



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 313-04-1917c

dated 03.04.2023

Re:

amendments to the Guidelines on the Application of Provisions on the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, 2022, ND No. 2-030101-048-E

Item(s) of supervision:

ships under construction and in service, technical documentation

Entry-into-force date:

15.04.2023

Cancels / amends / adds Circular Letter No.

dated

Number of pages: 1 + 3

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Sections 3 and 6 and Appendix 5

Director General

Sergey A. Kulikov

Text of CL:

We hereby inform that in connection with entry into force of new revision of IMO Circular MEPC.1/Circ.895/Rev.1 and specification of the text in the Guidelines on the Application of Provisions on the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, 2022, shall be amended as specified in the Appendices to the Circular Letter.

It is necessary to do the following:

1. Bring the content of the Circular Letter to notice of the RS surveyors, as well as interested organizations and persons in the area of the RS Branch Offices' activity.
 2. Apply the provisions of the Circular Letter during review and approval of the technical documentation during survey of ships under construction and in service requested from the entry-into-force date of amendments.
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List of the amended and/or introduced paras/chapters/sections:

Section 3: paras 3.1.1 – 3.1.3 and 3.3.9.4

Section 6: para 6.3.1.6

Appendix 5: Table 1

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**Information on amendments introduced by the Circular Letter
 (for inclusion in the Revision History to the RS Publication)**

Nos.	Amended paras/chapters/ sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
1	Section 3, para 3.1.1	Para has aligned with the NO _x Technical Code	313-04-1917c of 03.04.2023	15.04.2023
2	Section 3, para 3.1.2	Para has aligned with the NO _x Technical Code	313-04-1917c of 03.04.2023	15.04.2023
3	Section 3, para 3.1.3	Para has aligned with the NO _x Technical Code	313-04-1917c of 03.04.2023	15.04.2023
4	Section 3, para 3.3.9.4	Para has been amended considering IMO Circular MEPC.1/Circ.895/Rev.1	313-04-1917c of 03.04.2023	15.04.2023
5	Section 6, para 6.3.1.6	Requirements have been specified	313-04-1917c of 03.04.2023	15.04.2023
6	Appendix 5, Table 1	Table has been aligned with the NO _x Technical Code	313-04-1917c of 03.04.2023	15.04.2023

**GUIDELINES ON THE APPLICATION OF PROVISIONS ON THE TECHNICAL CODE
ON CONTROL OF EMISSION OF NITROGEN OXIDES FROM MARINE DIESEL
ENGINES SET THE REGULATIONS FOR SURVEY OF SHIP'S DIESEL ENGINES, 2022,**

ND. NO. 2-030101-048-E

**3 APPLICATION OF THE MARINE DIESEL ENGINE FAMILY OR MARINE DIESEL
ENGINE GROUP CONCEPTS AT THE FIRM (MANUFACTURER)**

1 **Para 3.1.1** is replaced by the following text:

"**3.1.1** To avoid certification testing of every engine for compliance with the NO_x emission limits, one of two approval concepts may be adopted, namely the Engine Family or the Engine Group concept in compliance with the provisions of the NO_x Technical Code."

2 **Para 3.1.2** is replaced by the following text:

"**3.1.2** The diesel engine family concept may be applied to any series produced marine diesel engines, which, through their design are proven to have similar NO_x emission characteristics, are used as produced, and during installation on board, require no adjustments or modifications, which could adversely affect the NO_x emissions."

3 **Para 3.1.3** is replaced by the following text:

"**3.1.3** The diesel engine group concept may be applied to any engine intended for main propulsion or auxiliary duties, where adjustment and modification following installation (and through the service life of the engine) is considered routine."

4 **New para 3.3.9.4** is introduced reading as follows:

"**3.3.9.4** For engines fitted with a selective catalytic reduction (SCR) system to reduce NO_x emissions specified in 3.3.9.2.3 and 3.3.9.2.4, the number and arrangement of cylinders may not be common to all members of the Engine Family. These parameters may be replaced with new parameters derived from the SCR chamber and catalyst blocks, such as the SCR space velocity (SV), catalyst block geometry and catalyst material. Thus, the applicant shall provide clear evidence that an Engine Family concept, allowing for different numbers and arrangements of cylinders, will result in same or lower NO_x emissions of the engines with different cylinder numbers compared to the NO_x emissions of the related parent engine."

**6 SURVEY OF DIESEL ENGINES ON BOARD FOR COMPLIANCE
WITH THE NO_x EMISSION LIMITS**

5 **Para 6.3.1.6** is replaced by the following text:

"**6.3.1.6** When the carbon balance method used for the calculation of the exhaust gas flow, in addition to gaseous components, the emission of solid particulates shall be calculated by the methods specified in GOST ISO 8178. On the Register approval, indirect measurement methods to measure emission particulates may be accepted, namely GOST ISO 8178 filtration method for smoke measurement. In this case the manufacturer shall provide the Register with the data on correlation between the exhaust smoke value the particulates concentration, which shall be measured in tests for a given marine diesel engine type by the method agreed with an independent test laboratory recognized by the Register."

PERMISSIBLE DEVIATIONS OF MEASURED PARAMETERS

1 PERMISSIBLE DEVIATIONS OF INSTRUMENTS FOR MEASUREMENT OF MARINE DIESEL ENGINE PARAMETERS ON A TEST BED

6 **Table 1** is replaced by the following:

"Table 1

Permissible deviations and calibration validity periods of instruments for engine related parameters for measurements on a test bed

Measurement instrument	Permissible deviationr	Calibration validity period (months)
Engine crankshaft speed	$\pm 2\%$ of reading or $\pm 1\%$ of engine's maximum value, whichever is larger	3
Torque	$\pm 2\%$ of reading or $\pm 1\%$ of engine's maximum value, whichever is larger	3
Power (where measured directly)	$\pm 2\%$ of reading or $\pm 1\%$ of engine's maximum value, whichever is larger	3
Fuel consumption	$\pm 2\%$ of engine's maximum value	6
Air consumption	$\pm 2\%$ of reading or $\pm 1\%$ of engine's maximum value, whichever is larger	6
Exhaust gas flow	$\pm 2,5\%$ of reading or $\pm 1,5\%$ of engine's maximum value, whichever is larger	6

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