RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER **No. 413-05-1964c** dated 02.08.2023

Re:

amendments to the Rules for the Classification and Construction of Subsea Pipelines, 2022, ND No. 2-020301-007-E

Item(s) of supervision:

subsea pipelines

Entry-into-force date:
15.08.2023

~~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 Part I "Subsea Pipelines" and Appendix 1 "Recommendations on Provision of Reliability and Safety of Subsea Pipelines on Seabed Soil"

Director General Sergey A. Kulikov

Text of CL:

We hereby inform that the Rules for the Classification and Construction of Subsea Pipelines 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 the notice of the RS surveyors, interested organizations and persons in the area of the RS Branch Offices' activity.
2. Apply the provisions of the Circular Letter starting from 15.08.2023 during review and approval of the technical documentation of subsea pipelines, during surveys of the subsea pipelines under construction and in service.

List of the amended and/or introduced paras/chapters/sections:

Part I: Table 4.5.5.3-2

Appendix 1: Table 2.4.12

Person in charge: Andrey S. Avdonkin 413 +7 (812) 380-19-54

"Thesis" System No. 23-155461

Appendix 1 to Circular Letter
No. 413-05-1964c dated 02.08.2023

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	Part I, Table 4.5.5.3-2	Requirements for pipe dimensions have been specified	413-05-1964c of 02.08.2023	15.08.2023
2	Appendix 1, Table 2.4.12	Recommendations on determination of burial depth of subsea pipelines have been specified	413-05-1964c of 02.08.2023	15.08.2023

Appendix 2 to Circular Letter
No. 413-05-1964c dated 02.08.2023

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SUBSEA PIPELINES, 2022,

ND No. 2-020301-007-E

PART I. SUBSEA PIPELINES

4 MATERIALS

1 **Table 4.5.5.3-2** is replaced by the following text:

"Table 4.5.5.3-2

General requirements for the pipe dimensions

Characteristics	Scope of examination	Welded pipe	Seamless pipe[1]
Diameter pipe ends D_a ≤ 610 mm	100 %	±0,5 mm or ±0,5 % D_a, (whichever is greater), but max. ±1,6 mm	
Diameter pipe ends D_a > 610 mm	100 %	±1,6 mm	±2,0 mm
Greatest difference in end diameters of one pipe (each pipe measured)	100 %	12,5 % t_c	
Diameter pipe body, D_a ≤ 610 mm	100 %	±0,5 mm or ±0,75 % D_a, (whichever is greater), but max. ±3,0 mm	±0,5 mm or ±0,75 % D_a (whichever is greater)
Diameter pipe body, D_a > 610 mm	100 %	±0,5 % D_a, but max ±4,0 mm	±1 % D_a
Out-of-roundness, pipe ends[2,3], D_a/t_c ≤ 75	*R*[4]	1,0 % but max. 8 mm	
Out-of-roundness, pipe ends[2], D_a/t_c > 75	*R*[4]	1,5 % but max. 8 mm	
Out-of-roundness, pipe body[2]	*R*[4,5]	2,0 % but max. 15 mm	
Local out-of-roundness	*R*[4]	< 0,5 % D_a, but not more than 2,5 mm	–
Wall thickness t_c ≤ 15 mm	100 %	±0,75 mm	±12,5 % t_c
Wall thickness, 15 < t_c ≤ 20 mm	100 %	±1,0 mm	±12,5 % t_c
Wall thickness, t_c > 20 mm	100 %	±1,5 / -1,0 mm	±10 % t_c, but max. ±3,0 mm
Total curvature	*R*[4]	≤ 0,2 % *L*[6]	
Local curvature	*R*[4]	≤ 1,5 mm for 1 m of *L*	
Ends squareness	*R*[4]	≤ 1,6 mm from true 90°	
Radial offset from the weld (LBW – laser-beam welding and HFW – high frequency welding)	*R*[4]	[7]	–
Radial offset from the weld (SWA – submerged arc welding)	*R*[4]	< 0,1 t_c, but max. 2,0 mm	–
Pipe length	100 %	Upon the customer's request	
Pipe weight	100 %	–3,5 % / + 10 % of nominal weight	

[1] The requirements for continuity and surface quality of seamless pipes are similar to those for a skelp (refer to Table 4.5.5.3-1).
[2] Out-of-roundness is determined by Formula (3.3.5-5) or as an absolute value.
[3] Upon agreement, out-of-roundness may be limited to 0,6 % but max. 5 mm.
[4] *R* means random testing of 5 % of the pipes, but minimum 3 pipes per shift.
[5] Dimensions pipe body shall be measured approximately in the middle of the pipe length.
[6] *L* – the pipe length.
[7] Thickness considering offset from the weld shall be within the limits of pipe wall thickness tolerance; in this case not less than actual minimum wall thickness of each pipe.

".

APPENDIX 1

RECOMMENDATIONS ON PROVISION OF RELIABILITY AND SAFETY OF SUBSEA PIPELINES ON SEABED SOIL

2 PROTECTION OF SUBSEA PIPELINES AGAINST HYDRODYNAMIC AND MECHANICAL EFFECTS

2 **Table 2.4.12** is replaced by the following text:

"Table 2.4.12

Recommendations on selection of pipeline burial depth

Prevailing external factor	Burial depth	Note
Large ice formations	The burial depth to the pipeline top shall be determined by the maximum depth of gouging furrow plus 1,0 m	Recommendation does not allow for extreme cases, for more detail refer to 8.3 of Part I "Subsea Pipelines"
Lithodynamic processes of seabed shape changes, including shore approach	The burial depth to the pipeline top shall be determined by the maximum possible seabed shape changes plus 1,0 m	
Frozen soils	Where pipelines for conveying hydrocarbons at a temperature higher than the surrounding frozen soils are laid, their burial depth shall be selected based on the calculation made using numerical methods that would allow to exclude melting and settling process capable to result in pipeline stripping	
Anchoring of vessels or other water craft	The burial depth to the top of the pipeline with concrete weight coating in the areas of possible anchoring of vessels or other water craft shall be assumed equal to the maximum depth of anchor penetration into the seabed soil plus 0,5 — 0,8 m. For the pipeline without concrete weight coating — plus 1,0 m. To protect the pipelines from the impact of anchors, partial burial of the pipeline is possible, and the filled berm shall be designed. The design of the berm shall be determined based on the calculation procedure agreed with the Register	Use of trawls, scrapers and other objects towed along the seabed shall be taken into consideration separately
Technical impossibility of burying	Where it is impossible to provide the required burial depth, the pipeline route shall be transferred to the area with more favourable conditions for the pipeline construction and operation	

".