

**Informal document regarding CEN standards recently published or ready to be
published for reference in RID/ADR**

Transmitted by the European Committee for Standardisation (CEN)

A. EN 1803:2002 Transportable gas cylinders - Periodic inspection and testing of welded steel gas cylinders (excluding LPG)

This standard had been ratified in February 2002. The standard is built according to the same structure as its two brothers for the periodic inspection of seamless steel cylinders (*EN 1968:2002 Transportable gas cylinders - Periodic inspection and testing of seamless steel gas cylinders (excluding LPG)*) and for the periodic inspection of aluminum cylinders (*EN 1802:2002 Transportable gas cylinders - Periodic inspection and testing of seamless aluminum gas cylinders*).

A summary of the assessment of EN 1803:2002 by the CEN consultant is in appendix.

CEN will present at the next Joint Meeting a proposal to refer to this standard in 6.2.2.

B. prEN 13293:2002 Transportable gas cylinders - Specifications for the design and construction of refillable transportable seamless normalised carbon manganese steel gas cylinders of water capacity up to 0.5 litre for compressed, liquefied and dissolved gases and up to 1 litre for carbon dioxide

This standard has been recently issued to the CEN members for final voting.

Hopefully this standard will be ratified before the next Joint Meeting. In this case, CEN will propose to refer to the published standard in 6.2.2.

A summary of the assessment of prEN 13293:2002 by the CEN consultant is in appendix.

C. prEN 12863:2002 Transportable gas cylinders - Periodic inspection and maintenance of dissolved acetylene cylinders.

This standard is the CEN version of *ISO 10462:1994 Cylinders for dissolved acetylene – Periodic inspection and maintenance*. ISO 10462 is referred to in 6.2.2.1 of the Model Regulations as mandatory for UN marked cylinders and will be referred to in 6.2.5.5 of the 2003 versions of RID/ADR.

This standard has been recently issued to the CEN members for final voting.

Hopefully this standard will be ratified before the next Joint Meeting. In this case, CEN will propose to refer to the published standard in 6.2.2.

A summary of the assessment of prEN 12863:2002 by the CEN consultant is in appendix.

Annex 1: Synopses of assessments of standards proposed for references in RID/ADR

A. EN 1803:2002 Transportable gas cylinders - Periodic inspection and testing of welded steel gas cylinders (excluding LPG)

Conclusions: The standard satisfies the requirements of ADR/RID on the scope of the standard and the standard does not come into contradiction with other requirements of ADR/RID.

The standard contains an Annex A that supports requirements of the Transportable Pressure Equipment Directive (TPED) with regard to the assessment of equipment already in service.

The standard includes also an informative (not mandatory) Annex B with “recommended” shorter testing periodicities for cylinders in special service, e.g. underwater breathing apparatus

Table of concordance between essential requirements of RID/ADR and clauses of PrEN 1803

marginal(s) of RID/ADR	clauses of standard
6.2.1.6 Refillable receptacles shall be subjected to periodic inspection under the supervision of a testing and certifying body approved by the competent authority, in accordance with the following specifications: (a) Check of the external conditions of the receptacle and verification of the equipment and the external markings; (b) Check the internal conditions of the receptacle (e.g. by weighing, internal inspection, checks of wall thickness); (c) The hydraulic test and, if necessary, verification of the characteristics of the material by suitable tests; Note 1: replacement of hydraulic test by pneumatic test or ultrasonic test Note 2: replacement of hydraulic test by acoustic emission test Note 3: replacement of hydraulic test for small welded steel LPG receptacles	5, 6, 9, Annex C 7, 8, 13.3, Annex C 10, Annex E note of 10.2.2 not covered not covered

B. prEN 13293:2002 Transportable gas cylinders - Specifications for the design and construction of refillable transportable seamless normalised carbon manganese steel gas cylinders of water capacity up to 0.5 litre for compressed, liquefied and dissolved gases and up to 1 litre for carbon dioxide

Conclusions: The standard covers all essential requirements of RID/ADR on the subject as outlined in the table hereafter and there is no contradiction between any part of the standard and these requirements.

Table of concordance between essential requirements of RID/ADR and clauses of PrEN 13293

Marginal(s) RID/ADR	Clauses of standard
6.2.1.1.1 Receptacles and their closures shall be designed, calculated, manufactured, tested and equipped in such a way as to withstand all conditions to which they will be subjected during their normal use and during normal transport conditions In the design of pressure receptacles, all relevant factors are to be taken into account such as: - internal pressure - ambient and operational temperatures including during transport; - dynamic loads Normally the wall thickness shall be determined by calculation	sections 4,5,6,7,8,9
6.2.3.1 At the test pressure, the stress in the metal at the most severely stressed point of the receptacle shall not exceed 77% of the guaranteed minimum yield stress (Re).	5.2

<p>6.2.1.5.1 New pressure receptacles shall be subjected to testing and inspection during and after manufacture in accordance with the following:</p> <p>On an adequate sample of pressure receptacles:</p> <p>(a) Testing of the mechanical characteristics of the material of construction;</p> <p>(b) Verification of the minimum wall thickness;</p> <p>(c) Verification of the homogeneity of the material for each manufacturing batch, and inspection of the external and internal conditions of the pressure receptacles;</p> <p>(d) Inspection of the neck threads;</p> <p>(e) Verification of the conformance with the design standard;</p> <p>For all pressure receptacles:</p> <p>(f) A hydraulic pressure test. Pressure receptacles shall withstand the test pressure without undergoing permanent deformation or exhibiting cracks;</p> <p><i>NOTE : With the agreement of the inspection body, the hydraulic pressure test may be replaced by a test using a gas, where such an operation does not entail any danger.</i></p> <p>(g) Inspection and assessment of manufacturing defects and either repairing them or rendering the pressure receptacles unserviceable;</p> <p>(h) An inspection of the markings on the pressure receptacles;</p> <p>(i) In addition, pressure receptacles intended for the carriage of UN 1001 acetylene,</p>	<p>7.3 and 8</p> <p>8.4</p> <p>8.3</p> <p>8.3</p> <p>8.3</p> <p>9.1</p> <p>Annex A</p> <p>Not in scope</p>
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C. prEN 12863:2002 Transportable gas cylinders - Periodic inspection and maintenance of dissolved acetylene cylinders.

Conclusions: The standard satisfies the requirements of ADR/RID on the scope of the standard and the standard does not come into contradiction with other requirements of ADR/RID. The standard contains an informative Annex A that is outside the scope of ADR/RID. This Annex supports some requirements of the Transportable Pressure Equipment Directive (TPED).

Table of concordance between essential requirements of RID/ADR and clauses of PrEN 12683

marginal(s) RID/ADR	clauses of standard
<p>6.2.1.6.2 For receptacles intended for the carriage of UN 1001 acetylene, dissolved and UN 3374 acetylene, solvent free, only the external conditions (corrosion, deformation), and the conditions of the porous mass (loosening, settlement) shall be required to be examined.</p>	4, 5, 6, Annex C
<p>4.1 P200</p> <p>(8) c: Every 10 years in the case of receptacles intended for the carriage of gases of classification codes 1A, 1O, 1F, 2A, 2O and 2F.</p> <p>(9) p: Alternatively, for UN 1001 acetylene, dissolved and UN 3374 acetylene, solvent free, cylinders which are not “UN” certified pressure receptacles may be filled with a non-monolithic mass;.....The maximum test period for periodic inspection of the cylinders shall not exceed 5 years.</p>	4.2
<p>5.2.1.6 Refillable receptacles shall bear the following particulars in clearly legible and durable characters:</p> <p>(c) date (year) of next inspection</p> <p>These marks can either be engraved, or indicated on a durable disk, label,..... or by painting or by any equivalent process</p>	8