COUNCIL OF THE EURASIAN ECONOMIC COMMISSION

SOLUTION

dated April 23, 2021 N 49

On amendments to the technical regulations of the Customs Union "On the safety of equipment operating under excess pressure" (TR CU 032/2013)

In accordance with Article 52 of the Treaty on the Eurasian Economic Union of May 29, 2014 and paragraph 29 of Appendix No. 1 to the Rules of Procedure of the Eurasian Economic Commission , approved by the Decision of the Supreme Eurasian Economic Council of December 23, 2014 No. 98 , the Council of the Eurasian Economic Commission

decided:

1. To amend the technical regulations of the Customs Union "On the safety of equipment operating under excessive pressure" (TR CU 032/2013) , adopted by the Decision of the Council of the Eurasian Economic Commission dated July 2, 2013 N 41 , changes according to the appendix .

2. This Decision comes into force upon the expiration of 180 calendar days from the date of its official publication.

Members of the Council of the Eurasian Economic Commission:
For the Republic of Armenia
M. Grigoryan
From the Republic of Belarus
I. Petrishenko
From the Republic of Kazakhstan
A. Smailov

From the Kyrgyz Republic
U. Karmyshakov
From the Russian Federation
A. Overchuk

ANNEX
to the Decision of the Council of the Eurasian Economic Commission
of April 23, 2021 N 49

Changes to the technical regulations of the Customs Union "On the safety of equipment operating under excess pressure" (TR CU 032/2013)

1. In the preamble:

1) the first paragraph shall be deleted;

2) the second paragraph shall be stated in the following edition:

"This technical regulation establishes unified safety requirements for equipment operating under excessive pressure, released into circulation and intended for use in the customs territory of the Union (hereinafter referred to as equipment), binding on the customs territory of the Eurasian Economic Union (hereinafter referred to as the Union)." ;

3) in the third paragraph, the words "Customs Union" shall be replaced by the words "Union (Customs Union)".

2. In paragraph 2 :

1) in the text of subparagraphs "a" - "d" the words "maximum allowable working pressure" in the corresponding case shall be replaced by the words

"design pressure" in the corresponding case;

2) the first paragraph of subparagraph "a" shall be stated in the following edition:

"a) vessels intended for compressed, liquefied, gases and vapors dissolved under pressure, used for working environments of group 1 and having:";

3) the first paragraph of subparagraph "b" shall be stated as follows:

"b) vessels intended for compressed, liquefied gases and vapors dissolved under pressure, used for working environments of group 2 and having:";

4) subparagraphs "f" - "and" shall be stated in the following edition:

"f) pipelines and fittings having a design pressure of over 0.05 MPa, a nominal diameter of over 25 mm, intended for compressed, liquefied, gases and vapors dissolved under pressure and used for working media of group 1.

The categories of pipelines and fittings intended for compressed, liquefied, gases and vapors dissolved under pressure and used for working media of group 1 are shown in Table 6 of Appendix No. 1 to this technical regulation;

g) pipelines and fittings having a design pressure over 0.05 MPa, a nominal diameter of over 32 mm and the product of the design pressure and the nominal diameter over 100 MPa mm, intended for compressed, liquefied, gases and vapors dissolved under pressure, and used for working environments group 2.

The categories of pipelines and fittings intended for compressed, liquefied, gases and vapors dissolved under pressure and used for working media of group 2 are shown in Table 7 of Appendix No. 1 to this technical regulation;

h) pipelines and fittings having a design pressure over 0.05 MPa, a nominal diameter of more than 25 mm and the product of the design pressure and the nominal diameter over 200 MPa mm, intended for liquids and used for working

media of group 1.

Categories of pipelines and fittings intended for liquids and used for working environments of group 1 are shown in Table 8 of Appendix No. 1 to this technical regulation;

i) pipelines and fittings having a design pressure of more than 1 MPa, a nominal diameter of more than 200 mm and the product of the design pressure and the value of the nominal diameter over 500 MPa mm, intended for liquids and used for working media of group 2.

Categories of pipelines and fittings intended for liquids and used for working environments of group 2 are shown in Table 9 of Appendix No. 1 to this technical regulation; ";

5) subparagraph "k" shall be supplemented with the words "over 0.05 MPa";

6) subparagraph "l" shall be deleted;

7) subparagraph "m" shall be supplemented with the words ", except for devices classified as measuring instruments".

3. Clause 3 shall be supplemented with subparagraphs "c" - "f" of the following content:

"c) networks for the supply, distribution and drainage of water with a temperature of 110 ° C or less, as well as supply conduits in hydraulic power plants and corresponding equipment parts;

r) heating devices and pipelines in water heating systems of buildings and structures;

s) equipment and items of equipment for supplying engines with gaseous fuel (compressed natural gas, liquefied petroleum gas (or liquefied petroleum gas), liquefied natural gas, fuel dimethyl ether), specially designed for use on

wheeled vehicles;

t) support-suspension systems of pipelines and their elements. ".

4. In paragraph 4 :

1) the first paragraph shall be stated in the following edition:

"4. For the purposes of applying this technical regulation, the concepts established by the Protocol on technical regulation within the framework of the Eurasian Economic Union (Appendix No. 9 to the Treaty on the Eurasian Economic Union of May 29, 2014), standard conformity assessment schemes approved by the Decision of the Council of the Eurasian Economic Commission are used dated April 18, 2018 N 44, as well as concepts that mean the following: ";

2) after the first paragraph, add the following paragraph:

"fittings" - a technical device installed on pipelines, as well as pipe elements of boilers and vessels, designed to control (shut off, prevent backflow, regulation, distribution, mixing, separation) the flow of the working medium, including by changing the flow area; " ;

3) in the eighth paragraph, the word "oxidizing" shall be replaced by the words "oxidizing (except for air with an oxygen content corresponding to the natural composition of atmospheric air)";

4) paragraph thirteen shall be deleted;

5) paragraph fifteen shall be stated in the following edition:

"nominal pressure" - the design pressure at a temperature of 20 ° C, used in calculating the strength of equipment (fittings, parts and connections of pipelines, etc.); ";

6) paragraphs sixteen and seventeen shall be stated in the following edition:

"nominal diameter" - a parameter used for piping systems and fittings as a characteristic of the connected parts. The nominal diameter is approximately equal to the inner diameter of the pipeline to be connected, expressed in millimeters and the corresponding nearest value from a series of numbers adopted in the prescribed manner, and is indicated without designation of dimensions;

"equipment identification" - a procedure by which the identity of the equipment characteristics is established with the features provided for this equipment (type or group of equipment) by this technical regulation, the documents specified in clauses 16 and 45 of this technical regulation, and the features specified in the information about the equipment, and the possibility of unambiguous assignment of equipment to the objects of technical regulation of this technical regulation is provided; ";

7) paragraph eighteen shall be deleted;

8) paragraph nineteen shall be stated in the following edition:

"waste-heat boiler" - a boiler that uses the heat of hot exhaust gases released during technological processes, or during operation of engines, or during additional combustion of process products and (or) additional fuel; ";

9) paragraph twenty-five shall be deleted;

10) in paragraph twenty-nine, the words "vessels with bringing them to an operable state" shall be replaced by the words "equipment with bringing it into an operable state";

11) after paragraph thirty-one, add the following paragraph:

"vessel with fire heating" - a vessel in which the working medium, which is under a pressure higher than atmospheric pressure, receives heat from the

flame and combustion products through the wall separating them; ";

12) after paragraph thirty-six, add the following paragraph:

"pipeline" - equipment designed for the transportation of various media under excess pressure, consisting of interconnected using one-piece and (or) detachable joints of pipeline fittings, pipes, flanges and other parts and elements of the pipeline, as well as supporting parts attached to them a suspension system that ensures the safe operation of the pipeline. The boundaries of the pipeline are determined by the project; ";

13) paragraph thirty-seventh shall be deleted.

5. The title of Section III shall be supplemented with the word "Union".

6. Clause 5 shall be stated as follows:

"5. The equipment is released into circulation on the Union market if it meets the requirements of this technical regulation and other technical regulations of the Union (Customs Union), which apply to this equipment, and provided that it has passed the conformity assessment in accordance with Section VI of this technical regulation and other technical regulations of the Union (Customs Union), which apply to it. ".

7. In clause 6, the words "Member States of the Customs Union" shall be replaced by the word "Union".

8. In clause 8 :

1) subparagraph "g" shall be stated as follows:

"g) excess pressure (the pressure exceeds the operating or design pressure specified in the operating documentation);";

2) subparagraph "and" shall be stated as follows:

"i) corrosion and other types of wear of the material of equipment elements;";

3) in subparagraph "p" the words "the level of the working medium" shall be replaced by the words "the level of the liquid working medium";

4) in subparagraph "p" the word "boiler" shall be replaced by the word "equipment";

5) in subparagraph "c" the words "in the boiler duct" shall be replaced by the words "in equipment", the word "level" shall be deleted;

6) in subparagraph "at" the words "level of the working medium" shall be replaced by the words "level of the liquid working medium".

9. Clause 9 shall be amended as follows:

"9. During the development (design) of equipment and its elements, hazardous factors must be identified and taken into account. Ensuring an acceptable level of risks in the development (design) is carried out using strength calculations and compliance with a set of technical requirements using experimental, expert methods or according to the operation data of similar equipment . ".

10. Clause 11 shall be supplemented with paragraphs as follows:

"The set of documents justifying the safety of equipment, taking into account all the hazards and safety requirements characteristic of it, include:

terms of reference, technical specifications or other documents that establish requirements for equipment at the stages of development (design) and production (manufacture);

design (construction) documentation (drawings, diagrams, specifications, calculations);

technical documentation attached to the equipment;

reporting documents on tests (protocols, conclusions, acts, certificates);

other documents containing an assessment of risk and operational reliability (if any).

For boilers, vessels and pipelines, in the development (design) of which standards were applied that establish specific safety requirements for equipment included in the list of standards, as a result of which, on a voluntary basis, compliance with the requirements of this technical regulation is ensured, documents justifying safety are calculated on strength and related requirements of the standards included in the specified list.

For equipment, in the development (design) of which standards were not applied that establish specific safety requirements for equipment included in the list of standards, as a result of which, on a voluntary basis, compliance with the requirements of this technical regulation is ensured, the set of documents justifying safety is supplemented with a document confirming, that the adopted technical solutions ensure the level of equipment safety not lower than the level established by the standards included in the specified list. "

11. In paragraph 16 :

1) add subparagraph "a" with the words "or documents providing identification for elements (assembly units, parts) and components";

2) subparagraph "b" shall be excluded;

3) subparagraph "c" shall be stated as follows:

"c) an assembly drawing or a drawing with an indication of the main dimensions (for fittings, parts of pipelines and flanges, a drawing with an indication of the main dimensions is allowed);";

4) subparagraph "f" shall be supplemented with the words "(for valves, pipeline parts and flanges, an extract from the calculation is allowed)";

5) subparagraph "g" shall be supplemented with the words "(except for elements (assembly units, parts) of equipment and components)".

12. Supplement with paragraph 16_1 as follows:

"16_1. Technical documentation drawn up in a foreign language is accompanied by a translation into Russian and (or), if there is a corresponding requirement in the legislation of a member state of the Union (hereinafter the member state), into the state language of a member state."

13. In paragraph 17 :

1) in the second paragraph, the words "Customs Union" shall be replaced by the word "Union";

2) the fourth paragraph shall be stated in the following edition:

"The equipment passport contains the signature of the responsible person of the manufacturer, the manufacturer's seal (if the mandatory presence of a seal for a legal entity or an individual registered as an individual entrepreneur is provided for by the legislation of a member state) and the date of its issuance is indicated."

14. In clause 19 :

1) subparagraphs "a" and "b" shall be stated in the following edition:

"a) the name and address of the operating organization, as well as the manufacturer of the pipeline;

b) the name and category of the pipeline; ";

2) subparagraphs "d" and "e" shall be stated in the following edition:

"d) the name and group of the working environment;

e) design pressure, MPa (kgf / cm), working pressure, MPa (kgf / cm), design wall temperature, ° C, working temperature of the working environment, ° C; ".

15. In paragraph 20 :

1) in the tenth paragraph of subparagraph "a" the words "and its elements" shall be deleted;

2) the second paragraph of subparagraph "b" after the word "combustion," shall be supplemented with the words "MJ / m (kcal / m) or";

3) subparagraphs "z" and "and" shall be stated in the following edition:

"h) information about the main elements of the boiler made (produced) of sheet steel (information about the quantity, size, material, welding and heat treatment, the results of measuring and non-destructive testing, testing of permanent joints, hydraulic (pneumatic) tests, etc.) ;

i) information about the boiler elements made (produced) from pipes (including the number, dimensions, material, welding and heat treatment, information on the results of measuring and non-destructive testing, testing of permanent joints, hydraulic (pneumatic) tests, etc.) ; ".

16. In paragraph 21 :

1) in subparagraph "a":

after the second paragraph, add the following paragraph:

"name of the vessel;";

add the following paragraph:

"the permissible number of loading cycles if the values of the stress amplitude are definable;";

2) the fifth paragraph of subparagraph "b" shall be stated as follows:

"the minimum permissible temperature of the vessel wall at the design pressure, ° C;";

3) subparagraph "c" shall be stated as follows:

"c) information about the main parts (information about their number, size, information about materials, welding (soldering) and heat treatment), the results of measuring and non-destructive testing, testing of permanent joints, hydraulic (pneumatic) tests, etc.);" ;

4) in subparagraph "e" the words "design pressure" shall be replaced by the words "nominal pressure and (or) design pressure";

5) subparagraph "g" shall be stated as follows:

"g) regulations for starting (stopping) in conditions of negative temperatures and other information ensuring the safe operation of the vessel (if other information is available)."

17. Paragraph five of sub-clause "a" of clause 22 shall be amended as follows:

"name and group of the working environment;".

18. In paragraph 23 :

1) the fourth paragraph of subparagraph "b" shall be stated as follows:

"name and group of the working environment;";

2) in subparagraph "d" the word "boiler" shall be replaced by the word "fittings".

19. Clause 25 shall be declared invalidated.

20. In the first paragraph of clause 28, the words "Member States of the Customs Union and the Common Economic Space (hereinafter referred to as the Member States)" shall be replaced by the words "Member States".

21. Subparagraph "d" of paragraph 29 shall be amended as follows:

"d) the name of the manufacturer and its trademark (if any);".

22. In the first sentence of paragraph 31, the words "liquefied hydrocarbon" shall be deleted.

23. In paragraph 33, the words "discontinuation of this equipment or discontinuation of its production" shall be replaced by the words "discontinuation of the production of this equipment".

24. In paragraph 37, the words "Customs Union" shall be replaced by the word "Union".

25. In subparagraphs "a" and "b" of paragraph 40, the words "Unified Register of Certification Bodies and Test Laboratories (Centers) of the Customs Union" shall be replaced by the words "Unified Register of Conformity Assessment Bodies of the Union".

26. In paragraph 42 :

1) after the words "in relation to equipment" add the words "and items of equipment";

2) the word "additional production" shall be replaced by the words "production or final production".

27. Paragraph 43, after the words "with regard to equipment", add the words "and items of equipment".

28. In the first paragraph of sub-clause "e" of clause 46, the word "additional production" shall be replaced by the words "production or final production".

29. In the title of Section VII, paragraphs 61-63, the words "Member States of the Customs Union" shall be replaced by the word "Union".

30. Clause 64 shall be amended as follows:

"64. Labeling of equipment with a single mark of product circulation on the Union market testifies to its compliance with the requirements of all technical regulations of the Union (Customs Union), which apply to this equipment, providing for the application of a single mark of product circulation on the Union market."

31. Section VIII shall be declared invalidated.

32. Appendix No. 1 to the specified technical regulations shall be stated in the following edition:

"Appendix No. 1
to the technical regulation of the Customs
Union" On the safety of equipment
operating under excessive
pressure "(TR CU 032/2013)
(as amended by the Decision of the Council of the

Eurasian Economic Commission
of April 23, 2021 No. 49)

Equipment classification by hazard categories

1. Categories of equipment are determined in accordance with tables 1-9 of this document.

Items of equipment (assembly units) and components for it that withstand the effect of pressure, indicating and safety devices, devices and safety devices are classified in the 4th category. In the case of their manufacture (production) for a specific equipment, they can be classified in the same category as the equipment for which they are made (produced).

If the equipment is intended for different working environments of one group or for working environments of different groups, then it is classified according to the category of the largest group defined for each working environment.

2. The category of equipment is increased by 1 (except for the 4th category) if it is intended for operation with the design wall temperature:

380 ° C and more - for carbon and low-alloy manganese and silicon-manganese steels;

450 ° C and more - for low-alloy chromium-molybdenum and chromium-molybdenum-vanadium steels;

525 ° C and more - for alloyed high-chromium martensitic class and austenitic steels;

575 ° C and more - for iron-nickel-based alloys;

600 ° C and more - for nickel-based alloys.

Table 1

Categories of vessels designed for compressed, liquefied, gases and vapors dissolved under pressure and used for working environments group 1

Equipment category	Equipment capacity (m)	Product of the design pressure value and the capacity value (MPa m)	Design pressure (MPa)
1	2	3	4
1st	over 0.001	over 0.0025 to 0.005 inclusive	over 0.05
2nd	over 0.001	over 0.005 to 0.02 inclusive	over 0.05
3rd	over 0.0001 to 0.001 inclusive	not standardized	over 20 to 100 inclusive
	over 0.001	over 0.02 to 0.1 inclusive	over 0.05
4th	over 0.0001 to 0.001 inclusive	not standardized	over 100
	over 0.001	over 0.1	over 0.05

table 2

Categories of vessels designed for compressed, liquefied, gases and vapors dissolved under pressure and used for working environments group 2

Equipment category	Equipment capacity (m)	Product of the design pressure value and the capacity value (MPa m)	Design pressure (MPa)
1	2	3	4

1st	over 0.001 to 0.4 inclusive	over 0.005 to 0.02 inclusive	over 0.05 to 20 inclusive
2nd	over 0.001 to 2 inclusive	over 0.02 to 0.1 inclusive	over 0.05 to 100 inclusive
3rd	over 0.0001 to 0.001 inclusive	not standardized	over 100 to 300 inclusive
	over 0.001 to 0.75 inclusive	over 0.1 to 0.3 inclusive	over 0.05
	over 0.75	over 0.1	over 0.05 to 0.4 inclusive
4th	over 0.0001 to 0.001 inclusive	not standardized	over 300
	over 0.001	over 0.3	over 0.4

Table 3

Categories of vessels designed for liquids and used for working environments group 1

Equipment category	Equipment capacity (m)	Product of the design pressure value and the capacity value (MPa m)	Design pressure (MPa)
1	2	3	4
1st	over 0.02	over 0.02	over 0.05 to 1 inclusive
2nd	over 0.0001 to 0.001 inclusive	not standardized	over 50
	over 0.001	over 0.02	over 1 to 50 inclusive
3rd	over 0.001	not standardized	over 50

Table 4

Categories of vessels designed for liquids and used for working environments group 2

Equipment category	Equipment capacity (m)	Product of the design pressure value and the capacity value (MPa m)	Design pressure (MPa)
1	2	3	4
1st	over 0.0001 to 0.01 inclusive	not standardized	over 100
	over 0.02	over 1	over 1 to 50 inclusive
2nd	over 0.01	over 1	over 50

Table 5

Categories of steam, hot water boilers and vessels with fire heating

Equipment category	Equipment capacity (m)	Product of the design pressure value and the capacity value (MPa m)	Design pressure (MPa)
1	2	3	4
1st	over 0.002	up to 0.005 inclusive	over 0.05
2nd	over 0.002	over 0.005 to 0.02 inclusive	over 0.05 to 3.2 inclusive
3rd	over 0.002 to 1 inclusive	over 0.02 to 0.3 inclusive	over 0.05 to 3.2 inclusive
4th	over 0.002	not standardized	over 3.2
	over 0.002 to 1 inclusive	over 0.3	over 0.05 to 3.2 inclusive

	over 1	not standardized	over 0.05 to 3.2 inclusive

Table 6

Categories of pipelines and fittings designed for compressed, liquefied, gases and vapors dissolved under pressure and used for working media of group 1

Equipment category	Nominal diameter (mm)	Product of the design pressure and the nominal diameter (MPa mm)	Design pressure (MPa)
1	2	3	4
1st	over 25 to 100 inclusive	up to 100 inclusive	over 0.05
2nd	over 25 to 100 inclusive	over 100	over 1
	over 100 to 350 inclusive	up to 350 inclusive	over 0.05
3rd	over 100 to 350 inclusive	over 350	over 1
	over 350	not standardized	over 0.05

Table 7

Categories of pipelines and fittings intended for compressed, liquefied, gases and vapors dissolved under pressure and used for working media of group 2

Equipment category	Nominal diameter (mm)	Product of the design pressure and the nominal diameter (MPa mm)	Design pressure (MPa)
1	2	3	4
1st	over 32 to 100 inclusive	over 100	over 0.05
	over 100	over 100 to 350 inclusive	over 0.05
2nd	over 100 to 250 inclusive	over 350	over 0.05
	over 250	over 350 to 500 inclusive	over 0.05
3rd	over 250	over 500	over 0.05

Table 8

Categories of pipelines and fittings intended for liquids and used for working environments of group 1

Equipment category	Nominal diameter (mm)	Product of the design pressure and the nominal diameter (MPa mm)	Design pressure (MPa)
1	2	3	4
1st	over 25	over 200	over 0.05 to 1 inclusive
2nd	over 25	over 200	over 1 to 50 inclusive
3rd	over 25	not standardized	over 50

Table 9

Categories of pipelines and fittings intended for liquids and used for working environments of group 2

Equipment category	Nominal diameter (mm)	Product of the design pressure and the nominal diameter (MPa mm)	Design pressure (MPa)
1	2	3	4
1st	over 200	over 500	over 1 to 50 inclusive
2nd	over 200	not standardized	over 50

33. In Appendix No. 2 to the specified technical regulation :

1) subparagraph "c" of paragraph 1 shall be stated as follows:

"c) static pressure under operating conditions and static pressure under test conditions, taking into account the hydrostatic pressure of the fluid in the equipment and (or) the pressure of bulk material, as well as a short-term increase in pressure during the operation of safety devices;";

2) subparagraph "d" of paragraph 2 shall be deleted;

3) in clause 14:

subparagraphs "b" and "c" shall be stated as follows:

"b) on the basis of mathematical modeling of limiting states and direct determination of the ultimate load;

c) based on the numerical analysis of the stress-strain state; ";

supplement with subparagraph "d" as follows:

"d) on the basis of fracture mechanics.";

4) in clause 15 the words "When calculating the strength" shall be replaced by the words "When developing (designing)";

5) in clause 16:

in the first sentence of subparagraph "a" the words "maximum allowable" shall be deleted;

subparagraph "c" shall be stated as follows:

"c) materials for the manufacture of equipment are selected taking into account the range of design temperatures;";

6) subparagraph "f" of paragraph 17 shall be stated as follows:

"f) relative elongation and relative contraction of the cross-section at break of standard samples;";

7) clause 20 shall be declared invalidated;

8) in subparagraph "a" of paragraph 21:

in the text, the words "maximum allowable temperature" shall be replaced by the words "design wall temperature";

in the first paragraph, the word "plastic" shall be deleted;

the last paragraph shall be supplemented with the words "(the creep limit is used to determine the permissible stress in cases where there is no data on the ultimate strength or when it is necessary to limit deformation (displacement) due to operating conditions)";

9) Clause 22 shall be stated in the following edition:

"22. In the absence of data on the minimum value of the conventional yield stress at 1 percent residual deformation, it is allowed to use the minimum value of the conventional yield stress at 0.2 percent residual deformation and the

design wall temperature c safety factor = 1.3:

$$[\sigma] = \frac{R_{p0,2/t}}{1,3}$$ ...

For shells, pipes, heads and other elements made of austenitic steel (except for flanges), the deformation (movement) of which under operating conditions does not need to be limited, when determining the permissible stresses in accordance with paragraph 21 of these Requirements, it is allowed if it is provided for by the standards, in in accordance with which the calculation and design are carried out, use the minimum value of the conditional yield stress at 0.2 percent residual deformation and the design wall temperature with

a safety factor = 1.1, but not more than the minimum value of the conditional yield stress at 0.2 percent residual deformation and a temperature of 20 ° C with

a safety factor = 1.5:

$$[\sigma] = \min\left\{\frac{R_{p0,2/20}}{1,5}; \frac{R_{p0,2/t}}{1,1}\right\}$$. ";

10) Clause 28 shall be stated in the following edition:

"28. The manufacturer provides inspection of equipment welded joints. Methods of non-destructive testing and its scope are determined by the developer of the project (design) of the equipment based on the need for more accurate and complete identification of unacceptable defects, taking into account the properties of materials and are indicated in the design (design) documentation of the equipment." ;

11) clause 30 shall be declared invalidated;

12) subparagraph "a" of paragraph 32 shall be stated as follows:

"a) pressure tests for strength and tightness;";

13) Clause 37 shall be stated in the following edition:

"37. When choosing materials for the manufacture of equipment (assembly units, parts), it is necessary to take into account the design pressure, wall temperature (design and minimum allowable), chemical composition and nature of the medium, technological properties and corrosion resistance of materials.

Data on the materials used in the manufacture (production) of equipment are given in the technical documentation. ";

14) subparagraph "a" of paragraph 38 shall be stated as follows:

"a) possessing properties (plasticity, strength) that allow them to be used during operation and during equipment testing. or several of the following measures: carrying out calculation of the structure for resistance to brittle fracture, increasing the safety factor, stricter control requirements at the stage of equipment manufacturing, ensuring regime measures (temperature increase at the moment the pressure reaches the design value, limiting the start-up speed); ";

15) Clause 40 shall be stated as follows:

"40. To relieve residual stresses in the elements of equipment arising in the process of their manufacture, which are unacceptable from the point of view of safe operation of the equipment, heat treatment should be carried out. The need, type and modes of heat treatment are determined by the developer of the equipment.";

16) Clause 43 shall be stated as follows:

"43. Welded and other permanent connections of equipment elements, performed during manufacture, including at the place of operation, must be subjected to non-destructive testing, based on the results of which reporting documents must be drawn up. When developing the equipment manufacturing technology, the specified requirement must be met.

Welded and other permanent connections of equipment elements must be available for non-destructive testing, as provided for by the project and the manual (instruction) for operation, during the entire service life of the equipment.

Methods (types) of non-destructive testing are established by the developer of the equipment. ";

17) the first paragraph of clause 51 shall be stated as follows:

"51. Lever-and-load safety valve or spring-loaded safety valve is equipped with a device for checking the proper functioning of the valve during operation of the equipment by forced opening. checks of safety valves. ";

18) in the first paragraph of clause 52, the words "Equipment designed for operating pressure, which" shall be replaced by the words "Equipment, the design pressure of which";

19) in the first paragraph of clause 54, the word "equipment" shall be replaced by the word "vessel", the words "maximum allowable working pressure" shall be replaced by the words "design pressure";

20) clause 55 shall be stated in the following edition:

"55. When the safety valves are in operation, it is allowed to exceed the design pressure in the vessel by no more than 25 percent, provided that this excess is confirmed by strength calculations and is provided for by the manual (instruction) for the operation of the vessel.";

21) in the first and second sentences of clause 56, the words "maximum allowable working pressure" shall be replaced by the words "design pressure";

22) the second proposal of clause 57 shall be stated as follows:

"On the equipment of mobile boiler plants, it is not allowed to install lever-cargo safety valves.";

23) Clause 59 shall be stated as follows:

"59. The throughput of the safety valve is confirmed by appropriate tests of the prototype safety valve of this design, carried out by its manufacturer, and is indicated in the safety valve passport.";

24) in the second paragraph of clause 63 the words "shut-off valves" shall be replaced by the words "shut-off valves";

25) in the first sentence of clause 66 the words "measuring instruments" shall be replaced by the word "indicators";

26) in the second paragraph of clause 68:

in the first sentence the words "direct-acting liquid levels" shall be replaced by the words "pipes connecting the direct-acting liquid level indicator with the equipment,";

in the second sentence the word “incoming” shall be replaced by the word “incoming”, the word “pointers” shall be replaced with the word “pointer”;

27) Clause 85 shall be stated in the following edition:

"85. On hot water boilers with a heating capacity of more than 1.163 MW, recording means for measuring the temperature of water at the outlet from the boiler are installed.";

28) in clause 89 the words "hot water boilers with a steam output of more than 21 GJ / h" shall be replaced by the words "hot water boilers with a heat output of more than 5.83 MW";

29) in paragraph 90:

subparagraph "b" shall be stated as follows:

"b) on a boiler with a superheater on the boiler drum and behind the superheater to the main shut-off valves;";

in subparagraph "d" the word "superheater" shall be replaced by the word "superheater".

34. In Section I of Appendix No. 3 to the specified technical regulation, the position "Carbonic acid" shall be stated as follows: "Carbon dioxide black carbon dioxide yellow -".

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