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**Plinske jeklenke - Ponovno polnljive plinske jeklenke in velike jeklenke iz celega - Preskus z akustično emisijo in ultrazvočni preskus pri periodičnem pregledu in preskušanju - Dopnilo A1 (ISO 16148:2016/DAM 1:2020)**

Gas cylinders - Refillable seamless steel gas cylinders and tubes - Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing - Amendment 1 (ISO 16148:2016/DAM 1:2020)

Gasflaschen - Wiederbefüllbare nahtlose Gasflaschen und Großflaschen aus Stahl - Schallemissionsprüfung und nachfolgende Ultraschallprüfung für die wiederkehrende Inspektion und Prüfung - Änderung 1 (ISO 16148:2016/DAM 1:2020)

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 (ISO 16148:2016/DAM 1:2020)

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# DRAFT AMENDMENT

## ISO 16148:2016/DAM 1

ISO/TC 58/SC 4

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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

#### AMENDMENT 1

*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

ICS: 23.020.35

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This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 4, Operational requirements of gas cylinders.

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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

## AMENDMENT 1

### 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, First paragraph

Replace:

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

With:

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

### Figure A.1, Note 2

Replace:

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

With:

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

### A.1.4

Replace:

#### A.1.4

- e) 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.
- f) It is possible to estimate the length of the discontinuity by reducing the gain and moving the sensor along the length of the cylinder until the signal drops below 10 % of the screen height.

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- g) 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 6406.

With:

**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 6406.

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