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AMENDMENT 1
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Gas cylinders — Cylinder valves — Specification and type testing

AMENDMENT 1: Pressure drums and tubes

Bouteilles à gaz — Robinets de bouteilles — Spécifications et essais de type

AMENDEMENT 1: Fûts à pression et tubes

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Amendment 1 to ISO 10297:2014 was prepared by Technical Committee ISO/TC 58, *Gas cylinders,* Subcommittee SC 2, *Cylinder fittings*.

Gas cylinders — Cylinder valves — Specification and type testing

AMENDMENT 1: Pressure drums and tubes

Clause 1

After list item c) add following list item d):

d) valves for pressure drums and tubes;

Replace Note 1 with the following:

NOTE 1 Where there is no risk of ambiguity, cylinder valves, main valves, VIPR and valves for pressure drums and tubes are addressed with the collective term “valves” within this document.

Replace second list item with the following:

— quick-release cylinder valves (e.g. for fire-extinguishing, explosion protection and rescue applications), self-closing cylinder valves or ball valves.

Replace Note 2 with the following:

NOTE 2 Requirements for valves for cryogenic vessels are specified in ISO 21011 and at a regional level, e.g. in EN 1626. Requirements for LPG valves are specified in ISO 14245 or ISO 15995. Requirements for quick-release cylinder valves are specified in ISO 17871. Requirements for self-closing cylinder valves are specified. in ISO 17879. Requirements for valves for portable fire extinguishers at a regional level are specified e.g. in EN 3 series.

3.10

Replace 3.10 with the following:

3.10

minimum closing torque

T_c

torque necessary to be applied to a *valve operating device* (3.3) of a newly manufactured valve to obtain *internal leak tightness* (3.5) at *valve test pressure* (3.8) and room temperature

Note 1 to entry The minimum closing torque is expressed in Nm.

5.2

Add the following paragraph after the first paragraph:

Copper alloys in contact with oxygen or other oxidizing gases or gas mixtures shall have a maximum aluminium content of no more than 2,5 %.

5.3, first paragraph

Replace the first paragraph with the following:

For valves using a yoke connection such as pin-index (post-type medical) valves in medical gas service (see Figure 8) the external dimensions of the valve shall be in accordance with the requirements of the relevant outlet connection standard.

5.5.2, third paragraph

Replace the third paragraph with the following:

Distortion due to impact is permissible. After being impacted, for safety reasons the closed valve shall first be pressurized hydraulically to p_{vt} before undergoing a leak tightness test at p_{vt} with the outlet unplugged.

The total leakage (comprising that from the valve internal sealing system plus that from the threaded joint between the valve and the cylinder/test fixture) shall not exceed 100 cm^3/h. Any leakage shall not result from cracking of the valve body. In addition the test sample shall remain capable of being opened for emergency venting purposes by hand or by using a simple tool or actuating connector (e.g. a valve key) provided the opening torque, if relevant, does not exceed T_f, see Table 1.

5.6.1

Replace paragraph with the following:

The valve operating mechanism shall meet the requirements of 5.6.2 to 5.6.5.

6.1.2

Replace list item k) with the following:

k) integration or removal of optional components like residual pressure device and non-return valve or functions like pressure reduction function (repetition of any tests to be decided case by case depending on the change). Removal of a pressure relief device will not require any tests to be repeated. Integration of a pressure relief device will require repetition of hydraulic burst pressure test and impact test (if required) only;

Add new list item l):

l) changes of the o-ring and/or washer material of a valve parallel inlet connection (repetition of impact test).

6.6.1, second paragraph

Replace the second paragraph with the following:

For liquefied gases, p_{vbt} is given by Formula (3):

$$p_{vbt} = 1{,}5 \times p_{vt} \quad (3)$$

6.7.2, second paragraph

Replace the second paragraph with the following:

For valves for helium, hydrogen or their mixtures, the test gas for the tightness tests after the endurance test shall be helium, hydrogen or an inert mixture of these gases.

6.8