

GUIDELINES

ON THE APPLICATION OF PROVISIONS OF THE TECHNICAL CODE ON CONTROL OF EMISSION OF NITROGEN OXIDES FROM MARINE DIESEL ENGINES

ND No. 2-030101-048-E

RULE CHANGE NOTICE

ENTERS INTO FORCE:

01.07.2024



St. Petersburg
2024

GUIDELINES ON THE APPLICATION OF PROVISIONS OF THE TECHNICAL CODE ON CONTROL OF EMISSION OF NITROGEN OXIDES FROM MARINE DIESEL ENGINES

The present Rule Change Notice to the Guidelines on the Application of Provisions on the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (hereinafter — RCN) has been approved in accordance with the established approval procedure and contains information on amendments and additions, except for editorial amendments. RCN amendments come into force on 1 July 2024.

REVISION HISTORY

Item	Applicability	Description	Remarks
Chapter 4.9	Self-propelled ships Internal combustion engines Tests	Paras that are no longer relevant have been deleted due to amendments in the NO _x Technical Code. New para has been introduced considering up-to-date possibilities of gas analysers	
Appendix 2	Self-propelled ships Internal combustion engines Technical File	Form of Technical file has been corrected	
Appendix 4	Self-propelled ships Internal combustion engines Analysers	Paras have been corrected in connection with amendments in the NO _x Technical Code	
Appendix 5	Self-propelled ships Internal combustion engines Tests Deviations of measurements of technical parameters	Paras have been corrected in connection with amendments in the NO _x Technical Code	

**GUIDELINES ON THE APPLICATION OF PROVISIONS OF THE TECHNICAL
CODE ON CONTROL OF EMISSION OF NITROGEN OXIDES FROM MARINE
DIESEL ENGINES, 2022**

**4 TECHNICAL SUPERVISION DURING TESTS OF MARINE DIESEL ENGINES AT THE
FIRM (MANUFACTURER) FOR COMPLIANCE WITH THE NO_x EMISSION LIMITS**

4.9 TEST RUN

Para 4.9.2 is renamed as follows:

"**4.9.2 ~~Methods for measurement of~~ Main components of exhaust gases: CO, CO₂, HC, NO_x and O₂ and particulates.**".

Paras 4.9.2.2 and 4.9.2.3 are deleted.

New para 4.9.8 is introduced reading as follows:

"**4.9.8** Considering structural particulars of gas analysers it is allowed, upon Administration approval, to demonstrate the records of the procedure of the latest valid calibration stored in the device memory including registration of the calibration signal drift as alternative to the requirements of 4.9.4 and 4.9.7 regarding checks with the use of gases containing zero or span gas. This alternative is possible only provided the compliance with all the requirements for calibration procedure given in Section 9 of Appendix 4."

APPENDIX 2

Appendix is renamed as follows:

**"TECHNICAL FILE (~~UNIFIED RECOMMENDED~~ FORM DEVELOPED
BY THE REGISTER)
(~~sample form~~)"**.

1. PARTICULARS OF THE ENGINE

Para 15 is amended as follows:

"**15.** Measured values of noxious substances emission:

NO_x, in g/kW·h

CO, in g/kW·h

HC, in g/kW·h

Concentration of smoke
particulates, in %".

3.2 PARAMETERS TO BE MEASURED AND MEASURING EQUIPMENT

The fifteenth paragraph is deleted:

~~"concentration of smoke particulates in exhaust gases (it is measured by optical or filtration method)."~~

APPENDIX 4

TECHNICAL SPECIFICATIONS, OPERATING PROCEDURES FOR ANALYSERS AND CALIBRATION OF ANALYSERS

1 DEFINITIONS

Definition "Repeatability of an analyser" is deleted:

New paragraph is introduced reading as follows:

"For determination the international standards apply: ISO 5725-1 (Accuracy of measurement methods and results, Part 1); ISO 5725-2 (Accuracy of measurement methods and results, Part 2) or equivalent national standards."

Chapter 3.1 and its content are replaced by the following text:

"3.1 ACCURACY OF MEASUREMENT

The analyser shall not deviate from the nominal calibration point by more than $\pm 2\%$ of the readings over the whole measurement range except zero, or $\pm 0,3\%$ of full scale, whichever is larger. The accuracy shall be determined in compliance with the calibration requirements laid down in Section 9."

Para 3.2.1 is replaced by the following text:

"3.2.1 Precision.

The precision defined as 2,5 times the standard deviation of 10 repetitive responses to a given calibration or span gas, shall be no greater than $\pm 1\%$ of full-scale concentration for each range used above 100 ppm (or ppmC) or $\pm 2\%$ of each range used below 100 ppm (or ppmC)."

PERMISSIBLE DEVIATIONS OF MEASURED PARAMETERS

The paragraph after Table 3 is deleted:

~~"Since in compliance with the requirements of the Russian standards the manufacturers of analytical instruments shall indicate the total measurement deviation of gas analysis without specifications, Table 5 contains the deviations for measurements of gas analysis permissible both according to the NO_x Technical Code and the Guidelines."~~

Table 5 is deleted.

Russian Maritime Register of Shipping

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on Control of Emission of Nitrogen Oxides from Marine Diesel Engines**

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