SLOVENSKI STANDARD
SIST EN ISO 11623:2023

01-november-2023

Nadomešča:
SIST EN ISO 11623:2016

Plinske jeklenke - Jeklenke in velike jeklenke iz kompozitnih materialov - Periodični pregledi in preskusi (ISO 11623:2023)

Gas cylinders - Composite cylinders and tubes - Periodic inspection and testing (ISO 11623:2023)

Gasflaschen - Verbundbauweise (Composite- Bauweise) - Wiederkehrende Inspektion und Prüfung (ISO 11623:2023)

Bouteilles à gaz - Bouteilles et tubes composites - Contrôles et essais périodiques (ISO 11623:2023)

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Ta slovenski standard je istoveten z: **EN ISO 11623:2023**

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ICS:

23.020.35	Plinske jeklenke	Gas cylinders

SIST EN ISO 11623:2023 **en,fr,de**

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 11623

September 2023

ICS 23.020.35

Supersedes EN ISO 11623:2015

English Version

Gas cylinders - Composite cylinders and tubes - Periodic inspection and testing (ISO 11623:2023)

Bouteilles à gaz - Bouteilles et tubes composites - Contrôles et essais périodiques (ISO 11623:2023)

Gasflaschen - Verbundbauweise (Composite-Bauweise) - Wiederkehrende Inspektion und Prüfung (ISO 11623:2023)

This European Standard was approved by CEN on 27 June 2023.

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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 11623:2023) has been prepared by Technical Committee ISO/TC 58 "Gas cylinders" in collaboration with 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of an identical text or by endorsement, at the latest by March 2024, and conflicting national standards shall be withdrawn at the latest by March 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 11623:2015.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association.

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INTERNATIONAL STANDARD

ISO 11623

Third edition
2023-07

Gas cylinders — Composite cylinders and tubes — Periodic inspection and testing

Bouteilles à gaz — Bouteilles et tubes composites — Contrôles et essais périodiques

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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 4, *Operational requirements for gas cylinders*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 23, *Transportable gas cylinders,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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This third edition cancels and replaces the second edition (ISO 11623:2015), which has been technically revised.

The main changes are as follows:

— revision of the Scope to include cylinders and tubes with a water capacity up to 3 000 l;

— modification of Table 1 to separate abrasion damage based on water capacity of the cylinder;

— clarification that a transparent sleeve may be left in place during inspection (7.1.3);

— clarification on the use of tare during inspection.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

The principal aim of periodic inspection and testing is that at the completion of the test, the cylinders can be reintroduced into service. It is not possible to identify all considerations for periodic inspection and testing of composite cylinders in this document. In such cases or where there is doubt, questions regarding specific cylinders should be directed to the manufacturer or owner.

This document is intended to be used under a variety of national regulatory regimes but has been written so that it is suitable for the application of the UN Model Regulations.[1]

This document also gives other requirements concerning preparation, finishing and maintenance of composite cylinders and tubes as well as the safety precautions for the personnel performing this work. These requirements can be mandatory under other regulations.

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Gas cylinders — Composite cylinders and tubes — Periodic inspection and testing

1 Scope

This document specifies the requirements for periodic inspection and testing to verify the integrity for further service of hoop-wrapped and fully-wrapped composite transportable gas cylinders and tubes, with aluminium-alloy, steel or non-metallic liners or of linerless construction (Types 2, 3, 4, and 5), intended for compressed, liquefied or dissolved gases under pressure, of water capacity from 0,5 l up to 3 000 l.

This document addresses the periodic inspection and testing of composite cylinders and tubes constructed according to ISO 11119-1, ISO 11119-2, ISO 11119-3, ISO 11119-4 or ISO 11515. It can be applied to other composite cylinders and tubes designed to comparable standards when authorized by the competent authority.

As far as practicable, this document can also be applied to cylinders of less than 0,5 l water capacity when authorized by the manufacturer.

NOTE Unless noted by exception, the use of the word "cylinder" in this document refers to both cylinders and tubes.

2 Normative references

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The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7225, *Gas cylinders — Precautionary labels*

ISO 10286, *Gas cylinders — Vocabulary*

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ISO 10460, *Gas cylinders — Welded aluminium-alloy, carbon and stainless steel gas cylinders — Periodic inspection and testing*

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

ISO 11119 (all parts), *Gas cylinders — Design, construction and testing of refillable composite gas cylinders and tubes*

ISO 11515, *Gas cylinders — Refillable composite reinforced tubes of water capacity between 450 l and 3000 l — Design, construction and testing*

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

ISO 13341, *Gas cylinders — Fitting of valves to gas cylinders*

ISO 13769, *Gas cylinders — Stamp marking*

ISO 18119, *Gas cylinders — Seamless steel and seamless aluminium-alloy gas cylinders and tubes — Periodic inspection and testing*

ISO 22434, *Gas cylinders — Inspection and maintenance of valves*

ISO 25760, *Gas cylinders — Operational procedures for the safe removal of valves from gas cylinders*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 10286 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
composite overwrap
combination of *fibres* (3.3) (including steel wire) and *matrix* (3.15)

3.2
external coating
layer of material applied to the cylinder as a protective coating not intended to be removed or for cosmetic purposes

EXAMPLE Gel coat and paint.

Note 1 to entry: Not all composite cylinders have a special external coating.

3.3
fibre
load-carrying part of the *composite overwrap* (3.1)

EXAMPLE Glass, aramid or carbon.

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3.4
Type 5 cylinder
fully wrapped cylinder without a *liner* (3.11) and with composite reinforcement on both the cylindrical portion and dome ends

3.5
Type 4 cylinder
fully wrapped cylinder with a non-load sharing *liner* (3.11) and composite reinforcement on both the cylindrical portion and dome ends

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3.6
Type 3 cylinder
fully wrapped cylinder with a load sharing metal *liner* (3.11) and composite reinforcement on both the cylindrical portion and the dome ends

3.7
Type 2 cylinder
hoop-wrapped cylinder with a load-sharing metal *liner* (3.11) and composite reinforcement on the cylindrical portion only

3.8
translucent cylinder
cylinder that permits the passage of light

3.9
identification label
label containing the permanent markings required by the relevant design specification

3.10
design life
maximum life (in number of years) to which a composite cylinder or tube is designed and approved in accordance with the applicable standard

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