SIST

SLOVENSKI STANDARD

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Oprema in pribor za utekoļ injeni naftni plin (UNP) ï Premiļ ne, ponovno polnljive jeklene varjene jeklenke za UNP ï Postopek za preverjanje pred polnjenjem, med njim in po njem

LPG equipment and accessories - Transportable refillable welded steel cylinders for Liquefied Petroleum Gas (LPG) - Alternative design and construction; procedure for checking before, during and after filling

Flüssiggas-Geräte und Ausrüstungsteile - Ortsbewegliche, wiederbefüllbare, geschweißte Flaschen aus Stahl für Flüssiggas (LPG) - Alternative Gestaltung und Konstruktion; Kontrollverfahren vor, während und nach dem Füllen

Equipements pour gaz de pétrole liquéfiés et leurs accessoires - Bouteilles en acier, soudées, transportables et rechargeables pour gaz de pétrole liquefiés (GPL) - Autres solutions de conception et de fabrication ; mode opératoire pour la vérification avant, pendant et apres le remplissage

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English Version

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This European Standard was approved by CEN on 9 December 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard (EN 14913:2005) has been prepared by Technical Committee CEN/TC 286 “Liquified petroleum gas equipment and accessories”, the secretariat of which is held by NSAI.

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of an identical text or by endorsement, at the latest by June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This European Standard has been submitted for reference into the RID and/or in the technical annexes of the ADR. Therefore the standards listed in the normative references and covering basic requirements of the RID/ADR not addressed within the present European 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Introduction

This European Standard calls for the use of substances and procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

It has been assumed in the drafting of this European Standard that the execution of its provisions is entrusted to appropriately qualified and experienced people. Where judgements are called for it has been assumed that they are made by competent persons who have been trained specifically for the tasks.

1 Scope

This European Standard specifies the procedures to be adopted when checking transportable refillable welded steel LPG cylinders of alternative design and construction (see EN 14140) before, during and after filling.

This European Standard applies to cylinders of water capacity from 0,5 l up to and including 150 l.

This European Standard does not apply to cylinders permanently installed in vehicles, or to plant and filling equipment.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10028-7, *Flat products made of steels for pressure purposes — Part 7: Stainless steels*

EN 12816, *Transportable refillable steel and aluminium LPG cylinders — Disposal*

EN 13952, *LPG cylinders — Filling procedures*

EN 14140, *Transportable refillable welded steel cylinders for Liquefied Petroleum Gas (LPG) — Alternative design and construction*

prEN 14894, *LPG equipment and accessories — Cylinder and drum marking*

EN 14914, *LPG equipment and accessories — Transportable refillable welded steel cylinders for Liquefied Petroleum Gas (LPG) — Alternative design and construction; periodic inspection*

3 Terms and definitions

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

3.1
LPG (liquefied petroleum gas)
mixture of predominantly butane or propane with traces of other hydrocarbon gases classified in accordance with UN number 1965, hydrocarbon gases mixture, liquefied, NOS or UN number 1075, petroleum gases, liquefied

NOTE In some countries, UN numbers 1011 and 1978 may also be designated LPG.

3.2
competent person
person who by a combination of training, experience and supervision is able to make objective judgements on the subject

3.3
competent body
person or corporate body defined by the national authority which by combination of appropriate qualification, training, experience and resources is able to make objective judgements on the subject

3.4
cylinder
transportable refillable pressure receptacle with a water capacity from 0,5 l up to and including 150 l

3.5
filling ratio
ratio of the mass of gas introduced into a cylinder to the mass of water at 15 °C that would fill the same cylinder fitted ready for use

NOTE See Annex A for filling ratio.

3.6
reference temperature
temperature used for the calculation of safe filling quantity

NOTE See Annex A for reference temperatures.

3.7
filled to a level
filled to a fixed level using an ullage device

3.8
filled by volume
filled with a fixed volume of LPG

3.9
filled by mass
filled with LPG using a weighing machine

3.10
filling plant
establishment where filling and checking of LPG cylinders takes place

3.11
periodic inspection
activities carried out at defined intervals, such as examining, measuring, testing or gauging the characteristics of a cylinder, comparing these with specified requirements as defined in EN 14914 and marking to attest conformity

3.12
tare weight
sum of the mass of the empty cylinder, the mass of the valve including a dip tube where fitted, and the mass of all other parts that are permanently attached to the cylinder when it is being filled, e.g. fixed valve guard.

4 Segregation of cylinders prior to filling

4.1 General

Cylinders shall be checked and segregated into the categories specified in 4.2 to 4.4.

A flow diagram of the checks before, during and after filling is given in Annex B.

4.2 Cylinders suitable for filling

The cylinder shall be deemed suitable for filling if the following conditions apply:

a) the design code/specification is identifiable,

b) the tare indication and water capacity are marked,

c) the allowed quantity and identification of the product (butane, propane or mixtures thereof, the properties of which were considered for the design of the cylinder) are indicated,

d) the cylinder is within the test date as determined from the marked manufacturer or periodic inspection date

and

e) the cylinder does not have defects as described in 4.4. The inspection of the foot-ring for corrosion or damage shall determine the need for a more thorough external visual examination of the cylinder base.

4.3 Cylinders for periodic inspection

A cylinder shall be set aside for periodic inspection in accordance with EN 14914 when at least one of the following conditions apply:

a) the cylinder is out of test date;

b) the cylinder cannot be confirmed to be within test date.

4.4 Cylinders requiring further assessment

A cylinder with any of the following defects shall be set aside for further assessment, e.g. re-taring, disposal, etc. (see Clause 5):

a) the indication of tare weight of a cylinder, filled by mass, is missing or illegible;

b) a cylinder is faulty or defective, e.g. dents, fire damage or damage to the shroud, carrying handles, foot-ring;

c) a cylinder is found to have visible corrosion or, with cylinders with a welded foot-ring, to exhibit corrosion at the weld;

d) a cylinder, valve or pressure relief device (if fitted) is damaged or has been previously identified as leaking;

e) a cylinder whose required permanent markings are obscured and not easily identified.

5 Reassessment of cylinders

5.1 General

Cylinders that have been set aside (see 4.4) shall be examined by a competent person who shall decide whether they are suitable for filling or shall be sent for disposal in accordance with EN 12816.

Cylinders that are intended to be filled by mass and where the indication of tare weight is missing or illegible shall be reassessed and have the indication of the tare weight applied in accordance with prEN 14894.

Leaking cylinders and cylinders with damaged or leaking valves shall be safely vented. Leaking or damaged valves shall be repaired or replaced. Cylinders leaking through the body shall be sent for disposal in accordance with EN 12816.