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European foreword

This document (EN 14071:2024) has been prepared by Technical Committee CEN/TC 286 “LPG 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of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by May 2025.

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

This document has been prepared under a standardization request 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.

This document supersedes EN 14071:2015+A1:2019.

The major changes in comparison to the previous edition include:

- Revision of 5.2 Metallic materials;
- Revision of 5.3 Non-metallic materials;
- Clarification to Table 1
- Revision of 6.3 Vent pipe
- Revision to the resistance of the isolating mechanism test, 7.6;
- Revision to the operation test, 7.8;
- Revision of the Kd value for M 36;
- Revision of Annex ZA.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

Introduction

This document 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.

It is recommended that manufacturers develop an environmental management policy. For guidance, see the EN ISO 14000 series [1], [2] and [3].

Protection of the environment is a key political issue in Europe and elsewhere. For TC 286 this is covered in CEN/TS 16765 [4] *LPG equipment and accessories - Environmental considerations for CEN/TC 286 standards*, and this Technical Specification should be read in conjunction with this document. The Technical Specification provides guidance on the environmental aspects to be considered regarding equipment and accessories produced for the LPG industry and the following is addressed:

- a) design;
- b) manufacture;
- c) packaging;
- d) use and operation; and
- e) disposal.

It has been assumed in the drafting of this document that the execution of its provisions is entrusted to appropriately qualified and experienced people.

All pressures are gauge pressures unless otherwise stated.

NOTE This document 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 [5].

1 Scope

This document specifies the design, testing and inspection requirements for pressure relief valve (PRV), isolating devices, valve manifolds, vent pipes and system assemblies which are, where necessary, used with PRVs for use in static pressure vessels for Liquefied Petroleum Gas (LPG) service.

This document addresses both prototype testing and production testing of isolating devices and PRV manifolds.

PRVs for LPG pressure vessels are specified in EN 14129:2024.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 549:2019+A2:2024, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 751-1:1996, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 1: Anaerobic jointing compounds*

EN 751-2:1996, *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 751-3:2022+A1:2023, *Sealing materials for metallic threaded joints in contact with 1st, 2nd and 3rd family gases and hot water - Part 3: Unsintered PTFE tapes and PTFE strings*

EN 1092-1:2018, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 1: Steel flanges*

EN 1563:2018, *Founding - Spheroidal graphite cast irons*

EN 10204:2004, *Metallic products - Types of inspection documents*

EN 12164:2016, *Copper and copper alloys - Rod for free machining purposes*

EN 12165:2016, *Copper and copper alloys - Wrought and unwrought forging stock*

EN 12420:2014, *Copper and copper alloys - Forgings*

EN 12516-1:2014+A1:2018, *Industrial valves - Shell design strength - Part 1: Tabulation method for steel valve shells*

EN 12516-4:2014+A1:2018, *Industrial valves - Shell design strength - Part 4: Calculation method for valve shells manufactured in metallic materials other than steel*

EN 13480-3:2017,¹ *Metallic industrial piping - Part 3: Design and calculation*

EN 13445-2:2021+A1:2023, *Unfired pressure vessels - Part 2: Materials*

1) As impacted by EN 13480-3:2017/A2:2020 and EN 13480-3:2017/A3:2020.