EESTI STANDARD EVS-EN ISO 11623:2002

Transportable gas cylinders - Periodic inspection and testing of composite gas cylinders

Transportable gas cylinders - Periodic inspection and testing of composite gas cylinders

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

Käesolev Eesti standard EVS-EN ISO 11623:2002 sisaldab Euroopa standardi EN ISO 11623:2002 ingliskeelset teksti. Käesolev dokument on jõustatud 06.08.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 11623:2002 consists of the English text of the European standard EN ISO 11623:2002. This document is endorsed on 06.08.2002 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

NATIONAL FOREWORD

Käsitlusala: This standard specifies the requirements for periodic inspection and testing of hoop wrapped and fully wrapped composite transportable gas cylinders, with aluminium, steel or non-metallic liners or of linerless construction, intended for compressed, liquefied or dissolved gases under pressure, of water capacity from 0,5 l up to 450 l.This standard specifies the requirements for periodic inspection and testing to verify the integrity of such gas cylinders for further service.	**Scope:** This standard specifies the requirements for periodic inspection and testing of hoop wrapped and fully wrapped composite transportable gas cylinders, with aluminium, steel or non-metallic liners or of linerless construction, intended for compressed, liquefied or dissolved gases under pressure, of water capacity from 0,5 l up to 450 l.This standard specifies the requirements for periodic inspection and testing to verify the integrity of such gas cylinders for further service.

ICS 23.020.30

Võtmesõnad: gas cylinders, gas holders, gas pressure vessels, gas type, gases, inspection, liquefied petroleum gas, liquefied petroleum gases, methods, mobile, pressure tests, re-usable, reusable equipment, seamless, specification (approval), specifications, testing, valves

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 11623

March 2002

ICS 23.020.30

English version

Transportable gas cylinders - Periodic inspection and testing of composite gas cylinders (ISO 11623:2002)

Bouteilles à gaz transportables - Contrôles et essais périodiques des bouteilles à gaz en matériau composite (ISO 11623:2002)

Ortsbewegliche Gasflaschen - Wiederkehrende Prüfung von Gasflaschen aus Verbundwerkstoffen (ISO 11623:2002)

This European Standard was approved by CEN on 8 March 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

Ref. No. EN ISO 11623:2002 E

Contents

Foreword

This document (EN ISO 11623:2002) has been prepared by Technical Committee CEN/TC 23 "Transportable gas cylinders", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 58 "Gas cylinders".

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 September 2002, and conflicting national standards shall be withdrawn at the latest by September 2002.

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 or in 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 in the technical annexes of the ADR.

Annexes A, C and D are informative.

Annex B and ZA are normative.

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 periodic inspection and testing is that at the completion of the test the cylinders may be reintroduced into service for a further period of time. It is not possible to identify all considerations for inspecting and re-testing of composite cylinders in this publication. Questions regarding specific cylinders should be directed to the manufacturer.

1 Scope

This standard specifies the requirements for periodic inspection and testing of hoop wrapped and fully wrapped composite transportable gas cylinders, with aluminium, steel or non-metallic liners or of linerless construction, intended for compressed, liquefied or dissolved gases under pressure, of water capacity from 0,5 l up to 450 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 for further service.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places 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 629-2:1996, *Transportable gas cylinders - 25E taper thread for connection of valves to gas cylinders - Part 2: Gauge inspection*

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

EN 1089-2, *Transportable gas cylinders — Gas cylinder identification (excluding LPG) — Part 2: Precautionary labels*

EN 1089-3, *Transportable gas cylinders — Gas cylinder identification — Part 3: Colour coding*

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

prEN 1802, *Transportable Gas cylinders — Periodic inspection and testing of seamless aluminium alloy gas cylinders*

prEN 1968, *Transportable gas cylinders — Periodic inspection and testing of seamless steel gas cylinders*

prEN 13096, *Transportable gas cylinders — Filling conditions for single gases*

ISO 32:1977, *Gas cylinders for medical use — Marking for identification of content*

ISO 6406: 1992, *Periodic inspection and testing of seamless steel gas cylinders*

ISO 7225:1994, *Gas cylinders — Precautionary labels*

ISO 10461: 1993, *Seamless aluminium-alloy gas cylinders; periodic inspection and testing*

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

ISO 11114-2:1997, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 2: Non-metallic materials*

ISO 11191:1997, *Gas cylinders — 25E taper thread for connection of valves to gas cylinders — Inspection gauges*

ISO 11621: 1997, *Gas cylinders — Procedures for change of gas service*

ISO 13341:1997, *Transportable gas cylinders — Fitting of valves to gas cylinders*

ISO 10298, *Determination of toxicity of a gas or gas mixture*

ISO 13769, *Gas cylinders — Stamp marking*

3 Terms and definitions

For the purposes of this European standard, the following terms and definitions apply.

3.1
burst pressure
maximum pressure attained during a burst test

3.2
composite overwrap
fibres and matrix taken together as a combined unit

3.3
exterior coating
layer of material applied to the cylinder as a protective coating or for cosmetic purposes

NOTE Not all composite cylinders will have a special exterior coating.

3.4
fibre
load-carrying part of the composite overwrap e.g. glass, aramid and carbon

3.5
fully wrapped composite cylinder without liner
cylinder manufactured only from continuous fibre strands in a resin matrix wrapped in both circumferential and longitudinal directions

3.6
fully wrapped composite cylinder with liner
steel, aluminium alloy or non-metallic liner wrapped with continuous fibre strands in a resin matrix both circumferentially and longitudinally

3.7
hoop wrapped composite cylinder
seamless steel or aluminium alloy liner wrapped with continuous fibre strands or steel wire around only the cylindrical body of the liner, leaving the metal in the neck and base regions exposed. The fibre strands are embedded in a resin matrix

3.8
identification label
label containing the permanent markings required by the relevant design document and EN 1089-1 or ISO 13769

3.9
LC_{50}
50 % lethal concentration, as defined in ISO 10298