



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 391-06-1453c

dated 20.10.2020

Re:

amendments to the Guidelines on Technical Supervision during Construction and Operation of Subsea Pipelines, 2020, ND No. 2-030301-002-E

Item(s) of supervision:

subsea pipelines under construction and in operation, materials and products for subsea pipelines

Entry-into-force date:

10.11.2020

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Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to the Guidelines on Technical Supervision during Construction and Operation of Subsea Pipelines

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Guidelines on Technical Supervision during Construction and Operation 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 when performing technical supervision of subsea pipelines under construction and in operation, during manufacture of materials and products for subsea pipelines.

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

Section 1: Chapter 1.2, para 1.3.4, Chapter 1.4, paras 1.4.7, 1.5.3.1, 1.5.3.6, Chapter 1.6, paras 1.7.1, 1.7.3, 1.7.5, Chapter 1.8, paras 1.9.1.5, 1.9.2.4, 1.9.2.5, 1.10.3, 1.10.7, Chapter 1.11, para 1.12.2;

Section 2: para 2.1.1, Table 2.2.2.6, Table 2.2.3.4, paras 2.5.1, 2.5.10, 2.6.1, 2.6.4.3, 2.7.1.1.2, 2.7.1.1.3, 2.7.1.1.4.3, 2.7.1.1.5, 2.7.1.3.1, 2.7.2.1.2, 2.7.2.1.3, 2.7.2.3.1, 2.7.2.5.2, 2.7.3.1.2 — 2.7.3.1.4, 2.7.3.3.1, 2.7.3.4, 2.7.4.1.2 — 2.7.4.1.4, 2.7.4.2.1, 2.7.4.2.2, 2.8.1.2 — 2.8.1.4, 2.8.3.1, 2.8.3.2.2, Table 2.8.4.11, paras 2.9.1.2 — 2.9.1.4, 2.10.1.1 — 2.10.1.3, 2.10.1.6, 2.10.3.1, 2.10.3.2, 2.10.3.5, 2.11.1.2 — 2.11.1.5, 2.11.2.1, Table 2.11.4.6, paras 2.12.1.2 — 2.12.1.4, 2.13.1.2 — 2.13.1.4, 2.13.2.1, 2.14.1.2 — 2.14.1.7, 2.14.2 — 2.14.4, 2.15.1.1, 2.15.1.2, 2.15.1.3.3, 2.15.2.1, 2.15.3.5, 2.16.1.2, 2.16.1.3, 2.16.1.5.1, 2.16.1.6, 2.16.1.7, 2.16.3.1 and 2.16.4.2;

Section 3: Chapter 3.1, 3.7.1.1, Table 3.7.1.1, paras 3.7.2.1 and 3.7.4.1;

Section 4: paras 4.1.1.1, 4.1.2, 4.1.2.1, 4.1.5, 4.2.1.1, 4.2.1.7, 4.2.5.1.4, 4.2.5.2.11 and 4.2.6.2

Person in charge: Andrey S. Avdonkin

391

+7 812 3801954

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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 1, Chapter 1.2	Reference to the General Regulations for the Classification and Other Activity has been introduced	391-06-1453c of 20.10.2020	10.11.2020
2	Section 1, para 1.3.4	Reference to the Nomenclature of items of the technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
3	Section 1, Chapter 1.4	Heading of the Chapter has been specified	391-06-1453c of 20.10.2020	10.11.2020
4	Section 1, para 1.4.7	Name of the contract concluded between the manufacturer and RS has been specified	391-06-1453c of 20.10.2020	10.11.2020
5	Section 1, para 1.5.3.1	Pre-FEED/FEED design stages have been included into the RS review	391-06-1453c of 20.10.2020	10.11.2020
6	Section 1, para 1.5.3.6	Report on results of in-line inspection has been included into the set of documentation	391-06-1453c of 20.10.2020	10.11.2020
7	Section 1, Chapter 1.6	Chapter has been revised considering implementation of schemes of the RS technical supervision during manufacture of materials and products, and amended Nomenclature of items of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
8	Section 1, para 1.7.1	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
9	Section 1, para 1.7.3	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
10	Section 1, para 1.7.5	Reference to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships has been specified	391-06-1453c of 20.10.2020	10.11.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
11	Section 1, Chapter 1.8	Chapter has been revised considering implementation of schemes of the RS technical supervision during manufacture of materials and products, and amended Nomenclature of items of the RS technical supervision	391-06-1453c of 20.10.2020	10.11.2020
12	Section 1, para 1.9.1.5	Reference to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships has been specified	391-06-1453c of 20.10.2020	10.11.2020
13	Section 1, para 1.9.2.4	References to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships have been specified	391-06-1453c of 20.10.2020	10.11.2020
14	Section 1, para 1.9.2.5	References to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships have been specified	391-06-1453c of 20.10.2020	10.11.2020
15	Section 1, para 1.10.3	References to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships have been specified	391-06-1453c of 20.10.2020	10.11.2020
16	Section 1, para 1.10.7	References to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships have been specified	391-06-1453c of 20.10.2020	10.11.2020
17	Section 1, Chapter 1.11	Chapter has been revised due to the amendments in the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships	391-06-1453c of 20.10.2020	10.11.2020
18	Section 1, para 1.12.2	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
19	Section 2, para 2.1.1	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
20	Section 2, Table 2.2.2.6	Head of the Table has been amended considering the type of rolled product "plates"	391-06-1453c of 20.10.2020	10.11.2020
21	Section 2, Table 2.2.3.4	Head of the Table has been amended considering the type of rolled product "plates"	391-06-1453c of 20.10.2020	10.11.2020
22	Section 2, para 2.5.1	Scope of RS documents accompanying SP valves supply has been specified	391-06-1453c of 20.10.2020	10.11.2020
23	Section 2, para 2.5.10	Para has been deleted	391-06-1453c of 20.10.2020	10.11.2020
24	Section 2, para 2.6.1	Para has been revised considering implementation of schemes of the RS technical supervision during manufacture of materials and products, and amended Nomenclature of items of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
25	Section 2, para 2.6.4.3	Reference to the Rules for the Classification and Construction of Sea-Going Ships has been specified	391-06-1453c of 20.10.2020	10.11.2020
26	Section 2, paras 2.7.1.1.2 and 2.7.1.1.3	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
27	Section 2, para 2.7.1.1.4.3	Terminology of performed types of tests has been specified	391-06-1453c of 20.10.2020	10.11.2020
28	Section 2, para 2.7.1.1.5	Scope of RS documents accompanying steel pipes for subsea pipelines with corrosion-protection coating applied has been specified	391-06-1453c of 20.10.2020	10.11.2020
29	Section 2, para 2.7.1.3.1	Reference to provisions concerning type approval of corrosion-protection coatings has been specified	391-06-1453c of 20.10.2020	10.11.2020
30	Section 2, paras 2.7.2.1.2 and 2.7.2.1.3	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
31	Section 2, para 2.7.2.3.1	Reference to provisions concerning type approval of sleeves has been specified	391-06-1453c of 20.10.2020	10.11.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
32	Section 2, para 2.7.2.5.2	Requirement for the firms to install sleeves has been introduced	391-06-1453c of 20.10.2020	10.11.2020
33	Section 2, paras 2.7.3.1.2 — 2.7.3.1.4	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
34	Section 2, para 2.7.3.3.1	Terminology of performed types of tests has been specified	391-06-1453c of 20.10.2020	10.11.2020
35	Section 2, para 2.7.3.4	Requirement for the firms to install galvanic anodes has been introduced	391-06-1453c of 20.10.2020	10.11.2020
36	Section 2, paras 2.7.4.1.2 — 2.7.4.1.4	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
37	Section 2, para 2.7.4.2.1	Last paragraph has been deleted	391-06-1453c of 20.10.2020	10.11.2020
38	Section 2, para 2.7.4.2.2	Terminology of performed types of tests has been specified	391-06-1453c of 20.10.2020	10.11.2020
39	Section 2, paras 2.8.1.2 — 2.8.1.4	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
40	Section 2, para 2.8.3.1	Reference to provisions concerning type approval of concrete coatings has been specified	391-06-1453c of 20.10.2020	10.11.2020
41	Section 2, para 2.8.3.2.2	Generic term "corrosion-protection coating" has been used	391-06-1453c of 20.10.2020	10.11.2020
42	Section 2, Table 2.8.4.11	Material used during application of concrete coating has been added. Numbering of items has been corrected. References to paras of the Guidelines have been specified	391-06-1453c of 20.10.2020	10.11.2020
43	Section 2, paras 2.9.1.2 — 2.9.1.4	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
44	Section 2, paras 2.10.1.1 — 2.10.1.3	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
45	Section 2, para 2.10.1.6	Requirement for the firms to install thermal insulation on pipe joints has been introduced	391-06-1453c of 20.10.2020	10.11.2020
46	Section 2, para 2.10.3.1	Reference to provisions concerning type approval of thermal insulation coatings has been specified	391-06-1453c of 20.10.2020	10.11.2020
47	Section 2, para 2.10.3.2	Scope of tests for thermal insulation coatings has been specified	391-06-1453c of 20.10.2020	10.11.2020
48	Section 2, para 2.10.3.5	Scope of tests for thermal insulation coatings has been specified	391-06-1453c of 20.10.2020	10.11.2020
49	Section 2, paras 2.11.1.2 — 2.11.1.5	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
50	Section 2, para 2.11.2.1	Designation of steel category has been corrected	391-06-1453c of 20.10.2020	10.11.2020
51	Section 2, Table 2.11.4.6	Places to measure strength of flange surfaces have been specified	391-06-1453c of 20.10.2020	10.11.2020
52	Section 2, paras 2.12.1.2 — 2.12.1.4	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
53	Section 2, paras 2.13.1.2 — 2.13.1.4	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
54	Section 2, para 2.13.2.1	Reference to the para of the Guidelines has been specified	391-06-1453c of 20.10.2020	10.11.2020
55	Section 2, paras 2.14.1.2 — 2.14.1.4	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
56	Section 2, paras 2.14.1.5 — 2.14.1.7	Requirements for insulating flanges and materials of insulating joints and flanges have been introduced	391-06-1453c of 20.10.2020	10.11.2020
57	Section 2, para 2.14.2	Requirements for the scope of documentation on insulating joints and flanges have been specified	391-06-1453c of 20.10.2020	10.11.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
58	Section 2, paras 2.14.3 and 2.14.4	Requirements for testing of insulating joints have been specified and requirements for materials of insulating flanges have been introduced	391-06-1453c of 20.10.2020	10.11.2020
59	Section 2, paras 2.15.1.1 and 2.15.1.2	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
60	Section 2, para 2.15.1.3.3	Terminology of performed test types for compounds has been specified	391-06-1453c of 20.10.2020	10.11.2020
61	Section 2, para 2.15.2.1	Reference to provisions concerning type approval of polymer compounds has been specified	391-06-1453c of 20.10.2020	10.11.2020
62	Section 2, para 2.15.3.5	Para has been deleted	391-06-1453c of 20.10.2020	10.11.2020
63	Section 2, paras 2.16.1.2 and 2.16.1.3	Paras have been revised due to amendments in the Nomenclature of items and schemes of technical supervision	391-06-1453c of 20.10.2020	10.11.2020
64	Section 2, para 2.16.1.5.1	Terminology of performed test types for anti-friction coatings has been specified	391-06-1453c of 20.10.2020	10.11.2020
65	Section 2, paras 2.16.1.6 and 2.16.1.7	Para 2.16.1.6 has been deleted. Existing para 2.16.1.7 has been renumbered 2.16.1.6	391-06-1453c of 20.10.2020	10.11.2020
66	Section 2, para 2.16.3.1	Reference to provisions concerning type approval of anti-friction coatings has been specified and the possibility to amend the scope of type tests has been considered	391-06-1453c of 20.10.2020	10.11.2020
67	Section 2, para 2.16.4.2	Requirement for pipe batches when approving anti-friction coatings has been specified	391-06-1453c of 20.10.2020	10.11.2020
68	Section 3, Chapter 3.1	Chapter has been revised based on the experience of technical supervision during SP construction	391-06-1453c of 20.10.2020	10.11.2020
69	Section 3, para 3.7.1.1	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
70	Section 3, Table 3.7.1.1	Item of technical supervision 3.2 has been specified, and item 3.4 regarding control of route preparation has been introduced	391-06-1453c of 20.10.2020	10.11.2020
71	Section 3, para 3.7.2.1	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
72	Section 3, para 3.7.4.1	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
73	Section 4, para 4.1.1.1	Para has been amended regarding necessity to carry out classification periodical SP surveys	391-06-1453c of 20.10.2020	10.11.2020
74	Section 4, para 4.1.2	Type of SP surveys has been specified	391-06-1453c of 20.10.2020	10.11.2020
75	Section 4, para 4.1.2.1	Para has been revised regarding specification of requirements for classification SP surveys	391-06-1453c of 20.10.2020	10.11.2020
76	Section 4, para 4.1.5	Requirements for the RS issued documents upon results of the SP classification surveys have been specified	391-06-1453c of 20.10.2020	10.11.2020
77	Section 4, para 4.2.1.1	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
78	Section 4, para 4.2.1.7	Reference to the Nomenclature of items of technical supervision has been specified	391-06-1453c of 20.10.2020	10.11.2020
79	Section 4, para 4.2.5.1.4	Reference to provisions concerning type approval of clamps and banding structures has been specified	391-06-1453c of 20.10.2020	10.11.2020
80	Section 4, para 4.2.5.2.11	Terminology of performed test types for reinforcing clamps has been specified	391-06-1453c of 20.10.2020	10.11.2020
81	Section 4, para 4.2.6.2	Reference to provisions concerning type approval of pre-welded and welded clamps has been specified	391-06-1453c of 20.10.2020	10.11.2020

GUIDELINES ON TECHNICAL SUPERVISION DURING CONSTRUCTION AND OPERATION OF SUBSEA PIPELINES, 2020,

ND No. 2-030301-002-E

1 GENERAL

- 1 **Chapter 1.2.** The first paragraph is replaced by the following text:

"Terms, definitions and abbreviations relating to the RS general terminology are given in General Regulations for Classification and Other Activities and in Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships."

- 2 **Para 1.3.4.** Reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

- 3 Heading of **Chapter 1.4** is replaced by the following text:

"1.4 REQUESTS AND CONTRACTS ON TECHNICAL SUPERVISION".

- 4 **Para 1.4.7** is replaced by the following text:

"**1.4.7** General requirements to requests and contracts on technical supervision to be concluded between the manufacturer and RS in order to confirm the compliance of the product batches shall comply with Section 4, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships."

- 5 **Para 1.5.3.1** is replaced by the following text:

".**1** SP project including pre-FEED/FEED (Front End Engineering Design) stages, including within the framework of the construction project of an oil-and-gas field/offloading terminal on a sea shelf;"

- 6 **Para 1.5.3.6** is replaced by the following text:

".**6** as-built documentation during SP construction (for classification of subsea pipelines specified in 1.3.8.2 and 1.3.8.3) including the following:

permission documentation (permit for commencement of construction, reports for mobilization of technical facilities for pipe laying and burial, preparation of routes/trenches, etc.);

welding documentation (welders' certification reports, welding procedure approval certificates with reports on mechanical tests, procedures for assessing the permissible defects during welding and for nondestructive examination (testing));

Inspection and Test Plan for pipeline construction;

certificates for materials and products including pipes and welding consumables;

concealed work reports;

pipe welding and laying logs;

pipe weld non-destructive test logs;

weld joint insulation connections;

route in-water study reports;

reports on checking for correct position of pipelines after laying/burial into the seabed;

hydraulic test reports;

report on results of in-line inspection upon completion of construction;

certificates of SP completion of construction and commissioning."

7 Chapter 1.6 is replaced by the following text:

"1.6 TECHNICAL SUPERVISION DURING MANUFACTURE OF MATERIALS AND PRODUCTS FOR SUBSEA PIPELINES AND NOMENCLATURE OF ITEMS OF THE REGISTER TECHNICAL SUPERVISION

1.6.1 Forms of the Register technical supervision.

1.6.1.1 Materials and products used in construction of subsea pipelines classed with the Register shall have the certificates of conformity or other documents confirming their compliance with the RS requirements. The list of materials and products subject to mandatory technical supervision is given in the Nomenclature of items of the RS technical supervision of subsea pipelines (hereinafter referred to as "the SP Nomenclature") — refer to 1.6.5.

In separate cases, at the RS discretion, technical supervision may be performed for the materials and products not contained in the SP Nomenclature, which are newly developed or are the components of the products listed in the SP Nomenclature and which functionally provide the safety of the items of technical supervision.

1.6.1.2 When determining scheme of technical supervision, items of technical supervision shall be divided into 5 groups. Possible schemes of technical supervision during manufacture for different groups are given in Table 1.6.1.2-1 for products and in Table 1.6.1.2-2 for materials.

In case of a single approval of products being the items of technical supervision of groups 2 — 4, the survey is carried out to the extent of group 5. Where a single approval is issued to single products, approval of technical documentation and survey results for the prototype cover only the material or product for which the certificates of conformity have been issued.

Table 1.6.1.2-1

Schemes of technical supervision during manufacture of products

Stage of technical supervision	Type of survey/Issued document	Product groups							
		Group 1	Group 2	Group 3			Group 4		Group 5
		1.1	2.1	3.1	3.2	3.3	4.1	4.2	5.1
Type approval	Approval of technical documentation	+ ¹	+	+	+	+	+	+	+
	Type testing of prototype	—	+	+	+	+	+	+	+ ²
	Type of a type approval certificate issued by RS	—	CTO	CTO			CTO		—
Survey of serial products	Survey of the manufacturer's quality control system	—	—	—	CKK 1	CKK 2	—	CKK 2	—
	Type of the Quality Control System Certificate issued by RS	—	—	—	CKK 1 Cert.	CKK 2 Cert.	—	CKK 2 Cert.	—
	Survey of products by RS	—	—	+	—	—	+	—	+
	Certificate issued by RS	—	—	C	C3	—	C	C3	C
	Document issued by manufacturer	M	MC	M	M	MC	M	M	M

¹ Review of technical documentation is carried out simultaneously with approval of technical documentation on the item of technical supervision where the product is applied.

² Tests are carried out in the scope prescribed by the SP Rules and the SP Guidelines considering 1.8.5.

Notes: 1. In case of a single approval given for the items of groups 2 — 4 the products are surveyed to the extent of group 5.

2. "+" means "Required", "—" means "Not Applicable" or "Not required".

Table 1.6.1.2-2

Schemes of technical supervision during manufacture of materials

Stage of technical supervision	Type of survey/Issued document	Material groups										
		Group 1M		Group 2M ¹			Group 3M			Group 4M		Group 5M
		1.1	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	5.1	
Manufacturer recognition/type approval	Approval of technical documentation on material	+ ²	+	+	+	+	+	+	+	+	+ ²	
	Tests at initial survey	—	+ ³	+	+	+ ³	+	+	+	+	+ ³	
	Type of a recognition certificate for manufacturer or a type approval certificate on material issued by RS	—	—	COCM	CTO	—	CTO		СПИ		—	
Survey of serial materials	Survey of the firm's quality control system/periodical confirmation of СПИ/COCM	—	—	+	—	—	CKK 1	CKK 2	+	+	—	
	Type of the Quality Control System Certificate issued by RS	—	—	—	—	—	CKK 1 Cert.	CKK 2 Cert.	—	CKK 1 Cert.	—	
	Survey of material by RS	—	+	—	—	+	+	—	+	—	+ ⁴	
	Certificate issued by RS	—	C	—	—	C	C3	—	C	C3	C	
	Document issued by manufacturer	M	M	MC	MC	M	M	MC	M	M	M	

¹ For welding materials, stages of technical supervision as for material groups 2.1 or 2.2 shall apply, for other materials — 2.1 or 2.3.
² Review of technical documentation on material is carried out simultaneously with approval of technical documentation on the item of technical supervision where the material is applied (item of application).
³ Tests are carried out in the scope prescribed by the SP Rules and the SP Guidelines considering 1.8.5 or 2.2.2.8.
⁴ Survey is carried out in the scope prescribed by the RS-approved technical documentation on the item of technical supervision.

Note. "+" means "Required", "—" means "Not Applicable" or "Not required".

1.6.1.3 Depending on the item belonging to the group of technical supervision, the compliance of materials and products with the RS requirements shall be confirmed by the following documents:

- .1 Certificate filled-in and signed by the Register (C, form 6.5.30);
- .2 Certificate filled-in and signed by an official of the firm (manufacturer) and drawn up (endorsed) by the Register (C3, form 6.5.31);
- .3 MC — a document drawn up by the manufacturer in which the material or product compliance with the RS requirements is declared;
- .4 M — a document drawn up by the manufacturer according to the standards of the firm; it shall contain data satisfactory for RS;
- .5 Manufacturer's Quality Control System Certificate (CKK Certificate, forms 7.1.28-1 and 7.1.28-2) — refer to 1.6.3 and 1.6.4;
- .6 Type Approval Certificate (CTO, form 6.8.3) — refer to 1.8.1;
- .7 Recognition Certificate for Manufacturer (СПИ, form 7.1.4.1);
- .8 Certificate of approval for welding consumables (COCM, form 6.5.33).

1.6.1.4 The contents of the certificates (C, C3) and the documents (MC, M) shall identify the material or product, their types, main parameters, as well as the manufacturer of materials and products. Validity period of certificates (C, C3) and the documents (MC, M) is not specified.

1.6.1.5 General requirements for RS technical supervision during manufacture of materials and products for SP shall comply with Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships.

1.6.2 Survey of serial products and materials.

1.6.2.1 The Register technical supervision during manufacture and tests of serial products and materials at established production specified in the SP Nomenclature is carried out in compliance with the requirements of Section 2 of these Guidelines. Serial products and materials are tested according to the Register approved test programme.

1.6.2.2 Serial products and materials shall be supplied with the RS certificates and documents of the firm indicated in Table 1.6.1.2-1 and Table 1.6.1.2-2 depending on the technical supervision group (1 — 5) of an item and the scheme of technical supervision applicable to the group.

1.6.2.3 General requirements for RS technical supervision during manufacture of serial products for SP shall comply with 7.1 and 7.2, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships.

1.6.2.4 Materials and products included in group 1 of technical supervision may be surveyed by the Register to confirm their compliance with the specified characteristics or technical documentation. The document confirming compliance is the Statement of Compliance (form 6.3.27).

1.6.3 Survey based on approval of the quality control system, Tier 1 (CKK 1).

1.6.3.1 The Register can entrust the manufacturer's technicians with the performance of production (acceptance) tests or their part, which shall be drawn up by the Quality Control System Certificate (CKK 1 Certificate).

1.6.3.2 The quality control system (CKK) is a set of procedures providing control of compliance of the production with the RS requirements and used by the manufacturer during the serial manufacture of materials and products. The CKK 1 system of the firm shall clarify:

the extent of the required examinations and tests;

to which extent and under which conditions the manufacturer may perform all or part of the required examinations and tests without the presence of the RS surveyor when the certificate (C3) is required.

1.6.3.3 The CKK 1 Certificate can be drawn up based on the survey of the manufacturer to the extent and in accordance with 1.7 and 1.11 of these Guidelines, as well as the type approval of the material or product (refer to 1.8 of these Guidelines).

1.6.3.4 When drawing up the CKK 1 Certificate, the Agreement on technical supervision shall be signed with the manufacturer. The Agreement on technical supervision shall include the manufacturer's rights and obligations, duties of the Register, and terms of payment to the Register for the implementation of technical supervision (refer to 4.4 and 4.5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships).

1.6.3.5 General requirements to the RS survey to draw up CKK 1 Certificate including periodical verification that the manufacturer observes the requirements for quality control system shall comply with 7.1 and 7.3, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships.

1.6.4 Survey based on approval of the Quality Control System, Tier 2 (CKK 2).

1.6.4.1 The procedure of the quality control system (CKK 2) approval is applied to the manufacturers of the materials and products of groups 3, 4 (refer to Table 1.6.1.2-1 and Table 1.6.1.2-2) having the Type Approval Certificate of the Register or Recognition Certificate for Manufacturer to entrust the manufacturer's technicians with the performance of production (acceptance) tests or their part.

1.6.4.2 Principal requirements for Quality Control System of the firm are:

.1 the manufacturer shall conform to the general requirements for the firms listed in 1.11 of these Guidelines;

.2 the firm shall have an implemented quality management system according to a national or international standard approved by an accredited certification body. The availability of the quality management system certified for compliance with the current version of ISO 9001 is sufficient to meet the condition;

.3 the manufacturer shall have a quality control system, current drawings, as well as rules and standards that cover the materials and products to be certified;

.4 the examinations and tests required by the RS rules are either to be included in procedures of the quality management system of the manufacturer, or to be separate documents agreed with RS;

.5 the type of the documents (C/C3/MC/M) confirming the compliance of components of the manufactured products with the RS requirements shall be agreed with RS.

1.6.4.3 When drawing up the CKK 2 Certificate, the Agreement on technical supervision shall be signed with the manufacturer. The Agreement on technical supervision shall include the manufacturer's rights and obligations, duties of the Register, and terms of payment to the Register for the implementation of technical supervision (refer to 4.4 and 4.5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships).

1.6.4.4 General requirements to the RS survey to draw up CKK 2 Certificate including the scope of information and documentation submitted to the Register as well as manufacturers'

survey procedure shall comply with 7.1 and 7.4, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships.

1.6.5 Nomenclature of items of the Register technical supervision.

1.6.5.1 The Nomenclature of items of the RS technical supervision of subsea pipelines (refer to Table 1.6.5.1) developed on the basis of the SP Rules (hereinafter referred to as "the SP Nomenclature"), is the list of items supervised by the Register during their manufacture, during SP construction, in which the number of group of item of technical supervision used to assign the form of technical supervision according to Table 1.6.1.2-1 and Table 1.6.1.2-2 is specified. In addition to the documents specified in 1.6.1.3, other documents issued by the Register as well as the necessity for branding items and for technical supervision performed directly by the RS surveyor during SP construction are indicated.

Table 1.6.5.1

Nomenclature of items of the Register technical supervision of subsea pipelines

Code of item	Item of technical supervision	Technical supervision of the Register						Note
		Group of item of technical supervision (1 – 5)	Other documents issued by RS	Branding	During construction of SP			
					Installation, application	Laying	Pressure testing	
1	2	3	4	5	6	7	8	9
23000000	Subsea pipelines:							
23100000	interfield	—	—	—	P	P	P	
23200000	export/main	—	—	—	P	P	P	
23300000	infield	—	—	—	P	P	P	
23400000	offloading	—	—	—	P	P	P	
23500000	standby	—	—	—	P	P	P	
23001000	Steel rolled products¹:							
23001001	plates/skelp	4M	—	K	—	—	—	
23001002	sections	4M	—	K	—	—	—	
23001003	bars	4M	—	K	—	—	—	
23001004	pipe billet	4M/5M	—	K	—	—	—	5M – without manufacturer's recognition
23002000	Steel pipes¹:							
23002001	seamless	4M	—	K	P	P	P	
23002002	welded	4M	—	K	P	P	P	
23003000	Steel bends and fittings¹							
23003001	seamless	4M/5M	—	K	P	P	P	5M – without manufacturer's recognition
23003002	welded	4M/5M	—	K	P	P	P	5M – without manufacturer's recognition
23004000	Steel castings and forgings¹	4M/5M	—	K	—	—	—	5M – without manufacturer's recognition
23005000	Flexible polymeric-metal pipes	3	—	—	P	P	P	
23006000	Steel valves:							
23006001	manually controlled	3	—	—	P	P	P	
23006002	remotely controlled	3	—	—	P	P	P	
23006003	safety valves	3	—	—	P	P	P	
23007000	Steel flanged joints:							
23007001	flanges	3	—	—	P	P	P	
23007002	fastenings	1	—	—	P	P	P	
23007003	sealing gaskets	1	—	—	P	P	P	
23008000	Corrosion protection and insulation:							
23008010	Internal pipe coatings:							
23008011	corrosion-protection	3M	—	—	P	P	—	
23008012	anti-friction	3M	—	—	P	P	—	
23008020	External corrosion-protection pipe coatings:							
23008021	polyolefin	3M	—	—	P	P	—	

Code of item	Item of technical supervision	Technical supervision of the Register						Note
		Group of item of technical supervision (1 – 5)	Other documents issued by RS	Branding	During construction of SP			
					Installation, application	Laying	Pressure testing	
1	2	3	4	5	6	7	8	9
23008022	polyurethane	3M	—	—	P	P	—	
23008023	epoxy	3M	—	—	P	P	—	
23008030	Thermal insulation coatings for pipes	3M	—	—	P	P	—	
23008040	Insulation coatings of joints:				P	P	—	
23008041	heat-shrink sleeves	3M	—	—	P	P	—	
23008042	end-face heat-shrink sleeves	3M	—	—	P	P	—	
23008043	thermal insulation of joints	3M	—	—	P	P	—	
23008044	thick polymer coatings	2M	—	—	P	P	—	
23008045	insulation of inner surface of joints	3M	—	—	P	P	—	
23008046	mastic coatings	2M	—	—	P	P	—	
23008050	Repair corrosion-protection materials	3M	—	—	P	P	—	
23008060	Rock shield/casing	2	—	—	P	P	—	
23008070	Coating materials	3M	—	—	P	P	—	
23009000	Ballasting							
23009010	Single weights:							
23009011	cast-iron	2	—	—	P	P	—	
23009012	concrete	2	—	—	P	P	—	
23009013	reinforced concrete	2	—	—	P	P	—	
23009020	Ballast coatings:							
23009021	concrete	3M	—	—	P	P	—	
23009022	reinforced concrete	3M	—	—	P	P	—	
23009023	asphalt composite	3M	—	—	P	P	—	
23010000	Alarm and automated control systems:							
23010001	excess of pressure	3	—	—	P	P	—	
23010002	leakage and consumption control	3	—	—	P	P	—	
23010003	corrosion monitoring	3	—	—	P	P	—	
23011000	Welding consumables:							
23011001	electrodes for "dry" welding	2M	—	—	—	—	—	
23011002	electrodes for underwater welding	2M	—	—	—	—	—	
23011003	welding wire/flux	2M	—	—	—	—	—	
23011004	welding wire/gas	2M	—	—	—	—	—	
23011005	type production processes		СОТПС	—	—	—	—	
23012000	Computer software	4	СТОП	—	—	—	—	
23013000	Clamps:							
23013010	Repair reinforcing clamps							
23013011	composite	3	—	—	P	P	P	
23013012	rolled composite	3	—	—	P	P	P	
23013013	steel	3	—	—	P	P	P	
23013014	steel wrapping with filler	3	—	—	P	P	P	
23013015	welded/pre-welded		—	—	P	P	P	
23013020	Combined clamp-protectors	3	—	—	P	P	P	
23013030	Insulating composite clamps	3	—	—	P	P	—	
23014000	Electrochemical corrosion protection:							
23014010	Galvanic anode system	3	—	—	P	P	—	
23014020	Cathode protection	3	—	—	P	P	—	
23014030	Electrical insulating arrangements:							
23014031	flanges	3	—	—	P	P	P	
23014032	joints	3	—	—	P	P	P	

Code of item	Item of technical supervision	Technical supervision of the Register						Note
		Group of item of technical supervision (1 – 5)	Other documents issued by RS	Branding	During construction of SP			
					Installation, application	Laying	Pressure testing	
1	2	3	4	5	6	7	8	9
23015000	Special repair devices:							
23015010	Mechanical connecting clamps	3	—	—	P	P	P	
23015020	Hot Tap type tie-in devices	3	—	—	P	P	P	
23016000	Magnetic markers	1	—	—	P	P	—	

¹ Manufacturing of materials and products from other alloys are subject to special consideration by the Register.

1.6.5.2 The following symbols are used in the SP Nomenclature (refer to Table 1.6.5.1) beyond indication of the group of item of technical supervision according to Table 1.6.1.2-1 and Table 1.6.1.2-2:

K — branding of items of supervision;

P — technical supervision directly carried out by the RS surveyor;

COTPC — Welding Procedure Approval Test Certificate (form 7.1.33);

CTOP — Type Approval Certificate for Software (form 6.8.5).

1.6.5.3 The materials and products used during construction and operation of subsea pipelines under the RS technical supervision shall be supplied to the firm, which carries out the SP construction or operation, along with the certificates or other documents that confirm their compliance with the requirements of the RS Rules, the SP Guidelines and/or the RS-approved standards according to the SP Nomenclature.

1.6.5.4 The list of the SP materials and components subject to the RS mandatory survey is given in the SP Nomenclature. Any changes of the SP Nomenclature shall be agreed upon with the Register. The materials and products missing in the SP Nomenclature may be surveyed upon the customer's request.

1.6.5.5 While carrying out the technical supervision during construction or operation of subsea pipelines and during manufacture of materials and products of a new original design, the Register is entitled to unilaterally introduce changes to the SP Nomenclature as well as confirm the compliance (certify) the materials and products not included into the SP Nomenclature.

1.6.5.6 In the column "Code of item" identification code of material, product, production process or software shall be indicated that consists of eight symbols. The code of item shall be indicated in the RS-issued documents confirming conformity of items of technical supervision with the RS requirements.

1.6.5.7 In the column "Branding" of the SP Nomenclature the "K" symbol means the necessity of branding an item of technical supervision in accordance with the Instructions on branding of items of the Register technical supervision (refer to Appendix 2, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships)."

8 **Para 1.7.1.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

9 **Para 1.7.3.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

10 **Para 1.7.5.** The second paragraph is replaced by the following text:

"applicable provisions of Sections 8 and 11, Part I "General Regulations for Technical Supervision" and Sections 1 and 2, Part III "Technical Supervision during Manufacture of Materials" of the Rules for Technical Supervision during Construction of Ships;"

11 **Chapter 1.8** is replaced by the following text:

"1.8 TYPE APPROVAL

1.8.1 The Type Approval Certificate (CTO) is the document of the Register, which certifies that construction, properties, parameters, characteristics of a type material or product found in

the course of surveys and indicated in the approved technical documentation, meet the RS requirements and may be used for items of technical supervision for the intended purpose.

1.8.2 The materials, products and software specified in the SP Nomenclature (refer to Table 1.6.5.1) and related to product groups 2 — 4 (refer to Table 1.6.1.2-1) and groups 2M, 3M for materials (refer to Table 1.6.1.2-2) are subject to type approval with drawing up of the following documents:

- Type Approval Certificate (CTO, form 6.8.3);

- Certificate of Approval for Welding Consumables (COCM, form 6.5.33);

- Type Approval Certificate for Software (CTOП, form 6.8.5).

1.8.3 The type approval procedure for materials and products shall comply with Section 6, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships and include:

- review and analysis of firm's application with attachments thereto;

- review of technical documentation;

- survey of the firm (manufacturer) including production (acceptance) and type tests;

- issue of the Type Approval Certificate (CTO) (form 6.8.3).

1.8.4 To supply products and materials having the Type Approval Certificate (CTO) and related to groups 3, 4 (refer to Table 1.6.1.2-1) and groups 2M, 3M for materials (refer to Table 1.6.1.2-2) with documents C, C3, M or MC, the following is required (refer to 1.6.3 and 1.6.4):

- survey of the quality control system (CKK) with drawing up of CKK 1 or CKK 2 Certificate;

- conclusion of Agreement on technical supervision where the manufacturer's rights and obligations, duties of the Register, and terms of payment to the Register for the implementation of technical supervision are specified.

In addition, in order to ensure the compliance with the RS requirements to the manufactured products, drawing up of the supporting documentation, filling in and signing of the RS documents, and also the observance of the CKK requirements, the manufacturer shall assign an official who has a competent knowledge of the manufacture and quality control of items of technical supervision.

1.8.5 The Register may consider the results of type approval tests carried out previously at the firm's (manufacturer's) under supervision of the RS surveyor and/or testing laboratory recognized by the Register (or by an RS-recognized classification/supervisory body) under the following conditions:

- deliveries of accessories/products are identical, process procedures and structural design remain unchanged;

- the firm has the quality control system for manufacture of material/product in compliance with ISO 9001 confirmed by a certificate;

- satisfactory results of technical supervision during the previous period (if any).

1.8.6 In case of a single RS approval of products being the items of technical supervision of groups 2 — 4 the survey is carried out to the extent of group 5 of the SP Nomenclature, and the type and production (acceptance) tests shall be performed in a scope as required by the Register considering 1.8.5.

1.8.7 Requirements for type approval of materials and products for subsea pipelines are listed in the relevant chapters of Section 2 of these Guidelines. The following shall be taken into account:

- coatings of different purposes including weight coatings applied on pipelines at the firms under the Register technical supervision are subject to type approval; Type Approval Certificate (form 6.8.3) for finished coating shall be issued for these firms;

- upon a request from the suppliers of coating materials, these firms may voluntarily pass the procedure of type approval of the specified materials with drawing up of Type Approval Certificate (form 6.8.3) — refer to 2.7.1.2.3."

12 **Para 1.9.1.5** is replaced by the following text:

"1.9.1.5 In order to be recognized by the Register, the service supplier shall meet the requirements of Section 8 and Chapter 9.2, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships and the requirements of this Chapter."

13 **Para 1.9.2.4.** The first sentence is replaced by the following text:

"Qualification of divers and operators of remotely operated or autonomous underwater vehicles shall comply with the applicable requirements specified in 9.3.3.2, 9.3.3.3, 9.3.3.4, 9.3.3.5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships."

14 **Para 1.9.2.5.** The first paragraph is replaced by the following text:

"**1.9.2.5** In case divers, remotely operated or autonomous underwater vehicles are used during in-water surveys the service supplier shall have the equipment specified in 9.3.3.6, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships, and consider applicable requirements of 9.3.3.7 and 9.3.3.8, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships."

15 **Para 1.10.3.** is replaced by the following text:

"**1.10.3** The requirements for testing laboratories are specified in Sections 8 and 10, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships."

16 **Para 1.10.7** is replaced by the following text:

"**1.10.7** In particular cases, including drawing up of a Recognition Certificate for Manufacturer (СПИ) and Type Approval Certificate (СТО), at the Register's discretion, tests may be carried out by the testing laboratory without the RS recognition. In this case, the testing laboratory conformity to the requirements listed in Section 8 and 10.2.1.1, 10.2.2.1, 10.2.2.2, 10.2.4.1, 10.2.4.2, 10.2.5 and 10.2.6, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships with drawing up of the Report (form 6.3.19) with Annex (form 6.3.19tl) shall be verified prior to test performance and the tests shall be carried out under supervision of the RS surveyor."

17 **Chapter 1.11** is replaced by the following text:

"1.11 AUDITS OF FIRMS

1.11.1 The firms engaged in the activities specified in Table 1.11.1 with regard to SP and being under the RS technical supervision shall be audited by the Register for compliance with the requirements of Section 8, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships and requirements of this Chapter.

Table 1.11.1

Type of firm's activities	
Code	Kind of activity
24003000	SP construction, modernization, repairs and maintenance
24004000	Diagnostics of SP technical condition
24005000	Installation, commissioning, repairs and maintenance of SP automation and alarm systems
24006000	Theoretical training and SP welders' practical qualification tests (at certification centres)

1.11.2 In addition to the requirements specified in 1.11.1, firms may voluntarily be audited for the compliance with the requirements listed in 12.2, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships.

1.11.3 The conformity of firms to the requirements specified in 1.11.1 and 1.11.2 is confirmed by a Certificate of Firm Conformity (ССП, form 7.1.27) to be issued in compliance with the requirements of 3.4 to 3.7, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships.

1.11.4 The firm shall demonstrate that its activity is performed in the area indicated in the request.

1.11.5 To draw up the Certificate of Firm Conformity (CCП, form 7.1.27) the firms engaged in the activities with codes 24003000 and 24004000 and audited according to these codes, shall additionally comply with the RS requirements applied to the service suppliers with the codes as follows (refer to 1.9):

24001004: for issuance of Certificate of Firm Conformity (CCП, form 7.1.27) for code 24003000 (or the firms recognized for code 24001004 may be subcontracted). This requirement does not apply for the firms carrying out auxiliary operations (for example, refer to 2.7.2.5.2, 2.7.3.4 and 2.10.1.6);

at least three types of activity with codes 24001001 — 24001005 and 24002000: for issuance of Certificate of Firm Conformity (CCП, form 7.1.27) for code 24004000."

18 **Para 1.12.2.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

2 TECHNICAL SUPERVISION DURING MANUFACTURE OF MATERIALS AND PRODUCTS FOR SUBSEA PIPELINES

19 **Para 2.1.1.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

20 The head of **Table 2.2.2.6** is amended reading as follows:

"

Type of tests ¹	Position of samples and specimens cutting-out	Quantity			Notes
		casts/plates/cast samples	specimens of a plate	Total number of specimens	

"

21 The head of **Table 2.2.3.4** is amended reading as follows:

"

Type of tests ¹	Position of samples and specimens cutting-out	Quantity			Notes
		casts/plates/cast samples	specimens of a plate	Total number of specimens	

"

22 **Para 2.5.1** is replaced by the following text:

"2.5.1 SP valves shall be manufactured according to the international (for example, ISO 14723) and/or national standards and the RS-approved documentation at the firms with the Register Type Approval Certificate (CTO) (form 6.8.3) for this type of products, issued by RS with regard to the requirements of 1.8.3 to 1.8.5.

According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-1), the SP valves shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4. In case of a single approval of SP valves the requirement specified in 1.8.6 shall be considered."

23 **Para 2.5.10** is deleted.

24 **Para 2.6.1** is replaced by the following text:

"2.6.1 General.

2.6.1.1 Flexible pipes for SP manufactured/subject to repair or modernization under the RS technical supervision shall meet the requirements specified in 3.8, 4.2.4 and 4.6, Part I "Subsea Pipelines" of the SP Rules.

2.6.1.2 Flexible pipes shall be manufactured according to the RS-approved documentation at the firms with the Type Approval Certificate (CTO) (form 6.8.3) for this type of products, issued by the Register with regard to the provisions of 1.8.3 to 1.8.5.

2.6.1.3 To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of flexible pipes shall be subject to testing according to the requirements specified in 2.6.5.

2.6.1.4 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-1), flexible pipes shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4. In case of a single approval of flexible pipes for subsea pipelines the requirement specified in 1.8.6 shall be considered.

2.6.1.5 The firm's (manufacturer's) application for technical supervision of flexible pipes for subsea pipelines shall be supplemented by the documents specified in 6.1.3.2.1, Part XIII "Materials" of the RS Rules.

2.6.1.6 Each pipe shall have marking which contains, as a minimum, an identification number, the values of specification working pressure and temperature (if the pipe is used at temperatures other than ambient temperature), the values of the minimum bend radius in storage and in service."

25 **Para 2.6.4.3** is replaced by the following text:

"2.6.4.3 Depending on the type of flexible pipe components and the type of tests, metal materials are sampled in compliance with the requirements specified in 3.2.5, 3.7.5, 3.8.5, 3.13.8, Part XIII "Materials" of the RS Rules."

26 **Paras 2.7.1.1.2 and 2.7.1.1.3** are replaced by the following text:

"2.7.1.1.2 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), the corrosion-protection coatings shall be applied to pipes according to RS-approved technical documentation at the firms having, as a rule, the Type Approval Certificate (CTO) (form 6.8.3) for this type of coatings issued by the Register with regard to the provisions of 1.8.3 to 1.8.5 and 1.8.7.

2.7.1.1.3 To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of corrosion protection coatings shall be subject to testing according to the requirements specified in 2.7.1.3 and 2.7.1.4."

27 **Para 2.7.1.1.4.3** is replaced by the following text:

".3 specifications (manufacturer's procedures and/or standards) on coatings application and required tests including type (periodical) and production (acceptance) tests;"

28 **Para 2.7.1.1.5** is replaced by the following text:

"2.7.1.1.5 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), steel pipes for subsea pipelines with corrosion-protection coatings applied shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4.

In case of a single approval of corrosion-protection coatings for steel pipes for subsea pipelines without obtaining type approval the scheme of technical supervision 3.1M as per Table 1.6.1.2-2 shall be used."

29 **Para 2.7.1.3.1.** Reference "2.6.1.7" is replaced by "1.8.5".

30 **Paras 2.7.2.1.2 and 2.7.2.1.3** are replaced by the following text:

"2.7.2.1.2 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), the sleeves shall be manufactured in accordance with the RS-approved technical documentation at the firms having, as a rule, the Type Approval Certificate (CTO, form 6.8.3) for this type of corrosion protection issued by the Register with regard to the provisions of 1.8.3 to 1.8.5.

To obtain the Type Approval Certificate (CTO, form 6.8.3), the specimens of sleeves shall be subject to testing according to the requirements specified in 2.7.2.3 and 2.7.2.4.

2.7.2.1.3 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), sleeves shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4.

In case of a single approval of sleeves for subsea pipelines without obtaining type approval the scheme of technical supervision 3.1M as per Table 1.6.1.2-2 shall be used."

31 **Para 2.7.2.3.1.** The reference "2.6.1.7" is replaced by "1.8.5".

32 **New para 2.7.2.5.2** is introduced reading as follows:

"2.7.2.5.2 Sleeves shall be installed on welded joints of SP pipes in accordance with the RS-approved documentation. For pipelines buried into seabed soil, the installed sleeve shall be protected by a rock shield that meets the requirements specified in 2.7.4, or an RS-approved joint thermal insulation and waterproofing design shall be used (refer to 2.10.1.6). In order to install sleeves and rock shield during SP laying, the contractor carrying out this type of work shall be checked by the Register on the basis of requirements specified in 1.11 for code of activity 24003000 within the surveys performed according to 3.6."

33 **Paras 2.7.3.1.2 — 2.7.3.1.4** are replaced by the following text:

"2.7.3.1.2 Galvanic anodes shall be manufactured according to the RS-approved technical documentation at the firms with the Type Approval Certificate (CTO, form 6.8.3) (refer to the SP Nomenclature in Table 1.6.5.1 and Table 1.6.1.2-1).

2.7.3.1.3 The requirements for type approval of galvanic anodes shall comply with 1.8.3 to 1.8.5. To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of galvanic anodes shall be subject to testing according to the requirements specified in 2.7.3.3.

2.7.3.1.4 According to Table 1.6.1.2-1 galvanic anodes for subsea pipelines shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4. In case of a single approval of galvanic anodes for subsea pipelines the requirement specified in 1.8.6 shall be considered."

34 **Para 2.7.3.3.1** is replaced by the following text:

"2.7.3.3.1 Type and production (acceptance) tests of galvanic anodes may be performed directly during their manufacture and confirmation of compliance of production batches."

35 **New para 2.7.3.4** is introduced reading as follows:

"2.7.3.4 Galvanic anodes shall be fitted on the SP pipes in accordance with the RS-approved documentation. In order to install galvanic anodes during SP laying, the contractor carrying out this type of work shall be checked by the Register on the basis of requirements specified in 1.11 for code of activity 24003000 within the surveys performed according to 3.6.

Installation of galvanic anodes on steel pipes at the firm carrying out application of concrete weight coatings shall be surveyed by the Register within approval of pipe weight coatings with galvanic anodes."

36 **Paras 2.7.4.1.2 — 2.7.4.1.4** are replaced by the following text:

"2.7.4.1.2 Rock shields/casings shall be manufactured and fitted onto SP according to the RS-approved technical documentation. The manufacturer shall have the Type Approval Certificate (CTO) (form 6.8.3) (refer to the SP Nomenclature in Table 1.6.5.1 and Table 1.6.1.2-1).

2.7.4.1.3 Requirements for type approval of rock shields/casings shall comply with 1.8.3 to 1.8.5. To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of rock shields shall be subject to testing according to the requirements specified in 2.7.4.2.

2.7.4.1.4 According to Table 1.6.1.2-1, rock shields/casings for subsea pipelines shall be delivered with the copy of Type Approval Certificate (CTO) and with document (MC). In case of a single approval of rock shields for subsea pipelines the requirement specified in 1.8.6 shall be considered."

37 **Para 2.7.4.2.1.** The last paragraph is deleted.

38 **Para 2.7.4.2.2.** The first sentence is replaced by the following text:

"**2.7.4.2.2** Production (acceptance) tests shall include the following:"

39 **Paras 2.8.1.2 — 2.8.1.4** are replaced by the following text:

2.8.1.2 Concrete weight coatings shall be applied to pipes according to the RS-approved technical documentation at the firms having, as a rule, the Type Approval Certificate (CTO) (form 6.8.3) (refer to the SP Nomenclature in Table 1.6.5.1 and Table 1.6.1.2-2).

2.8.1.3 Requirements for type approval of concrete weight coatings shall comply with 1.8.3 to 1.8.5. To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of concrete weight coatings shall be subject to testing according to the requirements specified in 2.8.3 and 2.8.4.

2.8.1.4 According to Table 1.6.1.2-2, concrete coated pipes for subsea pipelines shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4.

In case of a single approval of concrete coated pipes for subsea pipelines without obtaining type approval, the scheme of technical supervision 3.1M as per Table 1.6.1.2-2 shall be used."

40 **Para 2.8.3.1.** The reference "2.6.1.7" is replaced by "1.8.5".

41 **Para 2.8.3.2.2** is replaced by the following text:

".2 shear resistance of concrete weight coating relative to corrosion-protection coating;"

42 **Table 2.8.4.11. Item 1.8** is replaced by the following text:

"

1.8 Polymer-bitumen mastic or polymer compound	Certificate data and compliance with requirements of detailed design documentation	Each batch	R	For pipes with galvanic anodes
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"

43 **Table 2.8.4.11.** Repeated **item 9.2** and **items 9.3** and **9.4** are renumbered **9.3 — 9.5** (for Russian version only).

44 **Table 2.8.4.11. Item 9.5** is replaced by the following text:

"

9.5 Concrete weight coating repair	Defects of concrete weight coating	Each pipe repaired	W	As per 2.8.4.7 and 2.8.4.8
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"

45 **Table 2.8.4.11. Item 12** is replaced by the following text:

"

12 Application of polymer-bitumen mastic or polymer compound	As per detailed design documentation	Twice a shift	R	
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"

46 **Table 2.8.4.11. Item 13** is replaced by the following text:

"

13 Weighing of pipes with concrete weight coating (including galvanic anode and marker)	As per detailed design documentation	Each pipe and each batch	R	As per 2.8.1.8
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"

47 **Paras 2.9.1.2 — 2.9.1.4** are replaced by the following text:

2.9.1.2 The ballast weights shall be manufactured according to the RS-approved technical documentation at firms with the Type Approval Certificate (CTO) (form 6.8.3) (refer to the SP Nomenclature in Table 1.6.5.1 and Table 1.6.1.2-1).

2.9.1.3 Requirements for type approval of ballast weights shall comply with 1.8.3 to 1.8.5. To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of concrete weight coatings shall be subject to testing according to the requirements specified in 2.9.3 and 2.9.4.

2.9.1.4 According to Table 1.6.1.2-1, ballast weights for subsea pipelines shall be delivered with the copy of Type Approval Certificate (CTO) and with document (MC).

In case of a single approval of ballast weights without obtaining type approval the requirement specified in 1.8.6 shall be considered."

48 **Paras 2.10.1.1 — 2.10.1.3** are replaced by the following text:

2.10.1.1 The thermal insulation coatings for SP pipes manufactured under the RS technical supervision shall be made according to the RS-approved technical documentation at firms having, as a rule, the Type Approval Certificate (CTO) (form 6.8.3) for this type of coating issued by the Register with regard to the provisions of 1.8.3 to 1.8.5.

2.10.1.2 To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of thermal insulation coatings shall be subject to testing according to the requirements specified in 2.10.3 and 2.10.4.

2.10.1.3 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), thermal insulated pipes for subsea pipelines shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4.

In case of a single approval of thermal insulation coatings for steel SP pipes without obtaining type approval, the scheme of technical supervision 3.1M as per Table 1.6.1.2-2 shall be used."

49 **New para 2.10.1.6** is introduced reading as follows:

2.10.1.6 If the pipelines joints shall be thermally insulated, during SP laying the contractor for this type of activity shall be verified by the Register according to the requirements of 1.11 for code of activity 24003000. The thermal insulation shall be installed in accordance with the RS-approved documents and shall be type approved by the Register in compliance with the applicable requirements specified in 2.10.1.1 — 2.10.1.3."

50 **Para 2.10.3.1.** The reference "2.6.1.7" is replaced by "1.8.5".

51 **Para 2.10.3.2** is replaced by the following text:

2.10.3.2 Type approval tests are aimed at checking the following parameters of thermal insulation coatings:

- .1 water absorption;
- .2 thermal conductivity;
- .3 axial shear strength.

The tests specified in 2.10.3.2.1 to 2.10.3.2.3 may be carried out according to procedures of national and/or international standards and the RS-approved technical documentation."

52 **Para 2.10.3.5** is replaced by the following text:

"2.10.3.5 For polyurethane coating water absorption when boiling for 90 min shall be not more than 10 % by the volume."

53 **Paras 2.11.1.2 — 2.11.1.5** are replaced by the following text:

"2.11.1.2 Flanges shall be manufactured according to the RS-approved technical documentation at firms with the Type Approval Certificate (CTO) (form 6.8.3) for this type of products issued by the Register with regard to the provisions of 1.8.3 to 1.8.5.

2.11.1.3 To obtain the Type Approval Certificate (CTO) (form 6.8.3), the flange specimens shall be subject to testing according to the requirements specified in 2.11.4.

2.11.1.4 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), the flanges for subsea pipelines shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4. In case of a single approval of flanges for subsea pipelines, the requirement specified in 1.8.6 shall be considered.

2.11.1.5 In the course of the RS technical supervision during manufacture of flanges, billets (forged, cast and in some cases, steel plates) supplied to the manufacturer shall be type approved by RS (have the RS Type Approval Certificate) according to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2) and the requirements specified in 2.2 and 2.3 of these Guidelines.

The billets having a certificate issued by ACS (including the Manufacturer's Certificate endorsed by ACS) or supervisory body recognized by RS may be used as agreed upon with the Register."

54 **Para 2.11.2.1.** The designation of steel category PC550T(W) is replaced by PCT550(W).

55 **Table 2.11.4.6.** The line "Hardness" is replaced by the following text:

"

Hardness	3	At least three measurements at two surfaces and in the middle of thickness in the section with the largest thickness as well as on faces
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"

56 **Paras 2.12.1.2 — 2.12.1.4** are replaced by the following text:

"2.12.1.2 Steel bends for SP shall be produced by the manufacturers with the Recognition Certificate for Manufacturer (СПИ) (form 7.1.4.1) issued by the Register (refer to the SP Nomenclature, Table 1.6.5.1 and Table 1.6.1.2-2) and under the RS technical supervision.

2.12.1.3 General requirements for recognition of bend manufacturer shall comply with 2.2.2.2 to 2.2.2.4.

In some cases, upon agreement with the Register, the bends for SP may be produced at the manufacturer without the RS recognition provided that additional tests during manufacture in a scope required for manufacturer recognition are carried out taking into account 2.2.2.8.

2.12.1.4 According to Table 1.6.1.2-2, steel bends for subsea pipelines shall be delivered with the copy of Recognition Certificate for Manufacturer (СПИ) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.4.

In case of a single approval of steel bends for subsea pipelines without obtaining Recognition Certificate for Manufacturer (СПИ) (form 7.1.4.1), the scheme of technical supervision 5M as per Table 1.6.1.2-2 shall be used."

57 **Paras 2.13.1.2 — 2.13.1.4** is replaced by the following text:

"2.13.1.2 Steel fittings for SP shall be produced by the manufacturers with the Recognition Certificate for Manufacturer (СПИ) (form 7.1.4.1) issued by the Register (refer to the SP Nomenclature in Table 1.6.5.1 and Table 1.6.1.2-2) and under the RS technical supervision.

2.13.1.3 General requirements for recognition of steel fittings manufacturer shall comply with 2.2.2.2 to 2.2.2.4.

In some cases, upon agreement with the Register, fittings for SP may be produced at the manufacturer without the RS recognition provided that additional tests during manufacture in a scope required for manufacturer recognition are carried out taking into account 2.2.2.8.

2.13.1.4 According to Table 1.6.1.2-2, supply of steel fittings for subsea pipelines shall be carried out with the copy of Recognition Certificate for Manufacturer (СПИ) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.4.

In case of a single approval of steel fittings for subsea pipelines without obtaining Recognition Certificate for Manufacturer (СПИ) (form 7.1.4.1), the scheme of technical supervision 5M as per Table 1.6.1.2-2 shall be used."

58 **Para 2.13.2.1.** The reference "2.12.2.1" is replaced by "2.12.2".

59 **Paras 2.14.1.2 — 2.14.1.4** are replaced by the following text:

"2.14.1.2 Insulating joints shall be manufactured according to the RS-approved technical documentation at firms with the Type Approval Certificate (CTO) (form 6.8.3) for this type of products (refer to the SP Nomenclature in Table 1.6.5.1 and Table 1.6.1.2-2).

2.14.1.3 Requirements for type approval of insulating joints shall comply with 1.8.3 to 1.8.5. To obtain the Type Approval Certificate (CTO) (form 6.8.3), the insulating joint specimens shall be subject to testing according to the requirements specified in 2.14.3.

2.14.1.4 According to Table 1.6.1.2-1, the insulating joints for subsea pipelines shall be delivered with the copy of Type Approval Certificate (CTO) and with certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4. In case of a single approval of insulating joints for subsea pipelines, the requirement specified in 1.8.6 shall be considered."

60 **New paras 2.14.1.5 — 2.14.1.7** are introduced reading as follows:

"2.14.1.5 Insulating flanges shall be manufactured in accordance with the requirements of international and/or national standards and RS-approved technical documentation with regard to the requirements specified in 2.11 and this Chapter.

2.14.1.6 Materials of sealing system and electrical isolation used in insulating joints and flanges, in addition to providing electrical splitting, shall be resistant to sea water and transferred medium, which shall be confirmed in the technical documentation for these products.

Internal and external coatings as well as other design solutions may be used to prevent insulating materials from being exposed to sea water and transferred medium.

2.14.1.7 Steel pipes and forgings/flanges applied for manufacture of insulating joints, and welded joints thereof shall comply with the requirements of Sections 4 and 5, Part I "Subsea Pipelines" of the SP Rules."

61 **Para 2.14.2** is replaced by the following text:

"2.14.2 Requirements for scope of technical documentation.

2.14.2.1 Technical documentation on insulating joints subject to the RS-approval shall include the following:

assembly and design drawings for insulating joints with indication of the materials and components used (refer to 2.14.2.2);

strength calculations including load cases indicated in 2.14.3.2.1 to 2.14.3.2.4 as well as check of insulating joint strength with an SP laying method in use;

welding procedures for insulating joints structure;

assembly procedure;

coating procedure;

testing and installation procedure.

2.14.2.2 Specifications and/or certificates for the following components and materials of insulating joints:

metal forgings and pipe billets;

insulating and sealing materials;

filler;

external and internal coatings;

external spark gap, if any.

2.14.2.3 In addition to the documents indicated in 2.11.3, the scope of documentation for insulating flanges shall be supplemented by the documents for gaskets and sleeves applied for sealing and electrical isolation of flange connections."

62 **Paras 2.14.3 and 2.14.4** are replaced by the following text:

"2.14.3 Requirements for insulating joints tests.

2.14.3.1 At survey by the Register during insulating joints manufacture, the following type (periodical) and production (acceptance) tests shall be performed.

2.14.3.2 The insulating joints of each type and size are subject to type (periodical) tests in the following scope:

.1 combined internal hydraulic pressure equal to working pressure, and bending moment, with application scheme and testing value determined by design data. Total longitudinal stresses in insulating joint tubes induced by the indicated forces shall be at least 75 % of the yield stress of tube material. After holding under load applied for at least 30 minutes, the insulating joint shall be tested consecutively by methods indicated in 2.14.3.3.3 to 2.14.3.3.6;

.2 combined internal hydraulic pressure equal to working pressure, and torsional moment with application scheme and testing value determined by design data. Total stresses in insulating joint tubes induced by the indicated forces shall be at least 5 % of the yield stress of tube material. After holding under load applied for at least 30 minutes, the insulating joint shall be tested consecutively by methods indicated in 2.14.3.3.3 to 2.14.3.3.6;

.3 cycle life tests based on the assumption that insulating joints shall retain design performance parameters after $105 \times T$ cycles (T is the design service life of the joint in years) by applying internal pressure from 1,0 MPa up to the working pressure with frequency not exceeding 10 cycles/min. Upon completion of the cycle life tests, the internal pressure shall be increased to 1,5 times the design pressure, which shall then be held for at least 30 minutes. Leakage and yielding are not allowed.

.4 fracture strength tests by applying internal hydraulic pressure.

2.14.3.3 The production (acceptance) tests and checks after manufacture for each product shall include the following:

.1 visual examination and measurement including check of overall and end-to-end dimensions of the insulating joint;

.2 the scope of non-destructive testing for welded joints shall comply with 4.3.8, Part I "Subsea Pipelines" of the SP Rules;

.3 the insulating joint shall be subject to strength test with internal hydraulic pressure of 1,5 times the design pressure within at least 2 hours. Leakage and yielding is not allowed;

.4 leak tests of the insulating joints shall be carried out after internal hydraulic pressure strength test. Leak test is carried out with internal pressure at least $0,6 \pm 0,2$ MPa by pneumatic method within at least 30 min. Air bubbles are not allowed;

.5 measurement of resistance of the insulating joint, which shall be at least 5,0 MOhm with DC voltage of 1000 V. This test shall be carried out after tests, specified in 2.14.3.3.3 and 2.14.3.3.4;

.6 dielectric strength test of insulating joints with AC voltage of at least 5000 V, frequency 50 Hz. Creepage current shall not exceed 30,0 mA without breakdown. This test shall be carried out after the tests specified in 2.14.3.3.3 and 2.14.3.3.4;

.7 measurement of thickness and holiday detection for external and internal corrosion-protection coatings.

2.14.3.4 As agreed upon with the Register, the type cycle life tests performed according to 2.14.3.2.3 may be replaced by the production (acceptance) cycle strength fatigue tests by applying internal hydraulic pressure: 40 cycles from 1,0 MPa up to 85 % of the strength test pressure.

2.14.4 Unless indicated otherwise in the RS-approved documentation, materials for sealing and electrical insulation of flanged joints of insulating flanges shall meet the following:

electric resistance: at least 10 kOhm;

ultimate strength: at least 260 MPa;

water absorption by weight: maximum 0,01 %."

63 **Paras 2.15.1.1 and 2.15.1.2** are replaced by the following text:

"2.15.1.1 Polymer compounds (two and multicomponent) for SP under construction or in operation under the RS technical supervision shall be applied according to the technical documentation approved by the Register by the firms, having, as a rule, the Type Approval Certificate (CTO, form 6.8.3), refer to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2).

In case of a single approval of polymer compounds for SP without obtaining type approval, the scheme of technical supervision 2.1M as per Table 1.6.1.2-2 shall be used.

2.15.1.2 Requirements for type approval of polymer compounds shall comply with 1.8.3 to 1.8.5 and 1.8.7. To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of polymer compound shall be subject to testing according to the requirements specified in 2.15.2.

Products with applied thick polymer coatings shall be delivered with the copy of Type Approval Certificate (CTO), certificate (C), document (MC) or document (M)."

64 **Para 2.15.1.3.3** is replaced by the following text:

".3 specifications (firm's procedures and/or standards) for application of polymer compound and necessary testing including type (periodical) and production (acceptance) tests;".

65 **Para 2.15.2.1.** Reference "2.6.1.7" is replaced by "1.8.5".

66 **Para 2.15.3.5** is deleted.

67 **Paras 2.16.1.2 and 2.16.1.3** are replaced by the following text:

"2.16.1.2 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), internal anti-friction coatings shall be applied on pipes in accordance with the RS-approved technical documentation at firms having, as a rule, the Type Approval Certificate (CTO, form 6.8.3) for this type of coating, issued by the Register with regard to the provisions of 1.8.3 to 1.8.5 and 1.8.7.

To obtain the Type Approval Certificate (CTO) (form 6.8.3), the specimens of internal anti-friction coating shall be subject to testing according to the requirements specified in 2.16.3 and 2.16.4.

2.16.1.3 According to the SP Nomenclature (Table 1.6.5.1 and Table 1.6.1.2-2), steel pipes for subsea pipelines with anti-friction coating applied shall be delivered with the copy of Type Approval Certificate (CTO) and certificate (C, C3) or document (MC). In addition, the firm's quality control system shall be surveyed by the Register in accordance with 1.6.3 or 1.6.4.

In case of a single approval of internal anti-friction coating for SP steel pipes without obtaining type approval, the scheme of technical supervision 3.1M as per Table 1.6.1.2-2 shall be used."

68 **Para 2.16.1.5.1** is replaced by the following text:

".1 specifications (firm's procedures and/or standards) for application of internal anti-friction coating and necessary tests including type (periodical) and production (acceptance) tests;".

69 **Para 2.16.1.6** is deleted.

70 **Existing para 2.16.1.7** is renumbered **2.16.1.6**.

71 **Para 2.16.3.1** is replaced by the following text:

"2.16.3.1 These tests are aimed at the RS type approval of internal anti-friction coatings. In such case, the provisions of 1.8.5 may be taken into account. The scope of type approval tests may be amended by the RS as agreed upon with the customer and considering type of transported medium."

72 **Para 2.16.4.2** is replaced by the following text:

"2.16.4.2 The RS technical supervision during application of internal anti-friction coating is carried out in accordance with the requirements of 7.2, Part I "Subsea Pipelines" of the SP

Rules and this Section. General requirements for the RS technical supervision of coated pipe batches shall comply with 2.7.1.4.4."

3 TECHNICAL SUPERVISION DURING CONSTRUCTION OF SUBSEA PIPELINES

73 **Chapter 3.1** is replaced by the following text:

"3.1 GENERAL

3.1.1 Technical supervision during SP construction shall be performed on the basis of the agreement (contract) concluded between the Register and the customer (contractor carrying out SP construction) in accordance with the requirements specified in 1.4.

3.1.2 The firm shall ensure the necessary conditions for performance of the RS technical supervision according to the applicable requirements of Section 2, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision during Construction of Ships, inter alia:

- provide the technical documentation necessary for work, including the documents confirming quality of materials and products, personnel qualification, etc.;
- prepare the items of technical supervision to perform the survey to the extent required;
- ensure safety of surveys;
- provide for the presence of the officials authorized to present the items of technical supervision to surveys and tests;
- timely notify the Register on time and venue of surveys and tests of the items of technical supervision.

If the firm fails to comply with the terms of the technical supervision performance, the Register may refuse to carry out the surveys.

Any offshore/shore-based operations shall be carried out according to the firm's duly approved normative documents which regulate health and environmental protection in compliance with the requirements of the RF supervisory bodies.

3.1.3 Prior to commencement of technical supervision during SP construction, the firm shall be audited for conformity to the requirements of 1.11. Based on the results of the audit, a Report (form 6.3.19) with an Annex (form 6.3.19f) shall be issued or the Certificate of Firm Conformity may be issued (ССП, form 7.1.27, refer to 1.11).

3.1.4 The technical supervision scope and procedure, types of checks, tests and inspections are based on the scope of items and types of technical supervision during SP construction indicated in Table 3.7.1.1, but are not limited to it. Prior to construction, the scope of works shall be agreed between the RS Branch Office carrying out technical supervision during SP construction and the customer with account of the Nomenclature of items of the RS technical supervision of subsea pipelines (refer to 1.6), the requirements of this Section and the scope of approved detailed design documentation.

3.1.5 During SP construction, the RS shall perform technical supervision of the items (including processes and individual works subject to the RS technical supervision) for:

- pipes (including the preliminary applied insulating and weight coatings);
- control of pipeline route design parameters including pre-developed trenches and pits;
- procedures for pipeline assembly/welding (including repair of defective welds);
- technical equipment for pipeline laying and laying procedure;
- non-destructive testing of welded joints;
- control of laying parameters;
- application of insulating coatings to field joints;
- fitting of galvanic anodes and/or cathodic protection;
- fitting of spool pieces;
- setting of valves and inspection of flanged (mechanical) joints;
- pigging and hydraulic tests of the pipeline;
- mounting of automation, alarm and corrosion control systems;
- control of laid pipeline parameters along the route (including the value of a pipeline burial into the seabed).

3.1.6 Detailed construction and process documentation subject to the RS approval shall be developed for each item of technical supervision indicated in 3.1.5.

3.1.7 The RS surveyor performs acceptance of one or several similar items of technical supervision or works completed at the particular stage of construction depending on the construction sequence and other SP construction conditions. Main stages of SP construction shall be completed by issuing the Report (form 6.3.29) unless other RS documents are indicated in Table 3.7.1.1.

3.1.8 Upon agreement with the RS Branch Office, one or several documents elaborated by the firm in compliance with its existing practice may be used: Inspection and Test Plan (refer to 1.3.11 and 1.3.12), Technical Acceptance Book, a standard of the firm for submitting completed works to the Register or another similar document.

3.1.9 The surveys are conducted by the RS surveyor upon submission by the firm's technical control body of the item of technical supervision or completed works together with the documents issued, finally verified and properly prepared for submission to the Register.

3.1.10 The survey is mainly aimed at checking of the quality of the item of technical supervision at a particular stage of manufacture as provided by the production process, and permission for further stages of SP construction.

3.1.11 If nonconformities or deviations from approved documentation are revealed, the surveyor shall demand their elimination and, if necessary, repeated submission of item of supervision to the survey.

3.1.12 Along with surveys of items indicated in 3.1.4 and 3.1.5, the surveyor may conduct periodical inspections not associated with the official presentation by the firm's technical control body, but resulting from the Register's functions on technical supervision at the firm or specified by the SP Rules and other normative documents of the Register, and also stipulated by the contract on technical supervision. Based on results of the inspections, the surveyor may impose the requirements specified in 3.1.11.

3.1.13 The RS technical supervision during SP construction in the Russian offshore and inland water areas is carried out irrespective of the control by the RF supervisory bodies, unless otherwise specified by special agreements."

74 **Para 3.7.1.1.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

75 **Table 3.7.1.1. Item 3.2** is replaced by the following text:

"

3.2 Bottom trenches/pits for buried SP	Compliance with detailed design documentation	Total SP route	R	
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"

76 **Table 3.7.1.1. New item 3.4** is introduced reading as follows:

"

3.4 Shoreline crossing section	Compliance with detailed design documentation	Each crossing	W	
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"

77 **Para 3.7.2.1.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

78 **Para 3.7.4.1.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

4 TECHNICAL SUPERVISION OF SUBSEA PIPELINES IN OPERATION

79 **Para 4.1.1.1** is replaced by the following text:

4.1.1.1 RS activity for technical supervision of SP in operation is based on the classification periodical surveys. Where necessary (including SP accidents or incidents), occasional surveys shall be carried out. General requirements for the RS classification surveys are specified in Section 1.4, Part I "Subsea Pipelines" of the SP Rules."

80 Heading of **para 4.1.2** is replaced by the following text:

"4.1.2 Requirements for classification SP surveys."

81 **Para 4.1.2.1** is replaced by the following text:

4.1.2.1 General.

4.1.2.1.1 Classification surveys of subsea pipelines in operation are regulated by the SP Rules and these Guidelines.

4.1.2.1.2 Among the responsibilities of SP owners/operators is keeping to the dates for periodical surveys and other surveys, as prescribed by the Register, relevant preparation of items for surveys, as well as notifying the Register of any deficiencies, damage, emergencies or repairs to items of the SP Nomenclature that have taken place during the period between the surveys.

SP owner/operator shall notify the Register in advance of the planned repair, conversion or modernization to ensure appropriate supervision by the Register.

4.1.2.1.3 When preparing for survey the organizations and/or persons engaged in SP operation or repair are responsible for arrangement of necessary conditions for RS surveyors to perform surveys safely, submittal of needed information/documents, and rendering assistance to RS surveyors in compliance with applicable provisions of Section 4, Part I "General Provisions" of the Rules for the Classification Surveys of Ships in Service.

4.1.2.1.4 The Register may establish a required scope of technical supervision to check the compliance with the requirements specified in the SP Rules and to determine technical condition of subsea pipelines taking into account its service life and results of previous surveys.

4.1.2.1.5 To ensure continuous monitoring a computer-based registration of Class Status of subsea pipelines under RS technical supervision and dates of their survey is organized at the Register. The Register notifies the SP owners/operators of forthcoming and overdue surveys of SP or parts thereof in compliance with the SP Rules and these Guidelines, and also informs the owners/operators of suspension or withdrawal of class of SP in case of failure to submit it for surveys.

4.1.2.1.6 The RS Branch Offices for supervision of subsea pipelines in operation shall carry out regular operational verification of the following:

validity of classification documents;

terms of periodical classification surveys specified in computer-based registration of SP Class Status (List of SP Survey's Status);

due dates of conditions of class (requirements);

duration of class status for SP under survey;

period of SP class suspension.

4.1.2.1.7 The RS Branch Office for supervision of subsea pipelines in operation shall notify the SP owner/operator before three months on upcoming expiry dates for the following:

classification certificate;

SP submission for periodical surveys;

conditions of class.

4.1.2.1.8 Procedures for withdrawal, suspension and reinstatement of SP class shall comply with 1.3.9 to 1.3.11, Part I "Subsea Pipelines" of the SP Rules.

4.1.2.1.9 The RS Branch Office for supervision of subsea pipelines in operation shall keep updated the database of the computer-based registration of RS-classed subsea pipelines (SP registration) in accordance with the requirements of the Register internal procedures.

4.1.2.1.10 The requirements for SP examinations and technical condition inspections are developed by the owner/operator. The requirements of the RF supervisory bodies in the field of industrial safety and the standards of firms/organizations associated with SP owners/operators shall be taken into account for the subsea pipelines laid within inland waters/Russian shelf water areas.

The SP examinations and technical condition inspections shall be performed under the RS technical supervision.

4.1.2.1.11 The SP surveys shall be aimed at:

- .1 general external in-water studies of SP and its route;
- .2 SP in-line inspection;
- .3 technical condition inspection of SP or its sections (SP fault detection):
which requires in-line inspection results to be specified;
for which in-line inspection is impossible or impractical.

4.1.2.1.12 The classification survey schedule shall comply with 4.1.4 and the RS-approved operational documentation (refer to 4.1.1.2).".

82 **Para 4.1.5** is replaced by the following text:

"4.1.5 Documents issued by the Register based on the results of surveys.

4.1.5.1 Based on the results of the annual/intermediate/occasional/special survey of the SP, the Register shall issue Report (form 9.9.3) which in case of satisfactory results of the survey confirms the validity of Classification Certificate (form 9.9.2).

4.1.5.2 Upon satisfactory results of the special or initial survey of the SP, the Register issues the Classification Certificate of Subsea Pipeline (form 9.9.2) being valid (if annually confirmed) until the next special survey.

4.1.5.3 To confirm the survey performance and satisfactory technical condition at the moment of SP survey or repair, the survey results recorded in the relevant reports and notes accepted and verified by the Register in due order and copies of issued RS documents shall be kept in the RS Branch Offices for supervision of subsea pipelines in operation in the SP file according to the RS internal procedures.".

83 **Para 4.2.1.1.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

84 **Para 4.2.1.7.** The reference "Table 1.6.1" is replaced by "Table 1.6.5.1".

85 **Para 4.2.5.1.4.** The reference "2.6.1.3, 2.6.1.5, 2.6.1.6 and 2.6.1.7" is replaced by "1.8.3 to 1.8.6".

86 **Para 4.2.5.2.11.** The first paragraph is replaced by the following text:

"4.2.5.2.11 Production (acceptance) tests shall include at least the following:".

87 **Para 4.2.6.2.** The reference "2.6.1.3, 2.6.1.5, 2.6.1.6 and 2.6.1.7" is replaced by "1.8.3 to 1.8.6".