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BS EN 14129:2014



BSI Standards Publication

LPG Equipment and accessories — Pressure relief valves for LPG pressure vessels

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This British Standard is the UK implementation of EN 14129:2014. It supersedes BS EN 14129:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PVE/19, LPG containers and their associated fittings.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPÄISCHE NORM

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English Version

LPG Equipment and accessories - Pressure relief valves for LPG pressure vessels

Équipements pour GPL et leurs accessoires - Soupapes de sécurité pour réservoirs de GPL sous pression

Flüssiggas-Geräte und Ausrüstungsteile - Sicherheitsventile für Druckbehälter für Flüssiggas (LPG)

This European Standard was approved by CEN on 30 November 2013.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 14129:2014) 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 August 2014, and conflicting national standards shall be withdrawn at the latest by August 2014.

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

This document supersedes EN 14129:2004.

This European Standard has been submitted for reference into:

- the RID [9]; and
- the technical annexes of the ADR [10].

NOTE These regulations take precedence over any clause of this European Standard. It is emphasised that RID/ADR/ADN are being revised regularly at intervals of two years which may lead to temporary non-compliances with the clauses of this European Standard.

The major changes to this revision include the addition of:

- pilot operated pressure relief valve;
- an ageing test, see 7.9 and Annex C;
- an endurance test, see 7.10; and
- a stress cracking test, see 7.11.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

This European Standard calls for the use of substances and procedures that may be injurious to health and/or the environment if adequate precautions are not taken. It refers only to technical suitability: it does not absolve the user from their legal obligations at any stage.

Protection of the environment is a key political issue in Europe and elsewhere around the world. Protection of the environment in this document is understood in a very broad sense. The phrase is used, for example, in relation to the total life-cycle aspects of a product on the environment, including expenditure of energy, and during all phases of its existence, from mining of raw materials, to fabrication, packaging, distribution, use, scrapping, recycling of materials, etc.

NOTE 1 Annex D comprises an environmental checklist which highlights the clauses of this European Standard that address environmental aspects.

Provisions have to be restricted to a general guidance. Limit values are specified in national laws.

It is recommended that manufacturers develop an environmental management policy. For guidance see the EN ISO 14000 series [6], [7] and [8].

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.

All pressures are gauge pressures unless otherwise stated.

Valves designed in accordance with this standard are specifically for use in LPG applications. Valves manufactured in accordance EN ISO 4126-1 may also be used in certain LPG applications.

NOTE 2 This European Standard requires measurement of material properties, dimensions and pressures. All such measurements are subject to a degree of uncertainty due to tolerances in measuring equipment, etc. It may be beneficial to refer to the leaflet "measurement uncertainty leaflet" SP INFO 2000 27 [13].

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1 Scope

This European Standard specifies the requirements for the design and testing of spring loaded pressure relief valves and thermal expansion valves for use in:

- static LPG pressure vessels,

NOTE The pressure vessels can be situated above ground, underground or mounded.

- LPG pressure vessels on road tankers, rail tankers, tank-containers or demountable tanks.

This document does not address production testing.

Normative Annex B prescribes testing with conditioning at -40 °C for valves for use under extreme low temperature conditions.

The requirements for pressure relief valve accessories such as isolating devices, changeover manifolds and vent pipes are specified in EN 14071.

EN 14570 identifies the requirements for the pressure relief valve capacities for static pressure vessels.

EN 12252 identifies the requirements for the pressure relief valve capacities for road tankers.

Valves designed in accordance with this standard are specifically for use in LPG applications. Valves manufactured in accordance with EN ISO 4126-1 may also be used in certain LPG applications.

Terms used with LPG pressure relief valves are described graphically in Annex A.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 549:1994, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 751-1, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 1: Anaerobic jointing compounds*

EN 751-2, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 2: Non-hardening jointing compounds*

EN 751-3, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 3: Unsintered PTFE tapes*

EN 837-1, *Pressure gauges - Part 1: Bourdon tube pressure gauges - Dimensions, metrology, requirements and testing*

EN 1092-1:2007+A1:2013, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 1: Steel flanges*

EN 1503-1:2000, *Valves - Materials for bodies, bonnets and covers - Part 1: Steels specified in European Standards*