



SLOVENSKI STANDARD

SIST EN 14912:2006

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LPG equipment and accessories - Inspection and maintenance of LPG cylinder valves at time of periodic inspection of cylinders

Flüssiggas-Geräte und Ausrüstungsteile - Prüfung und Wartung von Ventilen für Flüssiggas (LPG)-Flaschen zum Zeitpunkt der wiederkehrenden Prüfung bei Flaschen

Équipement pour GPL et leurs accessoires - Contrôle et entretien des robinets de bouteilles de GPL lors du contrôle périodique des bouteilles

Ta slovenski standard je istoveten z: EN 14912:2005

ICS:

23.020.30	V æ} ^Ā [• [ā^Ē] ā •\ ^ b\ ^} \ ^	Pressure vessels, gas cylinders
23.060.40	V æ} ā^*~ æ[ā	Pressure regulators

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EUROPEAN STANDARD

EN 14912

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EUROPÄISCHE NORM

December 2005

ICS 23.060.40

English Version

LPG equipment and accessories - Inspection and maintenance of LPG cylinder valves at time of periodic inspection of cylinders

Équipement pour GPL et leurs accessoires - Contrôle et
entretien des robinets de bouteilles de GPL lors du contrôle
périodique des bouteilles

Flüssiggas-Geräte und Ausrüstungsteile - Prüfung und
Wartung von Ventilen für Flüssiggas (LPG)-Flaschen zum
Zeitpunkt der wiederkehrenden Prüfung bei Flaschen

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.

CEN members are the national standards bodies of 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.

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Foreword

This European Standard (EN 14912:2005) has been prepared by Technical Committee CEN/TC 286 “Liquefied 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.

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Introduction

This European Standard has been prepared to reflect the current state of the art for periodically inspecting LPG cylinders, and is based upon the operating experience of millions of cylinder years of service over a period of more than 50 years.

The primary objective of the periodic inspection of transportable refillable LPG cylinders is that, at the completion of the tests, the cylinder can be re-introduced into service for a further period of time.

The valve inspection is an integral part of the periodic inspection of an LPG cylinder.

Periodic inspection is normally carried out at a test station operated under the responsibility of a competent gas organisation, or of a third party.

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.

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1 Scope

This European Standard specifies the requirements for inspection and maintenance of LPG cylinder valves for reuse. It applies when the valve is inspected, repaired or refurbished at the time of periodic inspection of the cylinder.

The periodic inspection of cylinders is described in EN 1440, EN 14795, EN 14914, and EN 14767.

This European Standard may also be applied at any other time, for example when maintenance of the valve is necessary.

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 13152, *Specification and testing of LPG cylinder valves — Self closing*

EN 13153, *Specification and testing of LPG Cylinder valves — Manually operated*

3 Terms and definitions

For the purpose of this European Standard, the following 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

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 and marking to attest conformity

3.3

dismantling

separation into component parts

3.4

maintenance

minor repair, major repair or refurbishment

3.5

minor repair

operations that include cleaning and replacement of components accessible without any dismantling of the valve (e.g. outlet seal, excess flow device)

3.6

major repair

operations that include replacement of valve accessories which are incorporated within the pressure envelope but do not require complete dismantling of the valve e.g. pressure relief valve

EN 14912:2005 (E)**3.7****refurbishment**

operation that includes complete dismantling of the valve, evaluation and replacement of internal components, and reassembly

4 General requirements**4.1 General**

The valve shall be clean externally to facilitate inspection.

Inspection will determine if:

- the valve is suitable for a further period of service,
- a minor repair, major repair or refurbishment is required, or
- the valve shall be scrapped.

4.2 Cleaning

Contaminants, foreign matter and corrosion products shall be removed from the valve outlet, taking care not to damage any sealing surfaces.

If any cleaning materials are used, they shall either be:

- completely removed after use or
- be suitable for and compatible with:
 - LPG and
 - materials of construction of:
 - the valve,
 - the LPG cylinder and
 - the associated downstream equipment.

4.3 Personnel

Valves shall be inspected, repaired, refurbished and removed from LPG cylinders by competent personnel only.

4.4 Safety concerns

Prior to removing the valve, it shall be verified that the valve is not obstructed/blocked. Cylinders shall be emptied of liquid and depressurized in a safe and controlled manner. Cylinders with inoperative or blocked valves shall be brought to a place for safe valve removal.

NOTE 1 LPG cylinders, that may still contain residual liquid LPG when the valve is thought to be open, can be weighed and this weight compared to the tare weight.

NOTE 2 Valves may be removed and refitted safely from and to a fully pressurized LPG cylinder provided the facility includes suitable equipment.

Inspection and minor repairs may be carried out on valves while they are connected to a pressurised LPG cylinder, e.g. at time of filling, but this may require special procedures and equipment.

Major repairs and refurbishment shall only be performed on a valve fitted to a de-pressurised cylinder or on a removed valve.

5 Inspections

5.1 External inspection

Valves shall be inspected for:

- a) spindles that do not move smoothly or are difficult to turn or seized;
- b) bent, deformed, corroded, badly marked, scored or cracked bodies;
- c) bent or damaged spindles;
- d) cross-threaded, damaged or stripped valve outlet connections;
- e) damaged outlet sealing surfaces and/or any non metallic sealing elements;
- f) indications of having been subjected to excessive heat or having been in a fire;
- g) foreign matter in visible internal passageways;
- h) evidence of abuse or tampering;
- i) evidence of damaged gauges or indicators;
- j) damage to hand wheels;
- k) damage to pressure relief valves;
- l) missing parts.

5.2 Additional inspection

Valves that have been removed from the cylinder shall have all residual jointing compounds removed from the valve stem thread and the valve bore.

They shall be inspected for the following:

- a) contaminants, foreign matter and corrosion products;
- b) cross-threaded, damaged or stripped valve stem threads;
- c) damaged dip tubes, eduction tubes, sediment tubes and their retaining threads;
- d) damaged inlet filters;
- e) damaged liquid and pressure level indicating devices;