

## 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

18 April 2024

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Items 5 (c) of the provisional agenda

Transport of gases: Miscellaneous

### Updated ISO standard in Class 2

Transmitted by the International Organisation for Standardisation  
(ISO)

#### I. Introduction

1. This document introduces one new revised standard which has recently been published. The title of the standard is:

ISO 10297:2024, Gas cylinders — Cylinder valves — Specification and type testing

The usual arrangements have been made with the secretariat to circulate a PDF copy of this documents to the experts.

#### II. Proposal

2. In 4.1.6.1.8, in the paragraph below (e), revise the text in the third sentence to read as follows (new text is underlined):

“Valves with inherent protection used for refillable pressure receptacles shall meet the requirements of clause 4.6.2 of ISO 10297:2006 or clause 5.5.2 of ISO 10297:2014 or clause 5.5.2 of ISO 10297: 2014 + Amd 1:2017 or clause 5.4.2 of ISO 10297:2024, or in the of self-closing valves, of clause 5.4.2 of ISO 17879:2017.”

3. In the table in 6.2.2.3, in the row starting ISO 10297: 2014 + Amd 1:2017 replace “Until further notice” with “Until 31 December 2028”. In the table in 6.2.2.3 add the following new row beneath the row starting ISO 10297: 2014 + Amd 1:2017 to read:

|                |  |                      |
|----------------|--|----------------------|
| ISO 10297:2024 | Gas cylinders — Cylinder valves — Specification and type testing | Until further notice |
|----------------|--|----------------------|

#### III. Justification

4. This document specifies design, type testing and marking requirements for: cylinder valves intended to be fitted to refillable transportable gas cylinders; main valves (excluding ball valves) for bundles of cylinders, and; cylinder valves or main valves with integrated pressure regulator (VIPR).

This fourth edition cancels and replaces the third edition (ISO 10297:2014), which has been technically revised. It also incorporates the Amendment ISO 10297:2014/Amd 1:2017.

The main changes to the document are as follows:

- clarification of the Scope concerning different VIPR designs;
  - addition of several new terms and definitions, e.g. VIPR types A, B and C for easy referencing of different design types;
  - oxygen pressure surge test:
    - for VIPRs transferred from ISO 22435 and amended,
    - for RPVs transferred from ISO 15996 and amended,
  - reference for test equipment and procedure to ISO 11114-6,
  - endurance test for specific VIPR designs transferred from ISO 22435 and amended;
  - endurance test of the filling connection non-return valve transferred from ISO 22435 with clarification of the test procedure without changes to the acceptance criteria;
  - acetylene decomposition test of VIPR designs transferred from ISO 22435 and amended;
  - subclause 5.3 "Dimensions" removed;
  - introduction of Table 2 for giving the different leakage rates depending on the valve design;
  - Table 4 (former Table 3) of test schedule amended;
  - introduction of recommendations for flow capacity values and reference to CGA V-9 for the respective determination as an example;
  - introduction of a valve spindle impact test for pin-index valves not permanently protected during transport and use;
  - introduction of the hydraulic pressure test also in the closed position for manually operated valves;
  - introduction of an additional tightness test for pressure relief valves located upstream of the valve operating mechanism;
  - Annex D "Example of test schedule" removed;
  - information on changes and/or material variants within a valve design moved to new Annex F and amended.
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