SLOVENSKI STANDARD
oSIST prEN 12252:2021

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Oprema in pribor za utekočinjeni naftni plin (UNP) - Oprema cestnih cistern za utekočinjeni naftni plin (UNP)

LPG equipment and accessories - Equipping of LPG road tankers

Flüssiggas-Geräte und Ausrüstungsteile - Ausrüstung von Straßentankwagen für Flüssiggas (LPG)

Équipements pour GPL et leurs accessoires - Équipements des camions citernes pour GPL

Ta slovenski standard je istoveten z: **prEN 12252**

ICS:

23.020.20	Posode in vsebniki, montirani na vozila	Vessels and containers mounted on vehicles
43.080.10	Tovornjaki in priklopniki	Trucks and trailers

oSIST prEN 12252:2021 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 12252

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ICS 43.080.10

Will supersede EN 12252:2014

English Version

LPG equipment and accessories - Equipping of LPG road tankers

Équipements pour GPL et leurs accessoires - Équipements des camions citernes pour GPL

Flüssiggas-Geräte und Ausrüstungsteile - Ausrüstung von Straßentankwagen für Flüssiggas (LPG)

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 286.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 12252:2021) has been prepared by Technical Committee CEN/TC 286 “LPG equipment and accessories”, the secretariat of which is held by NSAI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12252:2014.

Compared with EN 12252:2014 the following significant changes apply:

— the term “drain valve” was added to Table 1;

— the requirement of a “dead-man” function for the Emergency-Shut-Down system was added (see 12.2.3);

— a new clause “Road tanker chassis” (see Clause 5) was added;

— new requirements for road tankers with remotely mounted discharge pump were added (see 7.1.3.4);

— introduction of overfill protection systems on the discharge side (see 8.2);

— introduction of filters and strainers (see 9.12);

— a new clause “Drain valves” (see 9.13) was added;

— clarification of specification for equipment of non-metallic materials (see 9.1.5);

— introduction of an additional Annex C on additional traffic safety measures;

— update of terms and definitions.

This document will be submitted for reference in

— the RID and/or

— the technical annexes of the ADR.

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

Introduction

This document calls for the use of substances and procedures that may be injurious to health and also 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. For CEN/TC 286 this is covered in CEN/TS 16765 and this Technical Specification should be read in conjunction with this document. This 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.

Provisions need 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 ISO 14000 series [3], [4] and [5]

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 might be beneficial to refer to the leaflet “measurement uncertainty leaflet” SP INFO 2000 27 [10].

1 Scope

This document specifies equipment and accessories for road tankers used for the transport of Liquefied Petroleum Gas (LPG) and identifies the equipment that is considered necessary to ensure that filling, transportation and discharge operations can be carried out safely. It specifies the requirements for the assembly of the accessories and the vehicle LPG equipment to the road tanker. This document also identifies additional equipment and accessories that can be used on road tankers carrying LPG.

This document does not preclude the use of alternative designs, materials and equipment testing which provide the same or a higher level of safety. ADR [9] requires that such alternative technical codes be recognized by the competent authority, provided that the minimum requirements of section 6.8.2 of ADR [9] are complied with.

This document does not apply to “tank-containers” or “battery-vehicles” used for the transport of LPG.

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, *Rubber materials for seals and diaphragms for gas appliances and gas equipment*

EN 558, *Industrial valves — Face-to-face and centre-to-face dimensions of metal valves for use in flanged pipe systems — PN and Class designated valves*

EN 837-2, *Pressure gauges — Part 2: Selection and installation recommendations for pressure gauges*

EN 1012-1, *Compressors and vacuum pumps — Safety requirements — Part 1: Air compressors*

EN 1591-1, *Flanges and their joints — Design rules for gasketed circular flange connections — Part 1: Calculation*

EN 1762, *Rubber hoses and hose assemblies for liquefied petroleum gas, LPG (liquid or gaseous phase), and natural gas up to 25 bar (2,5 MPa) — Specification*

EN 1983, *Industrial valves — Steel ball valves*

EN 1984, *Industrial valves — Steel gate valves*

EN 10025 (all parts), *Hot rolled products of structural steels*

EN 10028 (all parts), *Flat products made of steels for pressure purposes*

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

EN 10216-1, *Seamless steel tubes for pressure purposes — Technical delivery conditions — Part 1: Non-alloy steel tubes with specified room temperature properties*

EN 10217-1, *Welded steel tubes for pressure purposes — Technical delivery conditions — Part 1: Electric welded and submerged arc welded non-alloy steel tubes with specified room temperature properties*

EN 12074, *Welding consumables — Quality requirements for manufacture, supply and distribution of consumables for welding and allied processes*

EN 12493, *LPG equipment and accessories — Welded steel pressure vessels for LPG road tankers — Design and manufacture*

EN 12627, *Industrial valves — Butt welding ends for steel valves*

EN 12760, *Industrial valves — Socket welding ends for steel valves*

EN 13175, *LPG equipment and accessories — Specification and testing for Liquefied Petroleum Gas (LPG) tank valves and fittings*

EN 13709, *Industrial valves — Steel globe and globe stop and check valves*

EN 13789, *Industrial valves — Cast iron globe valves*

EN 13799, *LPG equipment and accessories — Contents gauges for Liquefied Petroleum Gas (LPG) pressure vessels*

EN 14422, *Clamp type coupling assemblies for liquefied petroleum gas (LPG) transfer hoses*

EN 14424, *Hose fittings with screwed ferrules*

EN ISO 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method (ISO 148-1)*

EN ISO 3834-2, *Quality requirements for fusion welding of metallic materials — Part 2: Comprehensive quality requirements (ISO 3834-2)*

EN ISO 3834-3, *Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements (ISO 3834-3)*

EN ISO 9606-1, *Qualification testing of welders - Fusion welding - Part 1: Steels (ISO 9606-1)*

EN ISO 10497, *Testing of valves — Fire type-testing requirements (ISO 10497)*

EN ISO 14732, *Welding personnel - Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials (ISO 14732:2013)*

EN ISO 15609-1, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 1: Arc welding (ISO 15609-1)*

EN ISO 15614-1, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys (ISO 15614-1)*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
liquefied petroleum gas
LPG
low pressure liquefied gas composed of one or more light hydrocarbons which are assigned to UN 1011, UN 1075, UN 1965, UN 1969 or UN 1978 only and which consists mainly of propane, propene, butane, butane isomers and butene with traces of other hydrocarbon gases

3.2
pressure vessel
assembly of the pressure envelope (including the openings and their closures) and non-pressure-retaining parts attached directly to it

3.3
primary shut-off system
valve or a series of valves attached to the pressure vessel which provides a method of sealing off the flow from the pressure vessel

3.4
vehicle LPG equipment
equipment and pipework on the road tanker which is in contact with LPG and forms part of the LPG operating system, shut-down system or safety system, but which is not directly connected to the pressure vessel and is not part of the automotive LPG system

3.5
accessory
device connected to the system whose main function is not for the storage or conveyance of LPG

Note 1 to entry: Referred to as "service and structural equipment" in ADR [9].

3.6
thermowell
permanently sealed pocket in the pressure vessel/pipework for the temperature gauge

3.7
pipework
pressure containing enclosure used for the conveyance of LPG, consisting of pipe, pipe fittings, valves and other accessories

3.8
road tanker
rigid vehicle, semi-trailer or trailer comprising of one or more fixed pressure vessels

Note 1 to entry: Referred to as fixed tanks (tank-vehicles) and demountable tanks in the ADR [9].

3.9
thermal expansion valve
self-closing valve which automatically, without the assistance of any energy other than that of the fluid concerned, discharges fluid at a predetermined pressure

3.10
non-return valve
valve designed to close automatically to restrict reverse flow

3.11
excess flow valve
valve designed to close automatically, with a small residual flow, when the fluid flow passing through it exceeds a predetermined value, and to re-open when the pressure differential across the valve has been restored below a certain value

3.12
shut-off valve
valve to provide a leak-tight seal which is operated either manually, remotely or is self-closing

3.13
pressure relief valve
PRV
self-closing valve which automatically, without the assistance of any energy other than that of the vapour concerned, discharges vapour at a predetermined pressure, and operates with a pop action

3.14
design pressure
DEPRECATED: calculation pressure
pressure used for the calculation of the minimum wall thickness

3.15
gas-free
less than 20 % of the lower explosive limit of LPG in air

3.16
competent person
person which by combination of appropriate qualification, training, experience, and resources, is able to make objective judgments on the subject

3.17
fixed liquid level gauge
control device, such as a dip tube in combination with a vent valve to indicate when a predetermined liquid level has been reached or surpassed

3.18
competent authority
authority or authorities or any other body or bodies designated as such in each State and in each specific case in accordance with domestic law