

GUIDELINES

ON TECHNICAL SUPERVISION DURING CONSTRUCTION AND OPERATION OF SUBSEA PIPELINES

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RULE CHANGE NOTICE

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GUIDELINES ON TECHNICAL SUPERVISION DURING CONSTRUCTION AND OPERATION OF SUBSEA PIPELINES

The present Rule Change Notice to the Guidelines on Technical Supervision during Construction and Operation of Subsea Pipelines (hereinafter — RCN) has been approved in accordance with the established approval procedure and contains information on amendments, except for editorial amendments. RCN amendments come in force on 1 July 2025.

REVISION HISTORY

GUIDELINES ON TECHNICAL SUPERVISION DURING CONSTRUCTION AND OPERATION OF SUBSEA PIPELINES

Item	Applicability	Description	Remarks
Para 1.1.2	Subsea pipelines	Term "oil-and-gas production unit" has been replaced for "oil-and-gas product unit"	
Para 1.2.1	Subsea pipelines	New term definition "Subsea connecting point of subsea pipeline" has been introduced	
Para 1.6.2	Subsea pipelines	The para has been renamed	
Para 1.6.2.5 (new)	Subsea pipelines	Requirements for the prototype and pilot specimens of products for SP have been introduced	
Para 1.6.3.6 (new)	Subsea pipelines Manufacturers of materials for subsea pipelines	Requirements for the materials supply by manufacturers having CKK1 have been introduced	
Para 1.10.6	Subsea pipelines Testing laboratories	Requirements for recognition of test laboratories have been introduced	
Chapter 1.11	Recognition of firms Firms engaged in the activities with codes: 24003000, 24004000, 24005000, 24006000	The chapter has been renamed	
Para 1.11.2	Subsea pipelines Firms engaged in the activities with codes: 24003000, 24004000, 24005000, 24006000	Requirements for audits of firms have been amended	

Item	Applicability	Description	Remarks
Para 2.4.3.2 and Table 2.4.3.2	Subsea pipelines Technical supervision during manufacture of pipes	Requirements for the specimens cutting- out positions and bend tests of weld joints have been amended	
Para 2.7.1.2.3	Subsea pipelines Materials for corrosion protection	Requirements for materials of corrosion- protection have been amended	
Table 2.7.1.4.7	Subsea pipelines Corrosion protection	Requirements for the Inspection and Test Plan during application of corrosion- protection coating have been amended	
Para 2.7.1.4.8	Subsea pipelines Corrosion protection	Requirements for polyurethane coatings have been amended	
Para 2.7.2.4.2.4	Subsea pipelines Sleeves for corrosion protection	Requirements for checks of parameters during sleeves manufacture have been amended	
Para 2.7.3.3.3.2	Subsea pipelines Galvanic anodes	Requirements for checks of galvanic anodes during RS survey have been amended	
Para 2.9.4.1	Subsea pipelines Ballast weights	Requirements for tests of concrete ballast weights during manufacture have been amended	
Para 2.11.2.6 (new)	Subsea pipelines Flange materials	Requirements for the hardness of forgings for flanges has been introduced	
Paras 2.11.3.1.11, 2.11.4.4, 2.13.4.2	Subsea pipelines Steel flange Steel fittings	Term "type (test) specimen" has been replaced for the "type (pilot) specimen"	
Table 2.11.4.2	Subsea pipelines Flange materials	Requirements for flanges to be tested have been amended	

Item	Applicability	Description	Remarks
Table 2.12.4.2	Subsea pipelines Steel bends	Requirements for the scope of tests and inspections of bends have been amended	
Table 2.12.4.6	Subsea pipelines Steel bends	Requirements for mother pipes for bends have been amended	
Para 3.1.7	Subsea pipelines Subsea pipeline construction	Requirements for the reporting documents to be issued by the results of RS acceptance of the main stages during SP construction have been amended	
Para 3.5.1.3	Subsea pipelines Subsea pipeline route	References to the Rules of Classification and Construction of Subsea Pipelines have been amended	
Table 3.7.1.1, Item 12	Subsea pipelines Subsea pipeline construction Insulating coating of welded joints	Requirements for insulating coating of welded joints during RS technical survey of SP construction have been amended	
Para 3.7.6.5 (new)	Subsea pipelines Subsea pipeline construction Contractor's reporting (as-built) documentation	Procedure for the review of contractor's reporting (as-built) documentation for SP construction has been introduced	
Para 4.1.2.1.11.3	Subsea pipelines	Requirements for the technical condition inspection of SP have been amended	
Para 4.1.3	Subsea pipelines	Definition of fault detection of subsea pipelines has been amended	
Table 4.1.4.1	Subsea pipelines	Items of survey and Requirements for the scope of periodical classification surveys of subsea pipelines have been amended	

Item	Applicability	Description	Remarks
Para 4.2.2.3 (new)	Subsea pipelines As-built documentation on repair results	Scope of as-built documentation on SP repair results to be reviewed by RS has been specified	
Para 4.2.5.2.4	Subsea pipelines Composite reinforcing clamps	Requirements for the fitting of clamps during SP repair have been amended	

1 GENERAL

1.1 SCOPE OF APPLICATION

Para 1.1.2 is amended as follows:

"**1.1.2** During survey of subsea pipelines and their materials and products, in addition to the requirements of these Guidelines, the Rules for the Classification and Construction of Sea-Going Ships (hereinafter referred to as "the RS Rules"), the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships (hereinafter referred to as "the Rules for Technical Supervision during Construction of Ships"), the Rules for the Oil-and-Gas Equipment of Floating Offshore ~~Oil-and-Gas Production Units~~ Oil-and-Gas Product Units, Mobile Offshore Drilling Units and Fixed Offshore Platforms (hereinafter referred to as "the Rules for the Oil-and-Gas Equipment"), Recommendations for Design, Construction and Operation of Subsea Pipelines (hereinafter referred to as the "SP Recommendations") and also the standards and rules of national technical supervision bodies, as appropriate, shall be followed."

1.2 TERMS, DEFINITIONS AND ABBREVIATIONS

Para 1.2.1. After the definition "Technical supervisory bodies", a new definition "Subsea connection point of subsea pipeline" is introduced reading as follows:

"Subsea connection point of subsea pipeline means a subsea pipeline connection point for the linear part of the offshore subsea pipeline using a spool piece to branch pipes of fixed offshore platforms, single point moorings, and subsea manifolds."

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

Para 1.6.2 is renamed as follows:

"**1.6.2** Survey of prototypes, specimens of serial products and materials."

New para 1.6.2.5 is introduced reading as follows:

"**1.6.2.5** Technical supervision of ~~test~~ pilot specimens of single products and prototypes of products shall be carried out in compliance with the requirements of 1.5 and 1.6, Part IV of the Rules for Technical Supervision during Construction of Ships."

New para 1.6.3.6 is introduced reading as follows:

"**1.6.3.6** If a Recognition Certificate for Manufacturer (СПИ, form 7.1.4.1) is available, the manufacturer having the CKK1 Certificate may supply materials with RS-certified manufacturer's certificates as per type 3.2 EN 10204, the scope presented in the information certificates shall be RS-approved."

1.10 RECOGNITION OF TESTING LABORATORIES

Para 1.10.6 is amended as follows:

"1.10.6 The Register recognition of the testing laboratory is confirmed by drawing up a Recognition Certificate of Testing Laboratory (form 7.1.4.3) to be issued considering 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 and 5.4, Part I of the SP Rules".

Chapter 1.11 is renamed as follows:

"1.11 AUDIT-RECOGNITION OF FIRMS' (ORGANIZATIONS) CONFORMITY"

Para 1.11.2 is amended as follows:

"1.11.2 In addition to the requirements specified in 1.11.1, firms ~~may voluntarily~~ shall 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."

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

2.4 STEEL PIPES FOR SUBSEA PIPELINES

Para 2.4.3.2 and Table 2.4.3.2 are amended as follows:

"2.4.3.2 The scope of tests during manufacture of pipes and the sampling methods shall meet the requirements provided in Table 2.4.3.2. In general, one pipe from a batch of 50 pipes shall be selected for testing.

The batch shall consist of pipes of the same cast, steel grade, heat treatment mode, diameter and wall thickness, subject the requirements of 4.2.3.6.2, Part I of the SP Rules.

Table 2.4.3.2

Scope of tests for steel pipes approval					
Type of tests ¹	Position of samples and specimens cutting-out	Quantity			Notes
		casts/pipes/cast samples	specimens of a pipe	Total number of specimens	
Chemical analysis (4.3.4)	From one end	1/50/1	1	1	Complete metal analysis, including microalloying and ladle sample
Tensile tests of base metal (4.3.2)	From one end, transverse	1/50/1	2	2	To be determined: R_{eH} , R_m , A_5
Tensile tests of welding joint (4.3.2)	From one end, transverse	1/50/1	2	2	R_m shall be determined
Bending impact test of base metal (4.3.3)	From one end, transverse	1/50/1	3	3	Tests at temperature corresponding to minimum operating temperature ²
Bending impact test of welding joint (4.3.3, 5.2.2.3.3)	From one end, transverse	1/50/1	12	12	Tests at temperature corresponding to minimum operating temperature ²

Type of tests ¹	Position of samples and specimens cutting-out	Quantity			Notes
		casts/pipes/cast samples	specimens of a pipe	Total number of specimens	
Determination of fracture type according to Drop-weight tear test (DWTT) ³ (4.3.9.2 and Section 1, Appendix 4)	From one end, transverse	1/50/1	2	2	Tests at temperature corresponding to minimum operating temperature ²
Bend test for base metal and welding joint (4.3.9.4, 5.2.2.3.2 and Section 3, Appendix 4)	From one end, transverse	1/50/1	3	3	Face-bend, root-bend (for welded joint) and side-bend testing Normal from both sides and side bend testing
Metallography and Vickers hardness (4.3.5)	From one end, transverse	1/50/1	3	3	For one section: base metal, weld and HAZ
Non-destructive testing (4.3.8)	Throughout the length and edges	1/50/50	the whole pipe	—	—
Hydraulic pressure test (4.3.7)	—	1/50/50	the whole pipe	—	—
Remanent magnetization (4.3.10)	At both ends	1/50/1	4	4	Not more than 2 mT (20 G)

¹ According to paras of Part I "Subsea Pipelines" of the SP Rules.
² Test temperature shall be assigned according to 4.3.3.6, Part I "Subsea Pipelines" of the SP Rules. When the data of the minimum operating temperature is missing, tests shall be carried out at temperature equal to – 40 °C.
³ Except pipes for L to L2 pipelines as well as for any pipes less than 500 mm in diameter.

2.7 MATERIALS FOR CORROSION PROTECTION

Para 2.7.1.2.3 is amended as follows:

"2.7.1.2.3 Documentation approved by the Register shall include technical requirements for supplied materials for coating application (or references to specifications/standards for their supply).

By the request of material suppliers, the Register is able to carry out type approval of coating materials under code 23008070 according to the applicable requirements of 2.7.1.1."

Table 2.7.1.4.7 is amended as follows:

Table 2.7.1.4.7

Inspection and Test Plan during application of corrosion-protection coating

Process or check procedure	Parameter to be checked	Test/inspection intervals	Type of inspection ¹	Note
1 Incoming inspection				
1.1 Incoming inspection of coating materials	Certificate data and compliance with requirements of detailed design documentation	Each batch	R	
1.2 Identification of pipes	Full marking	Each pipe	R	
1.3 Surface quality of pipes	Damages and dirt	Each pipe	R	
2 Preparation of pipe surface				
2.1 Preheating of pipes prior to abrasive blasting	Pipe surface temperature	2 times per shift	R	
2.2 Inspection of pipes prior to coating	Surface defects	Each pipe	M	
	Wall thickness at the defect grinding area	Defect grinding area	M	
	Quality of external surface treatment	For each pipe	R	
	Roughness, dedusting degree, quality, salt content	Every 4 hours	R	

Process or check procedure	Parameter to be checked	Test/inspection intervals	Type of inspection ¹	Note
3 Application and quality check				As per 2.7.1.4.5 of these Guidelines
3.1 Checking application of primer, adhesive and top coating	Thickness of coating layers	Layer-by-layer for first pipe of the batch	W	
3.2 Checking the adhesive and impact strength	Adhesion and impact strength at temperature of +20 °C	2 pipes per shift	R	
3.3 Continuity test	Coating continuity	Each pipe	W	
3.4 Remanent magnetization	Remanent magnetization	Each pipe on both ends	R	
3.5 Appearance	Coating appearance	Each pipe	R	
3.6 Coating thickness	Coating thickness	2 pipes per shift Each 10 th pipe	R	
3.7 Coating repair	Coating appearance	Each pipe repaired	R	
3.8 Marking the pipe coatings	Marking	Each pipe	M	
4 Issue of Firm's Certificate		Each batch	R	
5 Issue of the RS Certificate/endorsement of the Firm's Certificate		Each batch	H	

¹ For description of type of tests, refer to Table 1.3.11.

Para 2.7.1.4.8 is amended as follows:

"**2.7.1.4.8** Sizes of coating defects subject to repair according to the procedure agreed with the Register, unless otherwise specified in the documentation approved by the Register, shall comply with the requirements of the following standards:

ISO 21809-1: for polyolefin coatings (PE and PP);

ISO 21809-2: for epoxy coatings;

EN 10290: for polyurethane coatings.

The total number of defects repaired shall not exceed 1 defect per one meter of pipe length. If the size or number of defects exceed the permissible values, pipe coating shall be removed and reapplied."

Para 2.7.2.4.2.4 is amended as follows:

".4 maximum heat shrink stress in longitudinal direction (as agreed upon with the Register);"

Para 2.7.3.3.3.2 is amended reading as follows:

".2 monitoring of weight and dimensions for all galvanic anodes manufactured, including checking the possibility of fitting a bracelet galvanic anode on a pipe mock-up for 5 % of galvanic anodes per batch;"

2.9 BALLAST WEIGHTS

Para 2.9.4.1 is amended as follows:

"**2.9.4.1** The scope of tests of a batch comprising not more than 50 concrete ballast weights manufactured within a single shift shall be as follows:

compression strength test;

water absorption test;

concrete surface quality check;

check of concrete density according to design data;
 check of geometrical parameters and weight;
test of lugs for lifting with not less than double load."

2.11 STEEL FLANGES

New para 2.11.2.6 is amended as follows:

"2.11.2.6 The hardness of forgings for the manufacture of flanges shall be not more than 300 HV, and not more than 250 HV for flanges of L2 class pipelines."

Para 2.11.3.1.11 is amended as follows:

".11 requirements for scope and methods of testing of type (~~test pilot~~) specimen and specified during manufacture;"

Table 2.11.4.2 is amended as follows:

"Table 2.11.4.2

Scope of flange tests

Type of test and inspection	SP operational reliability level			Acceptance criteria
	0 and 1	2	3	
Chemical composition	T, 1	T, 1	T, 1	Ladle sample and finished product as per specifications
Tensile testing of the base metal on transverse specimens (base metal parameters to be determined: R_m , $R_{10.5}$, $R_{p0.2}$, A_5)	T, 1	T, 1	T, 1	As per specifications, compliance with the strength class Non-straightened cylindrical specimens
Impact, base metal (and welded joint, if applicable) for wall thickness more than 5 mm	T, 1	T, 1	T, 1	Temperature $T_p - 10$ °C, impact energy for both linear pipes of appropriate strength class, correction proportional to the length of specimens
Hardness on transverse sections	—	T, 1	—	Not more than 250 HV10
Surface hardness	—	T, 1	—	Not more than 250 HV10
Weldability (for flanges welded by a girth weld and for external welded rings of swivel flanges)	T	T	T	As for the base metal
Metallography	T	T, 1	T	The maximum grain size in the base metal and weld area — 7
Hydrogen cracking	—	T	—	CSR ≤ 2 %, CLR ≤ 15 %, CTR ≤ 5 %
Stress-corrosion tests	—	T	—	Absence of cracks and tears on the extended surface
Pitting corrosion (for stainless steel only)	T	T	T	Weight loss of 4,0 g/m ²
Visual examination	T, M	T, M	T, M	As per specifications
100 % magnetic particle/dye-penetrant testing	T, M	T, M	T, M	Readings up to 3 mm in the circumferential direction
100 % ultrasonic testing in the edge zone of at least 50 mm wide	T, S	T, S	T, S	As accepted for linear pipes. For requirements of level 2, delamination area is limited to 100 mm ²
Repair	M	M	M	As per specifications
Internal diameter at flange ends	M	M	M	As per specifications
Deviation from the round shape at flange ends	M	M	M	Not more than 1,5 %
Dimensions according to specifications	M	M	M	As per specifications
Treatment of flange ends	M	M	M	As per specifications
Surface condition	M	M	M	As per specifications
Hydraulic tests	T	T	T	With no cracks, tears and visible distortions, test pressure as per design documentation

Type of test and inspection	SP operational reliability level			Acceptance criteria
	0 and 1	2	3	
Symbols: T — on test flange; M — on all manufactured flanges; 1 — on one single flange from the batch; S — on the first ten flanges from the batch and then in general scope of 10 %, if no defects are detected (otherwise, 100 % tests).				

Para 2.11.4.4 is amended as follows:

"2.11.4.4 The RS type approval for the type (test pilot) flange based on results of tests specified in Table 2.11.4.2 may be applied to production batches of flanges that differ from test flange as specified in Table 2.11.4.4."

2.12 STEEL BENDS

Table 2.12.4.2 is amended as follows:

Table 2.12.4.2

Requirements for scope of tests and inspections of bends

Type of test and inspection	SP operational reliability level			Acceptance criteria
	0, 1	2	3	
Chemical composition	P	P	P	As for linear pipes, unless otherwise agreed with the Register
Tensile testing (parameters of base metal to be determined — R_m , $R_{0.5}$, $R_{p0.2}$, A_5 , weld joint parameter to be determined — R_m)	T	T	T	As for linear pipes, non-straightened cylindrical specimens are allowed
Impact test for wall thickness t , in mm, of more than 5 mm	—	T	T	Test temperature $T_p - t$, mm + 10 °C but not exceeding $T_p - 10$ °C. Impact energy for both metal of linear pipes, correction is proportional to the thickness of specimens
Hardness on transverse sections	T	T	T, S	For requirements of level 1 and 3 — not more than 300 HV10 or equivalent when using the other method. For level 2 requirements — not more than 250 HV10
Surface hardness	T, M	T, M	T, M	The value is similar to that on transverse sections. Average values along the manufactured branch areas shall not deviate from the appropriate average values on the prototype branch by more than equivalent 30 HV10
Metallography	T	T	T	The maximum grain size in the base metal and weld area — 7
Hydrogen cracking	—	T(P)*	—	CSR ≤ 2 %, CLR ≤ 15 %, CTR ≤ 5 %
Stress-corrosion tests	—	T(P)*	—	Absence of cracks and tears on the extended surface
Drop weight tests at wall thickness t , in mm, of more than 7,5 mm	—	T, S	T, S	80 % fibre component in the fractures at T_p for full thickness specimens, or at $[T_p - 20/n(t/19 \text{ mm})]$ °C for specimens 19 mm thick from the wall above 19 mm thick
CTOD at wall thickness above 7,5 mm	—	T, S	T, S	As for linear pipes
Face-bend of weld joints from both sides of the weld	P	P	P	At least 120°
Visual testing	T, M	T, M	T, M	As per specifications
Ultrasonic or radiographic weld testing	P	T, M	T, M	As for linear pipes

Type of test and inspection	SP operational reliability level			Acceptance criteria
	0, 1	2	3	
100 % ultrasonic testing of the weld made by high-frequency current welding (longitudinal defects)	—	T, M	—	A signal corresponds to notch with the depth of 10 % thickness
Magnetic particle/dye-penetrant testing of bend ends in the area 100 mm wide	M	M	M	Delaminations up to 6 mm in the circumferential direction
Ultrasonic testing of the area 50 mm wide around bend butt ends	M	M	M	Delaminations up to 6 mm in the circumferential direction or of area up to 100 mm ²
Magnetic particle/dye-penetrant testing of the metal of the extended bend part	T, M	T, M	T, M	Readings up to 3 mm
Ultrasonic testing of the extended bend part (transversal defects)	—	T, M	T, M	As accepted in specifications
100 % ultrasonic testing of the pipe body	—	T, M	T, M	As accepted for linear pipes. For requirements of level 2, delamination area is limited to 100 mm ²
100 % ultrasonic testing weld area 50 mm wide	—	T, S	—	Length up to 6 mm, max. three per 1 m length
Remanent magnetization of bend ends	M	M	M	Remanent magnetization shall not exceed 2 mT (20 G)
Repairs	M	M	M	As per specifications
Wall thickness	T, M	T, M	T, M	Generally minimum thickness is equal to nominal thickness of linear pipes, and maximum thickness is as accepted in specifications
Diameter of bend body D	M	M	M	As per specifications or as for linear pipes
Diameter of bend ends	M	M	M	As per specifications or as for linear pipes
Out-of-roundness of bend ends	M	M	M	Not more than 1,5 % or as for linear pipes
Out-of-roundness of bend body	M	M	M	Not more than 2,5 % at $r_b \geq 5D$, not more than 3 % at $3D < r_b < 5D$
Linear dimensions including length of straight parts	M	M	M	± 30 mm
Bending angle	M	M	M	$\pm 0,75^\circ$
Bending radius r_b	S	S	S	$\pm 1 \% r_b$ for $r_b \geq 1,0$ m, but not more than ± 10 mm for $r_b < 1,0$ m
Squareness of ends edges	M	M	M	Not more than 1,6 mm
Out-of-plane position of bend ends	M	M	M	$\pm(\text{Bending angle} \times 10) / 90$, mm, but not more than 5 mm
Waving on internal surface of bend	M	M	M	Maximum height of waving not more than 1 % of actual outside bend diameter, ratio of distance between adjacent waves to their height no less than 25
Treatment of bend ends	M	M	M	As per specifications
Surface condition	M	M	M	As per specifications
Hydraulic tests	T, M	T, M	T, M	With no cracks, tears and visible distortions, test pressure according to design documentation
Gauging of bend bore	T, M	T, M	T, M	According to 2.6.5.3.6
Symbols: P — test results for pipe billets are used. Otherwise, the test bend shall be tested; T — on test bend only; M— on all manufactured bends; S — on some manufactured bends (depending on manufacture stability indicators as agreed upon with the Register); * — for cold bends.				

Table 2.12.4.6 is amended as follows:

"Table 2.12.4.6

Number, orientation and position of specimens

Position	Test
Base metal of the straight end ¹	Tension, impact, hardness on transverse sections
Weld of the straight end ¹	Tension across the weld, impact, hardness on transverse sections, metallography, bending on a mandrel
Start and end heating areas, base metal from the external side of the bend ²	Tension, impact, hardness on transverse sections, metallography
Start and end heating areas, weld ²	Transverse tension, impact
Base metal of the bend from the external side of the bend	Tension, impact, hardness on transverse sections, drop weight test ³ , CTOD ³ , hydrogen cracking ⁴ and stress-corrosion ⁴
Base metal of the bend from the internal side of the bend	Tension, impact, hardness on transverse sections
Metal of the bent weld	Tension across the weld, impact, hardness on transverse sections, metallography, bending on a mandrel, CTOD ³ , hydrogen cracking ⁴ and stress-corrosion ⁴
¹ No tests after bending are required if test results for mother pipe are available and branch ends are not subject to heat treatment during and after bending. ² If the whole length of the mother pipe is subject to the uniform-induction heating, or heat treatment of the branch after bending took place, the transient areas are considered to be absent, unless otherwise provided in specifications. ³ As required by the Register. ⁴ For requirements of level 2 only. ⁵ Spiral welded pipes are subject to additional tests as required by the Register.	

2.13 STEEL FITTINGS

Para 2.13.4.2 is amended as follows:

"2.13.4.2 The scope of tests for type (test-pilot) fittings and fittings during manufacture shall comply with Table 2.13.4.2. If a number of flanges to be manufactured is less than 50, the type approval tests and test during manufacture tests may be combined."

3 TECHNICAL SUPERVISION DURING CONSTRUCTION OF SUBSEA PIPELINES

3.1 GENERAL

Para 3.1.7 is amended reading as follows:

"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 6-3-29-9.9.4) unless other RS documents are indicated in Table 3.7.1.1."

3.5 SUBSEA PIPELINE ROUTE

Para 3.5.1.3 is amended as follows:

"3.5.1.3 The following shall be separately surveyed by the Register:
 profile of a trench for laying the subsea pipelines buried into the seabed considering the requirements of ~~8.2.10~~ 8.2.1.10 and ~~8.2.11~~ 8.2.1.11, Part I "Subsea Pipelines" of the SP Rules;
 design of crossings (transitions) with the preliminary laid SP and cables considering the requirements of 8.2.3, 8.2.4 and ~~8.2.12~~ 8.2.1.12, Part I "Subsea Pipelines" of the SP Rules."

3.7 INSTALLATION, LAYING AND TESTS OF SUBSEA PIPELINES

Table 3.7.1.1. Item 12 is amended as follows:

12 Insulating coating of welded joints:				
12.1 Preparation of pipe surface in way of the welded joints	Compliance with detailed design documentation	Each pipe	M	
12.2 Application of coatings and/or fitting of sleeves	Compliance with detailed design documentation	Each pipe	M	
<u>12.3 Inspection of quality of coating application and / or sleeve fitting. Visual examination</u>	Compliance with detailed design documentation	Each pipe	W	
<u>12.4 Monitoring of thickness, adhesion, and impact resistance</u>	Compliance with detailed design documentation	<u>1st joint and each subsequent 50th joint and every joint after the 50th one</u>	W	
<u>12.5 Repair of coatings and sleeves, if required</u>	<u>Compliance with detailed design documentation</u>	<u>Each pipe to be repaired</u>	<u>W</u>	<u>Defects of sleeves and coating with area of not more than 100 cm² are subject to repair</u>

New para 3.7.6.5 is introduced reading as follows:

"3.7.6.5 The review of the contractor's reporting (as-built documentation) (specified in the technical supervision contract), upon agreement with the RS Head Office, is carried out by the RS branch office that carries out technical supervision over the SP construction."

4 TECHNICAL SUPERVISION OF SUBSEA PIPELINES IN OPERATION

4.1 SURVEYS OF SUBSEA PIPELINES IN OPERATION

Para 4.1.2.1.11.3 is amended as follows:

"3 technical condition inspection of SP or its section (~~SP fault detection~~), which (if necessary):
 require in-line inspection results to be specified;
 for which in-line inspection is impossible or impractical;"

Para 4.1.3 is amended as follows:

"4.1.3 Fault detection of subsea pipelines.

The fault detection means SP survey by the Register as per 4.1.2.2 and 4.1.2.3 for determining the types of SP defects with the instrumental determination of defect parameter values, the recording of these parameters and assessment of the acceptability (unacceptability) of further SP operation with the defects revealed. The fault detection for SP shall be carried out by the organization recognized by the Register and witnessed by the RS surveyors".

Table 4.1.4.1 is amended as follows:

"Table 4.1.4.1

Scope of periodical classification surveys of subsea pipelines

- O — examination with access, opening-up or dismantling, and also use of means for locating of buried SPs, where necessary;
- C — external examination;
- M — measurements (of thicknesses, insulation resistance, global and local defects dimensions, etc.);
- H — pressure tests;
- P — operation tests (of drives, alarms, etc.);
- E — check of the availability of valid documents and/or brands of instrumentation calibration.

SP item to be surveyed	SP surveys																			
	1st annual	2d annual	Intermediate	4th annual	1st special	1st annual	2d annual	Intermediate	4th annual	2d special	1st annual	2d annual	Intermediate	4th annual	3rd special	1st annual	2d annual	Intermediate	4th annual	4th special
SP service life, years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20, etc.
1 SPs buried into seabed soil	Refer to Note 1																			
1.1 In-line inspection including that on the item specified in 1.11, 1.13, 1.14			M ¹ E		M ¹ E			M ¹ E		M ¹ E			M ¹ E		M ¹ E			M ¹ E		M ¹ E
1.2 Hydraulic tests including those on items specified in 1.3, 1.4, 1.5, 1.11, 1.13, 1.14					OH ² E					OH ² E					OH ² E					OH ² E
1.3 Valves	O	O	OM ³ EP	O	OM ³ EP	O	O	OM ³ EP	O	OM ³ EP	O	O	OM ³ EP	O	OM ³ EP	O	O	OM ³ EP	O	OM ³ EP
1.4 Flanged joints	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E
1.5 Fittings/bends/spool pieces	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E
1.6 Electrochemical protection	O	O	OM ⁴ E	O	OM ⁴ E	O	O	OM ⁴ E	O	OM ⁴ E	O	O	OM ⁴ E	O	OM ⁴ E	O	O	OM ⁴ E	O	OM ⁴ E
1.7 Ballasting	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1.8 Alarm and automatic control systems	O	O	OP	O	OP	O	O	OP	O	OP	O	O	OP	O	OP	O	O	OP	O	OP
1.9 Corrosion-protection coatings including coatings of welded joints areas	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E
1.10 Thermal insulation coatings	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1.11 Electrical insulating joints and flanges	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E
1.12 General survey of SP route	C	C	CM ⁶ E	C	CM ⁶ E	C	C	CM ⁶ E	C	CM ⁶ E	C	C	CM ⁶ E	C	CM ⁶ E	C	C	CM ⁶ E	C	CM ⁶ E
1.13 Shelter, riser-Subsea connecting points and/or SP shore approach	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E
1.14 Risers/standpipes	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E
1.15 SP position at the route, SP burial depth	O	O	OM ⁸ E	O	OM ⁸ E	O	O	OM ⁸ E	O	OM ⁸ E	O	O	OM ⁸ E	O	OM ⁸ E	O	O	OM ⁸ E	O	OM ⁸ E
1.16 Verification of transported medium parameters	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹
1.17 Pig launchers and pig traps	Refer to Note 3																			
2 Unburied SPs	Refer to Note 2																			
2.1 In-line inspection including that on the item specified in 2.13, 2.14			M ¹⁰ E		M ¹⁰ E			M ¹⁰ E		M ¹⁰ E			M ¹⁰ E		M ¹⁰ E			M ¹⁰ E		M ¹⁰ E
2.2 Hydraulic tests including those on items specified in 2.3, 2.4, 2.5, 2.13, 2.14					OH ² E					OH ² E					OH ² E					OH ² E

SP item to be surveyed	SP surveys																			
	1st annual	2d annual	Intermediate	4th annual	1st special	1st annual	2d annual	Intermediate	4th annual	2d special	1st annual	2d annual	Intermediate	4th annual	3rd special	1st annual	2d annual	Intermediate	4th annual	4th special
SP service life, years	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20, etc.
2.3 Valves	O	O	OM ³ EP	O	OM ³ EP	O	O	OM ³ EP	O	OM ³ EP	O	O	OM ³ EP	O	OM ³ EP	O	O	OM ³ EP	O	OM ³ EP
2.4 Flanged joints	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E
2.5 Fittings/bends/spool pieces	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E	C	C	CM ³ E	C	CM ³ E
2.6 Electrochemical protection	O	O	OM ⁴ E	O	OM ⁴ E	O	O	OM ⁴ E	O	OM ⁴ E	O	O	OM ⁴ E	O	OM ⁴ E	O	O	OM ⁴ E	O	OM ⁴ E
2.7 Ballasting	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.8 Alarm and automatic control systems	O	O	OP	O	OP	O	O	OP	O	OP	O	O	OP	O	OP	O	O	OP	O	OP
2.9 Corrosion-protection coatings including coatings of welded joints areas	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E
2.10 Thermal insulation coatings	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
2.11 Electrical insulating joints and flanges	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E	C	C	CM ⁵ E	C	CM ⁵ E
2.12 General survey of route	C	C	CM ⁶ E	C	CM ⁶ E	C	C	CM ⁶ E	C	CM ⁶ E	C	C	CM ⁶ E	C	CM ⁶ E	C	C	CM ⁶ E	C	CM ⁶ E
2.13 Shelter, riser Subsea connecting points and/or SP shore approach	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E
2.14 Risers/standpipes	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E	C	C	CM ⁷ E	C	CM ⁷ E
2.15 Determination of SP spatial position on seabed soil and free spans	C	C	CM ¹¹ E	C	CM ¹¹ E	C	C	CM ¹¹ E	C	CM ¹¹ E	C	C	CM ¹¹ E	C	CM ¹¹ E	C	C	CM ¹¹ E	C	CM ¹¹ E
2.16 Measurements of thicknesses and local defects at sections without in-line inspection			OM ¹⁰ E		OM ¹⁰ E			OM ¹⁰ E		OM ¹⁰ E			OM ¹⁰ E		OM ¹⁰ E			OM ¹⁰ E		OM ¹⁰ E
2.17 Verification of transported medium parameters	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹	M ⁹
2.18 Pig launchers and pig traps	Refer to Note 3																			
¹ measurements of defect dimensions according to 4.1.2.3; ² hydraulic tests shall be carried out after repairs, modification, modernization and expiration of the estimated service life, in case of assignment/confirmation/reassignment of class when the SP fault detection is not performed (incomplete performance); ³ measurements of defect dimensions in non-destructive testing (considering accessibility); ⁴ measurements according to 4.1.2.3.27.1, 4.1.2.3.27.2 and 4.1.2.3.27.5; ⁵ measurements according to 4.1.2.3.27.3 and 4.1.2.3.27.4, or measurements of coating thicknesses in accessible locations; ⁶ measurements according to 4.1.2.2.1; ⁷ fault detection as agreed with the Register considering accessibility; ⁸ measurements of SP burial into seabed soil and according to 4.1.2.2.5 and 4.1.2.2.8; ⁹ data is provided by operator/owner according to 4.1.3.3; ¹⁰ methods of defects measurements (in-line inspection or external fault detection) are agreed with the Register; ¹¹ measurements according to 4.1.2.2.5 and 4.1.2.2.8.																				
Notes : 1. Items of buried SPs specified in 1.3 — 1.7, 1.9 — 1.11, 1.13 shall be surveyed at unburied sections or in a trench without backfilling, or when protective soil layer is removed (for repair, maintenance, etc.). 2. Items of unburied SPs specified in 2.9 and 2.10 shall be surveyed considering their accessibility and design, or during repairs or maintenance. 3. The scope of periodic classification surveys of pig launchers and pig traps shall comply with 2.27.1 and Table 10.2.7, Part I of the Rules for the Oil-and-Gas Equipment.																				

4.2 REPAIRS OF SUBSEA PIPELINES

New para 4.2.2.3 is introduced reading as follows:

"**4.2.2.3** As-built documentation issued based on the results of repair work or SP conversion shall be sent for consideration to the RS. The scope of the as-built documentation, taking into account the type and methods of repair work, shall comply with the 1.5.4.2 of Part I of the SP Rules."

Para 4.2.5.2.4 is amended as follows:

"**4.2.5.2.4** Upon agreement with the Register, the clamps may be fitted onto SP under pressure with the value determined for particular defect based on the inspection results, as well as fitting of clamps on concrete coating during the following banding as per 4.2.5.4. During repairs by means of clamps, lifting/lowering of SP string is not permitted."

Russian Maritime Register of Shipping

**Rule Change Notice
to the Guidelines on Technical Supervision during Construction
and Operation of Subsea Pipelin**

Endorsed: 25-134777

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