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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****Fifty-sixth session**

Geneva, 2-11 December 2019

Item 5 (b) of the provisional agenda

**Transport of gases: miscellaneous****Updated ISO standards in Class 2****Transmitted by the International Organisation for Standardisation  
(ISO)\*****Introduction**

1. These proposals concern one new standard which replaces two referenced standards, one revised standard and two amendments.

The titles of the standards are:

- ISO 11515:2013 + Amd 1:2018 Gas cylinders – Refillable composite reinforced tubes of water capacity between 450 L and 3000 L – Design, construction and testing;
- ISO 21172-1:2015 +Amd 1:2018 Gas cylinders – Welded steel pressure drums up to 3 000 litres capacity for the transport of gases – Design and construction – Part 1: Capacities up to 1 000 litres;
- ISO 18119:2018 Gas cylinders – Seamless steel and seamless aluminium-alloy gas cylinders and tubes – Periodic inspection and testing;
- ISO 10460:2018 Gas cylinders – Welded aluminium-alloy, carbon and stainless steel gas cylinders – Periodic inspection and testing.

2. There is also a proposal to delete one superseded periodic inspection standard.

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\* In accordance with the programme of work of the Sub-Committee for 2019-2020 approved by the Committee at its ninth session (see ST/SG/AC.10/C.3/108, paragraph 141 and ST/SG/AC.10/46, paragraph 14).

3. The usual arrangements have been made with the secretariat to circulate PDF copies of these documents to the experts.

## Proposal 1

4. In the table in 6.2.2.3 in the row starting ISO 11515:2013 replace “Until further notice” with “Until 31 December 2026”. Add a new row beneath this row as follows:

ISO 11515:2013 + Amd 1:2018	Gas cylinders – Refillable composite reinforced tubes of water capacity between 450 L and 3000 L – Design, construction and testing	Until further notice
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## Justification

5. When this standard was introduced it was criticised for omitting the gun fire test. This amendment rectifies that omission by introducing this test which has a long established use in the standards for composite cylinders. The blunt impact test is also revised.

## Proposal 2

6. In the table in 6.2.2.1.8 in the row starting ISO 21172-1:2015 replace ‘Until further notice’ with ‘Until 31 December 2026’. Add the following new second row to the table (after ISO 21172-1:2015):

ISO 21172-1:2015 + Amd 1:2018	Gas cylinders – Welded steel pressure drums up to 3 000 litres capacity for the transport of gases – Design and construction – Part 1: Capacities up to 1 000 litres;	Until further notice
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## Justification

7. When this standard was introduced to the Model Regulations there was widespread objections to clause 6.3.3.4 which forbade corrosive gases being carried in drums with dished ends convex to pressure. This amendment of the standard removes the restriction on corrosive substances so the note appearing with the reference to ISO 21172-1:2015 is not necessary for this new reference.

## Proposal 3

8. In the table in 6.2.2.4 in the two rows starting ISO 6406:2005 and ISO 10461:2005/A1:2006 replace ‘Until further notice’ with ‘Until 31 December 2024’. Add the following new second row to the table (after ISO 6404:2005):

ISO 18119:2018	Gas cylinders – Seamless steel and seamless aluminium-alloy gas cylinders and tubes – Periodic inspection and testing	Until further notice
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9. As a consequential amendment replace NOTE 3 in 6.2.1.6.1 with the following:

*“NOTE 3: The check of internal condition (b) and the hydraulic pressure test (d) may be replaced by ultrasonic examination carried out in accordance with ISO 18119:2018 for seamless steel and seamless aluminium alloy gas cylinders. For a transitional period until 31 December 2024 the standard ISO 10461:2005 +A1:2006 may be used for seamless aluminium alloy cylinders and ISO 6406:2005 may be used for seamless steel cylinders for this same purpose.”*

### Justification

10. This new standard covers the periodic inspection of both seamless steel and seamless aluminium cylinders and tubes; it therefore supersedes both ISO 6406 and ISO 10461. These latter standards have been withdrawn from the ISO online catalogue, but in accordance with the Guiding Principles may continue to be used for the periodic inspection of UN gas cylinders until the end of 2024.

### Proposal 4

11. In the table in 6.2.2.4 in the row starting ISO 10460:2005 ‘Until further notice’ with ‘Until 31 December 2024’. Add the following new fourth row to the table (after ISO 10460:2005):

ISO 10460:2018	Gas cylinders – Welded aluminium-alloy, carbon and stainless steel gas cylinders – Periodic inspection and testing.	Until further notice
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### Justification

12. The 2005 edition of this standard only covered welded cylinders made from carbon steel but this 2018 edition covers welded stainless steel cylinders and welded aluminium alloy as well. Also, the superseded edition allowed the repair of welds, but this new standard forbids the type of weld repairs formerly forbidden by the note accompanying the reference. There is therefore no need for such a note since the standard has been brought into alignment with the Model Regulations.

### Proposal 5

13. In 6.2.2.4 delete the row for ISO 11623:2002.

### Justification

14. ISO 11623:2002 Transportable gas cylinders – Periodic inspection and maintenance of composite gas cylinders has been superseded by the 2015 edition and is no longer applicable after the end of 2020 so this reference should be deleted from the table in 6.2.2.4.