



SLOVENSKI STANDARD

SIST EN 13720:2002

01-november-2002

Premične plinske jeklenke - Zahteve za polnjenje acetilenskih baterijskih vozil

Transportable gas cylinders - Filling conditions for acetylene battery vehicles

Ortsbewegliche Gasflaschen - Abfüllbedingungen für Acetylen-Batterie-Fahrzeuge

Bouteilles a gaz transportables - Conditions de remplissage des véhicules - batteries d'acétylene

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Ta slovenski standard je istoveten z: EN 13720:2002

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ICS:

23.020.30	Tlačne posode, plinske jeklenke	Pressure vessels, gas cylinders
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SIST EN 13720:2002

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EUROPEAN STANDARD

EN 13720

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2002

ICS 23.020.30

English version

Transportable gas cylinders - Filling conditions for acetylene battery vehicles

Bouteilles à gaz transportables - Conditions de remplissage
des véhicules - batteries d'acétylène

Ortsbewegliche Gasflaschen - Abfüllbedingungen für
Acetylen-Batterie-Fahrzeuge

This European Standard was approved by CEN on 11 April 2002.

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

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

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Foreword

This document EN 13720:2002 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 January 2003, and conflicting national standards shall be withdrawn at the latest by January 2003.

This European Standard has been submitted for reference into the RID and/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.

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

This European Standard is designed to harmonize the different filling conditions for acetylene battery vehicles (acetylene vehicles) in European countries.

The term "acetylene battery vehicle" covers a number of different systems which connect acetylene cylinders (see EN 1800) or acetylene bundles (see EN 12755) in a single unit for the purpose of storage, transport and use of acetylene.

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1 Scope

This European Standard specifies the requirements for filling acetylene battery vehicles.

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 1801, *Transportable gas cylinders — Filling conditions for single acetylene cylinders.*

EN 12754, *Transportable gas cylinders — Cylinders for dissolved acetylene — Inspection at time of filling.*

EN 12755:2000, *Transportable gas cylinders — Filling conditions for acetylene bundles.*

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

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3 Terms and definitions

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

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3.1

acetylene battery vehicle (acetylene vehicle)

assembly of cylinders or bundles connected to a manifold and securely attached to a vehicle chassis such that the assembly is transported and emptied as a single unit and can be filled as a single unit

3.2

acetylene vehicle type A

vehicle where cylinders or bundles are removed from the vehicle for the purpose of filling individually

3.3

acetylene vehicle type B

vehicle where cylinders or bundles are filled and emptied a prescribed number of times without removal from the vehicle

3.4

tare weight of an acetylene vehicle

sum of the tare weight of the individual cylinders [EN 1800:1998] or bundles [EN 12755:2000] plus the weight of the associated pipework, fittings, supports and the chassis

3.5

maximum gross weight

sum of the total weight of the individual cylinders or the maximum gross weight of the bundles plus the weight of the associated pipework, fittings, supports and the chassis

3.6

maximum acetylene content

sum of the maximum weights of acetylene permitted in the cylinders or bundles

EN 13720:2002 (E)**3.7****porous mass**

single or multi-component substance introduced into, or formed in the cylinder shell, in order to fill it and due to its porosity allow the absorption of the solvent and acetylene gas

3.8**solvent**

liquid which is absorbed by the porous mass and is capable of dissolving and releasing acetylene

3.9**working pressure**

pressure equal to the settled pressure at 15 °C which is stamped on the individual cylinders

3.10**maximum filling pressure**

highest pressure which is allowed in an acetylene vehicle manifold during filling

3.11**home station of the acetylene vehicle**

location (name of the company, address and telephone number) where the documentation is kept

4 Requirements for filling acetylene vehicles**4.1 General**

Acetylene vehicles shall be filled only when they conform to the requirements of 4.2 to 4.5.

4.2 Acetylene vehicle construction

The construction of the acetylene vehicle shall conform to prEN 13807 for the design, manufacture, identification and testing or to an equivalent standard. Different porous masses and different solvents may be adopted provided that each cylinder in the vehicle contains the same porous mass and solvent.

The manifold shall be equipped with all the necessary devices (e.g. valves, flash-back arrestors, flow cut-off devices and measuring devices) to ensure safe operation during transport, storage, filling and emptying.

4.3 Type of solvent

The number of filling cycles before replenishment of solvent will depend on the type of solvent (acetone or dimethyl formamide (DMF)) and shall be determined for an acetylene vehicle type B in accordance with EN 1801 (for single cylinders) or EN 12755 (for bundles) to ensure that no cylinder on the vehicle is filled if it contains less than the specified minimum quantity of solvent.

4.4 Identification

It shall be verified that:

- a) the acetylene vehicle has any necessary approvals;
- b) the acetylene vehicle is permitted to be filled in the country of the filling station;
- c) the cylinders have not passed their statutory test period.

4.5 Documentation

4.5.1 Dossier

A dossier shall be compiled for each acetylene vehicle, containing the data as defined in 4.5.2 to 4.5.4.

4.5.2 Acetylene vehicle filling data

- a) maximum acetylene content of the vehicle in kg;
- b) working pressure;
- c) type of porous mass;
- d) type of solvent;
- e) maximum gross weight.

In addition, for acetylene vehicles type B only:

- f) date of the next periodic inspection of the cylinders or bundles;
- g) tare weight of acetylene vehicle (see 3.4);
- h) the minimum specified quantity of solvent;
- i) the number of consecutive fillings since the last replenishment of solvent, if applicable.

4.5.3 Design data and records

- a) reference identifying acetylene vehicle and type;
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- b) total number of cylinders or bundles;
- c) size and identification number of all cylinders or bundles;
- d) operating procedures including filling and emptying;
- e) flow diagram and emergency instructions;
- f) records of pressure tests and maintenance;
- g) records of solvent loss from cylinders and bundles.

4.5.4 Other information

- a) name or identification of the manufacturer of the acetylene vehicle;
- b) name or identification of the owner of the acetylene vehicle;
- c) home station of the acetylene vehicle.