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INTERNAL CIRCULAR

Subject: *Unified Interpretations to MARPOL Annex VI*

Please find attached the Circular MEPC.1/Circ.795 “*Unified Interpretations to MARPOL Annex VI*” which was approved by MEPC 64.

It has been requested to comply with these interpretations during Survey, Certification and Approval activities in the scope of MARPOL Annex VI.

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Head of Marine Industry Division

Distribution (for):

Action : - *Marine Surveyors*
- *Plan Control and Research Engineers*

Information : -

Attachment : - *MEPC.1/Circ.795*
- *MEPC Res.203(62)* (*Inclusion of regulations on energy efficiency for ships in MARPOL Annex VI*)

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MEPC.1/Circ.795
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UNIFIED INTERPRETATIONS TO MARPOL ANNEX VI

1 The Marine Environment Protection Committee, at its sixty-fourth session (1 to 5 October 2012), approved Unified Interpretations to MARPOL Annex VI (MEPC 64/23, paragraphs 4.25 and 4.112.5).

2 The Unified Interpretations, as approved by the Committee, are set out in the annex hereto.

ANNEX

UNIFIED INTERPRETATIONS TO MARPOL ANNEX VI

Regulation 2

Definitions

Regulation 2.23 reads as follows:

- "23 *New ships* means a ship:
- .1 for which building contract is placed on or after 1 January 2013; or
 - .2 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
 - .3 the delivery of which is on or after 1 July 2015."

Interpretation:

For application of the definition "new ships" specified in regulation 2.23 of MARPOL Annex VI to each Phase specified in table 1 of regulation 21 of MARPOL Annex VI, it should be interpreted as follows:

- .1 the date specified in regulation 2.23.1 of MARPOL Annex VI should be replaced with the start date of each Phase;
- .2 the date specified in regulation 2.23.2 of MARPOL Annex VI should be replaced with the date six months after the start date of each Phase; and
- .3 the date specified in regulation 2.23.3 of MARPOL Annex VI, should for Phase 1, 2 and 3 be replaced with the date 48 months after the start date of each Phase.

With the above interpretations, the required EEDI of each Phase is applied to the following new ship which falls into one of the categories defined in regulations 2.25 to 2.31 of MARPOL Annex VI and to which chapter 4 of MARPOL Annex VI is applicable.

- (a) The required EEDI of Phase 0 is applied to the following new ship:
- .1 for which the building contract is placed in Phase 0, and the delivery is before 1 January 2019; or
 - .2 the building contract of which is placed before Phase 0, and the delivery is on or after 1 July 2015 and before 1 January 2019; or
- in the absence of a building contract,
- .3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013 and before 1 July 2015, and the delivery is before 1 January 2019; or

- .4 the keel of which is laid or which is at a similar stage of construction before 1 July 2013, and the delivery is on or after 1 July 2015 and before 1 January 2019.
- (b) The required EEDI of Phase 1 is applied to the following new ship:
- .1 for which the building contract is placed in Phase 1, and the delivery is before 1 January 2024; or
 - .2 the building contract of which is placed before Phase 1, and the delivery is on or after 1 January 2019 and before 1 January 2024; or
- in the absence of a building contract,
- .3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2015 and before 1 July 2020, and the delivery is before 1 January 2024; or
 - .4 the keel of which is laid or which is at a similar stage of construction before 1 July 2015, and the delivery is on or after 1 January 2019 and before 1 January 2024.
- (c) The required EEDI of Phase 2 is applied to the following new ship:
- .1 for which the building contract is placed in Phase 2, and the delivery is before 1 January 2029; or
 - .2 the building contract of which is placed before Phase 2, and the delivery is on or after 1 January 2024 and before 1 January 2029; or
- in the absence of a building contract,
- .3 the keel of which is laid or which is at a similar stage of construction on or after 1 July 2020 and before 1 July 2025, and the delivery is before 1 January 2029; or
 - .4 the keel of which is laid or which is at a similar stage of construction before 1 July 2020, and the delivery is on or after 1 January 2024 and before 1 January 2029.
- (d) The required EEDI of Phase 3 is applied to the following new ship:
- .1 for which the building contract is placed in Phase 3; or
 - .2 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 2025; or
 - .3 the delivery of which is on or after 1 January 2029.

Regulation 2.24 reads as follows:

- "24 *Major Conversion* means in relation to chapter 4 of this Annex a conversion of a ship:
- .1 which substantially alters the dimensions, carrying capacity or engine power of the ship; or

- .2 which changes the type of the ship; or
- .3 the intent of which in the opinion of the Administration is substantially to prolong the life of the ship; or
- .4 which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present Convention not applicable to it as an existing ship; or
- .5 which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI as set out in regulation 21 of this Annex."

Interpretation:

1 For regulation 2.24.1 of MARPOL Annex VI, any substantial change in hull dimensions and/or capacity (e.g. change of length between perpendiculars (L_{PP}) or change of assigned freeboard) should be considered a major conversion. Any substantial increase of total engine power for propulsion (e.g. 5 per cent or more) should be considered a major conversion. In any case, it is the Administration's authority to evaluate and decide whether an alteration should be considered as major conversion, consistent with chapter 4 of MARPOL Annex VI.

2 Notwithstanding paragraph 1, for regulation 2.24.5 of MARPOL Annex VI, the effect on attained EEDI as a result of any change of ship's parameters, particularly any increase in total engine power for propulsion, should be investigated. In any case, it is the Administration's authority to evaluate and decide whether an alteration should be considered as major conversion, consistent with chapter 4 of MARPOL Annex VI.

3 A company may, at any time, voluntarily request re-certification of EEDI with IEE Certificate reissuance on the basis of any new improvements to the ship efficiency that are not considered to be major conversion.

4 In regulation 2.24.4 of MARPOL Annex VI, terms "new ship" and "existing ship" should be understood as they are used in MARPOL Annex I regulation 1.9.1.4, rather than as the defined terms in regulations 2.22 and 2.23.

5 The term "a ship" referred to in regulation 5.4.2 of MARPOL Annex VI is interpreted as "new ship."

Regulation 2.30 reads as follows:

"30 *Refrigerated cargo carrier* means a ship designed exclusively for the carriage of refrigerated cargoes in holds."

Interpretation:

Ships dedicated to the carriage of fruit juice in refrigerated cargo tanks should be categorized as refrigerated cargo carrier.

Regulation 5

Surveys

Regulation 5.4.4 reads as follows:

- "4 For existing ships, the verification of the requirement to have a SEEMP on board according to regulation 22 shall take place at the first intermediate or renewal survey identified in paragraph 1 of this regulation, whichever is the first, on or after 1 January 2013."

Regulation 6

Issue or endorsement of a Certificates

Regulation 6.4 reads as follows:

- "4 An International Energy Efficiency Certificate for the ship shall be issued after a survey in accordance with the provisions of regulation 5.4 of this Annex to any ship of 400 gross tonnage and above before that ship may engage in voyages to ports or offshore terminals under the jurisdiction of other Parties."

Regulation 22

Ship Energy Efficiency Management Plan (SEEMP)

Regulation 22.1 reads as follows:

- "1 Each ship shall keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP). This may form part of the ship's Safety Management System (SMS)."

Interpretation:

1 The International Energy Efficiency Certificate (IEEC) shall be issued for both new and existing ships to which chapter 4 of MARPOL Annex VI applies.

2 The SEEMP required by regulation 22.1 of MARPOL Annex VI is not required to be placed on board an existing ship to which this regulation applies until such time as the verification survey specified in regulation 5.4.4 of MARPOL Annex VI is carried out.

3 For existing ships, a Ship Energy Efficiency Management Plan (SEEMP) required in accordance with regulation 22 shall be verified on board according to regulation 5.4.4, and an IEEC shall be issued, not later than the first intermediate or renewal MARPOL Annex VI chapter 2 survey, whichever is the sooner, on or after 1 January 2013, i.e. a survey connected to an intermediate/renewal survey of the IAPP Certificate.

4 The intermediate or renewal survey referenced in 2 relates solely to the timing for the verification of the SEEMP on board, i.e. these IAPPC survey windows will also become the IEEC initial survey date for existing ships. The SEEMP is however a survey item solely under the new MARPOL Annex VI, chapter 4, and is not a survey item relating to IAPPC surveys.

5 In the event that the SEEMP is not found on board during the first intermediate/renewal survey of the IAPP Certificate on or after 1 January 2013, then the RO should seek the advice of the Administration concerning the issuance of an IEEC and be

guided accordingly. However, the validity of the IAPP Certificate is not impacted by the lack of a SEEMP as the SEEMP is a survey item solely under the new MARPOL Annex VI, chapter 4, and not under the IAPPC surveys.

6 With respect to ships required to keep on board a SEEMP, such ships exclude platforms (including FPSOs and FSUs) and drilling rigs, regardless of their propulsion.

7 SEEMP should be established in a working language or languages understood by ship's personnel.

Regulation 8
Form of Certificates

Regulation 8.1 reads as follows:

"1 The International Air Pollution Prevention Certificate shall be drawn up in a form corresponding to the model given in appendix I to this Annex and 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."

Appendix 1
Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)

Section 2.3 of supplement to International Air Pollution Prevention Certificate reads as follows:

- 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:
 - 4.50% m/m (not applicable on or after 1 January 2012); or
 - 3.50% m/m (not applicable on or after 1 January 2020); or
 - 0.50% m/m, and/or
 - .2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 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:
 - 4.50% m/m (not applicable on or after 1 January 2012); or
 - 3.50% m/m (not applicable on or after 1 January 2020); or
 - 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:
 - 1.00% m/m (not applicable on or after 1 January 2015); or
 - 0.10% m/m, and/or
 - .2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 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:
 - 1.00% m/m (not applicable on or after 1 January 2015); or
 - 0.10% m/m

Interpretation:

Section 2.3 of the supplement ("as documented by bunker delivery notes") allows for an "x" to be entered in advance of the dates indicated in all of the relevant check boxes recognizing that the bunker delivery notes, required to be retained on board for a minimum period of three years, provide the subsequent means to check that a ship is actually operating in a manner consistent with the intent as given in section 2.3.

Regulation 16.9

Shipboard incineration

Regulation 16.9 reads as follows:

For incinerators installed in accordance with the requirements of paragraph 6.1 of this regulation the combustion chamber gas outlet temperature shall be monitored at all times the unit is in operation. 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. 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.

Interpretation:

For application of this regulation the term "waste shall not be fed into the unit" should be interpreted as follows:

The introduction of sludge oil, generated during normal operation of a ship, into a continuous-feed type incinerator during the warm-up process at combustion chamber temperatures above 500°C* in order to achieve the normal operation combustion chamber temperature of 850°C is allowed. The combustion chamber flue gas outlet temperature should reach 850°C within the period of time specified in the manufacturer's operations manual but should not be more than five minutes.

* For the introduction of sludge oil into the incinerator, two conditions need to be fulfilled to secure smokeless and complete combustion:

- .1 the combustion chamber flue gas outlet temperature has to be above 850°C as required by regulation 16.9 of MARPOL Annex VI to ensure smokeless combustion; and
- .2 the combustion chamber temperature (material temperature of the fire brickwork) has to be above 500°C to ensure a sufficient evaporation of the burnable components of the sludge oil.

RESOLUTION MEPC.203(62)

Adopted on 15 July 2011

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

(Inclusion of regulations on energy efficiency for ships in MARPOL Annex VI)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 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 "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI entitled Regulations for the Prevention of Air Pollution from Ships was added to the 1973 Convention (hereinafter referred to as "Annex VI"),

NOTING FURTHER that the revised Annex VI was adopted by resolution MEPC.176(58) and entered into force on 1 July 2010,

RECOGNIZING that the amendments to Annex VI and inclusion of a new chapter 4 intend to improve energy efficiency for ships through a set of technical performance standards, which would result in reduction of emissions of any substances that originate from fuel oil and its combustion process, including those already controlled by Annex VI,

RECOGNIZING ALSO that adoption of the amendments to Annex VI in no way prejudices the negotiations held in other international fora, such as the United Nations Framework Convention on Climate Change (UNFCCC), nor affect the positions of the countries that participate in such negotiation,

HAVING CONSIDERED draft amendments to the revised Annex VI for inclusion of regulations on energy efficiency for ships,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex VI, the text of which is set out in the annex to the present resolution;
2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012, unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which

constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex; and

6. INVITES the Parties to MARPOL Annex VI and other Member Governments to bring the amendments to MARPOL Annex VI to the attention of shipowners, ship operators, shipbuilders, ship designers, marine diesel engine and equipment manufacturers as well as any other interested groups.

ANNEX

**AMENDMENTS TO MARPOL ANNEX VI ON REGULATIONS FOR THE PREVENTION OF
AIR POLLUTION FROM SHIPS BY INCLUSION OF NEW REGULATIONS ON
ENERGY EFFICIENCY FOR SHIPS**

CHAPTER 1

GENERAL

Regulation 1

Application

1 The regulation is amended as follows:

"The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in regulations 3, 5, 6, 13, 15, 16, 18, 19, 20, 21, 22 and 23 of this Annex."

Regulation 2

Definitions

2 Paragraph 21 is amended as follows:

"21 *Tanker* in relation to regulation 15 means an oil tanker as defined in regulation 1 of Annex I or a chemical tanker as defined in regulation 1 of Annex II of the present Convention."

3 The following is added at the end of regulation 2:

"For the purpose of chapter 4:

22 "Existing ship" means a ship which is not a new ship.

23 "New ship" means a ship:

.1 for which the building contract is placed on or after 1 January 2013;
or

.2 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

.3 the delivery of which is on or after 1 July 2015.

- 24 "Major Conversion" means in relation to chapter 4 a conversion of a ship:
- .1 which substantially alters the dimensions, carrying capacity or engine power of the ship; or
 - .2 which changes the type of the ship; or
 - .3 the intent of which in the opinion of the Administration is substantially to prolong the life of the ship; or
 - .4 which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present Convention not applicable to it as an existing ship; or
 - .5 which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI as set out in regulation 21.
- 25 "Bulk carrier" means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers as defined in SOLAS chapter XII, regulation 1, but excluding combination carriers.
- 26 "Gas carrier" means a cargo ship constructed or adapted and used for the carriage in bulk of any liquefied gas.
- 27 "Tanker" in relation to chapter 4 means an oil tanker as defined in MARPOL Annex I, regulation 1 or a chemical tanker or an NLS tanker as defined in MARPOL Annex II, regulation 1.
- 28 "Container ship" means a ship designed exclusively for the carriage of containers in holds and on deck.
- 29 "General cargo ship" means a ship with a multi-deck or single deck hull designed primarily for the carriage of general cargo. This definition excludes specialized dry cargo ships, which are not included in the calculation of reference lines for general cargo ships, namely livestock carrier, barge carrier, heavy load carrier, yacht carrier, nuclear fuel carrier.
- 30 "Refrigerated cargo carrier" means a ship designed exclusively for the carriage of refrigerated cargoes in holds.
- 31 "Combination carrier" means a ship designed to load 100% deadweight with both liquid and dry cargo in bulk.
- 32 "Passenger ship" means a ship which carries more than 12 passengers.
- 33 "Ro-ro cargo ship (vehicle carrier)" means a multi deck roll-on-roll-off cargo ship designed for the carriage of empty cars and trucks.
- 34 "Ro-ro cargo ship" means a ship designed for the carriage of roll-on-roll-off cargo transportation units.
- 35 "Ro-ro passenger ship" means a passenger ship with roll-on-roll-off cargo spaces.

36 "Attained EEDI" is the EEDI value achieved by an individual ship in accordance with regulation 20 of chapter 4.

37 "Required EEDI" is the maximum value of attained EEDI that is allowed by regulation 21 of chapter 4 for the specific ship type and size."

CHAPTER 2

SURVEY, CERTIFICATION AND MEANS OF CONTROL

Regulation 5

Surveys

4 Paragraph 1 is amended as follows:

"1 Every ship of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall to ensure compliance with chapter 3 be subject to the surveys specified below:

- .1 An initial survey before the ship is put into service or before the certificate required under regulation 6 of this Annex is issued for the first time. This survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of chapter 3;
- .2 A renewal survey at intervals specified by the Administration, but not exceeding five years, except where regulation 9.2, 9.5, 9.6 or 9.7 of this Annex is applicable. The renewal survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with applicable requirements of chapter 3;
- .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 take the place of one of the annual surveys specified in paragraph 1.4 of this regulation. The intermediate survey shall be such as to ensure that the equipment and arrangements fully comply with the applicable requirements of chapter 3 and are in good working order. Such intermediate surveys shall be endorsed on the IAPP Certificate issued under regulation 6 or 7 of this Annex;
- .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 paragraph 1.1 of this regulation to ensure that they have been maintained in accordance with paragraph 5 of this regulation and that they remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the IAPP Certificate issued under regulation 6 or 7 of this Annex; and

- .5 An additional survey either general or partial, according to the circumstances, shall be made whenever any important repairs or renewals are made as prescribed in paragraph 5 of this regulation or after a repair resulting from investigations prescribed in paragraph 6 of this regulation. The survey 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 ship complies in all respects with the requirements of chapter 3."

5 Paragraph 2 is amended as follows:

"2 In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of chapter 3 are complied with."

6 A new paragraph 4 is added after existing paragraph 3 as follows:

"4 Ships to which chapter 4 applies shall also be subject to the surveys specified below, taking into account Guidelines adopted by the Organization¹:

- .1 An initial survey before a new ship is put in service and before the International Energy Efficiency Certificate is issued. The survey shall verify that the ship's attained EEDI is in accordance with the requirements in chapter 4, and that the SEEMP required by regulation 22 is on board;
- .2 A general or partial survey, according to the circumstances, after a major conversion of a ship to which this regulation applies. The survey shall ensure that the attained EEDI is recalculated as necessary and meets the requirement of regulation 21, with the reduction factor applicable to the ship type and size of the converted ship in the phase corresponding to the date of contract or keel laying or delivery determined for the original ship in accordance with regulation 2.23;
- .3 In cases where the major conversion of a new or existing ship is so extensive that the ship is regarded by the Administration as a newly constructed ship, the Administration shall determine the necessity of an initial survey on attained EEDI. Such a survey, if determined necessary, shall ensure that the attained EEDI is calculated and meets the requirement of regulation 21, with the reduction factor applicable corresponding to the ship 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. The survey shall also verify that the SEEMP required by regulation 22 is on board; and
- .4 For existing ships, the verification of the requirement to have a SEEMP on board according to regulation 22 shall take place at the first intermediate or renewal survey identified in paragraph 1 of this regulation, whichever is the first, on or after 1 January 2013."

¹

Refer to Guidelines on Survey and Certification of the Energy Efficiency Design Index.

7 Paragraph 4 is renumbered paragraph 5.

8 Paragraph 5 is renumbered paragraph 6.

Regulation 6

Issue or endorsement of a Certificate

9 The heading is amended as follows:

"Issue or endorsement of Certificates"

10 The following sub-heading is added at the beginning of the regulation:

"International Air Pollution Prevention Certificate"

11 Paragraph 2 is amended as follows:

"2 A ship constructed before the date Annex VI enters into force for that particular ship's Administration, shall be issued with an International Air Pollution Prevention Certificate in accordance with paragraph 1 of this regulation no later than the first scheduled dry-docking after the date of such entry into force, but in no case later than three years after this date."

12 The following is added at the end of the regulation:

"International Energy Efficiency Certificate

4 An International Energy Efficiency Certificate for the ship shall be issued after a survey in accordance with the provisions of regulation 5.4 to any ship of 400 gross tonnage and above before that ship may engage in voyages to ports or offshore terminals under the jurisdiction of other Parties.

5 The certificate shall be issued or endorsed either by the Administration or any organization duly authorized by it². In every case, the Administration assumes full responsibility for the certificate."

Regulation 7

Issue of a Certificate by another Party

13 Paragraph 1 is amended as follows:

"1 A Party may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the applicable provisions of this Annex are complied with, shall issue or authorize the issuance of an International Air Pollution Prevention Certificate or an International Energy Efficiency Certificate to the ship,

² Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

and where appropriate, endorse or authorize the endorsement of such certificates on the ship, in accordance with this Annex."

14 Paragraph 4 is amended as follows:

"4 No International Air Pollution Prevention Certificate or International Energy Efficiency Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party."

Regulation 8

Form of Certificate

15 The heading is amended as follows:

"Form of Certificates"

16 The following subheading is added, and the existing regulation is renumbered as paragraph 1:

"International Air Pollution Prevention Certificate"

17 The following new paragraph 2 is added at the end of the regulation:

"International Energy Efficiency Certificate

2 The International Energy Efficiency Certificate shall be drawn up in a form corresponding to the model given in appendix VIII to this Annex and 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."

Regulation 9

Duration and Validity of Certificate

18 The heading is amended as follows:

"Duration and Validity of Certificates"

19 The following subheading is added at the beginning of the regulation:

"International Air Pollution Prevention Certificate"

20 The following is added at the end of the regulation:

"International Energy Efficiency Certificate

10 The International Energy Efficiency Certificate shall be valid throughout the life of the ship subject to the provisions of paragraph 11 below.

11 An International Energy Efficiency Certificate issued under this Annex shall cease to be valid in any of the following cases:

- .1 if the ship is withdrawn from service or if a new certificate is issued following major conversion of the ship; or
- .2 upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of chapter 4. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports."

Regulation 10

Port State Control on Operational Requirements

21 A new paragraph 5 is added at the end of the regulation as follows:

"5 In relation to chapter 4, any port State inspection shall be limited to verifying, when appropriate, that there is a valid International Energy Efficiency Certificate on board, in accordance with article 5 of the Convention."

22 A new chapter 4 is added at the end of the Annex as follows:

"CHAPTER 4

REGULATIONS ON ENERGY EFFICIENCY FOR SHIPS

Regulation 19

Application

- 1 This chapter shall apply to all ships of 400 gross tonnage and above.
- 2 The provisions of this chapter shall not apply to:
 - .1 ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly. However, each Party should ensure, by the adoption of appropriate measures, that such ships are constructed and act in a manner consistent with chapter 4, so far as is reasonable and practicable.
- 3 Regulation 20 and regulation 21 shall not apply to ships which have diesel-electric propulsion, turbine propulsion or hybrid propulsion systems.
- 4 Notwithstanding the provisions of paragraph 1 of this regulation, the Administration may waive the requirement for a ship of 400 gross tonnage and above from complying with regulation 20 and regulation 21.

5 The provision of paragraph 4 of this regulation shall not apply to ships of 400 gross tonnage and above:

- .1 for which the building contract is placed on or after 1 January 2017;
or
- .2 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
- .3 the delivery of which is on or after 1 July 2019; or
- .4 in cases of a major conversion of a new or existing ship, as defined in regulation 2.24, on or after 1 January 2017, and in which regulation 5.4.2 and regulation 5.4.3 of chapter 2 apply.

6 The Administration of a Party to the present Convention which allows application of paragraph 4, or suspends, withdraws or declines the application of that paragraph, to a ship entitled to fly its flag shall forthwith communicate to the Organization for circulation to the Parties to the present Protocol particulars thereof, for their information.

Regulation 20

Attained Energy Efficiency Design Index (Attained EEDI)

1 The attained EEDI shall be calculated for:

- .1 each new ship;
- .2 each new ship which has undergone a major conversion; and
- .3 each new or existing ship which has undergone a major conversion, that is so extensive that the ship is regarded by the Administration as a newly constructed ship

which falls into one or more of the categories in regulations 2.25 to 2.35. The attained EEDI shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency, and be accompanied by the EEDI technical file that contains the information necessary for the calculation of the attained EEDI and that shows the process of calculation. The attained EEDI shall be verified, based on the EEDI technical file, either by the Administration or by any organization³ duly authorized by it.

2 The attained EEDI shall be calculated taking into account guidelines⁴ developed by the Organization.

³ Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

⁴ Guidelines on the method of calculation of the Energy Efficiency Design Index for new ships.

Regulation 21

Required EEDI

- 1 For each:
- .1 new ship;
 - .2 new ship which has undergone a major conversion; and
 - .3 new or existing ship which has undergone a major conversion that is so extensive that the ship is regarded by the Administration as a newly constructed ship

which falls into one of the categories defined in regulation 2.25 to 2.31 and to which this chapter is applicable, the attained EEDI shall be as follows:

$$\text{Attained EEDI} \leq \text{Required EEDI} = (1-X/100) \times \text{Reference line value}$$

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 ship is regarded by the Administration as a newly constructed ship, the attained EEDI shall be calculated and meet the requirement of paragraph 21.1 with the reduction factor applicable corresponding to the ship 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 the EEDI relative to the EEDI Reference line

Ship Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2025 and onwards
Bulk carrier	20,000 DWT and above	0	10	20	30
	10,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*
Gas carrier	10,000 DWT and above	0	10	20	30
	2,000 – 10,000 DWT	n/a	0-10*	0-20*	0-30*
Tanker	20,000 DWT and above	0	10	20	30
	4,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*
Container ship	15,000 DWT and above	0	10	20	30
	10,000 – 15,000 DWT	n/a	0-10*	0-20*	0-30*

Ship Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2025 and onwards
General Cargo ships	15,000 DWT and above	0	10	15	30
	3,000 – 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 – 5,000 DWT	n/a	0-10*	0-15*	0-30*
Combination carrier	20,000 DWT and above	0	10	20	30
	4,000 – 20,000 DWT	n/a	0-10*	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 ship size.

n/a means that no required EEDI applies.

3 The Reference line values shall be calculated as follows:

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

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

Table 2. Parameters for determination of reference values for the different ship types

Ship type defined in regulation 2	a	b	c
2.25 Bulk carrier	961.79	DWT of the ship	0.477
2.26 Gas carrier	1120.00	DWT of the ship	0.456
2.27 Tanker	1218.80	DWT of the ship	0.488
2.28 Container ship	174.22	DWT of the ship	0.201
2.29 General cargo ship	107.48	DWT of the ship	0.216
2.30 Refrigerated cargo carrier	227.01	DWT of the ship	0.244
2.31 Combination carrier	1219.00	DWT of the ship	0.488

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

5 For each ship to which this regulation applies, the installed propulsion power shall not be less than the propulsion power needed to maintain the manoeuvrability of the ship 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 ship types and reduction rates set out in this regulation.

Regulation 22

Ship Energy Efficiency Management Plan (SEEMP)

1 Each ship shall keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP). This may form part of the ship's Safety Management System (SMS).

2 The SEEMP shall be developed taking into account guidelines adopted by the Organization.

Regulation 23

Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships

1 Administrations shall, in co-operation with the Organization and other international bodies, promote and provide, as appropriate, support directly or through the Organization to States, especially developing States, that request technical assistance.

2 The Administration of a Party shall co-operate actively with other Parties, subject to its national laws, regulations and policies, to promote the development and transfer of technology and exchange of information to States which request technical assistance, particularly developing States, in respect of the implementation of measures to fulfil the requirements of chapter 4 of this annex, in particular regulations 19.4 to 19.6."

23 A new appendix VIII is added at the end of the Annex as follows:

"APPENDIX VIII

Form of International Energy Efficiency (IEE) Certificate

INTERNATIONAL ENERGY EFFICIENCY CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.203(62), to amend the International Convention for the Prevention of Pollution by Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....
(Full designation of the Party)

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

Particulars of ship⁵

Name of ship

Distinctive number or letters

Port of registry

Gross tonnage

IMO Number⁶

THIS IS TO CERTIFY:

- 1 That the ship has been surveyed in accordance with regulation 5.4 of Annex VI of the Convention; and
- 2 That the survey shows that the ship complies with the applicable requirements in regulation 20, regulation 21 and regulation 22.

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)

⁵ Alternatively, the particulars of the ship may be placed horizontally in boxes.

⁶ In accordance with IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

**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 Gross tonnage
- 1.5 Deadweight
- 1.6 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

* Insert ship type in accordance with definitions specified in regulation 2. Ships falling into more than one of the ship types defined in regulation 2 should be considered as being the ship type with the most stringent (the lowest) required EEDI. If ship does not fall into the ship types defined in regulation 2, insert "Ship other than any of the ship type defined in regulation 2".

3 Attained Energy Efficiency Design Index (EEDI)

3.1 The Attained EEDI in accordance with regulation 20.1 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-CO₂/tonne-mile

3.2 The Attained EEDI is not calculated as:

3.2.1 the ship is exempt under regulation 20.1 as it is not a new ship as defined in regulation 2.23

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

3.2.3 the requirement of regulation 20 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 20.1

4 Required EEDI

4.1 Required EEDI is: grams-CO₂/tonne-mile

4.2 The required EEDI is not applicable as:

4.2.1 the ship is exempt under regulation 21.1 as it is not a new ship as defined in regulation 2.23

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

4.2.3 the requirement of regulation 21 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 21.1

4.2.5 the ship's capacity is below the minimum capacity threshold in Table 1 of regulation 21.2

5 Ship Energy Efficiency Management Plan

5.1 The ship is provided with a Ship Energy Efficiency Management Plan (SEEMP) in compliance with regulation 22

6 EEDI technical file

6.1 The IEE Certificate is accompanied by the EEDI technical file in compliance with regulation 20.1

6.2 The EEDI technical file identification/verification number

6.3 The EEDI technical file verification date

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)"
