SLOVENSKI STANDARD
oSIST prEN 14894:2020

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Oprema in pribor za utekočinjeni naftni plin (UNP) - Označevanje jeklenk in sodov

LPG equipment and accessories - Cylinder and drum marking

Flüssiggas-Geräte und Ausrüstungsteile - Kennzeichnung

Équipements pour gaz de pétrole liquéfié et leurs accessoires - Marquage des bouteilles et des fûts à pression

Ta slovenski standard je istoveten z: **prEN 14894 rev**

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23.020.35 Plinske jeklenke Gas cylinders

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

LPG equipment and accessories - Cylinder and drum marking

Équipements pour gaz de pétrole liquéfié et leurs accessoires - Marquage des bouteilles et des fûts à pression

Flüssiggas-Geräte und Ausrüstungsteile - Kennzeichnung

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.

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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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 14894:2020) 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 has been submitted for reference in

— the RID and/or

— the technical annexes of the ADR.

NOTE These regulations take precedence over any clause of this standard. 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 standard.

The main technical changes to this version are as follows:

— To fully align with RID/ADR

Introduction

This document calls for the use of substances and procedures that may 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 document that the execution of its provisions is entrusted to appropriately qualified and experienced people.

1 Scope

This document specifies stamp marking requirements for transportable refillable LPG cylinders and metallic drums including:

— Steel LPG cylinders designed and manufactured in accordance with EN 1442, EN 14140, EN 12807 or an equivalent standard or technical code recognized by the Competent Authority.

— LPG metallic drums designed and manufactured in accordance with EN 14893 or an equivalent standard or technical code recognized by the Competent Authority.

— Welded aluminium LPG cylinders designed and manufactured in accordance with EN 13110 or an equivalent standard or technical code recognized by the Competent Authority.

— LPG composite cylinders designed and manufactured in accordance with EN 14427 or an equivalent standard or technical code recognized by the Competent Authority.

NOTE 1 All these types of receptacles are referred to throughout this document as “cylinders”.

This document does not specify any requirements for product, hazard or safety-phrase labelling of packaging which may be required to meet ADR or other legislative requirements.

NOTE 2 The marking of cylinders is regulated by RID/ADR which take precedence over any clause in this document. The European Directive on Transportable Pressure Equipment 2010/35/EU [8] includes additional marking requirements (π-marking).

2 Normative references

There are no normative references in this document.

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, butene with traces of other hydrocarbon gases

3.2
stamp marking
permanent or durable markings affixed to the cylinder

3.3
competent authority
authority designated as such in each country in accordance with national regulation

3.4
inspection body
independent inspection and testing body approved by the competent authority

4 Symbols and abbreviated terms

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road [7]
D	durable
P	permanent
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail [6]
TPED	Transportable Pressure Equipment Directive 2010/35/EU [8]
π-marking	Pi marking as defined in European Directive on Transportable Pressure Equipment 2010/35/EU [8]

5 Application of stamp markings

5.1 General

5.1.1 Stamp markings consist of manufacturing, operational and certification stamp marks and are listed in Clause 5, Clause 6, Clause 7 and Clause 8. The layout of the marks is covered by 5.3. Additional markings may be applied if required by other regulations or technical standards, or when required by the cylinder owner; provided the layout does not cause any confusion in their interpretation and the clarity of the other mandatory markings is not affected.

5.1.2 Low stress stamp marking methods shall be utilized.

5.1.3 Stamp markings shall be applied to low stress areas.

5.1.4 Stamp marking shall be in accordance with the requirements of EN 14894 and any requirements in the standard to which cylinder or drum is being manufactured.

The marking information may be supplemented and/or duplicated by electronic means or other types of coding where required by the operator.

NOTE 1 The TPED includes additional marking requirements (π-marking).

NOTE 2 The requirements of RID/ADR override any conflicting requirements of this document; this may lead to a temporary noncompliance with EN 14894.

5.2 Workmanship

5.2.1 All stamp markings shall be affixed clearly, legibly and durably on the cylinder and shall remain visible and legible under all foreseeable operating and ageing conditions.

— Markings required to be “permanent” shall be such that they can only be removed with the use of special tools and may be done, for example by hard metal stamping, engraving, casting, embossing, encapsulation or other similar methods.

— Markings required to be “durable” shall be such that they remain visible and legible for the relevant period of time and may be done, for example by printing, external labelling, stencilling, use of valve hand-wheel insert or other similar methods.

Clause 5, Clause 6, Clause 7 and Clause 8 indicate which markings shall be “permanent (P)” and which may be “durable (D)”.

Markings which are permitted to be durable may be permanently applied if so desired.

5.2.2 For metallic cylinders, the markings shall be located on the shoulder, top end or neck of the cylinder or on a permanently affixed component, e.g. shroud, handle(s), foot ring, welded nameplate, etc.

5.2.3 If markings are applied after completion of manufacture or following periodic inspection, by stamping or engraving onto the pressure parts of the cylinder, it shall be demonstrated by fatigue and burst tests in accordance with the original design standard or equivalent, that failure does not initiate in the markings.

5.2.4 For composite cylinders, permanent markings may be affixed by use of a printed label encapsulated by either placing it under the resin or by covering it with a permanent transparent coating, on the shoulder or the sidewall of the cylinder (see 5.3).

5.2.5 The characters in the stamp markings shall be at least 5 mm in height. On cylinders with an outside diameter less than 140 mm, this height may be reduced, but in no case shall the characters be less than 2,5 mm in height.

5.2.6 The π-mark, where applicable, shall have substantially the same vertical dimension as the other stamp markings but shall not be less than 5 mm. If the mark dimensions are changed, the proportions of the drawing shall be maintained.

NOTE The proportions of the π-mark are specified in the conformity marking drawing in the TPED.

5.2.7 The UN number and the letters “UN” shall be:

a) at least 12 mm high for cylinders of greater than 60 l water capacity;

b) at least 6 mm in height for cylinders of 60 l water capacity or less; and

c) be of an appropriate size for cylinders of 5 l or less.

5.3 Arrangements for stamp marking

5.3.1 The markings for manufacturing, operation and certification shall be arranged in three groups as specified in Clause 5, Clause 6 and Clause 7, where the manufacturing marks shall be the top grouping, the operational be the middle grouping and the certification marks be the bottom grouping.

5.3.2 The arrangement of additional markings specified in Clause 8, shall be such as to avoid confusion with the markings specified in 5.3.1.

5.3.3 When an identity plate (or label for composite cylinders) is used, all the stamp markings may be on a single plate or label together with any additional markings, provided the layout does not cause any confusion in their interpretation.

NOTE Possible locations of the markings are given in Annex A.

6 Certification stamp markings

This grouping of stamp markings shall be permanently applied in the sequence listed in Table 1.

Table 1 — Certification stamp marks

Mark	Specification	Status	Example
Technical standard	Identification of the relevant standard to which the cylinder is designed, manufactured and tested	Mandatory	EN 1442
Country mark (of approval)	Capital letter(s) identifying the country of approval using the character of the distinguishing signs of motor vehicles in international traffic [a] The country of approval shall be the country that approved the body which inspected the individual receptacle at the time of manufacture.	Mandatory	F
Inspection body mark	Identity mark or stamp of the inspection body that is registered with the competent authority of the country authorizing the marking	Mandatory	# or 1234
Initial inspection date	Date of initial inspection (at the time of manufacture/certification) shown as the year (4 digits) and month (2 digits) separated by a slash ("/")	Mandatory	2013/04
[a] The distinguishing signs for motor vehicles in international traffic as described in the Vienna Convention on Road Traffic (1968) shall be used.			

7 Operational stamp markings

This grouping of stamp markings shall be permanently applied in the sequence listed in Table 2.

Table 2 — Operational stamp markings

Mark	Specification	Status	Example
Test pressure	The prefix "PH" followed by the value of the test pressure which has been used by the manufacturer for the design of the cylinder, in bar, and the letters "BAR"	Mandatory	PH 30 BAR
Water capacity	The minimum water capacity guaranteed by the cylinder manufacturer, in litres, followed by the unit "L" The capacity shall be expressed to three significant digits, rounded down to the last digit. If the value of the water capacity is an integer, the digits after the decimal point may be neglected.	Mandatory	12,8 L

8 Manufacturing stamp markings

This grouping of stamp markings shall be permanently applied in the sequence listed in Table 3.