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**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

Thirty-second session
Geneva, 3-12 (a.m.) December 2007
Item 3 of the provisional agenda

**MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL
REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS**

References to ISO standards

Transmitted by the International Organization for Standardization (ISO)
and the European Industrial Gases Association (EIGA)^{*/}

Introduction

1. This document proposes the addition of four recently published standards into Chapter 6.2. There is also a need to update the reference to the standard ISO 10297, as proposed by the expert of the United Kingdom in ST/SG/AC.10/C.3/2007/35. The document also proposes to amend the requirement for competent authority approval of ultrasonic examination, taking into account the discussion of ST/SG/AC.10/C.3/2007/9.

^{*/} In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/60, para. 100 and ST/SG/AC.10/34, para. 14) (packing).

Proposal 1

2. In the table of paragraph 6.2.2.1.1 add the following standards.

ISO 20703:2006	Gas cylinders – Refillable welded aluminium-alloy cylinders – Design, construction and Testing
ISO 18172-1:2007	Gas cylinders – Refillable welded stainless steel cylinders – Part 1: Test pressure 6 MPa and below
ISO 18172-2:2007	Gas cylinders – Refillable welded stainless steel cylinders – Part 2: Test pressure greater than 6 MPa

3. These standards are concerned with cylinders of welded construction using aluminium alloy or stainless steel. The standard relating to welded steel cylinders (ISO 4706:1989) is still under revision and will not be ready for publication until next year.

Proposal 2

4. Amend Note 2 of 6.2.1.6.1(d) by adding the underlined sentence as shown below.

NOTE 2: *With the agreement of the competent authority, the hydraulic pressure test of cylinders or tubes may be replaced by an equivalent method based on acoustic emission testing, ~~ultrasonic examination~~ or a combination of acoustic emission testing and ultrasonic examination. ISO 16148:2006 may be used as a guide for acoustic emission testing procedures.*

5. At the thirty-first session EIGA proposed document ST/SG/AC.10/C.3/2007/9 to eliminate the requirement for competent authority approval for alternatives to the periodic hydraulic pressure test. This proposal was linked to Informal document INF 14 from ISO and proposed adding a reference to the standard ISO 16148:2006 Gas cylinders Refillable seamless steel gas cylinders – Acoustic emission testing (AT) for periodic inspection.

6. Since it is the wish of the Sub Committee to retain the competent authority approval of acoustic emission as a replacement of the hydraulic test, this proposal seeks to add a reference to ISO 16148 in a way which supports the use of acoustic emission and adds value to the Model Regulations. It was pointed out that the standard did not have rejection criteria and thus was a guide to techniques; and this is made clear in the above text.

7. The reason for deleting ultrasonic examination is made clear by Proposal 3 below. If Proposal 3 is not adopted, the deleted text should be reinstated.

Proposal 3

8. Add a new Note 3 to 6.2.1.5.1.

NOTE 3: *The hydraulic pressure test may be replaced by ultrasonic examination carried out in accordance with ISO 10461:2005+A1:2006 for seamless aluminium alloy cylinders and in accordance with ISO 6406:2005 for seamless steel cylinders and tubes. Note that ultrasonic examination may also be used to check the internal conditions (see 6.2.1.6.1(b)).*

9. The two standards listed in this note give complete instructions on ultrasonic examination and do include rejection criteria since the calibration notches are specified in terms of the wall thickness. It is therefore the opinion of the authors that since the tests are specified in detail, the direct involvement of the competent authority becomes unnecessary.
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