RULES FOR MARINE POLLUTION PREVENTION SYSTEMS

RULES

2020 AMENDMENT NO.1

Rule No.48 30 June 2020

Resolved by Technical Committee on 22 January 2020

An asterisk (*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

Rule No.48 30 June 2020
AMENDMENT TO THE RULES FOR MARINE POLLUTION PREVENTION SYSTEMS

"Rules for marine pollution prevention systems" has been partly amended as follows:

Amendment 1-1

Part 2 SURVEYS

Chapter 1 GENERAL

1.1 General

Paragraph 1.1.2 has been amended as follows.

1.1.2 Kinds of Surveys

1 Construction and equipment for the prevention of pollution from ships registered or intended to be registered are to subject to the following surveys:

(1) ~~Registration Surveys~~ Surveys for registration (hereinafter referred to as Registration Surveys)
Registration Surveys consist of the following surveys:
(a) Registration Surveys during Construction
(b) Registration Surveys not Built under the Survey

(2) Surveys for maintaining registration (hereinafter referred to as Registration Maintenance Surveys)
Registration Maintenance Surveys consist of the following surveys:
(~~2~~a) Periodical Surveys
(~~3~~b) Occasional Surveys
(~~4~~c) Unscheduled Surveys

~~**2** Registration Surveys consist of following surveys:~~
~~(1) Registration Surveys during Construction~~
~~Registration Surveys not Built under the Survey~~

~~**3**~~**2** Periodical Surveys consist of the following surveys:

(1) The construction, equipment and plans specified in **Part 3** to **6** and **8**:
(a) Annual Survey
(b) Intermediate Survey
(c) Special Survey

(2) The equipment specified in **Part 7**:
Special Survey

1.1.3 Intervals of Surveys*

Sub-paragraph -6 has been amended as follows.

6 Unscheduled Surveys
The classed ships may be subject to Unscheduled Surveys when the confirmation of the status of the ship by survey is deemed necessary in cases where the Society ~~suspects the ship of not being in continued compliance with the Rules and Regulations of the Society, and of not being properly maintained and operated by the ship owner~~ considers the ship to be subject to **1.4-3** of the **CONDITIONS OF SERVICE FOR CLASSIFICATION OF SHIPS AND REGISTRATION**

OF INSTALLATIONS. At Unscheduled Surveys, investigations, examinations or tests are to be made to the satisfaction of the Surveyor with respect to the matters concerned.

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 30 June 2020.

Amendment 1-2

Part 1 GENERAL

Chapter 1 GENERAL

1.1 General

1.1.4 Class Notations

Sub-paragraphs -2(1) and (2) have been amended as follows.

2 Based on **2.1.3-2 of the Rules for the Classification and Registry of Ships**, "*Nitrogen Oxides Emission-Tier III*" (abbreviated as "*NOx-III*") is to be affixed to the classification characters of ships installed with diesel engines satisfying the maximum allowable NOx emission limit criteria specified in **2.1.2-1(1)(c) of Part 8** which are permitted to operate in NOx emission control areas. For ships using selective catalytic reduction systems, exhaust gas recirculation systems, dual fuel engines or gas-only engines to satisfy the maximum allowable NOx emission limits criteria specified in **2.1.2-1(1)(c), Part 8**, the notations referred to in **(1)** to **(4)** below are listed in parentheses after *NOx-III* according to the installed equipment/engine. The purposes of engines fitted with the systems referred to in **(1)** and **(2)** below and the engines referred to in **(3)** and **(4)** below are to be entered in the Classification Register as descriptive notes for the ship.

(1) Ships using selective catalytic reduction systems complying with ~~**1.3.1-10(1)**~~**Chapter 21, Part D of the Rules for the Survey and Construction of Steel Ships**~~**, 1.2.1-11(1), Part 9 of the Rules for High-Speed Craft**, or **1.3.1-8(1), Part 7 of the Rules for the Survey and Construction of Inland Waterway Ships**~~:
Selective Catalytic Reduction (abbreviated as "*SCR*")

(2) Ships using exhaust gas recirculation systems complying with ~~**2.1.1-5**~~**Chapter 23, Part D of the Rules for the Survey and Construction of Steel Ships**~~**, 2.1.1-4, Part 9 of the Rules for High-Speed Craft**, or **2.1.1-5, Part 7 of the Rules for the Survey and Construction of Inland Waterway Ships**~~:
Exhaust Gas Recirculation (abbreviated as "*EGR*")

((3) and (4) are omitted.)

Sub-paragraph -4(2) has been amended as follows.

4 Based on **2.1.3-2 of the Rules for the Classification and Registry of Ships**, "*Sulphur Oxides*" (abbreviated as "*SOx*") is to be affixed to the classification characters of ships provided with the following **(1)** and/or **(2)** that comply with the requirements related to sulphur content specified in **-1** or **-2** of **1.2.2-1, Part 8,** or that are compliance methods at least equivalent to those complying with such requirements. The notations referred to in **(1)** and **(2)** below are listed in parentheses after *SOx* according to the provided arrangement/system. Details of the fuel referred to in **(1)** below as well as the purposes of machinery using the fuel referred to in **(1)** below and machinery fitted with the systems referred to in **(2)** below are to be entered in the Classification Register as descriptive notes for the ship.

((1) is omitted.)

(2) Exhaust gas cleaning systems approved by the Administration as an alternative specified in **1.1.3, Part 8** that comply with ~~**1.3.1-10(2)**~~**Chapter 22, Part D of the Rules for the Survey**

and Construction of Steel Ships~~, 1.2.1-11(2), Part 9 of the Rules for High Speed Craft or 1.3.1-8(2), Part 7 of the Rules for the Survey and Construction of Inland Waterway Ships~~:
"*Exhaust Gas Cleaning System*" (abbreviated as "*EGCS*")

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 1 July 2020.

2. Notwithstanding the amendments to the Rules, the current requirements apply to SCR systems, EGCS or EGR systems whose applications for approval are submitted to the Society before the effective date installed on ships for which the date of contract for construction is before the effective date.

Amendment 1-3

Part 2 SURVEYS

Chapter 1 GENERAL

1.3 Verification Survey of Certificates, etc.

1.3.2 Certificates and Documents other than those Specified in 1.3.1*

Sub-paragraph -1(3) has been amended as follows.

1 At surveys, the following certificates and other documents are to be presented to the Surveyor to verify that these certificates and documents are placed on board the ship (excluding unmanned towed ships), and are appropriate. However, at Occasional Surveys, the presentation of certificates and documents to the Surveyor may be limited to the concerned ones.
((1) and (2) are omitted.)
(3) Relating to the equipment for the prevention of air pollution from ships
((a) to (k) are omitted.)
(l) A manual for the EGR bleed-off discharge system, an EGR record book, a copy of the certificate for type approval and operating and maintenance manual of the relevant oil content meter, or other documents prescribed by the Administration (when an exhaust gas recirculation system specified in **2.1.1-5, Part 8** is installed).

Chapter 2 REGISTRATION SURVEYS

2.1 Registration Surveys during Construction

2.1.2 Submission of Plans and Documents for Approval*

Sub-paragraph -1(6) has been amended as follows.

1 For any ship intending to undergo Registration Surveys, the following plans and documents are to be submitted to the Society for approval:
((1) to (5) are omitted.)
(6) Equipment for the prevention of air pollution from ships
((a) is omitted.)
(b) Nitrogen Oxides (NOx)
Plans and documents relevant to the exhaust gas cleaning system or documents relevant to the method to reduce NOx emissions, if any. In cases where an exhaust gas recirculation system specified in **2.1.1-5, Part 8** is installed, a manual for the EGR bleed-off discharge system, an EGR record book; or other documents prescribed by the Administration are to be included with the above documents.
((c) to (f) are omitted.)
((7) is omitted.)

2.1.3 Inspections of Construction and Equipment*

Sub-paragraph -5(3) has been amended as follows.

5 Inspections are to be carried out on the following items for the equipment for the prevention of air pollution from every ship of 400 *tons* gross tonnage or above, every mobile offshore drilling unit and other platforms. However, the inspections required in **(2)(b)** and **(3)** excluding **(a)** are to be carried out irrespective of tonnage of the ship.

((1) and (2) are omitted.)

(3) Nitrogen Oxides (NOx)

The following emission testing, examination and survey specified in **(a)** and **(b)**, and the survey for diesel engines equipped with an exhaust gas recirculation system specified in **2.1.1-5, Part 8** specified in **(c)** are to be carried out in accordance with the *NOx Technical Code* for every individual diesel engine to which the requirements of **2.1, Part 8** are applied.

(a) For diesel engines deemed necessary by the Society, it is to be verified that NOx emissions are within the limits specified in **2.1.2-1, Part 8** in accordance with the on-board NOx verification procedures contained in the approved Technical File. The procedures are to be the on-board simplified measurement method referred to in **2.1.2-2(2)(b), Part 8** or the parameter check method referred to in **2.1.3-1(4), Part 8**. A part of the tests may be omitted where deemed appropriate by the Society and there are two or more diesel engines in an Engine Family or Engine Group or two or more cylinders of the same particulars on board the ship. However, the tests are to be completed for at least one of those diesel engines, and/or one of those cylinders. As an alternative to the examination of fitted components, the Society may accept conducting that part of the survey on spare parts carried on board provided they are representative of the components fitted to the diesel engine.

(b) For diesel engines whose NOx emissions have been verified without a NOx-reducing device in accordance with 2.2.5.1 of the *NOx Technical Code* when the measurement procedures for emission verification on a test bed referred to in **2.1.2-2(2)(a), Part 8** are applied, an onboard survey is to be carried out in accordance with a standard deemed appropriate by the Society.

(c) For EGR bleed-off water discharge arrangements, the following surveys are to be carried out:

i) Confirmation of installation, etc.; and

ii) Performance test

((4) and (5) are omitted.)

Chapter 3 REGISTRATION MAINTENANCE SURVEYS

3.1 Annual Surveys

3.1.2 Inspections of Construction and Equipment*

Sub-paragraph -4(4) has been amended as follows.

4 Inspections are to be carried out on the following items for the equipment for the prevention of air pollution from every ship of 400 *gross tonnage* and above, every mobile offshore drilling unit and other platforms. The survey referred to in **(3)(b)** is, however, to be carried out on all ships.
((1) to (3) are omitted.)
(4) Nitrogen Oxides (NOx)
  (a) For every diesel engine to which the requirements of **2.1, Part 8** are applied, it is to be verified that the exhaust gas cleaning system to reduce NOx emissions has been installed or the method to reduce NOx emissions has been carried out in accordance with the approved drawings and/or documents.
  (b) For every diesel engine to which the requirements of **2.1, Part 8** are applied, it is to be verified that NOx emissions are within the limits specified in **2.1.2-1, Part 8** in accordance with the on-board NOx verification procedures contained in the approved Technical File. The procedures followed are to be the same as either the on-board simplified measurement method referred to in **2.1.2-2(2)(b), Part 8**, the on-board direct measurement and monitoring method referred to in **2.1.2-2(2)(c), Part 8** or the parameter check method referred to in **2.1.3-1(4), Part 8**.
  (c) For ships equipped with the exhaust gas recirculation system specified in **2.1.1-5**, the following surveys for EGR bleed-off water discharge arrangements:
    i) General examination, and
    ii) Performance test

((5) and (6) are omitted.)

Part 8 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Chapter 1 GENERAL

1.1 General

1.1.2 Terminology (*Regulation* 2, 13, 14 and 16 of *Annex* VI and 1.3, 4.1, 4.3.9 and 4.4.8 of *NOx Technical Code*)*****

Sub-paragraph (12) has been amended as follows.

For the purpose of the requirements in this Part, the following definitions apply unless specified otherwise in **Chapters 2** or **3**:
((1) to (11) are omitted.)
(12) "Substantial modification" of a diesel engine means as follows.
((a) is omitted.)
(b) For diesel engines installed on ships at beginning stage of construction before 1 January 2000 (19 May 2005 for ships not engaged in international voyages), substantial modification means any modification made to an engine which increases its existing NOx emission characteristics in excess of the limits established by the on-board simplified measurement method referred to in **2.1.2-2(2)(b)**. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). However, the installation of a certified approved method pursuant to **2.1.1-3** or certification pursuant to **2.1.2(1)(a)** to **(c)** is not considered to be a substantial modification for the purpose of the application of **(13)** and **2.1.2-1(2)**.
((13) to (22) are omitted.)

Chapter 2 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

2.1 Nitrogen Oxides (NOx) (*Regulation*13 *of Annex* VI)

2.1.1 General*

Sub-paragraph -5 has been added as follows.

5 In cases where diesel engines, for which the EIAPP certificate is first issued on or after 1 June 2019, are equipped with an exhaust gas recirculation system having a bleed-off water discharge arrangement, said arrangement is to comply with a standard deemed appropriate by the Society.

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 1 July 2020.

Amendment 1-4

Part 2 SURVEYS

Chapter 2 REGISTRATION SURVEYS

2.1 Registration Surveys during Construction

2.1.3 Inspections of Construction and Equipment*

Sub-paragraph -1(3) has been amended as follows.

1 Inspections are to be carried out on the following items for the installations for the prevention of pollution by oil from the machinery spaces of all ships:
((1) and (2) are omitted.)
(3) Tanks for oil residues (*Regulation* 12 of *Annex* I)
((a) is omitted.)
(b) Homogenizers or other approved sludge control equipment are to be checked to see if they function properly. However, the application of this requirement is to be limited to cases where the size of such tanks has been approved in accordance with the requirements of **2.2.1-1(2) in Part 3 of the Rules**.
((4) is omitted.)

Part 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL

Chapter 2 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL FROM MACHINERY SPACES

2.2 Storage and Discharge of Oil Residues (Sludge) (*Regulations* 12 and 13 of *Annex* I)

Paragraph 2.2.1 has been amended as follows.

2.2.1 Capacity of Oil Residue (Sludge) Tanks*

~~**1**~~ Every ship of 400 *gross tonnage* and above is to be provided with a tank or tanks of adequate capacity to receive the oil residue (sludge). The capacity of such a tank or tanks is to be greater the minimum capacity specified in the following **(1)** or **(2)**. However, the volume of tanks for ships whose building contract is placed before 1 July 2010 are to comply with provisions specified elsewhere.

((1) and (2) are omitted.)

~~**2 Notwithstanding the requirements in the preceding -1, in ships listed below where all oily bilge water is exclusively discharged to reception facilities, oil residue (sludge) tanks may be replaced with oily bilge water storage arrangements.**~~

~~(1) Ships engaged exclusively in voyages in special areas~~

~~(2) Ships exclusively engaged in voyages in sea areas within 12 *nautical miles* from the territorial base line of any one state.~~

~~(3) Ships not provided with a propulsion engine, which are approved to be appropriate by the Society.~~

2.3 Oily-water Separating Equipment, Oil Filtering System, Oil Discharge Monitoring and Control System for Oily Bilge Water, and Oily Bilge Water Holding Tanks (*Regulation* 14 of *Annex* I)

Paragraph 2.3.4 has been amended as follows.

2.3.4 Oily Bilge Water Holding Tanks*

Oily Bilge water holding tanks fitted onto ships complying with the requirements given in ~~**2.2.1-2 or**~~ **2.4.2-2** are to satisfy the following requirements:

((1) to (4) are omitted.)

2.4 Requirements for Installation (*Regulation* 14 of *Annex* I)

2.4.2 Modifications

Sub-paragraph -2(5) has been deleted.

2 Notwithstanding the requirements in the preceding **2.4.1**, for ships listed below where all of the oily bilge water is intended to be discharged exclusively to reception facilities, oil filtering system may be substituted with oily bilge water holding tanks.

((1) to (4) are omitted.)

~~(5) Ships not provided with a propulsion engine, and considered to be appropriate by the Society.~~

EFFECTIVE DATE AND APPLICATION (Amendment 1-4)

1. The effective date of the amendments is 1 July 2020.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

Amendment 1-5

Part 8 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Chapter 3 ENERGY EFFICIENCY FOR SHIPS

3.1 General

3.1.1 Application (*Regulation* 19 of *Annex* VI)*

Sub-paragraph -2(2) has been amended as follows.

2 Notwithstanding **-1**, **3.2** and **3.3** is not to apply to the following ships:
((1) is omitted.)
(2) ~~Cargo ships having ice-breaking capability~~ Category *A* ships as defined in the Polar Code.

Paragraph 3.1.2 has been amended as follows.

3.1.2 Terminology (*Regulation* 2 of *Annex* VI)*

For the purpose of the requirements in this Chapter, the following definitions apply:
((1) to (20) are omitted.)
(21) ~~"Cargo ship having ice-breaking capability" means a cargo ship which is designed to break level ice independently with a speed of at least 2 *knots* when the level ice thickness is 1.0 *m* or more having ice bending strength of at least 500 *kPa*.~~ "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:
(a) 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 present convention concerning the amendment procedures applicable to an appendix to an annex; and
(b) amendments to Part II-B of the Polar Code are adopted by the Marine Environment Protection Committee in accordance with its "Rules of Procedure".
((22) is omitted.)

EFFECTIVE DATE AND APPLICATION (Amendment 1-5)

1. The effective date of the amendments is 1 October 2020.

GUIDANCE FOR MARINE POLLUTION PREVENTION SYSTEMS

GUIDANCE

2020 AMENDMENT NO.1

Notice No.27 30 June 2020

Resolved by Technical Committee on 22 January 2020

Notice No.27 30 June 2020
AMENDMENT TO THE GUIDANCE FOR MARINE POLLUTION PREVENTION SYSTEMS

"Guidance for marine pollution prevention systems" has been partly amended as follows:

Amendment 1-1

Part 2 SURVEYS

Chapter 2 REGISTRATION SURVEYS

2.1 Registration Surveys during Construction

2.1.3 Inspections of Construction and Equipment

Sub-paragraph -2(3) has been amended as follows.

2 Inspections of equipment for the prevention of pollution by oil carried in bulk by oil tankers are to be carried out specifically in accordance with the following procedures **(1)** through **(8)**:
((1) and (2) are omitted.)
(3) Inspections specified in **2.1.3-2(3)(b)i) in Part 2 of the Rules** are to be carried out in accordance with the following procedures :
((a) and (b) are omitted.)
(c) For flow meters, it is to be verified with the actual flow rate at ~~the lowest measurable limit~~ a flow rate of about 50 % of the rated flow of the flow meter that the tolerance in an installed condition is within ±10% of the actual flow rate. Measurements of actual flow rates may be by utilizing tank ullage readings.
((d) to (f) are omitted.)
((4) to (8) are omitted.)

Chapter 3 REGISTRATION MAINTENANCE SURVEYS

3.3 Special Surveys

3.3.2 Inspections of Construction and Equipment

Sub-paragraph -1 has been amended as follows.

1 The accuracy of flow meters specified in **3.3.2-2(3) in Part 2 of the Rules**, where the system utilizes the flow data from the flow meter, is to be verified by the actual flow rate at ~~the lowest measurable limit~~ a flow rate of about 50 % of the rated flow of the flow meter that the tolerance in the installed condition is within ±10% (within ±15% for ships at beginning stage of construction before 1 January 2005) of the actual flow rate. The actual flow rates may be measured by utilizing tank ullage readings.

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 30 June 2020.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-2

Part 8 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Chapter 1 GENERAL

1.2 General Requirement

Paragraph 1.2.2 has been amended as follows.

1.2.2 Use and Carriage of Fuel Oil (*Regulation* 14 of *Annex* VI)

1 In applying **1.1.3, Part 8 of the Rules** and **-1** or **-2** of **1.2.2, Part 8 of the Rules**, in cases where an exhaust gas cleaning system is used as an "alternative" to the use of fuel oil whose sulphur content is equal to or below 0.50% *m*/*m* or 0.10% *m*/*m*, such an exhaust gas cleaning system is to comply with the requirements of *IMO* resolution *MEPC*.259(68) or others deemed appropriate by the Administration taking into account said resolution.

2 The requirement specified in **1.2.2-1, Part 8 of the Rules** also applies to fuel oils for emergency equipment.

Chapter 2 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

2.1 Nitrogen Oxides (NOx) (*Regulation*13 of *Annex* VI)

Paragraph 2.1.4 has been added as follows.

2.1.4 Recording of Information related to NOx Emission Control

1 The wording "diesel engines installed on board a ship to which **2.1.2-1(1)(c)** applies" in **2.1.4, Part 8 of the Rules** includes additional or replaced diesel engines (refer to **2.1.2-1(1)**) installed on or after the relevant emission control area takes effect.

2 The wording diesel engines "which are certified to Tier II only" in **2.1.4, Part 8 of the Rules** means diesel engines which are certified to Tier II only and installed on board a ship which is constructed on or after the emission control area where the ship is operating takes effect.

3 In the context of the record keeping specified in **2.1.4, Part 8 of the Rules**, the diesel engines which are certified to Tier II only and installed on board a ship constructed before the entry into force of the emission control area where the ship is operating, are not considered to be diesel engines "which are certified to Tier II only" according to **2.1.4, Part 8 of the Rules**.

Such exclusion is extended to diesel engines which are certified to Tier II only replaced after the entry into force of the relevant emission control areas on board ships of this category, if the replacement engines meet the standards in **Table 8-1(b)** in accordance with **2.1.2-1(2), Part 8 of the Rules**.

4 In cases where a diesel engine installed on a ship constructed before the entry into force of the emission control area where the ship is operating has undergone a major conversion as described in **1.1.2(13)(a), Part 8 of the Rules**, such diesel engine is to be certified to Tier III; thus the

requirement in **-1** applies.

5 The recording requirements in **2.1.4, Part 8 of the Rules** apply to diesel engines which are certified to Tier II only operation in a NOx emission control area under the exemption according to **2.1.1-1(2)(a)**.

2.4 Incinerator (*Regulation*16 of *Annex* VI)

Sub-paragraph -4 has been amended as follows.

4 With respect to the requirement of "waste is not to be fed into the unit" in ~~In~~ **2.4-1(2)(c), Part 8 of the Rules**~~,~~ it is to be in accordance with the following **(1)** and **(2)**:

(1) For continuous-feed incinerators, solid waste is not to be fed into the unit when the combustion chamber flue gas outlet temperature is below 850 °*C*.

(2) ~~the introduction of~~ The sludge oil~~,~~ generated during normal operation of the ship is not to be regarded as waste in connection with this section, and can be fed into the unit when the required preheat temperature of 650 °*C* in the combustion chamber is achieved.~~, 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 is to reach 850°*C* within the period of time specified in the manufacturer's operations manual but is not to be more than five minutes~~.

Sub-paragraph -5 has been added as follows.

5 With respect to the requirement of "For batch-loaded incinerators, the unit is to be designed so that the combustion chamber gas outlet temperature is to reach 600 °*C* within 5 minutes after start-up" in **2.4-1(2)(d), Part 8 of the Rule**, the batch-loaded incinerator is to be designed so that the temperature in the actual combustion space where the solid waste is combusted reaches 600 °*C* within 5 minutes after start-up.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 30 June 2020.

Amendment 1-3

Part 2 SURVEYS

Chapter 1 GENERAL

1.1 General

Paragraph 1.1.3 has been amended as follows.

1.1.3 Intervals of Surveys

1 (Omitted)

2 Occasional surveys specified in **1.1.3-5(3), Part 2 of the Rules** are to be in accordance with the followings:

(1) STS operations Plan
(Omitted)

~~3~~(2)~~.~~ Approved Method
(Omitted)

~~4~~(3)~~.~~ Ship Energy Efficiency Management Plan (SEEMP)
(~~1~~a) (Omitted)
(~~2~~b) (Omitted)

~~5~~(4)~~.~~ Stability Instruments
(Omitted)

~~6~~(5)~~.~~ Oil Residues (Sludge) Tank Piping
(Omitted)

~~7~~(6)~~.~~ Equipment for the Prevention of Pollution by Sewage
(Omitted)

(7) Exhaust Gas Recirculation System
For ships equipped with the exhaust gas recirculation system specified in **2.1.1-5** which were delivered before 1 July 2020, a survey is to be carried out to verify compliance with the requirements of *IMO* resolution *MEPC.307(73)* or a standard deemed appropriate by the Administration taking into account this resolution by the first Periodical Survey carried out on or after 1 July 2020.

1.3 Verification Survey of Certificates, etc.

1.3.2 Certificates and Documents other than Those Specified in 1.3.1

Sub-paragraphs -6 and -7 have been added as follows.

6 The "manual for EGR bleed-off discharge system" and "EGR record book" specified in **1.3.2-1(3)(l), Part 2 of the Rules** refers to those specified in **2.1.2-2**.

7 The "certificate for type approval" and "operating and maintenance manual" of the relevant oil content meter specified in **1.3.2-1(3)(l), Part 2 of the Rules** refers to the following **(1)** and **(2)**, respectively.

(1) The certificate for type approval of the oil content meter specified in 2.4.2 of *IMO* resolution *MEPC.307(73)*

(2) The operating and maintenance manual of the oil content meter specified in 2.4.3 of *IMO*

resolution *MEPC.307(73)*

Chapter 2 REGISTRATION SURVEYS

2.1 Registration Surveys during Construction

2.1.2 Submission of Plans and Documents for Approval

Sub-paragraphs -2 to -4 have been renumbered to Sub-paragraphs -3 to -5, and Sub-paragraph -2 has been added as follows.

2 The "manual for EGR bleed-off discharge system" and "EGR record book" specified in **2.1.2-1(6)(b), Part 2 of the Rules** refers to the following **(1)** and **(2)**, respectively:

(1) The manual for EGR bleed-off discharge system specified in 2.3.5 and 2.4 of *IMO* resolution *MEPC.307(73)*

(2) The EGR record book specified in 2.3.4, 2.4, 4.2, and Section 6 of *IMO* resolution *MEPC.307(73)*

~~2~~**3**~~.~~ (Omitted)

~~3~~**4**~~.~~ (Omitted)

~~4~~**5**~~.~~ (Omitted)

Chapter 4 OCCASIONAL SURVEYS

4.1 General

4.1.2 Inspection

Sub-paragraphs -2 and -3 have been renumbered to Sub-paragraphs -3 and -2, and Sub-paragraph -2 has been amended as follows.

~~3~~**2** At Occasional Surveys carried out due to adjustment or modification to a diesel engine outside the approved limits documented in the Technical File specified in **1.1.2(10), Part 8 of the Rules**, it is to be verified that the diesel engine complies with **2.1.1-4, Part 8 of the Rules** and that its NOx emissions are within the limits specified in **2.1.2-1, Part 8 of the Rules** by one of the following **(1)** to **(3)**. For the purpose of the application of this requirement, IACS Unified Interpretation MPC40(Rev.1) is also to be applied.~~:~~

(1) The on-board simplified measurement method specified in the approved Technical File.

(2) Where the engine is a member of an Engine Group, reference to the test bed testing for the relevant Engine Group approval.

(3) The on-board direct measurement and monitoring method.

~~2~~**3** (Omitted)

Part 8 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Chapter 1 GENERAL

1.1 General

1.1.2 Terminology (*Regulation*2, 13, 14 and 16 of *Annex* VI and 1.3, 4.1, 4.3.9 and 4.4.8 of *NOx Technical Code*)

Sub-paragraph -1 has been amended as follows.

1 In applying ~~the "*NOx Technical Code*" referred to in~~ **1.1.2(1), Part 8 of the Rules**, *IMO* resolution *MEPC.291(71)* as amended is to be applied in case of diesel engines fitted with selective catalytic reduction systems. In applying the IMO resolution and the "*NOx Technical Code*", the IACS MPC series unified interpretations (MPC30(Rev.1), MPC58(Rev.1), MPC59(Rev.1), MPC74(Rev.1), MPC77(Rev.1), MPC106, MPC112(Rev.1), MPC115(Rev.1), MPC116(Rev.1) and MPC125)) related thereto are also to be applied.

Sub-paragraphs -2 to -4 have been renumbered to Sub-paragraphs -3 to -5, and Sub-paragraph -2 has been added as follows.

2 For the "Engine Family" and "Engine Group" referred to in **1.1.2(6)** and **(7), Part 8 of the Rules**, IACS Unified Interpretation MPC53(Rev.1) is also to be applied.

Sub-paragraph -3 has been amended as follows.

~~**2**~~**3** For the increase in "emission characteristics" and for the "substantial modification" referred to in ~~In applying~~ **1.1.2(12)(b), Part 8 of the Rules**, IACS Unified Interpretation MPC32(Rev.1) is also to be applied. ~~the following **(1)** or **(2)** is not regarded as "substantial modification" of diesel engines.~~

~~(1) Installation of the Approved Method certified in accordance with **2.1.1-3, Part 8 of the Rules**~~

~~(2) Certification to verify the compliance with the requirements of **(a)** to **(c)** of **2.1.2(1), Part 8 of the Rules**, as applicable~~

~~**3**~~**4** (Omitted)

~~**4**~~**5** (Omitted)

Chapter 2 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

2.1 Nitrogen Oxides (NOx) (*Regulation*13 of *Annex* VI)

2.1.1 General

Sub-paragraph -4 has been added as follows.

4 A "standard deemed appropriate by the Society" as specified in **2.1.1-5, Part 8 of the Rules** refers to the requirements of *IMO* resolution *MEPC.307(73)* or a standard deemed appropriate by the Administration taking into account this resolution.

2.1.3 Technical File and Record Book of Engine Parameters

Sub-paragraph -2 has been amended as follows.

2 ~~The wording~~ For the "specifications ~~of those spare parts/components of the diesel engine~~" referred to in **2.1.3-1(7), Part 8 of the Rules**, IACS Unified Interpretation MPC45(Rev.1) is also to be applied. ~~means identification marking, such as a part number, tied to a particular drawing or other data, under the control of the diesel engine manufacturer, etc., defining the features of that component with regard to its influence on NOx emission~~.

Appendix I CONDITION ASSESSMENT SCHEME

7 CAS Survey Requirements

7.1 General

Paragraph 7.1.7 has been amended as follows.

7.1.7 The CAS survey is not complete unless all ~~recommendations/~~conditions of class which relate to hull structures under review by the CAS survey have been rectified to the satisfaction of the RO.

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 1 July 2020.

Amendment 1-4

Part 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL

Chapter 2 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL FROM MACHINERY SPACES

2.2 Storage and Discharge of Oil Residues (Sludge)

Paragraph 2.2.1 has been amended as follows.

2.2.1 Capacity of Oil Residue (Sludge) Tanks

1 Except where it is assigned by the flag stage Government of the ship, *C* and *D* in the calculation formulae of **2.2.1-1(1) in Part 3 of the Rules** are to be determined as below:

((1) and (2) are omitted.)

2 Volume of tanks of "ships whose building contract is placed before 1 July 2010" referred to in **2.2.1-1 in Part 3 of the Rules** may be dealt with in the following manner. In such cases, the capacity of such a tank or tanks is to be greater than the sum of the minimum capacities of the individual tanks specified in the following **(1)** and **(2)**:

((1) and (2) are omitted.)

EFFECTIVE DATE AND APPLICATION (Amendment 1-4)

1. The effective date of the amendments is 1 July 2020.

2. Notwithstanding the amendments to the Guidance the current requirements apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

Amendment 1-5

Part 8 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Chapter 2 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

2.1 Nitrogen Oxides (NOx) (*Regulation*13 of *Annex* VI)

2.1.2 Requirements for Installation

Sub-paragraph -2(1) has been amended as follows.

2 The wording "procedures specified otherwise by the Society" in **2.1.2-2(2), Part 8 of the Rules** means those listed below.

(1) Measurement procedures for emission verification on a test bed
The procedures are to be in accordance with Chapter 5 of the *NOx Technical Code*. In addition to Chapter 5, procedures for diesel engines fitted with selective catalytic reduction systems are to be in accordance with *IMO* resolution *MEPC.*~~198(62)~~291(71) as amended. In applying the resolution and the *NOx Technical Code* referred to in the resolution, IACS MPC series unified interpretations related thereto are also to be applied.

((2) and (3) are omitted.)

EFFECTIVE DATE AND APPLICATION (Amendment 1-5)

1. The effective date of the amendments is 1 October 2020.