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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****Sixty-first session**

Geneva, 28 November-6 December 2022

Item 5 (c) of the provisional agenda

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

1. At the sixtieth session of the Sub-Committee of Experts, ISO submitted document ST/SG/AC.10/C.3/2022/14. The Sub-Committee requested additional information for two standards that were included in document ST/SG/AC.10/C.3/2022/14.

2. The standards are:

ISO 9809-4:2021, Gas cylinders – Design, construction and testing of refillable seamless steel gas cylinders and tubes – Part 4: Stainless steel cylinders with an Rm value of less than 1 100 MPa.

ISO 23826:2021, Gas cylinders – Ball valves – Specification and testing.

**Proposal 1**

3. Standard ISO 9809-4:2021 was revised to include a specific clause on type approval/production tests for cylinders ordered in small quantities. Cylinders made to standard ISO 9809-4 are typically only made in small quantities which is why the clause was added. The clause (and the standard) does not specify what is a small quantity. ISO has consulted with the experts who drafted the standard and an appropriate number for a small quantity for a batch of cylinders is considered to be less than 200 cylinders. Consequently, the proposal to include standard ISO 9809-4:2021 is amended to include a note to state that small quantities are a batch of cylinders not exceeding 200 cylinders.

4. In the table in 6.2.2.1.1, in the row starting ISO 9809-4:2014 replace “Until further notice” by “Until 31 December 2028”. And in the same table in 6.2.2.1.1 add the following new row beneath the row starting ISO 9809-4:2014:

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\* A/75/6 (Sect.20), para. 20.51

ISO 9809-4:2021	Gas cylinders – Design, construction and testing of refillable seamless steel gas cylinders and tubes – Part 4: Stainless steel cylinders with an Rm value of less than 1 100 MPa <i>NOTE: Small quantities are a batch of cylinders not exceeding 200</i>	Until further notice
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### Justification

5. The significant changes compared to the previous edition are as follows, (as presented in document ST/SG/AC.10/C.3/2022/14):

- (a) Update of Clause 5 Inspection and testing;
- (b) Clarification of Figure 3 Deviation of the cylindrical part of the shell from a straight line and from vertical;
- (c) Clarification of Clause 8.9 Neck threads;
- (d) Modifications of Clause 9.1 General requirements for type approval, Clause 9.2 Prototype test, Subclause 9.2.4 Torque test for taper thread only and Annex A Evaluation of manufacturing imperfections;
- (e) A new Subclause 9.2.5 Shear stress calculation for parallel threads;
- (f) A new Clause 9.4 for cylinders ordered in small quantities, (see para. 4 above).

### Proposal 2

6. Standard ISO 23826:2021 is a new standard specifying design, type testing, marking, manufacturing tests and examination requirements for ball valves used as closures of refillable transportable gas cylinders, pressure drums and tubes; main valves for cylinder bundles and valves for cargo transport units of Class 2 (e.g. battery vehicles and multiple element gas containers (MEGCs)) which convey compressed gases, liquefied gases and dissolved gases.

7. In 6.2.2.3 add the following new row at the end of the first table:

ISO 23826:2021	Gas cylinders – Ball valves – Specification and testing	Until further notice
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### Justification

8. During the revision of standard ISO 10297:2006 it was agreed by ISO/TC58/SC2 and ISO/TC58/SC2/WG6 that ISO 10297 is not applicable to specific valve designs such as quick-release cylinder valves, self-closing cylinder valves and ball valves. Therefore, these designs were excluded from standard ISO 10297:2014 and remained excluded in Amendment 1 from 2017.

9. Due to the urgent requirement for standards for quick-release cylinder valves and self-closing valves, it was agreed to develop separate standards based on standard ISO 10297 but giving divergent (non-applicable or adjusted) and additional requirements related to the specific designs and their applications. This work resulted in publication of standard ISO 17871 for quick-release cylinder valves and standard ISO 17879 for self-closing cylinder valves. Both standards are referenced in the Model Regulations.

10. For ball valves, at the time of revision of standard ISO 10297:2006, no applications for ball valves for pressure receptacles were reported, so it was decided to postpone development of a separate standard for ball valves. Some years later, the need to develop such a standard was driven by the requirement for ball valves mainly for cargo transport units such as trailers, battery vehicles and MEGCs. For the resulting standard ISO 23826, the same approach as for standards ISO 17871 and ISO 17879 was used so that this standard is also equivalent to standard ISO 10297.

**Proposal on editorial amendments**

11. Document ST/SG/AC.10/C.3/2022/14 proposed to align the presentation of all standards with the form used in the ISO catalogue. It was identified that not all standards were identified in document ST/SG/AC.10/C.3/2022/14, consequently the following additional amendments are proposed:

In 4.1.6.1.8 (e) replace “ISO 10297 + A1:2017” by “ISO 10297:2014 +Amd 1:2017”

In 6.2.1.6.1 (d) replace “ISO 10461:2005 + A1:2006” by “ISO 10461:2005 + Amd:2006”

12. The change to 4.1.6.1.2. is not required as standard ISO 11114-1:2012 +A1:2017 has been replaced by “ISO 11114-1:2020”, see document ST/SG/AC.10/C.3/2021/10.

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