) of rule 6 and the Central Government shall assume full responsibility for this Statement of Compliance.

(5) Upon receipt of reported data pursuant to sub-paragraphs (4), (5) or (6) of paragraph 11 of the First Schedule to this Rules, the Central Government or any recognised organisation shall promptly determine whether the data has been reported in accordance with the same and, if so, issue a Statement of Compliance related to fuel oil consumption to the vessel at that time and the Central Government shall assume full responsibility for this Statement of Compliance.

(6) Notwithstanding sub rule (4) of this rule, a vessel rated as D for three consecutive years or rated as E in accordance with paragraph 15 of the First Schedule to this Rules, shall not be issued a Statement of Compliance unless a plan of corrective actions is duly developed and reflected in the SEEMP and verified by the central government or any organization duly authorized by it in accordance with sub paragraphs (7) and (8) of paragraph 15 of the First Schedule to this Rules

9. **Issue of a Certificate by another party.—** (1)The Central Government may, at the request of the Administration of a vessel which is party, survey the vessel and if satisfied that the provisions of the Annex VI of the Convention are complied with, issue an International Air Pollution Prevention Certificate or an International Energy Efficiency Certificate to that vessel, and where appropriate, endorse or authorise the endorsement of that certificate on the vessel, in accordance with the provisions of this Rules, and such certificate shall contain a statement that it has been so issued and shall have the same effect as if it was issued by that Government.

(2) The Central Government may request, through an Indian Consular officer, or otherwise, the Administration of a party to survey an Indian vessel, and if satisfied that the provisions of this Rules are complied with, to issue or authorise the issuances of an International Air Pollution Prevention Certificate or an International Energy Efficiency Certificate to that vessel, and where appropriate, endorse or authorise the endorsement of that certificate on the vessel, in accordance with this rules, and such certificate shall contain a statement that it has been so issued, in accordance with

such request and shall have the same effect as a Certificate issued in accordance with rule 8.

(3) No International Air Pollution Prevention Certificate or an International Energy Efficiency Certificate shall be issued to a vessel which is entitled to fly the flag of a State which is not a party.

10. **Form of Certificates and Statements of Compliance Related to Fuel Oil Consumption Reporting.—**(1) An International Air Pollution Prevention Certificate shall be issued in the Appendix I of Second Schedule to this Rules.

(2) An International Energy Efficiency Certificate shall be issued in the form specified in Appendix II of Second Schedule to this Rules.

(3) The Statement of Compliance issued pursuant to sub-rule (4) and (5) of rule 8 shall be issued in the Appendix III of Second Schedule to this Rules.

(4) International Air Pollution Prevention Exemption Certificate for Unmanned Non-self-propelled Barges: In accordance with rule 4 (5) of this Rules, the International Air Pollution Prevention Exemption Certificate for Unmanned Non-self-propelled Barges shall be drawn up in the form corresponding to the model given in appendix XI to Second Schedule and shall be at least in English, If an official language of the issuing country is also used, this shall prevail in the event of a dispute or discrepancy.

(5) The Indian Air Pollution Prevention Certificate shall be in the form Appendix XII of the Second Schedule to this rules

11. **Duration and Validity of Certificates and Statements of Compliance Related to Fuel Oil Consumption Reporting.—**(1) An International Air Pollution Prevention Certificate shall be issued for a period specified by the Central Government, which shall not exceed five years.

(2) Notwithstanding the requirements of sub-rule (1),—

(a) when the renewal survey is completed within three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate;

(b) when the renewal survey is completed after the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate; and

(c) when the renewal survey is completed more than three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of completion of the renewal survey.

(3) Where a certificate is issued for a period less than five years, the Central Government may extend the validity of the certificate beyond the expiry date to the maximum period specified in sub-rule (1), provided that the applicable surveys referred to in clauses (c) and (d) of sub-rule (1) of rule 6 when a certificate is issued for a period of five years are carried out, as may be appropriate.

(4) Where a renewal survey has been completed and a new certificate cannot be issued or placed on board the vessel before the expiry date of the existing certificate, any recognised organisation may endorse the existing certificate and such a certificate shall be accepted as valid for a further period that shall not exceed five months from such expiry date.

(5) Where a vessel, at the time when a certificate expires, is not in a port in which it is to be surveyed, the Central Government may extend the period of validity of the certificate only for the purpose of allowing the vessel to complete its voyage to the port in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so.

Provided that, no certificate shall be extended for a period longer than three months, and a vessel to which an extension is granted shall not, on its arrival in the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port without having a new certificate and where the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before such extension was granted.

(6) A certificate issued to a vessel engaged on short voyages, which has not been extended under the foregoing provisions of this rule, may be extended by the Central Government for a period of one month from the date of expiry stated on such, and in

a case where the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before such extension was granted.

(7) In special circumstances, as determined by the Central Government, taking into account the guidelines adopted by the organization, a new certificate need not be dated from the date of expiry of the existing certificate as required by clause (a) of sub-rule (2), sub-rule (5) and sub-rule (6) and the new certificate shall be valid to a date not exceeding five years from the date of completion of the renewal survey.

Explanation.—For the purpose of this sub-rule, "guidelines adopted by the Organization" means the Survey Guidelines Under the Harmonized System of Survey and Certification (HSSC), 2023 adopted vide A.1186 (33)".

(8) Where an annual or intermediate survey is completed before the period specified in rule 6, the following matters shall be complied with, namely:—

(a) the anniversary date shown on the certificate shall be amended by endorsement to a date that shall not be more than three months later than the date on which the survey was completed;

(b) the subsequent annual or intermediate survey required under rule 6 shall be completed at such intervals specified by that rule using the new anniversary date; and

(c) the expiry date may remain unchanged provided one or more annual or intermediate surveys, as appropriate, are carried out so that the maximum intervals between the surveys specified under rule 6 are not exceeded.

(9) A certificate issued under rule 8 or 9 shall cease to be valid in any of the following cases, namely:—

(a) where the relevant surveys are not completed within the periods specified under *sub-rule (1) of rule 6;*

(b) where the certificate is not endorsed in accordance with clauses (c) and (d) of sub-rule (1) *of rule 6;*

(c) upon the transfer of the vessel flying the flag of another State to Indian flag, a new certificate shall only be issued when the Central Government or an recognised organisation to issue the new certificate is fully satisfied that the vessel is in compliance with the requirements of *sub-rule (4) of rule 6.*

(d) upon the transfer of an Indian vessel to the flag of another State, if requested by the Administration of new Flag, within three months after the transfer has taken place, the Central Government shall, as soon as possible, transmit to the Administration copies of the certificate carried by the vessel before the transfer and, if available, copies of the relevant survey reports.

(10) The International Energy Efficiency Certificate shall be valid throughout the life of the vessel subject to the provisions of sub-rule (11).

(11) An International Energy Efficiency Certificate issued under this Rules shall cease to be valid in any of the following cases, namely:—

(a) if the vessel is withdrawn from service or if a new certificate is issued following major conversion of the vessel; or

(b) upon the transfer of the vessel flying the flag of another State to Indian flag, a new certificate shall only be issued when the Central Government or a recognised organisation to issue the new certificate is fully satisfied that the vessel is in compliance with the requirements of Part II of the First Schedule to this Rules;

(c) upon transfer of an Indian vessel to the flag of another state, if requested by the Administration of new Flag, within three months after the transfer has taken place, the Central Government or recognised organisation authorized by the Central Government shall, as soon as possible, transmit to the Administration copies of the certificate carried by the vessel before the transfer and, if available, copies of the relevant survey reports.

(12) A Statement of Compliance issued pursuant to sub-rules (4) or (5) of rule 8 of this Rules shall be valid for the calendar year in which it is issued and for the first five months of the following calendar year and every Statement of Compliance shall be kept on board for at least the period of their validity.

12. **Port State Control on Operational Requirements.—***(1)* Subject to the provisions of sub-rule (2), a certificate issued under the authority of a party under Annex VI of the Convention, which is in accordance with the provisions of this Rules also, shall be accepted by the Central Government and regarded for all purposes covered by the present rules as having the same validity as a certificate issued by them.

(2) A vessel required to hold a certificate in accordance with the provisions of Annex VI or this Rules is subject, while in the ports or offshore terminals under the jurisdiction of India, to inspection by officers duly authorized by Central Government:

Provided that any such inspection shall be limited to verifying that there is on board a valid certificate, unless there are clear grounds determined taking into account guidelines issued by the Organization,—

(a) for believing that the condition of the vessel or its equipment does not correspond substantially with the particulars of that certificate, in which case, or if the vessel does not carry a valid certificate, the officers duly authorized by Central Government carrying out the inspection shall take such steps as will ensure that the vessel shall not sail until it can proceed to sea without presenting an unreasonable threat of harm to the marine environment, provided that the Central Government may, however, grant such a vessel permission to leave the port or offshore terminal for the purpose of proceeding to the nearest appropriate repair yard available; or

(b) for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of air pollution from vessels, in which case, the officers duly authorized by Central Government shall take such steps as to ensure that the vessel shall not sail until the situation has been brought to order in accordance with the requirements of Annex VI or this Rules.

Explanation.—For the purpose of this sub-rule, “guidelines adopted by the Organization” means the Procedures for Port State Control, 2023 (resolution A.1185 (33)”.

(3) Where the Central Government denies a foreign vessel entry to the ports or offshore terminals under the jurisdiction of India or takes any action against such a vessel for the reason that the vessel does not comply with the provisions of Annex VI or this Rules, the Central Government shall immediately inform the consul or diplomatic representative of the party whose flag the vessel is entitled to fly, or if this is not possible, the Administration of the vessel concerned and before denying entry or taking such action, the Central Government may request consultation with the Administration of the concerned vessel and the information shall also be given to the

Administration when a vessel does not carry a valid certificate in accordance with the provisions of Annex VI.

(4) In relation to Part II of the First Schedule to this Rules, any port State inspection shall be limited to verifying, when appropriate, that there is a valid Statement of Compliance related to fuel oil consumption reporting and International Energy Efficiency Certificate on board.

(5) With respect to any vessel of any non-party, Central Government shall apply the requirements of this Rules, as may be necessary to ensure that no more favourable treatment is given to such vessel.

Explanation.— For the purpose of this sub-rule, "non-party" means a State which is not a party.

13. **Detection of Violations and Enforcement.—***(1)* Central Government shall co-operate with any other party in the detection of violations and the enforcement of the provisions of Annex VI or this Rules, using all appropriate and practicable measures of detection and environmental monitoring, adequate procedures for reporting and accumulation of evidence.

(2) A vessel to which Annex VI or this Rules applies may, in any port or offshore terminal under jurisdiction of India, be subject to inspection by officers authorized by the Central Government for the purpose of verifying whether the vessel has emitted any of the substances covered by Annex VI or this Rules in violation of the provisions and where an inspection indicates a violations, a report shall be forwarded to the Central Government for any appropriate action.

(3) Where any party, in accordance with the provisions of Annex VI or this Rules, furnishes to the Central Government evidence, if any, that the vessel has emitted any of the substances covered by Annex VI or this Rules in violation of its provisions, the Central Government shall, upon receiving such evidence, investigate the matter, and may request the other party to furnish further or better evidence of the alleged contravention.

(4) Where the Central Government is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation of the provisions of Annex VI or this Rules, it shall cause such proceedings to be taken in accordance

with its law as soon as possible and shall promptly inform the party or its administration that has reported the alleged violation, as well as the Organization, of the action taken.

(5) Officers duly authorized by Central Government may also inspect a vessel to which Annex VI or this Rules applies when it enters the ports or offshore terminals under the jurisdiction of India, if a request for an investigation is received from any party together with sufficient evidence that the vessel has emitted any of the substances covered by Annex VI or this Rules in any place in violation of the provisions of Annex VI or this Rules and the report of such investigation shall be sent to the party requesting it and to the Administration of the concerned vessel so that the appropriate action may be taken under the Convention.

(6) The international law concerning the prevention, reduction, and control of pollution of the marine environment from vessels, including that law relating to enforcement and safeguards, in force at the time of application or interpretation of this Rules, applies, *mutatis mutandis*, to the rules and standards set forth in this Rules.

CHAPPTER III

MISCELLEANEOUS

14. Fee.— The fee for surveys and issue of International Air Pollution Prevention Certificate or the Indian Air Pollution Prevention certificates shall be as specified in the Third **Schedule**

15. **Penalty.—**Whosoever contravenes any of the provisions of this Rules shall be punishable with fine in accordance with the provisions of section 281 of the Act.

16. Power to Relax.—Where the Central Government is of the opinion that it is necessary or expedient to do so, it may by order, for reasons to be recorded in writing, relax any of the provisions of this Rules with respect to any matter contained therein.

FIRST SCHEDULE

PART I

REQUIREMENTS FOR CONTROL OF EMISSIONS FROM VESSELS

1. ***Ozone-depleting Substances.—****(1)* This paragraph does not apply to permanently sealed equipment where there are no refrigerant charging connections or potentially removable components containing ozone-depleting substances.

(2) Subject to the provisions of sub- rule (3) of rule 4, any deliberate emissions of ozone-depleting substances shall be prohibited:

Provided that emissions arising from leaks of an ozone-depleting substance, whether or not the leaks are deliberate, may be regulated by Central Government.

Explanation.— For the purpose of this sub paragraph, “deliberate emissions” include emissions occurring in the course of maintaining, servicing, repairing or disposing of systems or equipment, except that deliberate emissions do not include minimal releases associated with the recapture or recycling of an ozone-depleting substance.

(3) Installations that contain ozone-depleting substances, other than hydro-chlorofluorocarbons, shall be prohibited on all vessels.

(4) Installations that contain hydro-chlorofluorocarbons shall be prohibited on all vessels which are:

(a) constructed on or after 1 January 2020; or

(b) in the case of vessels constructed before 1 January 2020, which have a contractual delivery date of the equipment to the vessel on or after 1 January 2020 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the vessel on or after 1 January 2020.

(5) The substances referred to in this paragraph, and equipment containing such substances, shall be delivered to appropriate reception facilities when removed from vessels.

(6) Each vessel subject to sub-rule (1) of rule (8) shall maintain a list of equipment containing ozone-depleting substances.

Explanation.—For the purpose of this sub-paragraph, refer to section 2.1 of Supplement to International Air Pollution Prevention Certificate (IAPP Certificate), Appendix I of Second Schedule to this Rules

(7) Each vessel subject to sub-rule (1) of rule (8) that has rechargeable systems that contain ozone-depleting substances shall maintain an ozone-depleting substances record book, which may form part of an existing log-book or electronic recording system, as approved by the Central Government, taking into account the guidelines adopted by Organization.

Explanation.—For the purpose of this sub-paragraph, "guidelines adopted by the Organization" means the Guidelines for the use of electronic record books under MARPOL, adopted by resolution MEPC. 312(74) as may be amended".

(8) Entries in the ozone-depleting substances record book shall be recorded in terms of mass (kg) of substance and shall be completed without delay on each occasion, in respect of the following particulars, namely:—

(a) recharge, full or partial, of equipment containing ozone-depleting substances;

(b) repair or maintenance of equipment containing ozone-depleting substances;

(c) discharge of ozone-depleting substances to the atmosphere:

(i) deliberate; and

(ii) non-deliberate;

(d) discharge of ozone-depleting substances to land-based reception facilities; and

(e) supply of ozone-depleting substances to the vessel.

2. **Nitrogen Oxides (NO_x).—** (1) (a) This rule shall apply to the following categories, namely:—

(i) each marine diesel engine with a power output of more than 130 kW installed on a vessel; and

(ii) each marine diesel engine with a power output of more than 130 kW that undergoes a major conversion on or after 1 January 2020, except when demonstrated, taking into account the interpretation adopted by the Organization, to the satisfaction of the Central Government that such engine is an identical replacement to the engine that it is replacing and is otherwise not covered under clause (a).

Explanation.—For the purpose of this sub-rule, guidelines adopted by the Organization means "Unified Interpretation to MARPOL Annex VI issued vide MEPC.1/Circ.795/Rev.9 as may be amended".

(b) This paragraph does not apply to the following categories, namely:—

(i) a marine diesel engine intended to be used solely for emergencies, or solely to power any device or equipment intended to be used solely for emergencies on the vessel on which it is installed, or a marine diesel

engine installed in lifeboats intended to be used solely for emergencies; and

(ii) a marine diesel engine installed on a vessel solely engaged in voyages within waters subject to the sovereignty or jurisdiction of India, provided Central Government has established an alternative NO_x control measure for such engine.

(c) Notwithstanding the provisions of sub paragraph 1(1) of this paragraph, the Central Government may provide an exclusion from the application of this paragraph for any marine diesel engine that is installed on a vessel constructed, or for any marine diesel engine that undergoes a major conversion, before 19 May 2005, provided that the vessel on which the engine is installed is solely engaged in voyages to ports or offshore terminals within the State the flag of which the vessel is entitled to fly.

(2)(a) For the purpose of this paragraph, major conversion means a modification on or after 1 January 2000 of a marine diesel engine that has not already been certified to the standards set forth in sub paragraph (3), (4), or (5)(a)(i) of this paragraph where:

(i) the engine is replaced by a marine diesel engine or an additional marine diesel engine is installed, or

(ii) any substantial modification, as defined in the revised NOx Technical Code 2008, is made to the engine, or

(iii) the maximum continuous rating of the engine is increased by more than 10% compared to the maximum continuous rating of the original certification of the engine.

(b) For a major conversion involving the replacement of a marine diesel engine with a non-identical marine diesel engine, or the installation of an additional marine diesel engine, the standards in this paragraph at the time of the replacement or addition of the engine shall apply.

(c) For the purpose of this paragraph, the installation of a marine diesel engine replacing a steam system shall be considered a replacement engine and where in the case of replacement engines only, it is not possible for such a replacement engine to meet the standards set forth in sub paragraph (7) (c), then that replacement engine

shall meet the standards set forth in sub paragraph (7) (b) [4] of this paragraph (Tier II), taking into account the guidelines developed by the Organization and the Central Government shall notify the Organization in the instances where a Tier II rather than a Tier III replacement engine has been installed on or after 1 August 2025 in accordance with the provisions of this sub paragraph.

Explanation.—For the purpose of this sub-paragraph, guidelines adopted by the Organization means the "Unified Interpretation to MARPOL Annex VI issued vide MEPC.1/Circ.795/Rev.9. as may be amended" and the "2013 Guidelines as Required by Regulation 13.2.2 of MARPOL Annex VI in respect of Non-Identical Replacement Engines Not Required to meet the Tier III Limit issued vide MEPC Resolution MEPC.230(65) as may be amended".

(d) A marine diesel engine referred to in clauses (a)(ii) and (iii) of sub paragraph (2), shall meet the following standards, namely:—

(i) for vessels constructed prior to 1 January 2000, the standards set forth in sub paragraph (3) shall apply; and

(ii) for vessels constructed on or after 1 January 2000, the standards in force at the time the vessel was constructed shall apply.

Tier I

(3) Subject to rule 4, the operation of a marine diesel engine that is installed on a vessel constructed on or after 1 January 2000 and prior to 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute), namely:—

(a) 17.0 g/kWh when n is less than 130 rpm;

(b) $45 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm;

(c) 9.8 g/kWh when n is 2,000 rpm or more.

Explanation.—For the purpose of this sub-rule, guidelines adopted by the Organization means the "Guidelines for the application of the NOx Technical Code relative to certification and amendments of Tier I engines (MEPC.1/Circ.679) as may be amended".

Tier II

(4) Subject to rule 4, the operation of a marine diesel engine that is installed on a vessel constructed on or after 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

(a) 14.4 g/kWh when n is less than 130 rpm;

(b) $44 \cdot n^{(-0.23)}$ g/kWh when n is 130 or more but less than 2,000 rpm;

(c) 7.7 g/kWh when n is 2,000 rpm or more.

Tier III

(5)(a) Subject to rule 4, With respect to Tier III, in an emission control area designated for Tier III NOx control under sub paragraph (6) of this paragraph (NOx Tier III emission control area), the operation of a marine diesel engine that is installed on a vessel is prohibited,—

(i) except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

(A) 3.4 g/kWh when n is less than 130 rpm;

(B) $9 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm;

(C) 2.0 g/kWh when n is 2,000 rpm or more;

(ii) When that vessel is constructed on or after,—

(A) 1 January 2016 and is operating in the North American Emission Control Area or the United States Caribbean Sea Emission Control Area;

(B) 1 January 2021 and is operating in the Baltic Sea Emission Control Area or the North Sea Emission Control Area;

(iii) when that vessel is operating in a NOX Tier III emission control area, other than an emission control area described in sub paragraph (sub paragraph 7), and is constructed on or after the date of adoption of such an emission control

area, or a later date as may be specified by the Organization in the amendment designating the NO_X Tier III emission control area, whichever is later.

(b) The standards set forth in sub clause (i) of clause (a) of sub paragraph (5) shall not apply to the following categories, namely:—

(i) a marine diesel engine installed on a vessel with a length (L), of less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes; or

(ii) a marine diesel engine installed on a vessel with a combined nameplate diesel engine propulsion power of less than 750 kW if it is demonstrated, to the satisfaction of the Central Government, that the vessel cannot comply with the standards set forth in sub clause (i) of clause (a) of sub paragraph (5) because of design or construction limitations of the vessel; or

(iii) a marine diesel engine installed on a vessel constructed prior to 1 January 2021 of less than 500 gross tonnage, with a length (L) of 24 metres or over when it has been specifically designed, and is used solely, for recreational purposes.

Explanation.—For the purpose of this sub-rule, *"length (L)"* means 96 per cent of the total length on a waterline at 85 per cent of the least moulded depth measured from the top of the keel, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In vessels designed with a rake of keel the waterline on which this length is measured shall be parallel to the designed waterline. The length *(L)* shall be measured in metres.

(c) The tier and on/off status of marine diesel engines installed on board a vessel to which clause (a) sub paragraph (5) applies, which are certified to both Tier II and Tier III or which are certified to Tier II only, and as interpreted taking into account the guidelines adopted by the Organization, shall be recorded in such logbook or electronic record book as prescribed by the Central Government taking into account the guidelines adopted by the Organization, at entry into and exit from a NOx Tier III emission control area, or when the on/off status changes within such an area, together with the date, time and position of the vessel

Explanation.– For the purpose of this sub-rule, guidelines adopted by the Organization means Unified Interpretation to MARPOL Annex VI as adopted vide

“MEPC.1/Circ. 795/Rev.4. as may be amended” and the “Guidelines for the use of electronic record books under MARPOL, adopted by resolution MEPC. 312(74) as may be amended”.

(d) Emissions of nitrogen oxides from a marine diesel engine subject to clause (a) of sub paragraph (5) that occur immediately following building and sea trials of a newly constructed ship, or before and following converting, repairing, and/or maintaining the vessel, or maintenance or repair of a Tier II engine or a dual fuel engine when the vessel is required to not have gas fuel or gas cargo on board due to safety requirements, for which activities take place in a shipyard or other repair facility located in a NO_X Tier III emission control area are temporarily exempted, provided the following conditions are met, namely:—

(i) the engine meets the Tier II NO_X limits; and

(ii) the vessel sails directly to or from the shipyard or other repair facility, does not load or unload cargo during the duration of the exemption, and follows any additional specific routing requirements indicated by the port State in which the shipyard or other repair facility is located, if applicable.

(e) The exemption provided in clause (d) of sub paragraph (5) applies only for the following period, namely:—

(i) for a newly constructed ship, the period beginning at the time the vessel is delivered from the shipyard, including sea trials, and ending at the time the vessel directly exits any NO_X Tier III emission control area or, with regard to a vessel fitted with a dual fuel engine, the vessel directly exits any NO_X Tier III emission control area or proceeds directly to the nearest gas fuel bunkering facility appropriate to the vessel located in any NO_X Tier III emission control area;

(ii) for a vessel with a Tier II engine undergoing conversion, maintenance or repair, the period beginning at the time the vessel enters any NO_X Tier III emission control area and proceeds directly to the shipyard or other repair facility, and ending at the time the vessel is released from the shipyard or other repair facility and directly exits any NO_X Tier III emission control area after performing sea trials, if applicable; or

(iii) for a vessel with a dual fuel engine undergoing conversion, maintenance or repair, when the vessel is required to not have gas fuel or gas cargo on board due to safety requirements, the period beginning at the time the vessel enters any NO_X Tier III emission control area or when it is degassed in any NO_X Tier III emission control area and proceeds directly to the shipyard or other repair facility, and ending at the time when the vessel is released from the shipyard or other repair facility and directly exits any NO_X Tier III emission control area or proceeds directly to the nearest gas fuel bunkering facility appropriate to the vessel located in any NO_X Tier III emission control areas.

(6) For the purposes of this paragraph, a NO_X Tier III emission control area shall be any sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in Appendix III to Annex VI of the Convention, and shall constitute the following areas, namely:—

(a) the North American Emission Control Area, which means the area described by the coordinates provided in Appendix VII to the Annex VI of the Convention;

(b) the United States Caribbean Sea Emission Control Area, which means the area described by the coordinates provided in Appendix VII to the Annex VI of the Convention;

(c) the Baltic Sea Emission Control Area means the Baltic Sea proper with the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8' N;

(d) the North Sea Emission Control Area means the North Sea proper including seas therein with the boundary between:

(i) the North Sea southwards of latitude 62º N and eastwards of longitude 4º W;

(ii) the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57º 44.8´ N; and

(iii) the English Channel and its approaches eastwards of longitude 5º W and northwards of latitude 48º 30´ N.

(7) (a)Notwithstanding clause (a) of sub-rule (1), a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a vessel constructed on or after 1 January 1990 but prior to 1 January 2000 shall comply with the emission limits set forth in clause (d) of sub paragraph (7):

Provided that an approved method for that engine has been certified by a party to taking into account the guidelines adopted by the Organization and notification of such certification has been submitted to the Organization by such administration taking into account the guidelines adopted by the Organization, and the compliance with this sub paragraph shall be demonstrated through one of the following matters, namely:—

(i) installation of the certified approved method, as confirmed by a survey using the verification procedure specified in the approved method file, including appropriate notation on the vessel's International Air Pollution Prevention Certificate of the presence of the approved method; or

(ii) certification of the engine confirming that it operates within the limits set forth in sub paragraphs (3), (4) or (5) (a) (i) and an appropriate notation of the engine certification on the vessel's International Air Pollution Prevention Certificate.

Explanation.—For the purpose of this sub-rule, guidelines adopted by the Organization means the "2014 Guidelines on the approved method process (resolution MEPC.243(66)) as may be amended" and the "2014 Guidelines in respect of the information to be submitted by an Administration to the Organization covering the certification of an approved method as required under regulation 13.7.1 of MARPOL Annex VI (resolution MEPC.242(66)) as may be amended"**.**

(b) The provisions contained in Sub clause (a) of sub paragraph (7) shall apply no later than the first renewal survey that occurs twelve months or more after deposit of the notification under sub clause (a) of sub paragraph (7):

Provided that, where an owner of a vessel on which an approved method is to be installed can demonstrate to the satisfaction of the Central Government that the approved method was not commercially available despite best efforts to obtain it, then that approved method shall be installed on the vessel no later than

the next annual survey of that vessel which falls after the approved method is commercially available.

(c) With regard to a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a vessel constructed on or after 1 January 1990, but prior to 1 January 2000, the International Air Pollution Prevention Certificate shall, for a marine diesel engine to which sub clause (a) of sub paragraph (7) applies, shall indicate one of the following matters, namely:—

(i) an approved method has been applied pursuant to sub clause (i) of proviso to clause (a) of sub paragraph (7);

(ii) the engine has been certified pursuant to sub clause (ii) of proviso clause (a) of sub paragraph (7);

(iii) an approved method is not yet commercially available as described in clause (b) of sub paragraph (7) or

(iv) an approved method is not applicable.

(d) Subject to rule 4, the operation of a marine diesel engine described in clause (a) of sub paragraph (7) is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute)—

(a) 17.0 g/kWh when n is less than 130 rpm;

(b) $45 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm; and

(c) 9.8 g/kWh when n is 2,000 rpm or more.

(e) Certification of an approved method shall be in accordance with chapter 7 of the revised NO_x Technical Code 2008 and shall include verification of the following matters, namely:—

(i) by the designer of the base marine diesel engine to which the approved method applies that the calculated effect of the approved method will not decrease engine rating by more than 1.0%, increase fuel consumption by more than 2.0% as measured according to the appropriate test cycle set forth in the

revised NO_x Technical Code 2008, or adversely affect engine durability or reliability; and

(ii) that the cost of the approved method is not excessive, which is determined by a comparison of the amount of NO_x reduced by the approved method to achieve the standard set forth in clause (d) of sub paragraph (7) of this paragraph and the cost of purchasing and installing such approved method and such cost shall not exceed 375 Special Drawing Rights/metric ton NOx calculated in accordance with the Cost-Effectiveness(Ce) formula below and taking into account the guidelines adopted by the Organization:

Provided that, for the purpose of this sub-rule, the cost of an approved method shall not exceed 375 Special Drawing Rights/metric tonne NOx calculated in accordance with the cost-effectiveness (Ce) formula below:

C_e = {Cost of approved method · 10^6} / {Power (kW) · 0.768 · 6,000 (hours/year) · 5 (years) · ΔNOx (g/kWh)}

For the purpose of this sub paragraph, guidelines adopted by the Organization means “Definitions for the cost-effectiveness formula in regulation 13.7.5 of the revised MARPOL Annex VI (MEPC.1/Circ.678)”.

(8) The revised NO_x Technical Code 2008 shall be applied in the certification, testing, and measurement procedures for the standards set forth in this paragraph:

(9) The procedures for determining NO_x emissions set out in the revised NO_x Technical Code 2008 are intended to be representative of the normal operation of the engine and any defeat device and irrational emission control strategy undermine this intention and shall not be allowed;

Provided that, this paragraph shall not prevent the use of auxiliary control devices that are used to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure or that are used to facilitate the starting of the engine

3. ***Sulphur Oxides (SO_x) and Particulate Matter.—****(1)* The sulphur content of fuel oil used or carried for use on board vessels shall not exceed 0.5% m/m.

(2) For the purpose of this paragraph, emission control areas shall include the following areas, namely:—

(a) the Baltic Sea area as defined in regulation 1.11.2 of Annex I of the Convention;

(b) the North Sea area as defined in regulation 1.14.6 of Annex V of the present Convention;

(c) the North American Emission Control Area, which means the area described by the coordinates provided in appendix VII to Annex VI of the Convention; and

(d) the United States Caribbean Sea Emission Control Area, which means the area described by the coordinates provided in appendix VII to Annex VI of the Convention.

(3) While vessels are operating within an emission control area, the sulphur content of fuel oil used on board vessels shall not exceed 0.10% m/m.

(4) The sulphur content of fuel oil referred to in (1) and (3) this paragraph shall be documented by its supplier as required by paragraph 7 of this Schedule.

(5) Those vessels using separate fuel oils to comply with sub paragraph (3) and entering or leaving an emission control area set forth in sub paragraph (2) shall carry a written procedure showing the manner of doing the fuel oil change-over, allowing sufficient time for the fuel oil service system to be fully flushed of all fuel oils exceeding the applicable sulphur content specified in sub paragraph (3) prior to entry into an emission control area and the volume of low sulphur fuel oils in each tank as well as the date, time, and position of the vessel when any fuel-oil-change-over operation is completed prior to the entry into an emission control area or commenced after exit from such an area, shall be recorded in such log-book or electronic record book as prescribed by the Central Government.

(6) During the first twelve months immediately following entry into force of an amendment designating a specific emission control area under sub paragraph(2), vessels operating in that emission control area are exempt from the requirements in sub paragraph (3) and (5) and from the requirements of sub paragraph (4) in so far as they relate to sub-paragraph (3).

(7) Where any officer duly authorized by the Central Government in accordance with sub rule (2) of rule (12) and after due permission of the Central Government requires the in-use fuel oil sample or on board fuel oil sample to be analysed, it shall be done in accordance with the verification procedure set forth in Appendix VI of Second Schedule to this Rules to determine whether the fuel oil being used or carried for use on board meets the requirements in sub paragraph (1) or (3)

Provided that in-use fuel oil sample shall be drawn taking into account the guidelines adopted by the Organization and the on board fuel oil sample shall be drawn taking into account the guidelines to be adopted by the Organization:

(8) the sample shall be sealed by such officers with a unique means of identification installed in the presence of the vessels representative and the vessel shall be given the option of retaining a duplicate sample.

Explanation- "guidelines adopted by the Organization" means the 2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board vessels (MEPC.1/Circ.864/Rev.1) as may be amended and the 2020 Guidelines for on board sampling of fuel oil intended to be used or carried for use on board a vessel (MEPC.1/Circ.889) as may be amended.

(9) For each vessel subject to rules 6 and 8, a sampling point shall be fitted or designated for the purpose of taking representative samples of the fuel oil being used on board the vessel taking into account the guidelines adopted by the Organization.

Explanation.—For the purpose of this sub-rule, "guidelines adopted by the Organization" means the 2019 Guidelines for on board sampling for the verification of the sulphur content of the fuel oil used on board ships (MEPC.1/Circ.864/Rev.1) as may be further amended.

(10) For a vessel constructed before 1 April 2022, any sampling point referred to in sub paragraphs (7) and (8) shall be fitted or designated not later than the first renewal survey as identified in clause on or after 1 April 2023.

(11) The requirements of sub paragraphs (8) or (9) above are not applicable to a fuel oil service system for a low-flashpoint fuel for combustion purposes for propulsion or operation on board the vessel.

(12) The officers authorized by Central Government shall, as appropriate, utilize a sampling point fitted or designated for the purpose of taking representative sample of the fuel oil being used on board in order to verify that the fuel oil complies with this paragraph:

(13) Taking fuel oil samples under this paragraph by such officers shall be performed as expeditiously as possible without causing the vessel to be unduly delayed.

4. **Volatile Organic Compounds (VOCs*).—(1) Where*** the emissions of VOCs from a tanker are to be regulated in a port or ports or a terminal or terminals under the jurisdiction of India, they shall be regulated in accordance with the provisions of this paragraph.

(2) If Central Government regulates tankers for VOC emissions, it shall submit a notification to the Organization at least six months before the effective date, which shall include information on the size of tankers to be controlled, the cargoes requiring vapour emission control systems, and the effective date of such control.

Explanation.—For the purpose of this sub-rule, “notification to the Organization” means Notification to the Organization on ports or terminals where volatile organic compounds (VOCs) emissions are to be regulated vide MEPC. 1/Circ. 509 as may be amended”.

(3) If Central Government designates ports or terminals at which VOC emissions from tankers are to be regulated, it shall ensure that vapour emission control systems, approved by Central Government taking into account the safety standards for such systems adopted by the Organization are provided in any designated port and terminal and are operated safely and in a manner so as to avoid undue delay to a vessel.

(4) A tanker to which sub paragraph (1) applies shall be provided with a vapour emission collection system approved by the Central Government taking into account the safety standards for such systems developed by the Organization, and shall use

this system during the loading of relevant cargoes and a port or terminal that has installed vapour emission control systems in accordance with this rule may accept tankers which are not fitted with vapour collection systems for a period of three years after the effective date identified in sub-paragraph (2).

Explanation. — For the purpose of this sub-rule, "safety standards" means "the Standards for vapour emission control systems (MSC/Circ.585) as may be amended".

(5) A tanker carrying crude oil shall have on board and implement a VOC management plan approved by the Central Government and prepared taking into account the guidelines adopted by the Organization, where such plan shall be specific to each vessel and shall at least include the following matters, namely:—

(a) provide written procedures for minimizing VOC emissions during the loading, sea passage and discharge of cargo;

(b) give consideration to the additional VOC generated by crude oil washing;

(c) identify a person responsible for implementing the plan; and

(d) for vessels on international voyages, be written in the English.

Explanation: For the purpose of this sub-rule, "guidelines adopted by the Organization" means the Guidelines for the development of a VOC management plan (resolution MEPC.185(59)) and also the Technical information on systems and operation to assist development of VOC management plans (MEPC.1/Circ.680), and Technical information on a vapour pressure control system to facilitate the development and update of VOC management plans (MEPC.1/Circ.719).

(6) This paragraph shall also apply to gas carriers only if the types of loading and containment systems allow safe retention of non-methane VOCs on board or their safe return ashore.

Explanation.—For the purpose of this sub-rule, refer to the International code for the Construction and Equipment of vessels carrying liquefied gases in bulk resolution MS 370(93) as may be amended.

5. **Shipboard Incineration.—***(1)* Except as provided in sub paragraph (4), shipboard incineration shall be allowed only in a shipboard incinerator.

(2) Shipboard incineration shall be prohibited for the following substances, namely:—

(a) residues of cargoes subject to Merchant Shipping (Prevention of Pollution by Oil from Ships) Rules, 2026 as amended, Merchant Shipping (Control of Pollution by Noxious Liquid Substances in Bulk) Rules, 2026 as amended, Merchant Shipping (Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form) Rules, 2026 as amended or related contaminated packing materials;

(b) polychlorinated biphenyls (PCBs);

(c) garbage, as defined by Merchant Shipping (Prevention of Pollution by Garbage from Ships) Rules, 2026 as amended, containing more than traces of heavy metals;

(d) refined petroleum products containing halogen compounds;

(e) sewage sludge and sludge oil either of which are not generated on board the vessel; and

(f) exhaust gas cleaning system residues.

(3) Shipboard incineration of polyvinyl chlorides (PVCs) shall be prohibited, except in a shipboard incinerator for which Type Approval Certificates have been issued.

Explanation.—For the purpose of this sub-rule, Type Approval Certificates to be issued in accordance with the "Revised guidelines for the implementation of Annex V of MARPOL (resolution MEPC.59(33), as amended by resolution MEPC.92(45)), or Standard specification for shipboard incinerators (resolution MEPC.76(40), as amended by resolution MEPC.93(45)), or 2014 Standard specification for shipboard incinerators (resolution MEPC 244(66)) as may be further amended".

(4) Shipboard incineration of sewage sludge and sludge oil generated during normal operation of a vessel may also take place in the main or auxiliary power plant or boilers, but in those cases, shall not take place inside ports, harbours and estuaries.

(5) Nothing in this paragraph either affects the incineration at sea prohibitions of MS (Dumping Rules, 2026) or other requirements thereof or precludes the development, installation and operation of alternative design shipboard thermal waste treatment devices that meet or exceed the requirements of this paragraph)

(6) (a) Except as provided in clause (b) of this sub paragraph, each incinerator that is installed on board a vessel constructed on or after 1 January 2000 or incinerator that is installed on board a vessel on or after 1 January 2000 shall meet the requirements contained in Appendix IV to Second Schedule to this Rules subject to this sub paragraph (5) and each incinerator shall be approved by the Central Government or any recognised organisation taking into account the standard specification for shipboard incinerators adopted by the Organization.

Explanation.—For the purpose of this sub-rule, "standard specification for shipboard incinerators adopted by the Organization" means the 2014 Standard specification for shipboard incinerators (resolution MEPC.244(66)), or Standard specification for shipboard incinerators (resolution MEPC.76(40), as amended by resolution MEPC.93(45)), and Type approval of shipboard incinerators (MEPC.1/Circ.793) as may be further amended.

(b) The Central Government may allow exclusion from the application of clause (a) of sub paragraph (6) to any incinerator that is installed before 19 May 2005 on board a vessel, where the vessel is solely engaged in voyages within waters subject to the sovereignty or jurisdiction of India.

(7) Incinerators installed in accordance with the requirements of clause (a) of sub paragraph (6) shall be provided with a manufacturer's operating manual which is to be retained with the unit and which shall specify how to operate the incinerator within the limits described in paragraph 2 of Appendix IV of Second Schedule to this Rules

(8) Personnel responsible for the operation of an incinerator installed in accordance with the requirements of clause (a) of sub paragraph (6) shall be trained to implement the guidance provided in the manufacturer's operating manual as required by sub paragraph (7).

(9) For incinerators installed in accordance with the requirements of clause (a) of sub paragraph (6), the combustion chamber gas outlet temperature shall be monitored at all times the unit is in operation:

Provided that, where that incinerator is of the continuous-feed type, waste shall not be fed into the unit when the combustion chamber gas outlet temperature is below 850°C;

Provided further that, where that incinerator is of the batch-loaded type, the unit shall be designed so that the combustion chamber gas outlet temperature shall reach 600°C within five minutes after start-up and will thereafter stabilize at a temperature not less than 850°C.

6. **Reception Facilities**.—(1) The Central Government taking into account the guidelines adopted by the Organization shall ensure that the provision of facilities adequate to meet the following matters, namely:—

(a) needs of vessels using its repair ports for the reception of ozone depleting substances and equipment containing such substances when removed from vessels;

(b) needs of vessels using its ports, terminals or repair ports for the reception of exhaust gas cleaning residues from an approved exhaust gas cleaning system, without causing undue delay to vessels, and

(c) needs in vessel breaking facilities for the reception of ozone depleting substances and equipment containing such substances when removed from vessel.

Explanation.— For the purpose of this sub-rule, "safety standards adopted by the Organization" means the 2011 Guidelines for Reception Facilities under MARPOL Annex VI issued vide MEPC.199(62) as may be further amended**".**

(2) If a particular port or terminal is remotely located from, or lacking in, the industrial infrastructure necessary to manage and process those substances referred to in sub paragraph (1) and therefore cannot accept such substances, then, the Central Government shall inform the Organization of any such port or terminal so that this information may be circulated to all member states for their information and any appropriate action.

(3) The Central Government shall also notify the Organization of its ports and terminals where reception facilities are available to manage and process such substances.

7. **Fuel oil availability and Quality.—**(1) The Central Government shall take all reasonable steps to promote the availability of fuel oils that comply with these at ports and terminals within the jurisdiction of India and inform the Organization of the availability of compliant fuel oils in its ports and terminals.

(2) (a) Notwithstanding the flag of the vessel, if the vessel is found not to be in compliance with the standards for compliant fuel oils set forth in this Rules, the Central Government may require the vessel to fulfil the following requirements, namely:—

(i) present a record of the actions taken to attempt to achieve compliance; and

(ii) provide evidence that it attempted to purchase compliant fuel oil in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such fuel oil and that despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase.

(b) The Central Government shall not require a vessel to deviate from its intended voyage or delay unduly the voyage in order to achieve compliance.

(c) If a vessel provides the information set forth in clause (a) of sub paragraph (2), the Central Government shall take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

(d) A vessel registered under the Act shall notify the Central Government and the Competent Authority of relevant Port of destination when it cannot purchase compliant fuel oil.

(e) A vessel not registered under the Act and bound to a place or port in India shall inform the Central Government and its concerned administration when it cannot purchase compliant fuel oil.

(f) The Central Government shall notify the Organization when a vessel has presented evidence of the non-availability of compliant fuel oil.

(3) Fuel oil for combustion purposes delivered to and used on board vessels to which this Rules applies shall meet the following requirements, namely:—

(a) except as provided in clause (b),—

(i) the fuel oil shall be blends of hydrocarbons derived from petroleum refining which shall not preclude the incorporation of small amounts of additives intended to improve some aspects of performance;

(ii) the fuel oil shall be free from inorganic acid;

(iii) the fuel oil shall not include any added substance or chemical waste which, jeopardizes the safety of vessels or adversely affects the performance of the machinery, or is harmful to personnel, or contributes overall to additional air pollution;

(b) fuel oil for combustion purposes derived by methods other than petroleum refining shall not,—

(i) exceed the applicable Sulphur content set forth in paragraph 3 of this Schedule;

(ii) cause an engine to exceed the applicable NO_x emission limits set forth in sub paragraphs 3,4,5(a)(i), and sub paragraph (7) (d) of paragraph 2;

(iii) contain inorganic acid; or

(iv) jeopardize the safety of vessels or adversely affects the performance of the machinery; or be harmful to personnel, or contribute overall to additional air pollution.

(4) This paragraph does not apply to coal in its solid form or nuclear fuels and sub paragraphs (5),(6),(7)(a), (8)(a), (8)(b), (9)(b), (9)(c) and 9(d) of this paragraph do not apply to gas fuels such as Liquefied Natural Gas, Compressed Natural Gas or Liquefied Petroleum Gas and the Sulphur content of gas fuels delivered to a vessel specifically for combustion purposes on board that vessel shall be documented by the supplier.

(5) For each vessel subject to rules 6 and 8, details of fuel oil for combustion purposes delivered to and used on board shall be recorded by means of a bunker delivery note which shall contain at least the information specified in Appendix V of the Second Schedule to this Rules.

(6) The bunker delivery note specified under sub paragraph (5) shall be kept on board the vessel in such a place as to be readily available for inspection at all reasonable

times and shall be retained for a period of three years after the fuel oil has been delivered on board.

(7) Officers duly authorized by Central Government may—

(a) inspect the bunker delivery notes on board any vessel to which either this Rules or the Convention applies while the s vessel hip is in the port or offshore terminal of India;

(b) make a copy of each delivery note;

(c) require the master or person in charge of the vessel to certify that each copy is a true copy of such bunker delivery note; and

(d) verify the contents of each note consultations with the port where the note was issued:

Provided that the inspection of the bunker delivery notes and the taking of certified copies by Officers stated in this sub-rule shall be performed as expeditiously as possible without causing the vessel to be unduly delayed.

(8) The bunker delivery note shall be accompanied by a MAPROL Delivered Sample, which is representative sample of the fuel oil delivered taking into account guidelines developed by the Organization, and which shall be sealed and signed by the supplier's representative and the master or officer in charge of the bunker operation on completion of bunkering operations and retained under the vessel's control until the fuel oil is substantially consumed, but in any case for a period of not less than twelve months from the time of delivery and where the Central Government requires such representative sample to be analysed, it shall be done in accordance with the verification procedure set forth in Appendix VI of the Second Schedule to this Rules to determine whether the fuel oil meets the requirements of this Rules.

Explanation.— For the purpose of this sub paragraph, guidelines adopted by the Organization means "2009 Guidelines for the Sampling of Fuel Oil for Determination of Compliance with the Revised MARPOL Annex VI vide MEPC 182(59) as may be amended".

(9) The Central Government shall ensure that appropriate authorities designated by them fulfil the following duties, namely:—

(a) approving local suppliers of fuel oil taking into account guidelines adopted by the Organization and maintaining a register of all approved local suppliers of fuel oil;

Explanation.— For the purpose of this clause, "guidelines adopted by the Organization" means the Guidance for Best Practice for Member State/Coastal State vide MEPC.1/Circ.884 as may be amended by the Organization.

(b) requiring approved local suppliers to provide the bunker delivery note and sample as required by this paragraph, certified by the fuel oil supplier that the fuel oil meets the requirements of paragraph 3 and this paragraph of this Schedule;

(c) requiring approved local suppliers to retain a copy of the bunker delivery note for at least three years for inspection and verification by the port State as necessary;

(d) take action as appropriate against approved local fuel oil suppliers that have been found to deliver fuel oil that does not comply with that stated on the bunker delivery note;

(e) informing the concerned Administration of any vessel receiving fuel oil found to be non-compliant with the requirements of paragraph 3 and this paragraph; and

(f) informing the Organization of all cases where fuel oil suppliers have failed to meet the requirements specified in paragraph 3 and this paragraph.

(10) In connection with port State inspections carried out by the Central Government, the Central Government shall—

(a) inform the all concerned under whose jurisdiction a bunker delivery note was issued of cases of delivery of noncompliant fuel oil, giving all relevant information; and

(b) ensure that remedial action as appropriate is taken to bring noncompliant fuel oil discovered into compliance.

(11) For every vessel of 400 gross tonnage and above on scheduled services with frequent and regular port calls, the Central Government may decide after application and consultation with affected parties that compliance with sub-paragraph (6) may be

documented in an alternative manner which gives similar certainty of compliance with paragraphs 3 and this paragraph.

PART II
ENERGY EFFICIENCY FOR VESSELS

8. **Application.—**(1) This Part shall apply to all vessels of 400 gross tonnage and above.

(2) The provisions of this chapter shall not apply to—

(a) vessels solely engaged in voyages within waters subject to the sovereignty or jurisdiction of India:

Provided that the Central Government shall ensure, by the adoption of appropriate measures, that such vessels are constructed and act in a manner consistent with this chapter, so far as is reasonable and practicable;

(b) vessels not propelled by mechanical means, and platforms including floating production storage and offloading units and floating storage units and drilling rigs, regardless of their propulsion.

(3) Paragraphs 9,10,11 and 12 shall not apply—

(a) to vessel which have non-conventional propulsion, except that paragraphs 9 and 11 shall apply to cruise passenger ships having non-conventional propulsion and Liquefied Natural Gas carriers having conventional or non-conventional propulsion, delivered on or after 1 September 2019, and paragraphs 10 and 12 shall apply to cruise passenger ships having non-conventional propulsion and LNG carriers having conventional or non-conventional propulsion.;

(b) category A ships as defined in the Polar Code are also exempted from Paragraph 15 of this Schedule.

(4) Notwithstanding the provisions of sub-paragraph (1) of this rule, the Central Government may for a vessel of 400 gross tonnage and above, upon the transfer of the vessel to Indian flag, accept waiver by the previous Administration of the requirement from complying with paragraphs 9 and 11 of this Schedule

(5) The provisions contained in sub paragraph (4) shall not apply to vessel of 400 gross tonnage and above—

(a) for which the building contract is placed on or after 1 January 2017; or

(b) in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2017; or

(c) the delivery of which is on or after 1 July 2019; or

(d) in cases of a major conversion of a new ship or existing ship, on or after 1 January 2017, and in which clauses (a) and (b) of sub-rule (4) of rule 6 apply.

(6) The Central Government, when allowing application of sub paragraph (4), or suspends, withdraws or declines the application of sub paragraph (4), on vessel registered under the Act after coming into effect of this Rules, shall forthwith communicate to the Organization for circulation to the parties to the Convention particulars thereof, for their information.

9. **Energy Efficiency Design Index (attained EEDI).—**(*1)* The attained EEDI shall be calculated for the following categories of vessels, namely:—

(a) each new ship;

(b) each new ship which has undergone a major conversion; and

(b) each new or existing ship which has undergone a major conversion, that is so extensive that the ship is regarded by the Central Government as a newly constructed vessel.

(2) Any vessel for which attained EEDI shall be calculated as per sub-rule (1), shall fall into one or more of the categories of the following vessels, namely:—

(a) bulk carrier;

(b) gas carrier;

(c) tanker;

(d) container ship;

(e) general cargo ship;

(f) refrigerated cargo carrier;

(g) combination carrier;

(h) passenger ship;

(i) ro-ro cargo ship (vehicle carrier);

(j) ro-ro cargo ship;

(k) ro-ro passenger ship;

(l) *liquefied natural gas* carrier;

(m) cruise passenger ship.

(3) The attained EEDI shall be specific to each vessel and shall indicate the estimated performance of the vessel in terms of energy efficiency, and be accompanied by the EEDI technical file that contains the information necessary for the calculation of the attained EEDI and that shows the process of calculation.

(4) The attained EEDI shall be verified, based on the EEDI technical file, either by the Central Government or by any recognised organisation.

(5) The attained EEDI shall be calculated taking into account guidelines developed by the Organization.

Explanation.—For the purpose of this sub-rule, "guidelines developed by the Organization means the 2014 Guidelines on the method of calculation of the Energy Efficiency Design Index for new vessels (resolution MEPC.245(66), as amended by resolutions MEPC.263(68) and MEPC.281(70)) as may be amended.

(6) For each vessel subject to paragraph 11, the Central Government or any recognised organisation shall report to the Organization the required and attained EEDI values and relevant information, taking into account the guidelines developed by the Organization via electronic communication—

(a) within seven months of completing the survey required under sub-rule (4) of rule 6; or

(b) within seven months following 1 April 2022 for a vessel delivered prior to 1 April 2022.

Explanation.— For the purpose of this rule, "guidelines developed by the Organization" means the2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new vessels (resolution MEPC.308(73)), as amended by the Organization.

10. **Attained Energy Efficiency Existing Ship Index (attained EEXI)-** (1) The attained EEXI shall be calculated for:

(a) each vessel; and

(b) each vessel which has undergone a major conversion

which falls into the categories of bulk carrier, gas carrier, tanker, container ship, general cargo ship, refrigerated cargo carrier, combination carrier, ro-ro cargo ship (vehicle carrier), ro-ro cargo ship, ro-ro passenger ship, liquefied natural gas carrier and cruise passenger vessel and the attained EEXI shall be specific to each vessel and shall indicate the estimated performance of the vessel in terms of energy efficiency, and be accompanied by the EEXI technical file which contains the information necessary for the calculation of the attained EEXI and which shows the process of the calculation.

(c) The attained EEXI shall be verified, based on the EEXI technical file, either by the Central Government.

(2) The attained EEXI shall be calculated taking into account the guidelines developed by the Organization.

(3) Notwithstanding sub paragraph (1) of this paragraph, for each vessel to which paragraph 9 of this Schedule applies, the attained EEDI verified by the Administration or by any organization duly authorized by it in accordance with sub paragraph (1) of paragraph 9 may be taken as the attained EEXI if the value of the attained EEDI is equal to or less than that of the required EEXI required by paragraph 12 of this Schedule and in this case, the attained EEXI shall be verified based on the EEDI technical file

11. **Required EEDI -** (1) For each:

(a) new vessel,

(b) new vessel which has undergone a major conversion, and

(c) new or existing vessel which has undergone a major conversion that is so extensive that the vessel is regarded by the central government as a newly constructed ship

which falls into one of the categories of bulk carrier, gas carrier, tanker, container ship, general cargo ship, refrigerated cargo carrier, combination carrier, ro-ro cargo ship (vehicle carrier), ro-ro cargo ship, ro-ro passenger ship, liquefied natural gas carrier and cruise passenger vessel and to which this chapter is applicable, the attained EEDI shall be as follows:

Attained EEDI ≤ Required EEDI = (1- X/100) x Reference line value

where X is the reduction factor specified in table 1 for the required EEDI compared to the EEDI reference line.

(2) For each new and existing ship that has undergone a major conversion which is so extensive that the vessel is regarded by the Administration as a newly constructed ship, the attained EEDI shall be calculated and meet the requirement of sub paragraph (1) with the reduction factor applicable corresponding to the vessel type and size of the converted ship at the date of the contract of the conversion, or in the absence of a contract, the commencement date of the conversion.

Table 1 – Reduction factors (in percentage) for EEDI relative to the EEDI reference line

Vessel Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Mar 2022	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2022 and onwards	Phase 3 1 Jan 2025 and onwards
Bulk carrier	20,000 DWT and above	0	10		20		30
	10,000 and above but less than	n/a	0-10*		0-20*		0-30*

	20,000 DWT						
Gas carrier	15,000 DWT and above	0	10	20		30	
	10,000 and above but less than 15,000 DWT	0	10		20		30
	2,000 and above but less than 10,000 DWT	n/a	0-10*		0-20*		0-30*
Tanker	20,000 DWT and above	0	10		20		30
	4,000 and above but less than 20,000 DWT	n/a	0-10*		0-20*		0-30*
Container ship	200,000 DWT and above	0	10	20		50	
	120,000 and above but less than 200,000 DWT	0	10	20		45	
	80,000 and above but less than 120,000 DWT	0	10	20		40	
	40,000 and above but	0	10	20		35	

	less than 80,000 DWT						
	15,000 and above but less than 40,000 DWT	0	10	20		30	
	10,000 and above but less than 15,000 DWT	n/a	0-10*	0-20*		15-30*	
General Cargo ships	15,000 DWT and above	0	10	15		30	
	3,000 and above but less than 15,000 DWT	n/a	0-10*	0-15*		0-30*	
Refrigerated cargo carrier	5,000 DWT and above	0	10		15		30
	3,000 and above but less than 5,000 DWT	n/a	0-10*		0-15*		0-30*
Combination carrier	20,000 DWT and above	0	10		20		30
	4,000 and above but less than 20,000 DWT	n/a	0-10*		0-20*		0-30*

LNG carrier***	10,000 DWT and above	n/a	10**	20		30	
Ro-ro cargo ship (vehicle carrier)***	10,000 DWT and above	n/a	5**		15		30
Ro-ro cargo ship***	2,000 DWT and above	n/a	5**		20		30
	1,000 and above but less than 2,000 DWT	n/a	0-5*,**		0-20*		0-30*
Ro-ro passenger ship***	1000 DWT and above	n/a	5**		20		30
	250 and above but less than 1,000 DWT	n/a	0-5*,**		0-20*		0-30*
Cruise passenger ship*** having non-conventional propulsion	85,000 GT and above	n/a	5**	20		30	
	25,000 and above but less than 85,000 GT	n/a	0-5*,**	0-20*		0-30*	

* Reduction factor to be linearly interpolated between the two values dependent upon vessel size. The lower value of the reduction factor is to be applied to the smaller vessel size.

** Phase 1 commences for those s vessels hips on 1 September 2015.

*** Reduction factor applies to those vessels delivered on or after 1 September 2019.

Note: n/a means that no required EEDI applies.

(3) The reference line values shall be calculated as follows:

Reference line value = $a \cdot b^{-c}$

where *a*, *b* and *c* are the parameters given in table 2.

Table 2 - Parameters for the determination of reference values for the different vessel types

Vessel type	**a**	**b**	**c**
2.25 Bulk carrier	961.79	DWT of the vessel where DWT≤279,000 279,000 where DWT > 279,000	0.477
2.2.7 Combination carrier	1,219.00	DWT of the vessel	0.488
2.29 Containership	174.22	DWT of the vessel	0.201
2.2.11 Cruise passenger ship having non-conventional propulsion	170.84	GT of the vessel	0.214
2.2.14 Gas carrier	1,120.00	DWT of the vessel	0.456
2.2.15 General cargo ship	107.48	DWT of the vessel	0.216
2.2.16 LNG carrier	2,253.7	DWT of the vessel	0.474
2.2.22 Refrigerated cargo carrier	227.01	DWT of the vessel	0.244
2.2.26 Ro-ro cargo ship	1405.15	DWT of the vessel	0.498
	1686.17*	DWT of the vessel where DWT≤17,000*	

		17,000 where DWT > 17,000*	
2.2.27 Ro-ro cargo ship (vehicle carrier)	$(DWT/GT)^{-0.7} \cdot 780.36$ where DWT/GT < 0.3 1,812.63 where DWT/GT ≥ 0.3	DWT of the ship vessel	0.471
2.2.28 Ro-ro passenger ship	752.16	DWT of the vessel	0.381
	902.59*	DWT of the vessel where DWT≤10,000* 10,000 where DWT > 10,000*	
2.2.29 Tanker	1,218.80	DWT of the vessel	0.488

* to be used from phase 2 and thereafter.

(4) If the design of a ship allows it to fall into more than one of the vessel type definitions specified in table 2, the required EEDI for the vessel shall be the most stringent (the lowest) required EEDI.

(5) For each vessel to which this paragraph applies, the installed propulsion power shall not be less than the propulsion power needed to maintain the manoeuvrability of the vessel under adverse conditions as defined in the guidelines to be developed by the Organization

(6) At the beginning of phase 1 and at the midpoint of phase 2, the Organization shall review the status of technological developments and, if proven necessary, amend the time periods, the EEDI reference line parameters for relevant vessel types and reduction rates set out in this paragraph.

12. **Required EEXI –** (1) For:

(a) Each vessel; and

(b) Each vessel which has undergone a major conversion

which falls into one of the categories of bulk carrier, gas carrier, tanker, container ship, general cargo ship, refrigerated cargo carrier, combination carrier, ro-ro cargo ship (vehicle carrier), ro-ro cargo ship, ro-ro passenger ship, liquefied natural gas carrier and cruise passenger ship and to which this chapter is applicable, the attained EEXI shall be as follows:

Attained EEXI ≤ Required EEXI = (1 – Y/100) EEDI reference line value

Where Y is the reduction factor specified in Table 3 below for the required EEXI compared to the EEDI reference line

Table 3 – Reduction (in percentage) for the EEXI relative to the EEDI reference line

Vessel Type	Size	Reduction factor
Bulk carrier	200,000 DWT and above	15
	20,000 and above but less than 200,000 DWT	20
	10,000 and above but less than 20,000 DWT	0-20*
Gas carrier	15,000 DWT and above	30
	10,000 and above but less than 15,000 DWT	20
	2,000 and above but less than 10,000 DWT	0-20*
Tanker	200,000 DWT and above	10
	20,000 and above but less than 200,000 DWT	15
	4,000 and above but less than 20,000 DWT	0-20*
Containership	200,000 DWT and above	50
	120,000 and above but less than 200,000 DWT	45

	80,000 and above but less than 120,000 DWT	35
	40,000 and above but less than 80,000 DWT	30
	15,000 and above but less than 40,000 DWT	20
	10,000 and above but less than 15,000 DWT	0-20*
General cargo ship	15,000 DWT and above	30
	3,000 and above but less than 15,000 DWT	0-30*
Refrigerated cargo carrier	5,000 DWT and above	15
	3,000 and above but less than 5,000 DWT	0-15*
Combination carrier	20,000 DWT and above	20
	4,000 and above but less than 20,000 DWT	0-20*
LNG carrier	10,000 DWT and above	30
Ro-ro cargo ship (vehicle carrier)	10,000 DWT and above	15
Ro-ro cargo ship	2,000 DWT and above	5
	1,000 and above but less than 2,000 DWT	0-5*
Ro-ro passenger ship	1,000 DWT and above	5
	250 and above but less than 1,000 DWT	0-5*
Cruise passenger ship having non conventional propulsion	85,000 GT and above	30
	25,000 and above but less than 85,000 GT	0-30*

*Reduction factor to be linearly interpolated between the two values dependent upon vessel size. The lower value of the reduction factor is to be applied to the smaller vessel size.

(2) The EEDI reference line values shall be calculated in accordance with sub paragraphs (3) and (4) of paragraph 11 of this Schedule. For ro-ro cargo ships and ro-ro passenger ships, the reference line value to be used from phase 2 and thereafter under sub (3) of paragraph 11 shall be referred to.

13. **Ship Energy Efficiency Management Plan.—**(1) Each vessel shall keep on board a vessel specific Ship Energy Efficiency Management Plan (SEEMP), which may form part of the vessel's Safety Management System.

(2) The Ship Energy Efficiency Management Plan shall be developed taking into account guidelines adopted by the Organization.

Explanation.—For the purpose of this sub-rule,"guidelines adopted by the Organization" means the 2016 Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP Guidelines) (resolution MEPC.282(70)) as may be amended by the Organization.

(3) In the case of a vessel of 5,000 gross tonnage and above, which falls into one or more of the categories of bulk carrier, gas carrier, tanker, container ship, general cargo ship, refrigerated cargo carrier, combination carrier, ro-ro cargo ship (vehicle carrier), ro-ro cargo ship, ro-ro passenger ship, liquefied natural gas carrier and cruise passenger ship:

(a) On or before 1 January 2023 the SEEMP shall include:

(i) a description of the methodology that will be used to calculate the vessel's attained annual operational CII required by paragraph 15 of this Schedule and the processes that will be used to report this value to the vessel's Administration

(ii) the required annual operational CII, as specified in paragraph 15 of Annex VI of the Convention, for the next three years;

(iii) an implementation plan documenting how the required annual operational CII will be achieved during the next three years; and

(iv) a procedure for self-evaluation and improvement.

(5) For a vessel rated as D for three consecutive years or rated as E in accordance with paragraph 15 of this Schedule, the SEEMP shall be reviewed in accordance with sub paragraph (8) of paragraph 15 of this Schedule to include a plan of corrective actions to achieve the required annual operational CII.

`(6) The SEEMP shall be subject to verification and company audits taking into account the guidelines to be developed by the Organization.

14. **Collection and Reporting of Ship Fuel Oil Consumption Data.—**(1) Each vessel of 5,000 gross tonnage and above shall collect the data specified in Appendix IX of Second Schedule to this Rules, for each calendar year or portion thereof, as appropriate, according to the methodology included in the Ship Energy Efficiency Management Plan.

(2) Except as provided for in sub paragraphs (4), (5) and (6), at the end of each calendar year, the vessel shall aggregate the data collected in that calendar year or portion thereof, as appropriate.

(3) Except as provided for in sub paragraph (4), (5) and (6), within three months after the end of each calendar year, the vessel shall report to its Central Government or any recognised organisation, the aggregated value for each datum specified in Appendix IX of Second Schedule to this Rules**,** via electronic communication and using a standardized format developed by the Organization.

Explanation.—For the purpose of this sub-rule, “standardized format developed by the Organization” means the *2016 Guidelines for the development of a Ship Energy Efficiency Management Plan* (SEEMP Guidelines) (resolution MEPC.282(70)) as may be amended by the Organization.

(4) In the event of the transfer of a vessel to another State, the vessel shall on the day of completion of the transfer or as close as practical thereto report to the Central Government or any recognised organisation, the aggregated data for the period of the calendar year corresponding to prior such transfer, as specified in Appendix IX of Second Schedule to this Rules and, upon prior request of the Central Government, the disaggregated data.

(5) In the event of a change from one company to another, the vessel shall on the day of completion of the change or as close as practical thereto report to Central Government or recognised organisation, the aggregated data for the portion of the calendar year corresponding to the Company, as specified in Appendix IX of Second Schedule to this Rules and, upon request of Central Government, the disaggregated data.

(6) In the event of transfer of the vessel flying the flag of another State to Indian flag and from one company to another concurrently, sub paragraph (4) shall apply.

(7) The data shall be verified according to procedures established by the Central Government, taking into account guidelines developed by the Organization

Explanation.—For the purpose of this sub-rule, "guidelines developed by the Organization" means the 2017 Guidelines for Administration Verification of Ship Fuel Oil Consumption Data vide Resolution MEPC.292(71)" as may be amended by the Organization.

(8) Except as provided for in sub paragraph (4), (5) and (6), the disaggregated data that underlies the reported data noted in Appendix IX of Second Schedule to this Rules for the previous calendar year shall be readily accessible for a period of not less than twelve months from the end of that calendar year and be made available to the Central Government upon request.

(9) The Central Government shall ensure that the reported data noted in Appendix IX of Second Schedule to this Rules by its registered vessel of 5,000 gross tonnage and above are transferred to the IMO Ship Fuel Oil Consumption Database via electronic communication and using a standardized format to be developed by the Organization not later than one month after issuing the Statements of Compliance of these vessel.

(10) The central Government shall ensure that by 31st May of every year, all vessels of 400 gross tonnage and above, but below 5,000 gross tonnage, shall submit fuel consumption data to the Recognised organisation

Provided there shall not be any requirement related to the description of the methodology that will be used to collect the data in the SEEMP for such vessels.

15. **Operational Carbon Intensity** – (1) After the end of calendar year 2025 and after the end of each following calendar year, each vessel of 5,000 gross tonnage and above which falls into one or more of the categories of bulk carrier, gas carrier, tanker, container ship, general cargo ship, refrigerated cargo carrier, combination carrier, ro-ro cargo ship (vehicle carrier), ro-ro cargo ship, ro-ro passenger ship, liquefied natural gas carrier and cruise passenger ship shall calculate the attained annual operational CII over a 12-month period from 1 January to 31 December for the preceding calendar year, using the data collected in accordance with paragraph 14 of this Schedule, taking into account the guidelines to be developed by the Organization.

(2) Within three months after the end of each calendar year, the vessel shall report to its Administration, or any organization duly authorized by it, the attained annual operational CII via electronic communication and using a standardized format to be developed by the Organization.

(3) Notwithstanding sub paragraphs (1) and (2) of this paragraph, in the event of any transfer of a vessel addressed in sub paragraphs (4) (5) or (6) of paragraph 14 completed after 1 January 2025, a vessel shall, after the end of the calendar year in which the transfer takes place, calculate and report the attained annual operational CII for the full 12-month period from 1 January to 31 December in the calendar year during which the transfer took place, in accordance with sub paragraphs (1) and (2) of this paragraph, for verification in accordance with rule 8(6) of this Rules, taking into account guidelines to be developed by the Organization. Nothing in this paragraph relieves any vessel of its reporting obligations under paragraph 14 or this paragraph.

(4) For each vessel of 5,000 gross tonnage and above which falls into one or more of the categories of bulk carrier, gas carrier, tanker, container ship, general cargo ship, refrigerated cargo carrier, combination carrier, ro-ro cargo ship (vehicle carrier), ro-ro cargo ship, ro-ro passenger ship, liquefied natural gas carrier and cruise passenger ship , the required annual operational CII shall be determined as follows:

Required annual operational CII = $(1 - \mathbf{Z/100}) \cdot CII_{\mathbf{R}}$

where,

Z is the annual reduction factor to ensure continuous improvement of the vessel's operational carbon intensity within a specific rating level; and

CII_R is the reference value.

(5) The annual reduction factor Z[8] and the reference value CII_R shall be the values defined taking into account the guidelines to be developed by the Organization.

(6) 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, either by the Administration or by any organization duly authorized by it, taking into account the guidelines developed by the Organization. The middle point of rating level C shall be the value equivalent to the required annual operational CII set out in sub paragraph 4 of this paragraph.

(7). A vessel rated as D for three consecutive years or rated as E shall develop a plan of corrective actions to achieve the required annual operational CII.

(8) The SEEMP shall be reviewed to include the plan of corrective actions accordingly, taking into account the guidelines to be developed by the Organization. The revised SEEMP shall be submitted to the Administration or any organization duly authorized by it for verification, preferably together with, but in no case later than 1 month after reporting the attained annual operational CII in accordance with sub paragraph 2 of this paragraph

(9) A vessel rated as D for three consecutive years or rated as E shall duly undertake the planned corrective actions in accordance with the revised SEEMP.

(10) Vessels rated as A or B shall be provided with appropriate incentives to encourage

Review

(11) A review shall be completed by 1 January 2028 by the DG to assess:

(a) the effectiveness of this paragraph in reducing the carbon intensity of national shipping; .

(b) the need for reinforced corrective actions or other means of remedy, including possible additional EEXI requirements; .

(c) the need for enhancement of the enforcement mechanism; .

(d) the need for enhancement of the data collection system; and .

(e) the revision of the Z factor and CII_R values.

If based on the review the central government may decide to adopt amendments to this Schedule and such amendments shall be adopted and brought into force in accordance with the amendments brought into the Annex VI of the Convention

SECOND SCHEDULE

FORMS

APPENDIX 1 – FORM OF INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

International Air Pollution Prevention Certificate

Issued under the provisions of the Protocol of 1997, as amended, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as “the Convention”) under the authority of the Government of:

.....
.....

(full designation of the country)

by
.....
.....

(full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship

Name of ship
.....
.....

IMO
Number .....

Distinctive number or letters
.....

Port of registry
.....

Gross tonnage
.....
.

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with regulation 5 of Annex VI of the Convention; and

2 That the survey shows that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of Annex VI of the Convention.

This Certificate is valid until
(dd/mm/yyyy) .....
subject to surveys in accordance with regulation 5 of Annex VI of the Convention.

Completion date of the survey on which this certificate is based (dd/mm/yyyy)
.....

Issued at
.....
.....

(place of issue of Certificate)

Date
(dd/mm/yyyy)..... .....

(date of issue) *(signature of duly authorized official issuing the Certificate)*

(seal or stamp of the authority, as appropriate)

ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

THIS IS TO CERTIFY that, at a survey required by regulation 5 of Annex VI of the Convention, the ship was found to comply with the relevant provisions of that Annex:

Annual survey:

Signed
.....
.....

(signature of duly authorized official)

Place
.....
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

Annual/Intermediate survey:

Signed
.....
.....

(signature of duly authorized official)

Place
.....
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

Annual/Intermediate survey:

Signed
.....
.....

(signature of duly authorized official)

Place
.....
....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

Annual survey:

Signed
.....

(signature of duly authorized official)

Place
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

ANNUAL/INTERMEDIATE SURVEY IN ACCORDANCE WITH REGULATION 9.8.3

THIS IS TO CERTIFY that, at an annual/intermediate survey in accordance with regulation 9.8.3 of Annex VI of the Convention, the ship was found to comply with the relevant provisions of that Annex:

Signed
.....

(signature of duly authorized official)

Place
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN FIVE YEARS WHERE REGULATION 9.3 APPLIES

The ship complies with the relevant provisions of the Annex, and this Certificate shall, in accordance with regulation 9.3 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy) .....

Signed.
.....

(signature of duly authorized official)

Place
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED AND REGULATION 9.4 APPLIES

The ship complies with the relevant provisions of the Annex, and this Certificate shall, in accordance with regulation 9.4 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy).....

Signed.
.....

(signature of duly authorized official)

Place
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD OF GRACE WHERE REGULATION 9.5 OR 9.6 APPLIES

This certificate shall, in accordance with regulation 9.5 or 9.6 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy).....

Signed
.....

(signature of duly authorized official)

Place
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE WHERE REGULATION 9.8 APPLIES

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy) .....

Signed
.....

(signature of duly authorized official)

Place .....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy) .....

Signed .....

(signature of duly authorized official)

Place
.....

Date (dd/mm/yyyy)
.....

(seal or stamp of the authority, as appropriate)

SUPPLEMENT TO INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE (IAPP CERTIFICATE)

Record of Construction and Equipment

Notes:

1 This Record shall be permanently attached to the IAPP Certificate. The IAPP Certificate shall be available on board the ship at all times.

2 The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.

3 Entries in boxes shall be made by inserting either a cross (x) for the answer "yes" and "applicable" or a (-) for the answers "no" and "not applicable" as appropriate.

4 Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship
.....

1.2 IMO number
.....

1.3 Date on which keel was laid or ship was at a similar stage of construction (dd/mm/yyyy) .....

1.4 Length (*L*) metres

.....

2 Control of emissions from ships

2.1 *Ozone depleting substances* (regulation 12)

2.1.1 The following fire-extinguishing systems, other systems and equipment containing ozone-depleting substances, other than hydrochlorofluorocarbons (HCFCs), installed before 19 May 2005 may continue in service:

	System or equipment	**Location on board**	**Substance**	

2.1.2 The following systems containing HCFCs installed before 1 January 2020 may continue in service:

	System or equipment	**Location on board**	**Substance**	

2.2 *Nitrogen oxides (NO_x) (regulation 13)*

2.2.1 The following marine diesel engines installed on this ship are in accordance with the requirements of regulation 13, as indicated:

Applicable regulation of MARPOL Annex VI (NTC = NO_X Technical Code 2008) (AM = Approved Method)			Engine #1	Engine #2	Engine #3	Engine #4	Engine #5
1	Manufacturer and model						
2	Serial number						
3	Use (applicable application cycle(s) – NTC 3.2)						
4	Rated power (kW) (NTC 1.3.11)						
5	Rated speed (RPM) (NTC 1.3.12)						
6	Identical engine installed ≥ 1/1/2000 exempted by 13.1.1.2						
7	Identical engine installation date (dd/mm/yyyy) as per 13.1.1.2						
8a	Major Conversion (dd/mm/yyyy)	13.2.1.1 & 13.2.2					
8b		13.2.1.2 & 13.2.3					
8c		13.2.1.3 & 13.2.3					
9a	Tier I	13.3					
9b		13.2.2					
9c		13.2.3.1					
9d		13.2.3.2					
9e		13.7.1.2					
10a	Tier II	13.4					
10b		13.2.2					
10c		13.2.2 (Tier III not possible)					
10d		13.2.3.2					

10e		13.5.2 (Exemptions)					
10f		13.7.1.2					
11a	NO_x Tier III Emission Control Areas	13.5.1.1					
11b		13.2.2					
11c		13.2.3.2					
11d		13.7.1.2					
12	AM	installed					
13		not commercially available at this survey					
14		not applicable					

2.3 *Sulphur oxides (SO_x) and particulate matter* (regulation 14)

2.3.1 When the ship operates outside of an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.50% m/m, and/or…….....
.....

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.50% m/m…….....
...

2.3.2 When the ship operates inside an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.10% m/m, and/or…….....
.....

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of

SO_X emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.10% m/m…….....
...

2.3.3 For a ship without an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6, the sulphur content of fuel oil carried for use on board the ship shall not exceed 0.50% m/m as documented by bunker delivery notes…….....

2.3.4 The ship is fitted with designated sampling point(s) in accordance with regulation
14.10 or 14.11.....

2.3.5 In accordance with regulation 14.12, the requirement for fitting or designating sampling point(s) in accordance with regulation 14.10 or 14.11 is not applicable for a fuel oil service system for a low-flashpoint fuel for combustion purposes for propulsion or operation on board the ship ..…….....…….....

2.4 *Volatile organic compounds (VOCs)* (regulation 15)

2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ.585.
…….

2.4.2.1 For a tanker carrying crude oil, there is an approved VOC Management Plan
…….…….

2.4.2.2 VOC Management Plan approval reference:
.....

2.5 *Shipboard incineration* (regulation 16)

The ship has an incinerator:

.1 installed on or after 1 January 2000 that complies with:

.1 resolution MEPC.76(40), as amended…....…….....…….…

.2 resolution MEPC.244(66)…....…….....…….…

.2 installed before 1 January 2000 which complies with:

.1 resolution MEPC.59(33), as amended…..…….....……

.2 resolution MEPC.76(40), as amended....…….....……

2.6 *Equivalents* (regulation 4)

The ship has been allowed to use the following fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by Annex VI of the Convention:

System or equipment	**Equivalent used**	**Approval reference**

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at
.....
.....
.....

(place of issue of the Record)

Date (dd/mm/yyyy) ....
.....

(date of issue) *(signature of duly authorized official issuing the Record)*

(seal or stamp of the authority, as appropriate)

APPENDIX II – CYCLES AND WEIGHTING FACTORS (PARAGRAPH 2 OF FIRST SCHEDULE)

The following test cycles and weighting factors shall be applied for verification of compliance of marine diesel engines with the applicable NO_x limit in accordance with paragraph 2 of First Schedule using the test procedure and calculation method as specified in the revised NO_X Technical Code 2008.

.1 For constant-speed marine engines for vessel main propulsion, including diesel-electric drive, test cycle E2 shall be applied;

.2 For controllable-pitch propeller sets test cycle E2 shall be applied;

.3 For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied;

.4 For constant-speed auxiliary engines test cycle D2 shall be applied; and

.5 For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

Test cycle for *constant speed main propulsion* application
(including diesel-electric drive and all controllable-pitch propeller installations)

Test cycle type E2	Speed	100%	100%	100%	100%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *propeller-law-operated main* and *propeller-law-operated auxiliary engine* application

Test cycle type E3	Speed	100%	91%	80%	63%
	Power	100%	75%	50%	25%

	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *constant-speed auxiliary engine* application

Test cycle type D2	Speed	100%	100%	100%	100%	100%
	Power	100%	75%	50%	25%	10%
	Weighting factor	0.05	0.25	0.3	0.3	0.1

Test cycle for *variable-speed and -load auxiliary engine* application

Test cycle type C1	Speed	Rated				Intermediate			Idle
	Torque	100%	75%	50%	10%	100%	75%	50%	0%
	Weighting factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

In the case of an engine to be certified in accordance with sub clause (i) of clause (a) of sub paragraph (5) of paragraph 2 of First Schedule to this Rules, the specific emission at each individual mode point shall not exceed the applicable NO_x emission limit value by more than 50% except as follows:

.1 The 10% mode point in the D2 test cycle.

.2 The 10% mode point in the C1 test cycle.

.3 The idle mode point in the C1 test cycle.

APPENDIX III – CRITERIA AND PROCEDURES FOR THE DESIGNATION OF EMISSION CONTROL AREAS (PARAGRAPHS 2 (6) AND 3(3) OF FIRST SCHEDULE)

(1) **Objectives**

(a) The purpose of this appendix is to provide the criteria and procedures for formulating and submitting proposals for the designation of emission control areas and to set forth the factors to be considered in the assessment of such proposals by the Organization.

(b) Emissions of NO_x, SO_x and particulate matter from ocean-going vessels contribute to ambient concentrations of air pollution in cities and coastal areas around the world. Adverse public health and environmental effects associated with air pollution include premature mortality, cardiopulmonary disease, lung cancer, chronic respiratory ailments, acidification and eutrophication.

(c) An emission control area should be considered for adoption by the Organization if supported by a demonstrated need to prevent, reduce and control emissions of NO_x or SO_x and particulate matter or all three types of emissions (hereinafter emissions) from vessels.

(2) **Process for the designation of emission control areas**

(a) A proposal to the Organization for the designation of an emission control area for NO_x or SO_x and particulate matter or all three types of emissions may be submitted only by Central Government. Where any other state(s) is have an interest in a particular area, a coordinated proposal should be formulated by the Central Government.

(b) A proposal to designate a given area as an emission control area should be submitted to the Organization in accordance with the rules and procedures established by the Organization.

3 **Criteria for designation of an emission control area**

(a) The proposal shall include:

(i) a clear delineation of the proposed area of application, along with a reference chart on which the area is marked;

(ii) the type or types of emission(s) that is or are being proposed for control (i.e. NO_x or SO_x and particulate matter or all three types of emissions);

(iii) a description of the human populations and environmental areas at risk from the impacts of vessel emissions;

(iv) an assessment that emissions from vessels operating in the proposed area of application are contributing to ambient concentrations of air pollution or to adverse environmental impacts. Such assessment shall include a description of the impacts of the relevant emissions on human health and the environment, such as adverse impacts on terrestrial and aquatic ecosystems, areas of natural productivity, critical habitats, water quality, human health, and areas of cultural and scientific significance, if applicable. The sources of relevant data including methodologies used shall be identified;

(v) relevant information, pertaining to the meteorological conditions in the proposed area of application, to the human populations and environmental areas at risk, in particular prevailing wind patterns, or to topographical, geological, oceanographic, morphological or other conditions that contribute to ambient concentrations of air pollution or adverse environmental impacts;

(vi) the nature of the vessel traffic in the proposed emission control area, including the patterns and density of such traffic;

(vii) a description of the control measures taken by the proposing Party or Parties addressing land-based sources of NO_x, SO_x and particulate matter emissions affecting the human populations and environmental areas at risk that are in place and operating concurrently with the consideration of measures to be adopted in relation to provisions of paragraphs 2 and 3 of First Schedule to this Rules; and

(viii) the relative costs of reducing emissions from vessels when compared with land-based controls, and the economic impacts on shipping engaged in international trade.

(b) The geographical limits of an emission control area will be based on the relevant criteria outlined above, including emissions and deposition from vessels navigating in the proposed area, traffic patterns and density, and wind conditions.

(4) **Procedures for the assessment and adoption of emission control areas by the Organization**

(a) The Organization shall consider each proposal submitted to it by a Party or Parties.

(b) In assessing the proposal, the Organization shall take into account the criteria that are to be included in each proposal for adoption as set forth in section 3 above.

(c) An emission control area shall be designated by means of an amendment to Annex VI of the Convention, considered, adopted and brought into force in accordance with article 16 of the Convention.

(5) **Operation of emission control areas**

(a) Parties that have vessels navigating in the area are encouraged to bring to the Organization any concerns regarding the operation of the area.

APPENDIX IV – TYPE APPROVAL AND OPERATING LIMITS FOR SHIPBOARD INCINERATORS (PARAGRAPH 6 OF FIRST SCHEDULE TO THIS RULES)

(1) Shipboard incinerators described in clause (a) of sub paragraph (1) of paragraph 6 of the First Schedule to this Rules shall possess an IMO Type Approval Certificate for each incinerator. In order to obtain such certificate, the incinerator shall be designed and built to an approved standard as described in clause (a) of sub paragraph (1) of paragraph 6 of the First Schedule to this Rules. Each model shall be subject to a specified type approval test operation at the factory or an approved test facility, and under the responsibility of the Administration, using the following standard fuel/waste specification for the type approval test for determining whether the incinerator operates within the limits specified in paragraph 2 of this appendix:

Sludge Oil Consisting of:	75% sludge oil from heavy fuel oil (HFO);

	5% waste lubricating oil; and
	20% emulsified water.
Solid waste consisting of:	50% food waste;
	50% rubbish containing;
	approx. 30% paper,
	“ 40% cardboard,
	“ 10% rags,
	“ 20% plastic
	The mixture will have up to 50% moisture and 7% incombustible solids.

(2) Incinerators described in clause (a) of sub paragraph (1) of paragraph 6 of the First Schedule to this Rules shall operate within the following limits:

O_2 in combustion chamber:	6–12%
CO in flue gas maximum average:	200 mg/MJ
Soot number maximum average:	Bacharach 3 or Ringelmann 1 (20% opacity) (a higher soot number is acceptable only during very short periods such as starting up)
Unburned components in ash residues:	Maximum 10% by weight
Combustion chamber flue gas outlet temperature range:	850–1200°C

APPENDIX V – INFORMATION TO BE INCLUDED IN THE BUNKER DELIVERY NOTE (PARAGRAPH 7 (5) OF FIRST SCHEDULE)

1. Name and IMO Number of receiving vessel

2. Port

3. Date of commencement of delivery

4. Name, address, and telephone number of marine fuel oil supplier

5. Product name(s)

6. Quantity in metric tons

7. Density at 15°C (kg/m^3)

8. Sulphur content (%m/m)

9. A declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with of sub paragraph (3) of paragraph 7 of the First Schedule to this Rules and that the sulphur content of the fuel oil supplied does not exceed:

□ the limit value given by paragraph 3 of First Schedule to this Rules;

□ the limit value given by paragraph 3 of First Schedule to this Rules; or

□ the purchaser's specified limit value of _____ (% m/m), as completed by the fuel oil supplier's representative and on the basis of the purchaser's notification that the fuel oil is intended to be used:

(1) in combination with an equivalent means of compliance in accordance with Rule 4 of this Rules; or

(2) is subject to a relevant exemption for a ship to conduct trials for sulphur oxides emission reduction and control technology research in accordance with rule 4 (2) of this Rules

The declaration shall be completed by the fuel oil supplier's representative by marking the applicable box(es) with a cross (x).

APPENDIX VI – VERIFICATION PROCEDURES FOR A MARPOL ANNEX VI FUEL OIL SAMPLE (PARAGRAPHS 7 (8) (B) OR PARAGRAPH 3(8))

The following relevant verification procedure shall be used to determine whether the fuel oil delivered to, in use or carried for use on board a vessel has met the applicable sulphur limit of paragraph 3 to the first Schedule to this Rules.

This appendix refers to the following representative MARPOL Annex VI fuel oil samples:

- Part 1 – sample of fuel oil delivered in accordance with clause (a) of sub paragraph (8) of paragraph (7), hereafter referred to as the "MARPOL delivered sample" as defined in clause (jj) sub Rule (1) of rule 3
- Part 2 – sample of fuel oil in use, intended to be used or carried for use on board in accordance with sub paragraph (8) of paragraph 2 of the First Schedule to this Rules, hereafter referred to as the "in-use sample" as defined in clause (bb) of sub rule of rule 3 and "onboard sample as defined in clause (oo) of sub rule (1) rule 3

Part 1 – MARPOL delivered sample

(1) General Requirements

(a) The representative sample of the fuel oil, which is required by clause (a) of sub paragraph (8) of paragraph 7 of the First Schedule to this Rules (the MARPOL delivered sample), shall be used to verify the sulphur content of the fuel oil delivered to a vessel.

(b) A Party, through its competent authority, shall manage the verification procedure.

(c) A laboratory undertaking the sulphur testing procedure given in this appendix shall have valid accreditation in respect of the test method to be used.

(2) Verification Procedure Part 1

(a)The MARPOL delivered sample shall be conveyed by the competent authority to the laboratory.

(b) The laboratory shall:

(i) record the details of the seal number and the sample label on the test record;

(ii) record the condition of the seal of the sample as received on the test record; and

(iii) reject any sample where the seal has been broken prior to receipt and record that rejection on the test record.

(c) If the seal of the sample as received has not been broken, the laboratory shall proceed with the verification procedure and shall:

(i) unseal the sample;

(ii) ensure that the sample is thoroughly homogenized;

(iii) draw two subsamples from the sample; and

(iv) reseal the sample and record the new reseal details on the test record.

(d) The two subsamples shall be tested in succession, in accordance with the specified test method referred to in clause (hhh) clause (1) rule 3. For the purposes of this Part

1 verification procedure, the results of the test analysis shall be referred to as '1A' and '1B':

(i) results 1A and 1B shall be recorded on the test record in accordance with the requirements of the test method; and

(ii) if the results of 1A and 1B are within the repeatability (r) of the test method, the results shall be considered valid; or

(iii) if the results 1A and 1B are not within the repeatability (r) of the test method, both results shall be rejected and two new subsamples shall be taken by the laboratory and tested. The sample bottle shall be resealed in accordance with paragraph 2.3.4 after the new subsamples have been taken.

(iv) in the case of two failures to achieve repeatability between 1A and 1B, the cause of that failure shall be investigated by the laboratory and resolved before further testing of the sample is undertaken. On resolution of that repeatability issue, two new subsamples shall be taken in accordance with paragraph 2.3. The sample shall be resealed in accordance with paragraph 2.3.4 after the new subsamples have been taken.

(e) If the test results of 1A and 1B are valid, an average of these two results shall be calculated. The average value shall be referred to as 'X' and shall be recorded on the test record:

(i) if the result X is equal to or less than the applicable limit required by paragraph 3 of First Schedule to this Rules, the fuel oil shall be considered to have met the requirement; or

(ii) if the result X is greater than the applicable limit required by paragraph 3 of First Schedule to this Rules, the fuel oil shall be considered to have not met the requirement.

Table 1: Summary of Part 1 MARPOL delivered sample procedure

<table>
<tr><td colspan="3">On the basis of the test method referred to in regulation 2.1.30 of Annex VI of the Convention</td></tr>
<tr><td>Applicable limit % m/m: V</td><td>Result 2.5.1: X ≤ V</td><td>Result 2.5.2: X > V</td></tr>
<tr><td>0.10</td><td rowspan="2">Met the requirement</td><td rowspan="2">Not met the requirement</td></tr>
<tr><td>0.50</td></tr>
<tr><td></td><td colspan="2">Result X reported to 2 decimal places</td></tr>
</table>

(f) The final results obtained from this verification procedure shall be evaluated by the competent authority.

(g) The laboratory shall provide a copy of the test record to the competent authority managing the verification procedure.

Part 2 – In-use and onboard samples

(3) General Requirements

(a) The in-use or onboard sample, as appropriate, shall be used to verify the sulphur content of the fuel oil as represented by that sample of fuel oil at the point of sampling.

(b) A Party, through its competent authority, shall manage the verification procedure.

(c) A laboratory undertaking the sulphur testing procedure given in this appendix shall have valid accreditation in respect of the test method to be used.

(4) Verification Procedure Part 2

(a) The in-use or onboard sample shall be conveyed by the competent authority to the laboratory.

(b) The laboratory shall:

(i) record the details of the seal number and the sample label on the test record;

(ii) record the condition of the seal of the sample as received on the test record; and

(iii) reject any sample where the seal has been broken prior to receipt and record that rejection on the test record.

(c) If the seal of the sample as received has not been broken, the laboratory shall proceed with the verification procedure and shall:

(i) unseal the sample;

(ii) ensure that the sample is thoroughly homogenized;

(iii) draw two subsamples from the sample; and

(iv) reseal the sample and record the new reseal details on the test record.

(d) The two subsamples shall be tested in succession, in accordance with the specified test method referred to in Rule 3(1) (hhh). For the purposes of this Part 2 verification procedure, the results obtained shall be referred to as '2A' and '2B':

(i) results 2A and 2B shall be recorded on the test record in accordance with the requirements of the test method; and

(ii) if the results of 2A and 2B are within the repeatability (r) of the test method, the results shall be considered valid; or

(iii) if the results of 2A and 2B are not within the repeatability (r) of the test method, both results shall be rejected and two new subsamples shall be taken by the laboratory and tested. The sample bottle shall be resealed in accordance with paragraph 4.3.4 after the new subsamples have been taken; and

(iv) in the case of two failures to achieve repeatability between 2A and 2B, the cause of that failure shall be investigated by the laboratory and resolved before further testing of the sample is undertaken. On resolution of that repeatability

issue, two new subsamples shall be taken in accordance with paragraph 4(c). The sample shall be resealed in accordance with paragraph 4(3)(c) after the new subsamples have been taken.

(e) If the test results of 2A and 2B are valid, an average of these two results shall be calculated. That average value shall be referred to as 'Z' and shall be recorded on the test record:

.1 if Z is equal to or less than the applicable limit required by paragraph 3 of the First Schedule to this Rules, the sulphur content of the fuel oil as represented by the tested sample shall be considered to have met the requirement;

.2 if Z is greater than the applicable limit required by paragraph 3 of the First Schedule to this Rules but less than or equal to that applicable limit + 0.59R (where R is the reproducibility of the test method), the sulphur content of the fuel oil as represented by the tested sample shall be considered to have met the requirement; or

.3 if Z is greater than the applicable limit required by paragraph 3 of the First Schedule to this Rules + 0.59R, the sulphur content of the fuel oil as represented by the tested sample shall be considered to have not met the requirement.

Table 2: Summary of in-use or onboard sample procedure

On the basis of the test method referred to in Rule 3 (1) (hhh)				
Applicable limit %m/m: V	Test margin value: W	Result 4.5.1: Z ≤ V	Result 4.5.2: V < Z ≤ W	Result 4.5.3: Z > W
0.10	0.11	Met the requirement	Met the requirement	Not met the requirement
0.50	0.53			
		Result Z reported to 2 decimal places		

(f) The final results obtained from this verification procedure shall be evaluated by the competent authority.

(g) The laboratory shall provide a copy of the test record to the competent authority managing the verification procedure.

Appendix VII – Emission Control Areas (Paragraph 2 (6) and Paragraph 3 (3))

(1) The boundaries of emission control areas designated under Paragraph 2 (6) and Paragraph 3 (3), other than the Baltic Sea and the North Sea areas, are set forth in this appendix.

(2) The North American area comprises:

(a) the sea area located off the Pacific coasts of the United States and Canada, enclosed by geodesic lines connecting the following coordinates:

Point	Latitude	Longitude
1	32º32′.10 N	117º06′.11 W
2	32º32′.04 N	117º07′.29 W
3	32º31′.39 N	117º14′.20 W
4	32º33′.13 N	117º15′.50 W
5	32º34′.21 N	117º22′.01 W
6	32º35′.23 N	117º27′.53 W
7	32º37′.38 N	117º49′.34 W
8	31º07′.59 N	118º36′.21 W
9	30º33′.25 N	121º47′.29 W
10	31º46′.11 N	123º17′.22 W
11	32º21′.58 N	123º50′.44 W
12	32º56′.39 N	124º11′.47 W
13	33º40′.12 N	124º27′.15 W
14	34º31′.28 N	125º16′.52 W
15	35º14′.38 N	125º43′.23 W
16	35º44′.00 N	126º18′.53 W
17	36º16′.25 N	126º45′.30 W
18	37º01′.35 N	127º07′.18 W
19	37º45′.39 N	127º38′.02 W
20	38º25′.08 N	127º53′.00 W
21	39º25′.05 N	128º31′.23 W
22	40º18′.47 N	128º45′.46 W

23	41º13′.39 N	128º40′.22 W
24	42º12′.49 N	129º00′.38 W
25	42º47′.34 N	129º05′.42 W
26	43º26′.22 N	129º01′.26 W
27	44º24′.43 N	128º41′.23 W
28	45º30′.43 N	128º40′.02 W
29	46º11′.01 N	128º49′.01 W
30	46º33′.55 N	129º04′.29 W
31	47º39′.55 N	131º15′.41 W
32	48º32′.32 N	132º41′.00 W
33	48º57′.47 N	133º14′.47 W
34	49º22′.39 N	134º15′.51 W
35	50º01′.52 N	135º19′.01 W
36	51º03′.18 N	136º45′.45 W
37	51º54′.04 N	137º41′.54 W
38	52º45′.12 N	138º20′.14 W
39	53º29′.20 N	138º40′.36 W
40	53º40′.39 N	138º48′.53 W
41	54º13′.45 N	139º32′.38 W
42	54º39′.25 N	139º56′.19 W
43	55º20′.18 N	140º55′.45 W
44	56º07′.12 N	141º36′.18 W
45	56º28′.32 N	142º17′.19 W
46	56º37′.19 N	142º48′.57 W

47	58º51′.04 N	153º15′.03 W

(b) the sea areas located off the Atlantic coasts of the United States, Canada and France (Saint- Pierre-et-Miquelon), and the Gulf of Mexico coast of the United States enclosed by geodesic lines connecting the following coordinates:

Point	**Latitude**	**Longitude**
1	60º00′.00 N	64º09′.36 W
2	60º00′.00 N	56º43′.00 W
3	58º54′.01 N	55º38′.05 W
4	57º50′.52 N	55º03′.47 W
5	57º35′.13 N	54º00′.59 W
6	57º14′.20 N	53º07′.58 W
7	56º48′.09 N	52º23′.29 W
8	56º18′.13 N	51º49′.42 W
9	54º23′.21 N	50º17′.44 W
10	53º44′.54 N	50º07′.17 W
11	53º04′.59 N	50º10′.05 W
12	52º20′.06 N	49º57′.09 W
13	51º34′.20 N	48º52′.45 W
14	50º40′.15 N	48º16′.04 W
15	50º02′.28 N	48º07′.03 W
16	49º24′.03 N	48º09′.35 W
17	48º39′.22 N	47º55′.17 W
18	47º24′.25 N	47º46′.56 W
19	46º35′.12 N	48º00′.54 W
20	45º19′.45 N	48º43′.28 W

21	44º43′.38 N	49º16′.50 W
22	44º16′.38 N	49º51′.23 W
23	43º53′.15 N	50º34′.01 W
24	43º36′.06 N	51º20′.41 W
25	43º23′.59 N	52º17′.22 W
26	43º19′.50 N	53º20′.13 W
27	43º21′.14 N	54º09′.20 W
28	43º29′.41 N	55º07′.41 W
29	42º40′.12 N	55º31′.44 W
30	41º58′.19 N	56º09′.34 W
31	41º20′.21 N	57º05′.13 W
32	40º55′.34 N	58º02′.55 W
33	40º41′.38 N	59º05′.18 W
34	40º38′.33 N	60º12′.20 W
35	40º45′.46 N	61º14′.03 W
36	41º04′.52 N	62º17′.49 W
37	40º36′.55 N	63º10′.49 W
38	40º17′.32 N	64º08′.37 W
39	40º07′.46 N	64º59′.31 W
40	40º05′.44 N	65º53′.07 W
41	39º58′.05 N	65º59′.51 W
42	39º28′.24 N	66º21′.14 W
43	39º01′.54 N	66º48′.33 W
44	38º39′.16 N	67º20′.59 W

45	38º19′.20 N	68º02′.01 W
46	38º05′.29 N	68º46′.55 W
47	37º58′.14 N	69º34′.07 W
48	37º57′.47 N	70º24′.09 W
49	37º52′.46 N	70º37′.50 W
50	37º18′.37 N	71º08′.33 W
51	36º32′.25 N	71º33′.59 W
52	35º34′.58 N	71º26′.02 W
53	34º33′.10 N	71º37′.04 W
54	33º54′.49 N	71º52′.35 W
55	33º19′.23 N	72º17′.12 W
56	32º45′.31 N	72º54′.05 W
57	31º55′.13 N	74º12′.02 W
58	31º27′.14 N	75º15′.20 W
59	31º03′.16 N	75º51′.18 W
60	30º45′.42 N	76º31′.38 W
61	30º12′.48 N	77º18′.29 W
62	29º25′.17 N	76º56′.42 W
63	28º36′.59 N	76º48′.00 W
64	28º17′.13 N	76º40′.10 W
65	28º17′.12 N	79º11′.23 W
66	27º52′.56 N	79º28′.35 W
67	27º26′.01 N	79º31′.38 W
68	27º16′.13 N	79º34′.18 W

69	27º11′.54 N	79º34′.56 W
70	27º05′.59 N	79º35′.19 W
71	27º00′.28 N	79º35′.17 W
72	26º55′.16 N	79º34′.39 W
73	26º53′.58 N	79º34′.27 W
74	26º45′.46 N	79º32′.41 W
75	26º44′.30 N	79º32′.23 W
76	26º43′.40 N	79º32′.20 W
77	26º41′.12 N	79º32′.01 W
78	26º38′.13 N	79º31′.32 W
79	26º36′.30 N	79º31′.06 W
80	26º35′.21 N	79º30′.50 W
81	26º34′.51 N	79º30′.46 W
82	26º34′.11 N	79º30′.38 W
83	26º31′.12 N	79º30′.15 W
84	26º29′.05 N	79º29′.53 W
85	26º25′.31 N	79º29′.58 W
86	26º23′.29 N	79º29′.55 W
87	26º23′.21 N	79º29′.54 W
88	26º18′.57 N	79º31′.55 W
89	26º15′.26 N	79º33′.17 W
90	26º15′.13 N	79º33′.23 W
91	26º08′.09 N	79º35′.53 W
92	26º07′.47 N	79º36′.09 W

93	26º06′.59 N	79º36′.35 W
94	26º02′.52 N	79º38′.22 W
95	25º59′.30 N	79º40′.03 W
96	25º59′.16 N	79º40′.08 W
97	25º57′.48 N	79º40′.38 W
98	25º56′.18 N	79º41′.06 W
99	25º54′.04 N	79º41′.38 W
100	25º53′.24 N	79º41′.46 W
101	25º51′.54 N	79º41′.59 W
102	25º49′.33 N	79º42′.16 W
103	25º48′.24 N	79º42′.23 W
104	25º48′.20 N	79º42′.24 W
105	25º46′.26 N	79º42′.44 W
106	25º46′.16 N	79º42′.45 W
107	25º43′.40 N	79º42′.59 W
108	25º42′.31 N	79º42′.48 W
109	25º40′.37 N	79º42′.27 W
110	25º37′.24 N	79º42′.27 W
111	25º37′.08 N	79º42′.27 W
112	25º31′.03 N	79º42′.12 W
113	25º27′.59 N	79º42′.11 W
114	25º24′.04 N	79º42′.12 W
115	25º22′.21 N	79º42′.20 W
116	25º21′.29 N	79º42′.08 W

117	25º16′.52 N	79º41′.24 W
118	25º15′.57 N	79º41′.31 W
119	25º10′.39 N	79º41′.31 W
120	25º09′.51 N	79º41′.36 W
121	25º09′.03 N	79º41′.45 W
122	25º03′.55 N	79º42′.29 W
123	25º03′.00 N	79º42′.56 W
124	25º00′.30 N	79º44′.05 W
125	24º59′.03 N	79º44′.48 W
126	24º55′.28 N	79º45′.57 W
127	24º44′.18 N	79º49′.24 W
128	24º43′.04 N	79º49′.38 W
129	24º42′.36 N	79º50′.50 W
130	24º41′.47 N	79º52′.57 W
131	24º38′.32 N	79º59′.58 W
132	24º36′.27 N	80º03′.51 W
133	24º33′.18 N	80º12′.43 W
134	24º33′.05 N	80º13′.21 W
135	24º32′.13 N	80º15′.16 W
136	24º31′.27 N	80º16′.55 W
137	24º30′.57 N	80º17′.47 W
138	24º30′.14 N	80º19′.21 W
139	24º30′.06 N	80º19′.44 W
140	24º29′.38 N	80º21′.05 W

141	24º28′.18 N	80º24′.35 W
142	24º28′.06 N	80º25′.10 W
143	24º27′.23 N	80º27′.20 W
144	24º26′.30 N	80º29′.30 W
145	24º25′.07 N	80º32′.22 W
146	24º23′.30 N	80º36′.09 W
147	24º22′.33 N	80º38′.56 W
148	24º22′.07 N	80º39′.51 W
149	24º19′.31 N	80º45′.21 W
150	24º19′.16 N	80º45′.47 W
151	24º18′.38 N	80º46′.49 W
152	24º18′.35 N	80º46′.54 W
153	24º09′.51 N	80º59′.47 W
154	24º09′.48 N	80º59′.51 W
155	24º08′.58 N	81º01′.07 W
156	24º08′.30 N	81º01′.51 W
157	24º08′.26 N	81º01′.57 W
158	24º07′.28 N	81º03′.06 W
159	24º02′.20 N	81º09′.05 W
160	24º00′.00 N	81º11′.16 W
161	23º55′.32 N	81º12′.55 W
162	23º53′.52 N	81º19′.43 W
163	23º50′.52 N	81º29′.59 W
164	23º50′.02 N	81º39′.59 W

165	23º49′.05 N	81º49′.59 W
166	23º49′.05 N	82º00′.11 W
167	23º49′.42 N	82º09′.59 W
168	23º51′.14 N	82º24′.59 W
169	23º51′.14 N	82º39′.59 W
170	23º49′.42 N	82º48′.53 W
171	23º49′.32 N	82º51′.11 W
172	23º49′.24 N	82º59′.59 W
173	23º49′.52 N	83º14′.59 W
174	23º51′.22 N	83º25′.49 W
175	23º52′.27 N	83º33′.01 W
176	23º54′.04 N	83º41′.35 W
177	23º55′.47 N	83º48′.11 W
178	23º58′.38 N	83º59′.59 W
179	24º09′.37 N	84º29′.27 W
180	24º13′.20 N	84º38′.39 W
181	24º16′.41 N	84º46′.07 W
182	24º23′.30 N	84º59′.59 W
183	24º26′.37 N	85º06′.19 W
184	24º38′.57 N	85º31′.54 W
185	24º44′.17 N	85º43′.11 W
186	24º53′.57 N	85º59′.59 W
187	25º10′.44 N	86º30′.07 W
188	25º43′.15 N	86º21′.14 W

189	26º13′.13 N	86º06′.45 W
190	26º27′.22 N	86º13′.15 W
191	26º33′.46 N	86º37′.07 W
192	26º01′.24 N	87º29′.35 W
193	25º42′.25 N	88º33′.00 W
194	25º46′.54 N	90º29′.41 W
195	25º44′.39 N	90º47′.05 W
196	25º51′.43 N	91º52′.50 W
197	26º17′.44 N	93º03′.59 W
198	25º59′.55 N	93º33′.52 W
199	26º00′.32 N	95º39′.27 W
200	26º00′.33 N	96º48′.30 W
201	25º58′.32 N	96º55′.28 W
202	25º58′.15 N	96º58′.41 W
203	25º57′.58 N	97º01′.54 W
204	25º57′.41 N	97º05′.08 W
205	25º57′.24 N	97º08′.21 W
206	25º57′.24 N	97º08′.47 W

(c) the sea area located off the coasts of the Hawaiian Islands of Hawai'i, Maui, Oahu, Moloka'i, Ni'ihau, Kaua'i, Lana'i and Kaho'olawe, enclosed by geodesic lines connecting the following coordinates:

Point	**Latitude**	**Longitude**
1	22º32′.54 N	153º00′.33 W
2	23º06′.05 N	153º28′.36 W
3	23º32′.11 N	154º02′.12 W

4	23º51′.47 N	154º36′.48 W
5	24º21′.49 N	155º51′.13 W
6	24º41′.47 N	156º27′.27 W
7	24º57′.33 N	157º22′.17 W
8	25º13′.41 N	157º54′.13 W
9	25º25′.31 N	158º30′.36 W
10	25º31′.19 N	159º09′.47 W
11	25º30′.31 N	159º54′.21 W
12	25º21′.53 N	160º39′.53 W
13	25º00′.06 N	161º38′.33 W
14	24º40′.49 N	162º13′.13 W
15	24º15′.53 N	162º43′.08 W
16	23º40′.50 N	163º13′.00 W
17	23º03′.20 N	163º32′.58 W
18	22º20′.09 N	163º44′.41 W
19	21º36′.45 N	163º46′.03 W
20	20º55′.26 N	163º37′.44 W
21	20º13′.34 N	163º19′.13 W
22	19º39′.03 N	162º53′.48 W
23	19º09′.43 N	162º20′.35 W
24	18º39′.16 N	161º19′.14 W
25	18º30′.31 N	160º38′.30 W
26	18º29′.31 N	159º56′.17 W
27	18º10′.41 N	159º14′.08 W

28	17º31′.17 N	158º56′.55 W
29	16º54′.06 N	158º30′.29 W
30	16º25′.49 N	157º59′.25 W
31	15º59′.57 N	157º17′.35 W
32	15º40′.37 N	156º21′.06 W
33	15º37′.36 N	155º22′.16 W
34	15º43′.46 N	154º46′.37 W
35	15º55′.32 N	154º13′.05 W
36	16º46′.27 N	152º49′.11 W
37	17º33′.42 N	152º00′.32 W
38	18º30′.16 N	151º30′.24 W
39	19º02′.47 N	151º22′.17 W
40	19º34′.46 N	151º19′.47 W
41	20º07′.42 N	151º22′.58 W
42	20º38′.43 N	151º31′.36 W
43	21º29′.09 N	151º59′.50 W
44	22º06′.58 N	152º31′.25 W
45	22º32′.54 N	153º00′.33 W

(3) The United States Caribbean Sea area includes:

(a) the sea area located off the Atlantic and Caribbean coasts of the Commonwealth of Puerto Rico and the United States Virgin Islands, enclosed by geodesic lines connecting the following coordinates:

Point	**Latitude**	**Longitude**
1	17º18′.37 N	67º32′.14 W
2	19º11′.14 N	67º26′.45 W

3	19º30′.28 N	65º16′.48 W
4	19º12′.25 N .	65º06′.08 W
5	18º45′.13 N	65º00′.22 W
6	18º41′.14 N	64º59′.33 W
7	18º29′.22 N	64º53′.51 W
8	18º27′.35 N	64º53′.22 W
9	18º25′.21 N	64º52′.39 W
10	18º24′.30 N	64º52′.19 W
11	18º23′.51 N	64º51′.50 W
12	18º23′.42 N	64º51′.23 W
13	18º23′.36 N	64º50′.17 W
14	18º23′.48 N	64º49′.41 W
15	18º24′.11 N	64º49′.00 W
16	18º24′.28 N	64º47′.57 W
17	18º24′.18 N	64º47′.01 W
18	18º23′.13 N	64º46′.37 W
19	18º22′.37 N	64º45′.20 W
20	18º22′.39 N	64º44′.42 W
21	18º22′.42 N	64º44′.36 W
22	18º22′.37 N	64º44′.24 W
23	18º22′.39 N	64º43′.42 W
24	18º22′.30 N	64º43′.36 W
25	18º22′.25 N	64º42′.58 W
26	18º22′.26 N	64º42′.28 W

27	18º22′.15 N	64º42′.03 W
28	18º22′.22 N	64º40′.60 W
29	18º21′.57 N	64º40′.15 W
30	18º21′.51 N	64º38′.23 W
31	18º21′.22 N	64º38′.16 W
32	18º20′.39 N	64º38′.33 W
33	18º19′.15 N	64º38′.14 W
34	18º19′.07 N	64º38′.16 W
35	18º17′.23 N	64º39′.38 W
36	18º16′.43 N	64º39′.41 W
37	18º11′.33 N	64º38′.58 W
38	18º03′.02 N	64º38′.03 W
39	18º02′.56 N	64º29′.35 W
40	18º02′.51 N	64º27′.02 W
41	18º02′.30 N	64º21′.08 W
42	18º02′.31 N	64º20′.08 W
43	18º02′.03 N	64º15′.57 W
44	18º00′.12 N	64º02′.29 W
45	17º59′.58 N	64º01′.04 W
46	17º58′.47 N	63º57′.01 W
47	17º57′.51 N	63º53′.54 W
48	17º56′.38 N	63º53′.21 W
49	17º39′.40 N	63º54′.53 W
50	17º37′.08 N	63º55′.10 W

51	17º30′.21 N	63º55′.56 W
52	17º11′.36 N	63º57′.57 W
53	17º05′.00 N	63º58′.41 W
54	16º59′.49 N	63º59′.18 W
55	17º18′.37 N	67º32′.14 W

APPENDIX VIII - FORM OF INTERNATIONAL ENERGY EFFICIENCY (IEE) CERTIFICATE

INTERNATIONAL ENERGY EFFICIENCY CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as “the Convention”) under the authority of the Government of:

.....
.....

(full designation of the country)

by
.....
.....

(full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship

Name of ship
.....
..

Distinctive number or letters
.....
.....

Port of registry
.....
.....

Gross tonnage
.....
.....

IMO
Number .....
.....

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with regulation 5.4 of Annex VI to the Convention; and

2 That the survey shows that the ship complies with the applicable requirements in regulations 22, 23, 24, 25 and 26.

Completion date of survey on which this Certificate is based:
.....
(dd/mm/yyyy)

Issued at
.....
.....

(place of issue of certificate)

(dd/mm/yyyy): .....
....

(date of issue) *(signature of duly authorized official issuing the certificate)*

(seal or stamp of the authority, as appropriate)

Supplement to the International Energy Efficiency Certificate (IEE Certificate)

RECORD OF CONSTRUCTION RELATING TO ENERGY EFFICIENCY

Notes:

1 This Record shall be permanently attached to the IEE Certificate. The IEE Certificate shall be available on board the ship at all times.

2 The Record shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy.

3 Entries in boxes shall be made by inserting either: a cross (x) for the answers "yes" and "applicable"; or a dash (-) for the answers "no" and "not applicable", as appropriate.

4 Unless otherwise stated, regulations mentioned in this Record refer to regulations in Annex VI of the Convention, and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship
.....
.....

1.2 IMO number
.....
.....

1.3 Date of building contract
.....
.....

1.4 Date of major conversion (if applicable).....
.....

1.5 Gross tonnage
.....
.....

1.6 Deadweight
.....
.....

1.7 Type of ship .....
.....

2 Propulsion system

2.1 Diesel propulsion
.....
.....

2.2 Diesel-electric propulsion
.....
.....

2.3 Turbine propulsion
.....
.....

2.4 Hybrid propulsion
.....
.....

2.5 Propulsion system other than any of the above
.....
.....

3 Attained Energy Efficiency Design Index (EEDI)

3.1 The attained EEDI in accordance with regulation 22.1 is calculated based on the information contained in the EEDI technical file, which also shows the process of calculating the attained EEDI.....
.....

The attained EEDI is: ..... grams-CO_2/tonne-nautical mile

3.2 The attained EEDI is not calculated as:

3.2.1 the ship is exempt under regulation 22.1 as it is not a new ship as defined in regulation 2.2.18 .....

3.2.2 the type of propulsion system is exempt in accordance with regulation 19.3 .....

3.2.3 the requirement of regulation 22 is waived by the ship's Administration in accordance with regulation 19.4 .....

3.2.4 the type of ship is exempt in accordance with regulation 22.1 .....
.....

4 Required EEDI

4.1 Required EEDI is:
..... grams-CO_2/tonne-mile

4.2 The required EEDI is not applicable as:

4.2.1 the ship is exempt under regulation 24.1 as it is not a new ship as defined in regulation 2.2.18.....

4.2.2 the type of propulsion system is exempt in accordance with regulation 19.3.....

4.2.3 the requirement of regulation 24 is waived by the ship's Administration in accordance with regulation 19.4 .....

4.2.4 the type of ship is exempt in accordance with regulation 24.1 ....

4.2.5 the ship's capacity is below the minimum capacity threshold in table 1 of regulation 24.2.....

5 Attained Energy Efficiency Existing Ship Index (EEXI)

5.1 The attained EEXI in accordance with regulation 23.1 is calculated taking into account the guidelines developed by the Organization.....

The attained EEXI is:……..grams-CO_2/tonne-mile

5.2 The attained EEXI is not calculated, as:

5.2.1 the type of propulsion system is exempt in accordance with regulation 19.3.....

5.2.2 the type of ship is exempt in accordance with regulation 23.1..... .....

6 Required EEXI

6.1 The required EEXI is:…….grams-CO_2/tonne-mile in accordance with regulation 25

6.2 The required EEXI is not applicable, as:

6.2.1 the type of propulsion system is exempt in accordance with regulation 19.3.....

6.2.2 the type of ship is exempt in accordance with regulation 25.1.....

6.2.3 the ship's capacity is below the minimum capacity threshold in table 3 of regulation 25.1.....

7 Ship Energy Efficiency Management Plan

7.1 The ship is provided with a Ship Energy Efficiency Management Plan (SEEMP) in compliance with regulation 26.....

8 EEDI technical file

8.1 The IEE Certificate is accompanied by the EEDI technical file in compliance with regulation 22.1 .....

8.1.1 The EEDI technical file identification/verification number.....

8.1.2 The EEDI technical file verification date.....
.....

9 EEXI technical file

9.1 The IEE Certificate is accompanied by the EEXI technical file in compliance with regulation 23.1 .....

9.1.1 The EEXI technical file identification/verification number.....

9.1.2 The EEXI technical file verification date.....

9.2 The IEE Certificate is not accompanied by the EEXI technical file as the attained EEDI is used as an alternative to the attained EEXI
.....

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at
.....

(place of issue of the Record)

(dd/mm/yyyy): ....

(date of issue) *(signature of duly authorized official issuing the Record)*

(seal or stamp of the authority, as appropriate)

APPENDIX IX – INFORMATION TO BE SUBMITTED TO THE IMO SHIP FUEL OIL CONSUMPTION DATABASE

Identity of the ship

IMO number……

Period of calendar year for which the data is submitted

Start date (dd/mm/yyyy)……

End date (dd/mm/yyyy)……

Technical characteristics of the ship

Ship type, as defined in Regulation 2 of Annex VI or other (to be stated)……

Gross tonnage (GT) ……

Net tonnage (NT) ……

Deadweight tonnage (DWT) ……

Power output (rated power) of main and auxiliary reciprocating internal combustion engines over 130 kW (to be stated in kW)
……

EEDI (if applicable)
……

Ice class. ……

Fuel oil consumption, by fuel oil type in metric tonnes and methods used for collecting fuel oil consumption data
……

Distance travelled
……

Hours under way……
…

APPENDIX X – FORM OF STATEMENT OF COMPLIANCE – FUEL OIL CONSUMPTION REPORTING AND OPERATIONAL CARBON INTENSITY RATING

STATEMENT OF COMPLIANCE – FUEL OIL CONSUMPTION REPORTING AND OPERATIONAL CARBON INTENSITY RATING

Issued under the provisions of the Protocol of 1997, as amended, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as “the Convention”) under the authority of the Government of:

……

(full designation of the country)

by.....

(full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship

Name of ship ……

Distinctive number or letters……

IMO Number……

Port of registry……

Gross tonnage……

Deadweight……

Type of ship……

THIS IS TO DECLARE:

1 the ship has submitted to this Administration the data required by regulation 27 of Annex VI to the Convention, covering ship operations from (dd/mm/yyyy) to (dd/mm/yyyy);

2 the data was collected and reported in accordance with the methodology and processes set out in the ship's SEEMP that was in effect over the period from (dd/mm/yyyy) to (dd/mm/yyyy);

3 the attained annual operational CII of the ship from (dd/mm/yyyy) through (dd/mm/yyyy) was: …… pursuant to regulations 28.1 and 28.2 of Annex VI of the Convention, for ships to which regulation 28 applies;

4 the annual operational carbon intensity of the ship in this period is rated as

□A □B □C □D □E

in accordance with regulation 28 of Annex VI to the Convention, for a ship to which regulation 28 applies; and

5 a corrective action plan has been developed and included in the SEEMP (for a ship to which regulation 28 applies, rated as D for three consecutive years or rated as E)*

This Statement of Compliance is valid until (dd/mm/yyyy)……

Issued at:……

(place of issue of the Statement)

(dd/mm/yyyy)…… ……

(date of issue) *(signature of duly authorized official issuing the Statement)*

(seal or stamp of the authority, as appropriate)

APPENDIX XI - FORM OF EXEMPTION CERTIFICATE FOR UNSP BARGES

INTERNATIONAL AIR POLLUTION PREVENTION EXEMPTION CERTIFICATE FOR UNMANNED NON-SELF-PROPELLED (UNSP) BARGES

Issued under the provisions of the Protocol of 1997, as amended, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....

(full designation of the country)

by .....

(full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship

Name of ship .....

Distinctive number or letters .....

IMO Number2 .....

Port of registry .....

Gross tonnage .....

THIS IS TO CERTIFY THAT:

1 the UNSP barge has been surveyed in accordance with regulation 3.4 of Annex VI of the Convention

2 the survey shows that the UNSP barge:

.1 is not propelled by mechanical means;

.2 has no system, equipment and/or machinery fitted that may generate emissions controlled by Annex VI to the Convention; and

.3 has neither persons nor living animals on board; and 3 the UNSP barge is exempted, under regulation 3.4 of Annex VI to the Convention, from the certification and related survey requirements of regulations 5.1 and 6.1 of Annex VI to the Convention.

This Certificate is valid until (dd/mm/yyyy) .....

subject to the exemption conditions being maintained.

Completion date of the survey on which this Certificate is based (dd/mm/yyyy)

.....

Issued at .....

(place of issue of certificate)

(dd/mm/yyyy): .....
.....

(date of issue) (signature of duly authorized official

issuing the certificate)

(seal or stamp of the authority, as appropriate)

APPENDIX XII – FORM OF INDIAN AIR POLLUTION PREVENTION CERTIFICATE

INDIAN AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of Merchant Shipping (Prevention of Air Pollution from the Ships) Rules 2026, under the authority of the Government of India

By ……..

(full designation of the competent person or organisation authorised under the provisions of this Rules

Particulars of vessel

Name of vessel ……..

Registration Number (IMO Number) ……..

Distinctive numbers of letters……..

Port of registry……

Gross tonnage……

THIS IS TO CERTIFY:

(1) That the vessel has been surveyed in accordance with rule 6 of this Rules and
(2) That the survey shows that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirement of this Rules

This Certificate is valid until (dd/mm/yyyy)……..

Subject to the survey in accordance with Rule 6 of this Rules

Completion date of survey on which this certificate is based (dd/mm/yyyy)
……

Issued at……

(place of issue of certificate)

Date (dd/mm/yyyy)…… ……

(date of issue) (signature of duly authorised

official issuing the certificate)

ENDORESEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

This is to certify that, at a survey required by Rule 6 of this Rules, the vessel was found to comply with the relevant provisions of this Rules

Annual Survey: signed ……..

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

Annual/ Intermediate survey: signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

Annual/ Intermediate survey: signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

ANNUAL/ INTERMEDIATE SURVEY IN ACCORDANCE WITH RULE 9(8) (c)

THIS IS TO CERTIFY that, at an annual/intermediate survey in accordance with Rules 9(8)(c) of this Rules, the vessel was found to comply with the relevant provisions of this Rules

signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

ENDORSEMENT TO EXTEND THE CERTIFICATEIF VALID FOR LESS THAN FIVE YEARS WHERE RULE 9(3) APPLIES

This vessel complies with the relevant provisions of the rules and this certificate shall, in accordance with the rule 9(3) be accepted as valid until (dd/mm/yyyy)……..

signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED AND RULE 9(4) APPLIES

This vessel complies with the relevant provisions of the rules and this certificate shall, in accordance with the rule 9(4) Be accepted as valid until (dd/mm/yyyy)……..

signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD OF GRACE WHERE RULES 9(5) or 9 (6) APPLIES

This certificate shall, in accordance with rules 9(5) or 9(6) of this Rules, be accepted as valid until (dd/mm/yyyy)……..

signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE WHERE RULE 9 (8) APPLIES

In accordance with Rule 9 (8) of this Rules, the new anniversary date is (dd/mm/yyyy)……..

signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

In accordance with Rule 9(8) of this Rules, the new anniversary date is (dd/mm/yyyy)……..

signed ……

(signature of duly authorised official)

Place ……

Date (dd/mm/yyyy)……..

(seal or stamp of the authority, as appropriate)

SUPPLEMENT TO INDIAN AIR POLLUTION PREVENTION CERTIFICATE (InAPP CERTIFICATE)

RECORD OF CONSTRUCTION AND EQUIPMENT

Notes:
1 This Record shall be permanently attached to the InAPP Certificate. The InAPP Certificate shall be available on board the vessel at all times.
2 The Record shall be in English. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.
3 Entries in boxes shall be made by inserting either: a cross (x) for the answers “yes” and “applicable”; or a dash (–) for the answers “no” and “not applicable”, as appropriate.
4 Unless otherwise stated, regulations mentioned in this Record refer to this Rules

1. Particulars of vessel

1.1 Name of the vessel……..

1.2 Registration Number (IMO number)……

1.3 Date on which keel was laid or vessel was at similar stage of construction (dd/mm/yyyy)……..

1.4 Length (L) metres……..

2. Control emission from vessels

2.1 Ozone depleting substances (Paragraph 1 of First Schedule to this Rules)

2.1.1. The following fire-extinguishing systems, other systems and equipment containing ozone-depleting substances, other than hydrochlorofluorocarbons (HCFCs), installed before 19 May 2005 may continue in service:

System or equipment	Location on board	Substance

2.1.2 The following systems containing HCFCs installed before 1 January 2020 may continue in service

System or equipment	Location on board	Substance

2.2 Nitrogen oxides (NOx) (Paragraph 2 of the First Schedule to this Rules)

2.2.1 The following marine diesel engines installed on this vessel are in accordance with the requirements of paragraph 2 of the First Schedule to this Rules, as indicated:

Applicable Rules (NTC = NO_X Technical Code 2008) (AM = Approved Method)		Engine #1	Engine #2	Engine #3	Engine #4	Engine #5
1	Manufacturer and model					
2	Serial number					
3	Use (applicable application cycle(s) – NTC 3.2)					
4	Rated power (kW) (NTC 1.3.11)					
5	Rated speed (RPM) (NTC 1.3.12)					
6	Identical engine installed ≥ 1/1/2000 exempted by paragraph 2 (1)(a) (i) of First Schedule to this Rules					

7	Identical engine installation date (dd/mm/yyyy) as per paragraph 2 (1)(a) (i) of First Schedule to this Rules						
8a	Major Conversion (dd/mm/yyyy)	2 (2) (a) (i) & 2(2) (b)					
8b		2 (2) (a) (ii) & 2 (2) (c)					
8c		2(2)(a)(iii) & 2(2) (c)					
9a	Tier I	2(3)					
9b		2 (3).(b)					
9c		2 (2)(c)(i)					
9d		2(2)(c)(iii)					
9e		2(7)(a)(b)					
10a	Tier II	2 (4)					
10b		2(2)(b)					
10c		2 (2) (b) (Tier III not possible)					
10d		2 (2) (c)(ii)					
10e		2 (5) (b) (Exemptions)					
10f		2 (7) (a) (ii)					
11a	NO_x Tier III Emission Control Areas	2 (5) (a) (i)					
11b		2 (2)(b)					
11c		2 (2) (c) (iii)					
11d		2 (7) (a) (ii)					
12	AM	installed					

13		not commercially available at this survey					
14		not applicable					

2.3 Sulphur oxides (SOx) and particulate matter (Paragraph 3 of the First Schedule to this Rules)

2.3.1 When the vessel operates outside of an emission control area specified in paragraph 3 (3) of the First Schedule to this Rules, the vessel uses:

(i) fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.50% m/m, and/0r …….

(ii) an equivalent arrangement approved in accordance with Rule 5 (1) as listed in paragraph 2.6 of this certificate, that is at least as effective in terms of SOx emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.50% m/m…….

2.3.2 When the vessel operates inside an emission control area specified in paragraph 3 (3) of the First Schedule to this Rule, the vessels uses

. 1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.10% m/m, and/or ……..

.2 an equivalent arrangement approved in accordance with Rule 5(1) as listed in paragraph 2.6 of this certificate, that is at least as effective in terms of SOx emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.10% m/m

2.3.3 For a vessel without an equivalent arrangement approved in accordance with Rule 5 (1) as listed in paragraph 2.6 of this certificate, the sulphur content of fuel oil carried for use on board the vessel shall not exceed 0.50% m/m as documented by bunker delivery notes…….

2.3.4 The vessel is fitted with designated sampling point(s) in accordance with paragraph 3(10) or 3(11) of the First Schedule to this Rules

2.3.5 In accordance with paragraph 3(12) of the First Schedule to this Rules, the requirement for fitting or designating sampling point(s) in accordance with paragraph 3(10) or 3(11) is not applicable for a fuel oil service system for a low-flashpoint fuel for combustion purposes for propulsion or operation on board the vessel

2.4 Volatile organic compounds (VOCs) (paragraph 4 of the First Schedule to this Rules)

2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ.585……..

2.4.2.1 For a tanker carrying crude oil, there is an approved VOC management plan……..

2.4.2.2 VOC management plan approval reference…….

2.5 Shipboard incineration (Paragraph 5 of the First Schedule to this Rules)

The vessel has an incinerator

.1 installed on or after 1 January 2000 that complies with:

.1 resolution MEPC.76(40), as amended…….

.2 resolution MEPC 244 (66) …….

.2 installed before 1 January 2000 that complies with:

.1 resolution MEPC 59(33) as amended…….

.2 resolution MEPC 76(40) as amended……..

2.6 Equivalents (Rule 5)

The vessel has been allowed to use the following fitting, material, appliance or apparatus to be fitted in a vessel or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Rules

System or equipment	Equivalent used	Approval reference

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at ……..

(place of issue of the records)

Date (dd/mm/yyyy) …….

……

(date of issue) (signature of duly authorised

official issuing the record)

(seal or stamp of the authority, as appropriate)

THIRD SCHEDULE

(See Rule14)

FEE

SR. NO.	ITEMS	CATEGORY	FEES
1.	Survey to verify compliance with the provisions of Merchant Shipping (Prevention of Air Pollution by Ships), Rules 2026.	a) Initial Survey (i) Vessel's Between 400 to 1000 GT (ii) Vessel's above 1000 GT b) Renewal Survey (i) Vessel's Between 400 to 1000 GT (ii) Vessel's above 1000 GT b) Additional Survey (i) Vessel's Between 400 to 1000 GT (ii) Vessel's above 1000 GT c) Periodical Survey (**Annual Survey/ Intermediate Survey)**	Rs.10,000/- Rs.10,000/- Plus Rs.1,000/- for every additional 500 GT or part thereof subject to maximum of Rs.40,000/- Rs.8,000/- Rs.8,000/- plus Rs.5,00/- for every additional 500 GT or Part thereof subject to maximum of Rs.35,000/- Rs.8,000/- Rs.8,000/- plus Rs.5,00/- for every additional 500 GT or Part thereof subject to maximum of Rs.35,000/- 75% of renewal survey fees subject to a min of Rs.6,500/-
2	Issuance of certificate		Rs.3,000/-

SR. NO.	ITEMS	CATEGORY	FEES
3	Permissions in respect of extension of surveys/ exemptions/ dispensation etc.		Rs.1,500/- perCase
4	Approval of plans related to Ballast water management system		Rs.8000/-