



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 314-01-1255c

dated 21.08.2019

Re:

amendments to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships, 2019, ND No. 2-020101-118-E

Item(s) of supervision:

welders' certification and welding processes

Entry-into-force date:

01.10.2019

~~Valid till:~~

~~Validity period extended till:~~

~~Cancels / amends / adds Circular Letter No. Insert text here~~

~~dated~~

Number of pages:

1+8

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part III "Technical Supervision during Manufacture of Materials"

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships, shall be amended as specified in Appendix 2 to the Circular Letter

It is necessary to do the following:

1. Familiarize the RS surveyors the interested organization in the area of RS Branch Offices' activity with the content of the Circular Letter.
 2. Apply the provisions of the Circular Letter during the RS practical activity.
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List of the amended and/or introduced paras/chapters/sections:

Section 4: para 4.3.2.3 and Appendix 1 (Mandatory); paras 6.2.2.3; 6.6.3.2; 6.6.3.3; 6.8.2.3; 7.5.3.3 and 8.1.4.

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"Thesis" System No. 19-137908

**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	Para 4.3.2.3	The requirement for the code designation of the welding process has been specified	314-01-1255c of 21.08.2019	01.10.2019
2	Section 4, Appendix 1 (Mandatory)	On Figures 1-4, the designations of the welding processes have been replaced On Figure 5, code designations have been deleted	314-01-1255c of 21.08.2019	01.10.2019
3	Para 6.2.2.3	New symbols for coding of welded joint types have been introduced	314-01-1255c of 21.08.2019	01.10.2019
4	Table 6.6.3.2	The requirements for the approval for weld positions considering the current requirements by the IACS Members have been specified	314-01-1255c of 21.08.2019	01.10.2019
5	Table 6.6.3.3	The requirements for the types of welded joints based on experience of technical supervision have been specified	314-01-1255c of 21.08.2019	01.10.2019
6	Table 6.8.2.3	The requirements for the symbols of the welding processes have been specified	314-01-1255c of 21.08.2019	01.10.2019
7	Para 7.5.3.3	The requirements for type approval of welded joints based on technical supervision experience have been specified	314-01-1255c of 21.08.2019	01.10.2019
8	Para 8.1.4	The symbol of weld processes has been replaced	314-01-1255c of 21.08.2019	01.10.2019

**RULES FOR TECHNICAL SUPERVISION DURING CONSTRUCTION OF SHIPS
AND MANUFACTURE OF MATERIALS AND PRODUCTS FOR SHIPS**

ND No. 2-020101-118-E

PART III. TECHNICAL SUPERVISION DURING MANUFACTURE OF MATERIALS

4 WELDING. REGULATIONS FOR WELDERS CERTIFICATION

1 **Para 4.3.2.3** is replaced by the following text:

4.3.2.3 For assignment the range of approval of the Welder Approval Test Certificates for welding processes 111, 114, 131, 133, 135, 136 the types of electrode covering, wires and flux-cored wire filler shall be indicated in accordance with the instructions given below.

According to ISO 2560, the type of electrode covering, depending on its composition, (welding process 111) is shown by the following letter indices:

- A = acid (oxidizing) covering;
- B = basic covering;
- C = cellulose covering;
- R = rutile covering;
- RA (AR) = mixed rutile-acid covering;
- RB = mixed rutile-basic covering;
- RC = mixed rutile-cellulosic covering;
- RR = rutile thick covering;

The use of solid wire for welding processes 131 and 135 is indicated by S letter index.

According to ISO 17632, depending on the composition, the filler type for flux-cored welding wire (welding processes 114, 133 and 136) is indicated by letter indices according to Table 4.3.2.3".

APPENDIX 1 (Mandatory)

**TYPES OF WELDED JOINTS TEST PIECES USED IN PRACTICAL TESTS FOR WELDERS'
APPROVAL**

2 In the tables in **Figures 1 – 4** the designations of the welding processes "MW, SA, A" are replaced by "M, S, A".

3 Code designations specified in **Figure 5** are deleted.

6 APPROVAL OF WELDING PROCEDURES FOR STEEL STRUCTURES AND ITEMS

6.2 DEFINITIONS, TERMS AND SYMBOLS

4 **Para 6.2.2.3** is replaced by the following text:

6.2.2.3 When executing the documentation related to the approval of welding procedures, it is recommended to use coding of welded joint types as follows:

- A — single sided weld with backing;
- B — single sided weld without backing;

C — double sided weld with gouging;
 D — double sided weld without gouging;
 TW — T-weld with full penetration;
 FW — fillet weld;
 ss — single-side welding (welding from one side);
 bs — welding from both sides;
 nb — welding without backing;
 mb — welding with backing;
 gb — welding with gas backing;
 gg — welding with back gouging or back grinding of welds;
 ng — welding without (no) back gouging or without (no) back grinding of welds."

6.3 TYPES OF WELDED JOINT TEST PIECES AND REQUIREMENTS FOR THEIR PREPARATION

5 **Table 6.6.3.2** is replaced by the following Table:

"Table 6.6.3.2

Type of welding the test piece ¹	Weld position of the test piece ²	Range of approval according to welding positions ²			
		Butt welds		Fillet welds	
		Plates	Pipes	Plates	Pipes
Butt welds in plate	PA	PA	PA ³	PA	PA ³
	PC	PC	PC ³	PB	PA ³ ,PB ³ ,PD ³
	PG	PG	—	PG	—
	PF	PF	—	PF	—
	PE	PE	—	PD	PA ³ ,PD ³
	PC+PF	All except for PG	All except for PG ³	All except for PG	All except for PG ³
Butt welds in pipe	PA	PA	PA	PA	PA
	PC	PC	PA,PC	PB	PA, PB, PD
	PG	PG	PG	PG	—
	PF	PA, PC, PE	PA,PF	PA, PB, PD	PA, PB, PD
	PC+PF or H-LO45	All except for PG	All except for PG	All except for PG	All except for PG
Fillet welds in plate (no beveling)	PA			PA	PA ³
	PB			PB	PA ³ , PB ³ , PD ³
	PF			PF	—
	PG	—	—	PG	—
	PD			PD	PA ³ , PB ³ , PD ³
	PB+PD			All except for PG	All except for PG ³
Fillet welds in pipe (no beveling)	PA			PA	PA
	PB			PB	PA, PB, PD
	PG	—	—	PG	PG
	PD			PD	PA, PB, PD
	PF			All except for PG	All except for PG

¹ Branch connections are subject to separate qualification tests.
² Designations of welding positions comply with ISO 6947.
³ Pipes with outside diameter $D > 500$ mm are considered equivalent to plates according to the range of approval (not applicable to branch connections).

6 Table 6.6.3.3 is replaced by the following:

"Table 6.6.3.3

Type of welded test assembly in tests for approval			Range of approval											
			Plates (P)								Pipes (T) ¹			
			Butt welds (BW)				T-joints (TW)				Fillet bead welds without beveling (F)	Butt welds		Fillet joints (F)
			Single side welding		Both side welding		Single side welding		Both side welding			Single-side welding		
with backings (A)	without backings (B)	with gouging (C)	without gouging (D)	with backings (A)	without backings (B)	with gouging (C)	without gouging (D)	with backings (A)	without backings (B)					
Butt weld of plates	Single side welding	with backings (A)	*	—	x	—	—	—	—	—	x	—	—	x
		without backings (B)	x	*	x	x	—	—	—	—	x	—	—	x
	Both side welding	with gouging (C)	—	—	*	—	—	—	—	—	x	—	—	x
		without gouging (D)	—	—	x	*	—	—	—	—	x	—	—	x
Butt weld of pipes	Single side welding	with backings (A)	x	—	x	—	—	—	—	—	x	*	—	x
		without backings (B)	x	x	x	x	—	—	—	—	x	x	*	x
T-joint with edge preparation (TW)	Single side welding	with backings (A)	—	—	—	—	*	—	x	—	x	—	—	x
		without backings (B)	—	—	—	—	x	*	x	x	x	—	—	x
	Both side welding	with gouging (C)	—	—	—	—	—	—	*	—	x	—	—	x
		without gouging (D)	—	—	—	—	—	—	x	*	x	—	—	x
Fillet (gauge) weld (F)	Plates (P)		—	—	—	—	—	—	—	—	*	—	—	x
	Pipes (T)		—	—	—	—	—	—	—	—	x	—	—	*

¹ Pipes with outside diameter $D > 500$ mm shall be considered similar to the plates by ranges of approval (unacceptable to branch connections).

Symbols:

* means types of welded joints, for which WPS is approved directly by test results;

x means types of welded joints, for which WPS may be approved by the range of approval (without additional tests);

— means types of welded joints, for which WPS are not subject to approval.

6.8 ISSUE AND TERMS OF VALIDITY OF WELDING PROCEDURE APPROVAL TEST CERTIFICATE

7 **Table 6.8.2.3.** Items Nos 6 and 30 are replaced by the following text:

"Table 6.8.2.3

Requirements for filling in the WPS form

Nos	Name of form positions	Requirements for filling in
...
6	Type of welding	Designations: M — manual welding; S— semi-automatic welding; A — automatic welding; T — tungsten electrode welding
...
30	Welding wire feed rate	For welding types S and A the range of welding wire feed rate shall be indicated
...

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7 APPROVAL OF WELDING PROCEDURES FOR ALUMINIUM ALLOYS

7.5 RANGE OF APPROVAL FOR WELDING PROCEDURE BASED ON QUALIFICATION TEST RESULTS

8 **Table 7.5.3.3** is replaced by the following:

"Table 7.5.3.3

Range of approval by welded joint types

Type of welded test assembly in approval tests			Range of approval												
			Butt joint on plates				T-joints on plates (TW)				Butt joint on pipe (T)		Branch connections (T:TW)		Fillet welds on pipe and plate without beveling (F)
			Welded from one side		Welded from both sides		Welded from one side		Welded from both sides		Welded from one side		Welded from one side	Welded from both sides	
			with backings (A)	without backings (B)	with gouging (C)	without gouging (D)	with backings (A)	without backings (B)	with gouging (C)	without gouging (D)	with backings (A)	without backings (B)			
Butt joint on plates ²	Welded from one side	with backings (A)	*	—	x	—	x	—	x	—	x ¹	—	—	x ¹	
		without backings (B)	x	*	x	x	x	x	x	x	x ¹	x ¹	x ¹	x ¹	x
	Welded from both sides	with gouging (C)	x	—	*	—	x	—	x	—	x ¹	—	—	x ¹	x
		without gouging (D)	x	—	x	*	x	—	x	x	—	—	—	x ¹	x
T-joint on plate with beveling (TW)	Welded from one side	with backings (A)	—	—	—	—	*	—	x	—	—	—	—	—	x
		without backings (B)	—	—	—	—	x	*	x	x	—	—	—	—	x
	Welded from both sides	with gouging (C)	—	—	—	—	x	—	*	—	—	—	—	—	x
		without gouging (D)	—	—	—	—	x	—	x	*	—	—	—	—	x

Butt joint on pipes	Welded from one side	with backings (A)	x	—	x	—	—	—	—	—	*	—	—	x	x
		without backings (B)	x	x	x	x	—	—	—	—	x	*	x	x	x
Branch connections (T:TW)	Welded from one side		—	—	—	—	—	—	—	—	—	—	*	x	x
	Welded from both sides		—	—	—	—	—	—	—	—	—	—	—	*	x
Fillet joints on pipe and plate without beveling (F)			—	—	—	—	—	—	—	—	—	—	—	—	*

¹ Plate qualifies pipe with external diameter $D > 500$ mm.

² Butt joints on plate qualify T-joints.

Symbols:

* indicates those welding types of joints for which WPS is approved directly by the test results;

x indicates those welding types of joints covered by WPS (without additional tests);

— indicates those welding types of joints not covered by WPS (new approval tests are required).

8 APPROVAL OF WELDING PROCEDURE FOR TITANIUM ALLOYS

8.1 GENERAL

- 9 **Para 8.1.4.** The symbol "MW" is replaced by the symbol "M".