

Transportable gas cylinders - Periodic inspection and testing of seamless aluminium alloy gas cylinders

Transportable gas cylinders - Periodic inspection and testing of seamless aluminium alloy gas cylinders

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1802:2002 sisaldab Euroopa standardi EN 1802:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 12.07.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1802:2002 consists of the English text of the European standard EN 1802:2002.</p> <p>This document is endorsed on 12.07.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p>Käsitlusala: This European Standard specifies the requirements for periodic inspection and testing of seamless aluminium alloy transportable gas cylinders (single or those from bundles) intended for compressed and liquefied gases under pressure, of water capacity from 0,5 l up to 150 l.</p>	<p>Scope: This European Standard specifies the requirements for periodic inspection and testing of seamless aluminium alloy transportable gas cylinders (single or those from bundles) intended for compressed and liquefied gases under pressure, of water capacity from 0,5 l up to 150 l.</p>
---	---

ICS 23.020.30

Võtmesõnad: co, gas cylinders, liquefied petroleum gas, liquefied petroleum gases, macroscopic analysis, mobile, pressure tests, recurrent, repeat tests, seamless, specification (approval), specifications, test method, testing, ultrasonic testing, visual inspection (testing)

ICS 23.020.30

English version

Transportable gas cylinders - Periodic inspection and testing of seamless aluminium alloy gas cylinders

Bouteilles à gaz transportables - Contrôles et essais périodiques des bouteilles à gaz sans soudure en alliages d'aluminium

Ortsbewegliche Gasflaschen - Wiederkehrende Prüfung von nahtlosen Gasflaschen aus Aluminiumlegierung

This European Standard was approved by CEN on 8 November 2001.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	page
Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Intervals between periodic inspection and test	6
4 List of procedures for periodic inspection and test	6
5 Identification of cylinder and preparation for inspection and test	7
6 External visual inspection	7
7 Internal visual inspection	8
8 Supplementary tests	8
9 Inspection of cylinder neck/shoulder	8
10 Pressure test or ultrasonic test	9
11 Inspection of valve	10
12 Final operations	10
13 Rejection and rendering cylinder unserviceable	12
Annex A (informative) Gas cylinders manufactured according to National Regulations	13
Annex B (normative) Inspection periods	15
Annex C (normative) Description, evaluation of defects and conditions for rejection of seamless aluminium alloy gas cylinders at time of visual inspection	16
Annex D (normative) Procedure to be adopted when a cylinder valve is suspected to be obstructed	22
Annex E (normative) Cleaning of aluminium alloy gas cylinders	25
Annex F (normative) Proof pressure test of gas cylinders	26
Annex G (normative) Volumetric expansion testing of gas cylinders	27
Annex H (normative) Ultrasonic test	35
Annex I (informative) Inspection and maintenance of valves and their connections: recommended procedures	46
Bibliography	47

Foreword

This document EN 1802:2002 has been prepared by Technical Committee CEN/TC 23 "Transportable gas cylinders", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2002, and conflicting national standards shall be withdrawn at the latest by August 2002.

In this standard the annexes B, C, D, E, F, G and H are normative and the annexes A and I are informative.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports the objectives of the framework Directives on Transport of Dangerous Goods.

This European Standard has been submitted for reference into the RID and/or the technical annexes of the ADR. Therefore in this context the standards listed in the normative references and covering basic requirements of the RID/ADR not addressed within the present standard are normative only when the standards themselves are referred to in the RID and/or the technical annexes of the ADR.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

The principal aim of a periodic inspection and testing procedure is that at the completion of the test the cylinders may be reintroduced into service for a further period of time.

Experience of the inspection and testing of cylinders which is specified in this European Standard is an important factor when determining whether a cylinder should be returned into service.

This document is a preview generated by EVS

1 Scope

This European Standard specifies the requirements for periodic inspection and testing of seamless aluminium alloy transportable gas cylinders (single or those from bundles) intended for compressed and liquefied gases under pressure, of water capacity from 0,5 l up to 150 l.

NOTE As far as practicable, this standard may also be applied to cylinders of less than 0,5 l water capacity.

This standard specifies the requirements for periodic inspection and testing to verify the integrity of such gas cylinders to be reintroduced into service for a further period of time. It also defines a procedure to qualify existing gas cylinders for free movement between member states of the European Union (see annex A).

This standard does not apply to periodic inspection and testing of acetylene cylinders or composite (fully wrapped or hoop-wrapped) aluminium alloy cylinders.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate place in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 473, *Non-destructive testing — Qualification and certification of NDT personnel — General principles.*

EN 629-2, *Transportable gas cylinders — 25E taper thread for connection of valves to gas cylinders — Part 2: Gauge inspection.*

EN 837-1, *Pressure gauges — Part 1: Bourdon tube pressure gauges — Dimensions, metrology, requirements and testing.*

EN 837-3, *Pressure gauges — Part 3: Diaphragm and capsule pressure gauges — Dimension, metrology, requirements and testing.*

EN 1089-1, *Transportable gas cylinders — Gas cylinder identification (excluding LPG) — Part 1: Stampmarking.*

EN 1795, *Transportable gas cylinders (excluding LPG) — Procedures for change of gas service.*

prEN 1964-2, *Transportable gas cylinders — Specification for the design and construction of refillable transportable seamless steel gas cylinders of water capacities from 0,5 litre up to and including 150 litres — Part 2: Cylinders made of seamless steel with an R_m value of 1100 MPa and above.*

EN 1975, *Transportable gas cylinders — Specification for the design and construction of refillable transportable seamless aluminium and aluminium alloy gas cylinders of capacity from 0,5 litre up to 150 litre.*

EN ISO 11114-1, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 1: Metallic materials (ISO 11114-1:1997).*

EN ISO 11114-2, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials (ISO 11114-2:2000).*

EN ISO 13341, *Transportable gas cylinders — Fitting of valves to gas cylinders (ISO 13341:1997).*