RULES FOR MARINE POLLUTION PREVENTION SYSTEMS

RULES

2012 AMENDMENT NO.1

Rule No.54 15th November 2012

Resolved by Technical Committee on 27th July 2012

Approved by Board of Directors on 25th September 2012

Rule No.54 15th November 2012
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 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL

Chapter 1 GENERAL

1.1 Application and Terminology

1.1.1 Application

Sub-paragraph -7 has been added as follows.

7 With regard to conversions from single hull oil tankers to bulk carriers, the requirements in effect at the date of conversion are to be complied with.

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 15 November 2012.
2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships for which the date of contract for conversion is before the effective date.

Amendment 1-2

Part 1 General

Chapter 1 General

1.1 General

Paragraph 1.1.4 has been added as follows.

1.1.4 Class Notations

Based on **2.1.3-2 of the Rules for the Classification and Registry of Ships,** "*Energy Efficiency Design Index-phase X*" (abbreviated as *EEDI-pX* in which *X* refers to the adopted phase) is to be affixed to the classification characters of ships whose attained EEDI satisfies a required value calculated using a phase reduction factor which is stricter than the phase reduction factor to be applied according to **Chapter 3, Part 8**.

Part 2 SURVEYS

Chapter 1 GENERAL

1.3 Verification Survey of Certificates, etc.

Paragraph 1.3.2 has been amended as follows.

1.3.2 Certificates and Documents other than those specified in 1.3.1

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) to (3) are omitted)

2 For ships affixed with the notation specified in **1.1.4, Part 1**, the International Energy Efficiency Certificate, the Energy Efficiency Design Index (EEDI) Technical File and the Ship Energy Efficiency Management Plan (SEEMP) are to be submitted to Surveyor during periodical surveys so that it can be verified that they are being properly maintained on board ship and that the information they contain is as required.

Chapter 2 REGISTRATION SURVEYS

2.1 Registration Surveys during Construction

2.1.2 Submission of Plans and Documents for Approval

Sub-paragraph -3 has been renumbered to -4 and -3 has been added as follows.

3 For ships subject to **Chapter 3, Part 8**, the Energy Efficiency Design Index (EEDI) Technical File and all relevant additional Information are to be submitted to the Society for verification prior to the test specified in **2.1.3-6(2)**. Furthermore, a revised version of the EEDI Technical File based on the results of said test is to be submitted for approval upon completion of the test.

Paragraph 2.1.3 has been amended as follows.

2.1.3 Inspections of Construction and Equipment

(-1 to -5 are omitted)

6 For ships subject to **Chapter 3, Part 8,** inspections related to Energy Efficiency Design Index (EEDI) are to be carried out as follows:

(1) Verification at the design stage

Tank tests are to be carried out and the EEDI calculated from the power curve (correlation between speed and engine output) obtained from the results of tank tests and principle particulars of the ship is to be verified. However, such tank tests may be omitted in cases deemed appropriate by the Society. In such cases, the EEDI calculated from the power curve obtained from available data, etc. as well as the principle particulars of the ship is to be verified.

(2) Verification at sea trials

Confirmation of speed test measurements and the verification of the final calculated value of attained EEDI are to be carried out.

~~**6**~~**7** For the tests specified in **-1**~~**,and**~~ **-2**, and **-6** the applicant is to prepare test plans for review by the Society prior to testing. In addition, test records and/or measurement records are to be submitted to the Society as required.

Paragraph 2.1.4 has been renumbered to 2.1.5 and 2.1.4 has been added as follows.

2.1.4 Inspections of Ship Energy Efficiency Management Plans (SEEMP)

It is to be confirmed that the Ship Energy Efficiency Management Plan (SEEMP) is in accordance with **3.4, Part 8**.

Paragraph 2.1.5 has been amended as follows.

2.1.~~4~~5 Documents to be maintained on board

At the completion of a registration survey, the Surveyor confirms that the following applicable certificates and documents of ~~those specified in **1.3.2**~~ are maintained on board.

(1) The certificates and documents specified in **1.3.2**

(2) The Energy Efficiency Design Index (EEDI) Technical File specified in **2.1.2-3**.

(3) The Ship Energy Efficiency Management Plan (SEEMP) specified in **2.1.4**.

2.2 Registration Surveys not Built under the Survey

Paragraph 2.2.4 has been renumbered to 2.2.5 and 2.2.4 has been added as follows.

2.2.4 Inspections of Ship Energy Efficiency Management Plans (SEEMP)

It is to be confirmed that the Ship Energy Efficiency Management Plan (SEEMP) is in accordance with **3.4, Part 8**.

2.2.~~4~~5 Documents to be maintained on board

At the completion of a registration survey, the Surveyor confirms that certificates and documents specified in **2.1.~~4~~5** are on board.

Part 8 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

Chapter 1 GENERAL

1.1 General

Paragraph 1.1.2 has been amended as follows.

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*)

For the purpose of the requirements in this Part, the following definitions apply unless specified otherwise in Chapters 2 or 3:

((1) to (13) are omitted)

(14) "NOx Emission Control Areas" means the following areas:

(a) The North American Area

i) The sea area located off the Pacific coasts of the United States and Canada, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.1 to Annex VI.

ii) 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 coordinates specified in Appendix VII.2 to Annex VI.

iii) The sea area located off the coasts of the Hawaiian Islands of Hawaii, Maui, Oahu, Molokai, Niihau, Kauai, Lanai, and Kahoolawe, enclosed by geodesic lines connecting the coordinates specified in Appendix VII.3 to Annex VI.

(b) The United States Caribbean Sea Area

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 coordinates specified in Appendex VII.3 to Annex VI.

(~~b~~c) Any other sea area, including port areas, designated by the *IMO* in accordance with criteria and procedures set forth in Appendix III to *Annex* VI.

(15) "SOx Emission Control Areas" means areas listed in the following **(a)** through **(c)**:

(a) The Baltic Sea Area

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.

(b) The North Sea Area

The North Sea proper including seas therein with the boundary between:

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

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

iii) the English Channel and its approaches eastwards of longitude 5°W and northwards of latitude 48°30'N.

(c) The area specified in **1.1.2(14)(a)** and **(b)**

(d) Any other sea area, including port areas, designated by the IMO in accordance with criteria and procedures set forth in Appendix III to Annex VI.

(16) (omitted)

Chapter 2 EQUIPMENT FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

2.2 Sulphur Oxides (SOx) and Particulate Matter (*Regulation*14 *of Annex* VI)

Sub-paragraph -1 has been amended as follows.

1 Fuel oil used for every ship engaged in a voyage in a SOx Emission Control Area is to be certified by the bunker delivery note specified in **1.2.2-2** that its sulphur content does not exceed the following specified limits~~:~~. However, this regulation is not to apply, prior to 1 January 2020, to ships operating in the areas specified in **1.1.2(15)(c)** which were built on or before 1 August 2011 and which are powered by propulsion boilers that were not originally designed for continuous operation on marine distillate fuel or natural gas.

(1) 1.5% *m*/*m* prior to 1 July 2010
(2) 1.0% *m*/*m* on and after 1 July 2010
(3) 0.1% *m*/*m* on and after 1 January 2015

Chapter 3 has been added as follows.

Chapter 3 ENERGY EFFICIENCY FOR SHIPS

3.1 General

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

1 The requirements in this Chapter apply to all ships of 400 gross tonnage and above which are engaged in the international voyages.

2 Notwithstanding **-1**, **3.2** and **3.3** is not to apply to ships which have diesel-electric propulsion, turbine propulsion or hybrid propulsion systems.

3 Notwithstanding **-1**, the Administration may exempt ships of 400 gross tonnage and above from complying with **3.2** and **3.3** except in the following cases:

(1) Ships whose building contract is placed on or after 1 January 2017

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

(3) Ship whose delivery is on or after 1 July 2019

(4) New ships or existing ships in which a major conversion is carried out on or after 1 January 2017.

3.1.2 Terminology (*Regulation 2 of Annex VI*)

For the purpose of the requirements in this Chapter, the following definitions apply:

(1) "New ship" means as follows:

(a) Ships whose building contract is placed on or after 1 January 2013

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

(c) Ships whose delivery is on or after 1 July 2015

(2) "Existing ship" means a ship which is not a new ship.

(3) "Major Conversion" means any of the following:

(a) A conversion that substantially alters the dimensions, carrying capacity or engine power of the ship

(b) A conversion that changes the type of the ship

(c) A conversion whose intent in the opinion of the Administration is to substantially prolong the life of the ship

(d) A conversion 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

(e) A conversion which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI specified in **3.3**.

(4) "Bulk carrier" means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers, but excluding combination carriers.

(5) "Gas carrier" means a cargo ship constructed or adapted and used for the carriage in bulk of any liquefied gas.

(6) "Tanker" means an oil tanker as defined in **2.1.1(6)** of **Part 1**, an NLS tanker as defined in **2.1.1(7)** of **Part 1**, or a chemical tanker as defined in **1.3.1(8) of Rules for the Survey and Construction of Steel Ships, Part S**.

(7) "Container ship" means a ship designed exclusively for the carriage of containers in holds and

on deck.

(8) "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 carriers, barge carriers, heavy load carriers, yacht carriers and nuclear fuel carriers.

(9) "Refrigerated cargo carrier" means a ship designed exclusively for the carriage of refrigerated cargoes in holds.

(10) "Combination carrier" means a ship designed to load 100% deadweight with both liquid and dry cargo in bulk.

(11) "Passenger ship" means a ship which carries more than 12 passengers.

(12) "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.

(13) "Ro-ro cargo ship" means a ship designed for the carriage of roll-on-roll-off cargo transportation units.

(14) "Ro-ro passenger ship" means a passenger ship with roll-on-roll-off cargo spaces.

(15) "Attained EEDI" is the EEDI value achieved by an individual ship in accordance with **3.2**.

(16) "Required EEDI" is the maximum value of attained EEDI that is allowed by **3.3** for the specific ship type and size.

3.2 Attained Energy Efficiency Design Index (Attained EEDI) (*Regulation 20 of Annex* VI)

1 The attained EEDI is to be calculated for the following and is to be verified in accordance with guidelines deemed appropriate by the Society, based on the EEDI Technical File, either by the Society or the Administration.

(1) each new ship which falls into one or more of the categories in **3.1.2(4)** to **(14)**

(2) each new ship which has undergone a major conversion which falls into one or more of the categories in **3.1.2(4)** to **(14)**

(3) each new or existing ship which has undergone a major conversion which falls into one or more of the categories in **3.1.2(4)** to **(14)**, and which is so extensive that the ship is regarded as newly constructed by the Administration.

2 The attained EEDI is to be specific to each ship and is to indicate the estimated performance of the ship in terms of energy efficiency; moreover, it is to be accompanied by the EEDI Technical File that contains the information necessary for the calculation of the attained EEDI and shows the process of calculation.

3 The attained EEDI is to be calculated in accordance with guidelines deemed appropriate by the Society.

3.3 Required Energy Efficiency Design Index (Required EEDI) (*Regulation 21 of Annex* VI)

1 The attained EEDI of the following **(1)** to **(3)** is not to exceed the required EEDI calculated according to the equation specified below:

(1) a new ship which falls into or more of the categories in **3.1.2(4)** to **(10)**

(2) a new ship which falls into or more of the categories in **3.1.2(4)** to **(10)** and which has undergone a major conversion

(3) a new or existing ship which falls into or more of the categories in **3.1.2(4)** to **(10)** and which has undergone a major conversion that is so extensive that the ship is regarded as newly constructed by the Administration

Attained EEDI ≦ Required EEDI = (1-X/100) × Reference line value

where

X: reduction factor specified in **Table 8-8** for the required EEDI compared to the EEDI Reference line.

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

a, *b* and *c*: parameters given in **Table 8-9**

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

3 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 is to be the most stringent (i.e., the lowest) required EEDI.

4 For each ship to which **3.3** applies, the installed propulsion power is not to be less than the propulsion power needed to maintain ship manoeuvrability under adverse conditions as defined in guidelines deemed appropriate by the Society.

Table 8-8 Reduction factors (in percentage) for EEDI relative to the EEDI Reference line

Ship Type	Size (DWT)	Reduction Factors (%)			
		Phase 0	Phase 1	Phase 2	Phase 3
		1 Jan. 2013- 31 Dec. 2014	1 Jan. 2015 - 31 Dec. 2019	1 Jan. 2020 - 31 Dec. 2024	1 Jan. 2025 and onwards
Bulk Carrier	20,000 -	0	10	20	30
	10,000 - 20,000	n/a	0-10*	0-20*	0-30*
Gas Carrier	10,000 -	0	10	20	30
	2,000 - 10,000	n/a	0-10*	0-20*	0-30*
Tanker	20,000 -	0	10	20	30
	4,000 - 20,000	n/a	0-10*	0-20*	0-30*
Container Ship	15,000 -	0	10	20	30
	10,000 - 15,000	n/a	0-10*	0-20*	0-30*
General Cargo Ships	15,000 -	0	10	15	30
	3,000 - 15,000	n/a	0-10*	0-15*	0-30*
Refrigerated Cargo Carrier	5,000 -	0	10	15	30
	3,000 - 5,000	n/a	0-10*	0-15*	0-30*
Combination Carrier	20,000 -	0	10	20	30
	4,000 - 20,000	n/a	0-10*	0-20*	0-30*

Note*: 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.

Table 8-9 Parameters for determination of reference values for different ship types

Ship type defined in **3.1.2**	*a*	*b*	*c*
(4) Bulk carrier	961.79	DWT of the ship	0.477
(5) Gas carrier	1120.00		0.456
(6) Tanker	1218.80		0.488
(7) Container carrier	174.22		0.201
(8) General cargo ship	107.48		0.216
(9) Refrigerated cargo carrier	227.01		0.244
(10) Combination carrier	1219.00		0.488

3.4 Ship Energy Efficiency Management Plan (SEEMP) (*Regulation 22 of Annex VI*)

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

2 SEEMPs are to be developed in accordance with guidelines deemed appropriate by the Society.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 1 January 2013.

GUIDANCE FOR MARINE POLLUTION PREVENTION SYSTEMS

GUIDANCE

2012 AMENDMENT NO.1

Notice No.83 15th November 2012

Resolved by Technical Committee on 27th July 2012

Notice No.83 15th November 2012
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 1 General

1.1 General

Paragraph 1.1.3 has been amended as follows.

1.1.3 Intervals of Surveys

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

STS operations Plan

For oil tankers delivered before 1 January 2011 that are engaged in the transfer of oil cargo between oil tankers at sea, it is to be confirmed that a STS operations Plan which complies with **1.2.4, Part 3 of the Rules** is provided on board no later than the first Annual, Intermediate or Special Survey conducted on or after 1 January 2011.

2 Approved Method

For diesel Engines subject to **2.1.1-3, Part 8 of the Rules,** NOx emissions are to be verified no later than the first Special Survey conducted 12 or more months after the date that the Approved Method is certified by the Administration. However, in cases where the Administration deems that the Approved Method was not commercially available despite best efforts to obtain it, said Approved Method is to be installed on the ship and is to be confirmed no later than the next annual survey of said ship which falls after the Approved Method is commercially available.

Chapter 4 OCCASIONAL SURVEYS

4.1 General

Paragraph 4.1.2 has been amended as follows.

4.1.2 Inspection

1 At ~~O~~occasional surveys carried out ~~in accordance with **4.1.2, Part 2 of the Rules**~~ due to a major conversion of a diesel engine specified in **1.2.2(12), Part 8 of the Rules**, it is to be ensured that the NOx emission is within the limits specified in **2.1.2-1, Part 8 of the Rules** by one of the following:

(1) 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

2 At occasional surveys carried out in order to verify **2.1.1-3, Part 8 of the Rules**, it is to be verified that NOx emissions are within any of the limits specified in **Table 8-1(a) to (c) Part 8 of the Rules** by the following **(1)** or **(2)**:

(1) It is to be verified that the Approved Method is appropriately installed in accordance with the procedures specified in the Approved Method Technical File.

(2) Verification is conducted according to **2.1.3-5(3), Part 2 of the Rules**.

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 2.2.2 has been amended as follows.

2.2.2 Construction of Sludge Tanks and Piping Arrangements

1 In **2.2.2-2(1)**, **Part 3 of the Rules**, interconnection piping between bilge systems and sludge systems connected to common piping leading to standard discharge connections specified in **2.2.3, Part 3 of the Rules** that are fitted with screw-down non-return valves to prevent sludge from discharging into bilge systems may be regarded as the "common piping" specified in **2.2.2-2(1)(a), Part 3 of the Rules.**

2 The discharge capacity of pumps of "ships whose building contract is placed before 1 July 2010" referred to in **2.2.2-2(2)(c)**, **Part 3 of the Rules** may be dealt with in the following manner:

(1) The pumping rate of "ships which were at beginning stage of construction before 31 December 1991" is to be the following Q_1 or Q_2, whichever is greater.

$Q_1 = V/t$ (m^3/h)

where

V : V_1 or V_2 specified in **2.2.1-2(1)** of the Rules

t : 6 *hours*

Ships with a gross tonnage exceeding 1,000 *tons*

$Q_2 = 5.0$ (m^3/h)

Ships with a gross tonnage of 1,000 *tons* or less

$Q_2 = 2.5$ (m^3/h)

(2) The pumping rate of "ships which were at beginning stage of construction on or after 31 December 1991" is to be the following Q_1 or Q_2, whichever is the greater.

$Q_1 = V/t$ (m^3/h)

where

V : V_1 or V_2 specified in **2.2.1-2(1)** of the Rules

t : 4 *hours*

$Q_2 = 2.0$ (m^3/h)

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 15 November 2012.

Amendment 1-2

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

STS operations Plan

For oil tankers delivered before 1 January 2011 that are engaged in the transfer of oil cargo between oil tankers at sea, it is to be confirmed that a STS operations Plan which complies with **1.2.4, Part 3 of the Rules** is provided on board no later than the first Annual, Intermediate or Special Survey conducted on or after 1 January 2011.

2 Ship Energy Efficiency Management Plan (SEEMP)

For ships 400 gross tonnage and above which are engaged in the international voyages, and which are existing ships as specified in **3.1.2(2) Part 8 of the Rules,** it is to be confirmed at the first Intermediate or Special Survey conducted, whichever is the first, on or after 1 January 2013 that a Ship Energy Efficiency Management Plan (SEEMP) which complies with **3.4, Part 8 of the Rules** is maintained on board.

Chapter 2 General

2.1 Registration Surveys during Construction

Paragraph 2.1.2 has been amended as follows.

2.1.2 Submission of Plans and Documents for Approval

1 (omitted)

2 Details of the documents related to ship energy efficiency referred to in **2.1.2-3 in Part 2 of the Rules** are as follows:

(1) The Energy Efficiency Design Index (EEDI) Technical File is a document which contains basic information related to the EEDI calculation conditions. It is to contain the following:
   (a) Basic data such as deadweight (DWT), the maximum continuous rating (MCR) of main and auxiliary engines, estimated ship speed and the specific fuel consumption of main and auxiliary engines (Data for each is to be provided. Copies, etc. which indicate the specific fuel consumption of main and auxiliary engines are to be attached.)
   (b) Power curve(s) (kW – knot) estimated at design stage under the conditions for EEDI calculation as well as power curves estimated under sea trial speed test conditions (Each power curve is to be represented graphically.)
   (c) Principal particulars as well as overviews of propulsion systems and electricity supply systems (Schematic diagrams, etc. are to be provided.)
   (d) Power curve estimation process (explanation using process diagrams, etc. of the methodology followed from tank tests to power curve estimation at design stage)
   (e) Overview of energy saving equipment
   (f) Attained EEDI calculated values (including the relevant calculation outline)
   (g) If attained $EEDI_{weather}$ (a value which considers the effects of decreases in speed caused by wind and waves) is calculated, said value as well as the value for f_w (the speed reduction coefficient) used in the calculations are to be provided.
   (h) Other documents deemed necessary by the Society.

(2) Additional Information (documentation other than that specified in **(1)** above which is needed by the Society to verify the attained EEDI) is, in principal, to contain the following:
   (a) Descriptions of the relevant tank test facility (supporting materials to confirm the reliability of tank tests). This is to include the name of the facility, the particulars of the tanks and towing equipment, and the records of calibration for each piece of monitoring equipment used.
   (b) Model ship lines and actual ship lines in order to verify the appropriateness of the tank test (Documentation to confirm that the relevant lines are detailed enough to demonstrate the similarity between the model ship and the actual ship)
   (c) Ship lightweight and displacement table (Documents for deadweight verification)
   (d) Detailed reports on both tank test results and power curve(s) estimated calculations (Documentation to confirm that the ship speed estimated under EEDI calculation conditions and the ship speed estimated under sea trial speed test conditions were attained using the same calculation process)
   (e) Reasons for omitting tank tests, if applicable (Documentation which provides appropriate technical justification for omitting tank tests. Such documentation is to include the lines and tank test results of relevant ships of the same type.)
   (f) Other documents deemed necessary by the Society.

~~2~~3 The wording "separately specified by the Society" in **2.1.2-~~3~~4 in Part 2 of the Rules** means as follows:

((1) and (2) are omitted)

2.1.3 Inspections of Construction and Equipment

Sub-paragraph -8 has been added as follows.

8 The wording "deemed appropriate by the Society" in **2.1.3-6(1) of the Rules** means as follows:

(1) Ships to which **3.3, Part 8 of the Rules** is not applied.

(2) Cases where it is judged that tank test results of other ships of the same type of ship are equivalent.

(3) Cases where sea trial speed tests are carried out under draught conditions corresponding to EEDI calculation conditions

(4) Other cases where it is judged that there is an appropriate technical justification for omitting tank tests.

Paragraph 2.1.4 has been amended as follows.

2.1.45 Documents to be maintained on Board

The certificates specified in **2.1.45, Part 2 of the Rules** are those such as the ones issued for each piece of equipment, device, etc., type approval certificates valid at the time of the Registration Survey, or others applicable. In addition, unless equipment or devices on board are renewed after the ship has entered service, these certificates need not be updated.

Chapter 4 OCCASIONAL SURVEYS

4.1 General

Paragraph 4.1.2 has been amended as follows.

4.1.2 Inspection

1 Occasional surveys carried out in accordance with **4.1.2, Part 2 of the Rules** due to a major conversion of a diesel engine, it is to be ensured that the NOx emission is within the limits specified in **2.1.2-1, Part 8** by one of the following:

(1) 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

2 The occasional surveys of ships undergoing a major conversion specified in **3.1.2(3), Part 8 of the Rules** are as follows:

(1) For any ship intending to undergo an occasional survey, the revised EEDI Technical File as well as supporting documents including at least the following **(a)** to **(d)** are to be submitted to the Society for approval before any conversion work is started.

(a) Documents explaining the details of the conversion

(b) EEDI parameters changed after the conversion as well as the technical justifications for each respective parameter

(c) Reasons for changes, other than those in **(b)** above, made to the EEDI Technical File, if any

(d) Calculated value of the attained EEDI and a calculation overview (This is to contain, at a minimum, each calculation parameter value as well as the calculation process used to determine the attained EEDI after the conversion.)

(2) It is to be verified that the attained EEDI is recalculated as necessary and satisfies the requirements in **3.3, Part 8 of the Rules**, with a reduction factor applicable to the type and size of the converted ship in a phase corresponding to the date of contract or keel laying or delivery determined for the original ship.

(3) In cases where a major conversion of a new or existing ship is so extensive that the ship is regarded as newly constructed by the Administration and said Administration determines that an initial survey related to the EEDI is necessary, the attained EEDI is to be calculated and satisfy the requirements in **3.3, Part 8 of the Rules** with the reduction factor applicable corresponding to the type and size of the converted ship at the date of the contract for the conversion, or in the absence of such a contract, the commencement date of the conversion. In addition, it is to be verified that the SEEMP required by **3.4, Part 8 of the Rules** is maintained on board.

(4) For ships deemed necessary, sea trial speed tests are to be conducted to verify the attained EDDI.

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 -1(1) has been amended as follows.

1 Major conversion of a marine diesel engine is to be accordance with following:

(1) For 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 specified in **2.1.2-1, Part 8 of the Rules** in force at the time of the replacement or addition of the engine are to be applied. On or after 1 January 2016, in the case of replacement engines only, if it is not possible for such a replacement engine to meet the standards set forth in **2.1.2-1(c), Part 8 of the Rules**, then that replacement engine is to meet the standards set forth in **2.1.2-1(b), Part 8 of the Rules**. Guidelines are to be developed by the *IMO* to set forth the criteria of when it is not possible for a replacement engine to meet the standards in **2.1.2-1, Part 8 of the Rules**. Where, the "time of the replacement or addition of the engine" mentioned above refers to any of the following **(a)** to **(c)**:

(a) The contractual delivery date of the engine to the ship. However, the engine is to be fitted on board and tested before 1 July 2016.

(b) In the absence of a contractual delivery date, the actual delivery date of the engine to the ship, provided that the date is confirmed by a delivery receipt. However, the engine is to be fitted on board and tested before 1 July 2016.

(c) In the event the engine is fitted on board and tested for its intended purpose on or after 1 July 2016, the actual date that the engine is tested on board.

Chapter 3 has been added as follows.

Chapter 3 ENERGY EFFICIENCY FOR SHIPS

3.1 General

3.1.2 Terminology (*Regulation 2 of Annex VI*)

"Reference lines" specified in **3.1.2(8), Part 8 of the Rules** means those calculated in accordance with the "Guidelines for Calculation of Reference Lines for Use with the Energy Efficiency Design Index (EEDI)(IMO Res.MEPC.215(63))".

3.2 Attained Energy Efficiency Design Index (Attained EEDI) (*Regulation 20 of Annex VI*)

1 "Guidelines deemed appropriate by the Society" specified in **3.2-1, Part 8 of the Rules** means the "*Guidelines on Survey and Certification of the Energy Efficiency Design Index (EEDI) (IMO Res.MEPC.214(63))*"

2 "Guidelines deemed appropriate by the Society" specified in **3.2-3, Part 8 of the Rules** means the "*Guidelines on the Method of Calculation of the Attained Energy Efficiency Design Index (EEDI) for New Ships (IMO Res.MEPC.212(63))*"

3.3 Required Energy Efficiency Design Index (Required EEDI) (*Regulation 21 of Annex VI*)

"Guidelines deemed appropriate by the Society" specified in **3.3-4, Part 8 of the Rules** means related guidelines to be developed by the *IMO*.

3.4 Ship Energy Efficiency Management Plan (SEEMP) (*Regulation 22 of Annex VI*)

"Guidelines deemed appropriate by the Society" specified in **3.4-2, Part 8 of the Rules** means the "*Guidelines for the Development of a Ship Energy Efficiency Management Plan (SEEMP) (IMO Res.MEPC.213 (63))".*

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 1 January 2013.