



SLOVENSKI STANDARD
SIST EN 13385:2002
01-november-2002

Premične plinske jeklenke - Baterijska vozila za permanentne in utekočinjene pline (razen acetilena) - Kontrola polnjenja

Transportable gas cylinders - Battery vehicles for permanent and liquefied gases (excluding acetylene) - Inspection at time of filling

Ortsbewegliche Gasflaschen - Batteriefahrzeuge für beständige und verflüssigte Gase (außer Acetylen) - Prüfung zum Zeitpunkt des Füllens

Bouteilles à gaz transportables - Véhicules-batteries, pour gaz permanents et liquéfiés (sauf acétylène) - Contrôle au moment du remplissage

<https://standards.iteh.ai/catalog/standards/sist/0d6a5f86-a024-4947-a209-991de7c78535/sist-en-13385-2002>

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ICS:

23.020.30	Tlačne posode, plinske jeklenke	Pressure vessels, gas cylinders
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EUROPEAN STANDARD

EN 13385

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2002

ICS 23.020.30

English version

Transportable gas cylinders - Battery vehicles for permanent and liquefied gases (excluding acetylene) - Inspection at time of filling

Bouteilles à gaz transportables - Véhicules-batteries, pour gaz permanents et liquéfiés (sauf acétylène) - Contrôle au moment du remplissage

Ortsbewegliche Gasflaschen - Batteriefahrzeuge für beständige und verflüssigte Gase (außer Acetylen) - Prüfung zum Zeitpunkt des Füllens

This European Standard was approved by CEN on 30 December 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.

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

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Foreword

This document EN 13385:2002 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 September 2002, and conflicting national standards shall be withdrawn at the latest by September 2002.

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.

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Introduction

Battery vehicles require inspection at time of filling, both before and after the filling process, in order to ensure that all components are suitable for the intended filling conditions and are free of serious defects and contamination that can affect the integrity of the battery vehicle.

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1 Scope

This European Standard specifies requirements for inspection before, during and after the time of filling for battery vehicles.

This standard does not apply to acetylene battery vehicles which are covered in prEN 13720.

This standard is not applicable to the automotive components of a battery trailer.

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

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

prEN 13807, *Transportable gas cylinders — Battery vehicles — Design, manufacture, identification and testing.*

prEN ISO 11623, *Transportable gas cylinders — Periodic inspection and testing of composite gas cylinders (ISO/FDIS 11623:2000).*

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3 Terms and definitions

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

3.1

cylinder bundle (bundle)

transportable assembly, which is designed for being routinely lifted and which consists of a frame and two or more cylinders each of capacity up to 150 litres connected to a manifold by cylinder valves or fittings such that they cylinders are filled, transported and emptied without disassembly

3.2

battery vehicle

an assembly of cylinders, tubes or bundles connected to a manifold and securely mounted onto a vehicle chassis such that the assembly is filled, transported, and emptied as a single unit

Note For the purpose of this standard the word "cylinder" also includes large cylinders commonly referred to as tubes.

3.3

frame

structural and non structural members of a bundle which combine all other components together, whilst providing protection for the bundle's cylinders, valves and manifold and which enable the bundle to be transported

3.4

cylinder valve

valve which is fitted into a cylinder and to which a manifold is connected

EN 13385:2002 (E)**3.5****cylinder fitting**

device with no gas shut-off capability which serves as a method for connecting the manifold of a bundle to its individual cylinders or individual cylinders to the manifold of the battery vehicle

3.6**manifold**

system for connecting a battery vehicle's cylinder valves or cylinder fittings to the main outlet valve(s) or outlet connection(s)

3.7**main outlet valve**

valve which is fitted to the manifold of the battery vehicle isolating it from the outlet connection(s)

3.8**liquefied gas**

gas which has a critical temperature of 20 °C or above

3.9**maximum permissible filling weight**

product of the minimum guaranteed water capacity of the cylinders of the battery vehicle and the filling ratio of the gas contained

4 Inspection at time of filling

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4.1 Inspection prior to filling

Before filling a battery vehicle it shall be verified by visual examination that:

- the battery vehicle is permitted to be filled in the country of the filling station;
- the battery vehicle has an unexpired periodic inspection date;
- the battery vehicle is compatible with the nature of the gas and filling pressure or filling weight;
- the cylinder supports or bundle frames are free from damage which will affect the mechanical integrity of the battery vehicle;
- the restraining systems that prevent the cylinders from moving are secure and the cylinders have not moved whilst in service;
- the visible surfaces of cylinders are free of any signs of dents, cuts, gouges, fire damage or any other signs of damage. Rejection criteria shall be applied in accordance with EN 1968, EN 1802 or prEN ISO 11623, as appropriate. Where any cylinder is damaged that cylinder shall be isolated and identified. In the case of fire damage all cylinders within the battery vehicle shall be inspected and any suspect cylinders shall be revalidated or rejected;
- the cylinder valves, where fitted, and any isolating shut-off valves are all in the open position;
- the main outlet connection is free from contamination and is undamaged and has the correct thread for the gas to be filled;
- where appropriate any safety devices such as relief valves or bursting discs are in place and have not been damaged;
- the necessary data specified in prEN 13807 is permanently marked or labelled on the battery vehicle.

Additionally a check of the main outlet valve shall be carried out to ensure that the valve operates properly.

In addition it shall be verified that the battery vehicle is free from any internal contamination which may affect the integrity of the pressure system by ensuring that the battery vehicle has a positive residual pressure.

4.2 Immobilisation and earthing

4.2.1 Immobilisation

A device shall be engaged whereby the battery vehicle cannot be driven or moved when a loading or discharge hose is connected.

4.2.2 Earthing

Where flammable gases are being filled, an earthing connection shall be made between the filling point and the battery vehicle in order to achieve electrical continuity before the filling process commences.

4.3 Inspection during filling

During filling it shall be verified, e.g. by use of a leak detection solution, that no apparent leaks exist. Particular care shall be exercised where the battery vehicle contains toxic, pyrophoric or flammable gases.

The level to which battery vehicles are filled with liquefied gases shall be determined from the weight of the gas which shall not exceed the weight of gas the vehicle battery is designed to hold.

For battery vehicles equipped with closable cylinder valves, in order to ensure that no bundle or individual cylinder equipped with a cylinder valve is overfilled, only one cylinder or bundle shall be filled at a time. The weight of product added to each cylinder or bundle shall be controlled in accordance with the prescribed filling ratio and procedures.

4.4 Disconnection

Prior to disconnection, the hose assembly shall be vented and purged in accordance with the manufacturers instructions in a manner that prevents the vented gas from causing any form of hazard.

4.5 Inspection after filling

Upon completion of the filling of the battery vehicle it shall be verified that:

- the battery vehicle has not been over filled. For battery vehicles filled by pressure the pressure shall be corrected against the reference temperature;
- for battery vehicles without closable cylinder valves filled by weight, the weight of the full battery vehicle shall be checked against the maximum permissible filling weight by the use of a scale suitable for the weight of the battery vehicle;
- the fill hose has been disconnected from the battery vehicle;
- the battery vehicle has been correctly labelled for the nature of the gas and any transport requirements;
- the main outlet valve is not leaking;
- all immobilising and earthing equipment has been disconnected, connections plugged and no loose equipment remains on the battery vehicle.