SLOVENSKI STANDARD
SIST EN ISO 11118:2016/oprA1:2018

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Plinske jeklenke - Kovinske plinske jeklenke za enkratno polnitev - Specifikacija in preskusne metode - Dopolnilo A1 (ISO 11118:2015:DAM 1:2018)

Gas cylinders - Non-refillable metallic gas cylinders - Specification and test methods (ISO 11118:2015:DAM 1:2018)

Gasflaschen - Metallische Einwegflaschen - Spezifikationen und Prüfverfahren - Änderung 1 (ISO 11118:2015/DAM 1:2018)

Bouteilles à gaz - Bouteilles à gaz métalliques non rechargeables - Spécifications et méthodes d'essai (ISO 11118:2015:DAM 1:2018)

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ICS:

23.020.35	Plinske jeklenke	Gas cylinders

SIST EN ISO 11118:2016/oprA1:2018 **en,fr,de**

DRAFT AMENDMENT

ISO 11118:2015/DAM 1

ISO/TC **58**/SC **3** Secretariat: **BSI**

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Gas cylinders — Non-refillable metallic gas cylinders — Specification and test methods

AMENDMENT 1

Bouteilles à gaz — Bouteilles à gaz métalliques non rechargeables — Spécifications et méthodes d'essai

AMENDEMENT 1

ICS: 23.020.35

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This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 3, *Cylinder design*.

Gas cylinders — Non-refillable metallic gas cylinders — Specification and test methods

AMENDMENT 1

Normative references

Add the following standard:

ISO 14732, Welding personnel — Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials

8.1.1.2.1

Replace the text with the following:

The welding of longitudinal and circumferential seams shall be by a semi-automatic or automatic process.

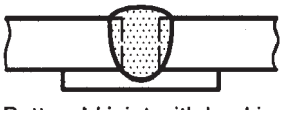
The longitudinal seam weld, if any, shall be of the butt type weld joint as illustrated in Figure 1 a).

The circumferential seam(s), if any, shall be as illustrated in Figure 1 a), b), c), or d).

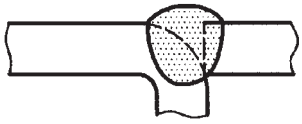
Welded joints shall have strength greater than the tensile strength of the finished cylindrical wall.

The welding procedure and operator qualifications shall include, as a minimum, welds representative of those made in production representing the variables in the materials and the process. Requalifying of the procedures and operators shall be required if there is a change in any of the essential variables as specified in 8.1.1.2.2.7.

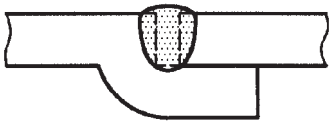
a) Butt weld joint



c) Butt weld joint with backing ring



b) Offset weld



d) Joggle weld

Figure 1 — Weld joints

8.1.1.2.2.1

Replace the text with the following:

a) All welders, welding operators and welding procedures shall be approved by meeting the requirements of 8.1.1.2.2 through 8.1.1.2.2.9 or those given in ISO 9806-1, ISO 14732, ISO 15613, and ISO 15614-1.

b) Records of welders and welding operator qualifications and welding procedure qualification-shall be kept on file by the manufacturer.

c) Welding procedure specification approval tests shall be carried out such that the welds shall be representative of those made in production.

d) Welders, welding operators and welding procedures shall pass the approval tests for the specific type of work and procedure specification concerned.

8.1.1.2.2.7, first paragraph

Replace the paragraph with the following:

The welding procedure specification and welder qualification shall be tested and approved when any of the following changes are made, if not already covered:

9.2.2

Replace the text with the following:

For carbon steel, a check analysis shall be performed by the cylinder manufacturer on material representative of the cylinders.

Check analysis shall be carried out either on specimens taken during manufacture from the material in the form as supplied by the material manufacturer to the cylinder manufacturer or from finished cylinders. For carbon steels, the maximum permissible deviation from the limits for the cast analyses shall conform to the values specified in ISO 9329-1.

For austenitic stainless steels the cylinder manufacturer shall obtain certificates of the analysis of the cast. If check analysis is required, it shall be carried out either on test specimens taken from material in the form supplied by the producer of the austenitic stainless steel or from finished gas cylinders.

For aluminium alloys, the cylinder manufacturer shall obtain certificates of the analysis of the cast. If check analysis is required, it shall be carried out either on test specimens taken from material in the form supplied by the producer of the aluminium alloys or from finished gas cylinders.

9.2.4.1, second paragraph

Replace the paragraph with the following:

Burst testing successfully passing the requirements of 9.2.4.5 fulfils the requirement of this Clause.

9.2.4.5, a)

Replace the text with the following:

a) for cylinder designs with p_b of <70 bar, pressurize the cylinder to the test pressure (p_h) at a rate not exceeding 14 bar/min and hold the test pressure for 30 s. There shall be no decrease in the pressure during the 30 s holding period. Once the holding period has passed, increase the pressure in the cylinder (at any convenient rate) until the cylinder bursts. As an alternative, once the 30 s holding period has ended, the pressure may be decreased below the test pressure before repressurizing until the cylinder bursts.

9.2.4.5, b)

Replace the text with the following:

b) for cylinder designs with $P_b \geq 70$ bar, pressurize the cylinder to the test pressure (p_h) at a rate not exceeding 5 bar/s to test pressure (p_h) and hold for 30 s. There shall be no decrease in the pressure during the holding period. Once the holding period has passed, increase the pressure in the cylinder at any convenient rate until the cylinder bursts. As an alternative, once the 30 s holding period has ended, the pressure may be decreased below the test pressure before repressurizing until the cylinder bursts.

Clause 11

Replace the text with the following:

11.1 Visual inspection

Each cylinder shall be inspected for the following:

a) being free of cracks, seams, laminations, or other defects;

b) weld quality;

c) proper markings.

11.2 Proof pressure test

Each non-refillable cylinder, except those used for burst tests, shall be proof pressure tested at a pressure of at least the test pressure (p_h). As an alternative, the cylinder shell shall be pressure tested at a pressure of at least the test pressure (p_h) and the non-refillable cylinder shall be leak tested at time of filling (see 11.3).

The cylinder/cylinder shell shall remain at the proof test pressure long enough, at least 10 s for testing with gaseous media and 30 s for liquid media, to make it possible to validate the integrity of the cylinder and welds.

WARNING — It should be noted that pneumatic pressure tests are considerably more dangerous than water pressure tests since, regardless of the size of the cylinder, any error in carrying out this test is highly likely to lead to a rupture under gas pressure. Therefore, these tests should only be carried out after ensuring that the safety measures satisfy the safety requirements.

11.3 Leak testing

Leak testing shall be conducted with the cylinder submerged under water or by any other method giving equal sensitivity of leak detection.

11.4 Rejection criteria

Cylinders shall not exhibit leaks, visible distortion, or any other defects during the test.

Cylinders exhibiting any of these defects shall be rejected.

11.5 Repairs

Cylinder weld repair are permitted. The weld operator and process shall be as defined in Clause 8. Repairs shall be followed by pressure testing as defined above.

Cylinders that cannot be repaired shall be rendered unserviceable.

12.1

Replace the existing NOTE with the following:

Requirements for marking in relevant regulations override the requirements given in this International Standard.

12.2.1, h)

Replace the text with the following:

h) UN identification number of the gas prefixed by the letters UN, when known.

12.2.4, first paragraph

Replace the paragraph with the following: