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Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods****Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods**

Geneva, 19-29 September 2023

Items 2 and 3 of the provisional agenda

Tanks, and Standards**RID/ADR 6.8.3.6 – Requirements for battery-wagons/
battery-vehicles and multiple-element gas containers which
are designed, constructed, inspected and tested according to
referenced standards****Transmitted by the European Industrial Gases Association (EIGA) and
European Cylinder Makers' Association (ECMA)*,*****Summary*

Explanatory summary: With standard EN ISO 23826:2021 published and referenced in RID/ADR (especially in 6.8.3.6), the use of ball valves for battery vehicles/battery wagons and Multiple-Element Gas Containers (MEGCs) is intended and permitted. However, standard EN ISO 23826:2021 is not explicitly referenced in EN 13807:2017. For clarity a reference is needed in RID/ADR to explicitly allow the use of ball valves for battery-vehicles/battery-wagons and MEGCs.

Decision to be taken: To add a clarification note to the table in RID/ADR 6.8.3.6. under standards EN 13807:2017 referencing the use of ball valves in accordance with standard EN ISO 23826:2021.

Related document: -

* A/77/6 (Sect. 20), table 20.6.

** Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2023/33.

Introduction

1. The main standard for cylinder valves for pressure receptacles EN ISO 10297 (referenced in 6.2.4.1) was revised in 2014. During that revision, specific valves designs (i.e. quick-release valves, self-closing valves and ball valves) were excluded from the scope of the standard with the aim to publish separate standards for these designs which take their specific configurations and applications into account.
2. As result of the exclusion of specific designs in standard EN ISO 10297, amongst other standards and mainly because necessity of the application highlighted by the gas industry, standard EN ISO 23826 was published as a new standard for ball valves with the main application for "cargo transport units" (e.g. battery-vehicles, battery-wagons and MEGCs).
3. Standard EN ISO 23826:2021 is for the first time referenced in RID/ADR 2023 in 6.2.4.1 (for pressure receptacles), 6.8.2.6.1 (for tanks) and 6.8.3.6 (for battery-vehicles/battery-wagons and MEGCs) with a transition period of 2 years.

Current situation

4. According to the table in 6.8.3.6, for battery-vehicles/battery-wagons and MEGCs, EN 13807:2017 is mandatory to be applied for new type approvals or renewals of type approvals.
5. Standard EN 13807:2017 requires valves to meet standard EN ISO 10297 (current edition) if used as closures of the single pressure receptacles in a battery-vehicle/battery-wagon or MEGC. In addition, the main valve (valve fitted to the manifold isolating it from the main connection(s)) of a battery-vehicle/battery-wagon or MEGC shall also meet standard EN ISO 10297 (current edition).
6. At the time of publication of standard EN 13807:2017, the use of ball valve as closures for single pressure receptacles and as main valves was agreed in the respective standardization group but there was no standard for ball valves available to which standard EN 13807 could have referred.
7. With now having standard EN ISO 23826:2021 published and referenced in RID/ADR (especially 6.8.3.6), the use of ball valves for battery-vehicles/battery-wagons and MEGCs is intended and permitted.
8. Standard EN ISO 23826:2021 is not explicitly referenced in standard EN 13807:2017. For clarity, a reference is needed in RID/ADR to explicitly allow the use of ball valves for battery-vehicles/battery-wagons and MEGCs.
9. Standard EN 13807 will be revised soon, amongst other things to include ball valves as alternative to cylinder valves but this revision will need some time and the revised standard will subsequently be referenced in RID/ADR before it can be applied.
10. To already allow using ball valves in battery-vehicles/battery-wagons and MEGCs earlier, it is proposed to amend the application of standard EN 13807:2017 within RID/ADR to cover ball valves in a shorter period.
11. Because standard EN ISO 23826 explicitly excludes ball valves for oxidizing and toxic gases, the application of ball valves for battery-vehicles/battery-wagons and MEGCs shall be limited to non-oxidizing and non-toxic gases.

Proposal 1

12. In the Table of 6.8.3 insert a Note in column (2) for standard EN 13807:2017.6 to read as follows:

"NOTE: For non-oxidizing and non-toxic gases, cylinder valves according to standard EN ISO 10297 as required in clauses 4.4.1 and 4.6.1 may be replaced by ball valves according to EN ISO 23826:2021."

Reference	Title of document	Requirements the standard complies with	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 13807:2003	Transportable gas cylinders – Battery vehicles – Design, manufacture, identification and testing <i>NOTE: Where appropriate this standard may also be applied to MEGCs which consists of pressure receptacles</i>	6.8.3.1.4 and 6.8.3.1.5 6.8.3.2.18 to 6.8.3.2.26, 6.8.3.4.12 to 6.8.3.4.14 and 6.8.3.5.10 to 6.8.3.5.13	Between 1 January 2005 and 31 December 2020	
EN 13807:2017	Transportable gas cylinders – Battery vehicles and multiple-element gas containers (MEGCs) – Design, manufacture, identification and testing <i>NOTE: For non-oxidizing and non-toxic gases, cylinder valves according to EN ISO 10297 as required in clauses 4.4.1 and 4.6.1 may be replaced by ball valves according to EN ISO 23826:2021.</i>	6.8.3.1.4, 6.8.3.1.5, 6.8.3.2.18 to 6.8.3.2.28, 6.8.3.4.12 to 6.8.3.4.14 and 6.8.3.5.10 to 6.8.3.5.13	Until further notice	
EN ISO 23826:2021	Gas cylinders – Ball valves – Specification and testing	6.8.2.1.1 and 6.8.2.2.1	Mandatory from 1 January 2025	

Proposal 2

13. Insert additional requirements the standard complies with, in column (3) for EN ISO 23826:2021 in the Table of 6.8.3.6 to read as follows (adding 6.8.3.2.18, 6.8.3.2.19, 6.8.3.2.25 and 6.8.3.2.28 marked as underlined):

Reference	Title of document	Requirements the standard complies with	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 13807:2003	Transportable gas cylinders – Battery vehicles – Design, manufacture, identification and testing <i>NOTE: Where appropriate this standard may also be applied to MEGCs which consists of pressure receptacles</i>	6.8.3.1.4 and 6.8.3.1.5 6.8.3.2.18 to 6.8.3.2.26, 6.8.3.4.12 to 6.8.3.4.14 and 6.8.3.5.10 to 6.8.3.5.13	Between 1 January 2005 and 31 December 2020	
EN 13807:2017	Transportable gas cylinders – Battery vehicles and multiple-element gas containers (MEGCs) – Design, manufacture, identification and testing	6.8.3.1.4, 6.8.3.1.5, 6.8.3.2.18 to 6.8.3.2.28, 6.8.3.4.12 to 6.8.3.4.14 and 6.8.3.5.10 to 6.8.3.5.13	Until further notice	
EN ISO 23826:2021	Gas cylinders – Ball valves – Specification and testing	6.8.2.1.1, and 6.8.2.2.1, <u>6.8.3.2.18,</u> <u>6.8.3.2.19,</u> <u>6.8.3.2.25 and</u> <u>6.8.3.2.28</u>	Mandatory from 1 January 2025	

Justification

14. This amendment aims to clarify the allowance of using ball valves in battery-vehicles/battery-wagons and MEGCs as already foreseen by referenced standard EN ISO 23826:2021 and as needed by specific applications.