

## Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

6 May 2016

Forty-ninth session

Geneva, 27 June – 06 July 2016

Item 5 (b) of the provisional agenda

Transport of gases: miscellaneous

### Addendum to paper ST/SG/AC.10/C.3/2016/20 – Insertion of references to ISO standards in 6.2.2

Transmitted by the International Organisation for Standardisation  
(ISO)

#### Introduction

1. Shortly after document ST/SG/AC.10/C.3/2016/20 was submitted, another ISO standard was published which ISO would like to propose for inclusion in the 20<sup>th</sup> Revision of the UN Model Regulations. This is ISO 16148:2016 *Gas cylinders – Refillable seamless steel gas cylinders and tubes – Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing*.
2. The 2006 version of this standard already appears in Note 2 of paragraph 6.2.1.6.1. However, the standard has been developed considerably in the intervening ten years and this is reflected in a change of scope and title. Therefore the way in which this paper proposes to reference it is changed.

#### Proposal 1

3. Replace the existing Note 2 in paragraph 6.2.1.6.1 with the following.

*NOTE 2: For seamless steel cylinders and tubes the check of 6.2.1.6.1 (b) and hydraulic pressure test of 6.2.1.6.1 (d) may be replaced by a procedure conforming to ISO 16148:2016 'Gas cylinders – Refillable seamless steel gas cylinders and tubes – Acoustic emission examination (AT) and follow-up ultrasonic examination (UT) for periodic inspection and testing'.*

#### Justification for Proposal 1

4. The 2006 version of the standard was limited to acoustic emission examination so it was not a complete procedure; acoustic emission examination identifies and locates emission sources but other non destructive examination methods are needed to evaluate the significance of AT detected sources. This standard specifies the ultrasonic examination method as the follow-up procedure.

5. This new Note differs from the previous version in the following key respects.
- (a) Competent authority agreement is no longer needed because the new standard is not limited to acoustic emission examination and gives a complete procedure for examining the cylinder or tube;
  - (b) The procedure in the standard also examines the interior condition of the cylinder or tube so the standard fulfils the check of internal condition specified in 6.2.1.6.1 (b).
  - (c) The note specifies that the standard is only applicable to seamless steel cylinders and tubes to emphasise that it cannot be used for composite, welded or aluminium pressure receptacles.

## Proposal 2

6. Amend Note 3 of 6.2.1.6.1 to read as follows (new text underlined).

*NOTE 3: The check of 6.2.1.6.1 (b) and the hydraulic pressure test of 6.2.1.6.1 (d) may be replaced by ultrasonic examination carried out in accordance with ISO 10461:2005 + A1:2006 for seamless aluminium alloy gas cylinders and in accordance with ISO 6406:2005 for seamless steel gas cylinders.*

## Justification for Proposal 2

7. When preparing the revised Note 2, it was realised that the ultrasonic examination procedure specified in Note 3 also examines the internal condition of the pressure receptacle and so the check of 6.2.1.6.1 (b) could also be included in Note 3.
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