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AMENDMENT 1
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Gas cylinders — Refillable seamless steel gas cylinders and tubes — Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing

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Bouteilles à gaz — Bouteilles à gaz rechargeables en acier sans soudure et tubes — Essais d'émission acoustique et examen ultrasonique complémentaire pour l'inspection périodique et l'essai

AMENDEMENT 1

PROOF/ÉPREUVE

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

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This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 4, *Operational requirements of gas cylinders*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 23, *Transportable gas cylinders,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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Gas cylinders — Refillable seamless steel gas cylinders and tubes — Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing

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Clause 2

Replace:

ISO 6406, *Gas cylinders — Seamless steel gas cylinders — Periodic inspection and testing*

with:

ISO 18119, *Gas cylinders — Seamless steel and seamless aluminium-alloy gas cylinders and tubes — Periodic inspection and testing*

Clause 9, paragraph 1

Replace:

(See ISO 6406 or equivalent for the rejection criteria.)

with:

(See ISO 18119 or equivalent for the rejection criteria.)

A.1.4, Figure A.1, NOTE 2

Replace the second sentence with:

The depth (d) for notches 2 and 4 is a quarter of the depth of notch 1 ($d_2 = d_4 = ¼\ d_1$) for the same tube.

A.1.4

Delete list items e), f) and g).

A.1.5

Add a new subclause 4.1.5 as follows:

A.1.5 Test criteria

a) Any UT indications showing an amplitude that exceeds the DAC curve should be considered a potential for rejection. After the discontinuity has been located, it shall be evaluated by scanning in at least two directions. The signal amplitude as well as the circumferential and longitudinal

position of the discontinuity shall be recorded. A cylinder containing a potentially rejectable discontinuity shall be removed from the stack to allow access to the discontinuity location.

b) It is possible to estimate the length of the discontinuity by reducing the gain so the signal peak at the maximum amplitude is less than 100 % and then moving the sensor parallel with the flaw until the signal amplitude drops to a value less than or equal to 50 % of the maximum amplitude. Record this point. The length of the flaw "X" is the distance between the reduced amplitude (e.g. 50 %) and the maximum amplitude.

   Verification tests shall be performed on cylinders with a given notch to determine the value of "X".

c) When the removal of a cylinder from service is indicated, the cylinder either shall be rendered unserviceable or examined in the critical zone where a discontinuity has been located with a method in accordance with ISO 18119.

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