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Outdoor hydrogen refuelling points dispensing gaseous hydrogen and incorporating filling protocols

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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EUROPEAN STANDARD
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EUROPÄISCHE NORM

EN 17127

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English Version

Outdoor hydrogen refuelling points dispensing gaseous hydrogen and incorporating filling protocols

Points de ravitaillement en hydrogène en extérieur distribuant de l'hydrogène gazeux et intégrant des protocoles de remplissage

Gasförmiger Wasserstoff - Betankungsanlagen - Teil 1: Allgemeine Anforderungen

This European Standard was approved by CEN on 25 June 2018.

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
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17127:2018) has been prepared by Technical Committee CEN/TC 268 “Cryogenic vessels and specific hydrogen technologies applications”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by May 2019, and conflicting national standards shall be withdrawn at the latest by May 2019.

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 Mandate M/533 given to CEN by the European Commission and the European Free Trade Association.

It applies to vehicles covered by GTR13.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The European Commission in its standardization request M/533 of March 12th, 2015, aims to ensure that technical specifications for interoperability of refuelling points are specified in European Standards compatible with the relevant International Standards. These specifications aim to meet the European needs, be compatible and aligned as much as possible with relevant International Standards and as far as possible with existing refuelling infrastructure already in place and leave room to accommodate the adopted standard to local technical, analytical and regulatory needs. The requested European Standards aim to be technologically and commercially neutral and based on the know-how currently in possession of the EU industry and of the public sector on a fair, reasonable and non-discriminatory basis.

According to the legal requirements given in the Alternative Fuels Infrastructure Directive (AFID) and M/533, European Standards specifying only the required specifications for ensuring the interoperability of refuelling points have to be provided. European standards and common requirements with respect to "interoperability" mean the capacity of an infrastructure to supply energy that is compatible with all vehicle technologies and allows seamless EU-wide mobility and a clear definition of fuel pressure and temperature levels and connector designs[1].

The European Standardization Organizations (ESOs) should adopt European Standards in accordance with Article 10 of Regulation (EU) No 1025/2012 of the European Parliament and of the Council, and those standards should be based on current International Standards or ongoing international standardization work, where applicable.

Direction from the standardization request M/533 for European Standards for hydrogen supply are to *develop European Standards containing technical solutions for interoperability with technical specifications in regard to Article 5 and point 2 of Annex II, in particular for:*

a) outdoor hydrogen refuelling points dispensing gaseous hydrogen;

b) hydrogen purity dispensed by hydrogen refuelling points;

c) fuelling algorithms and equipment of hydrogen refuelling points;

d) connectors for vehicles for the refuelling of gaseous hydrogen.

This document specifies Items a) and c). Item b) is covered by EN 17124 and Item d) by EN ISO 17268.

[1] The energy to be supplied is hydrogen as a fuel and this fuel is dispensed in a hydrogen refuelling station meeting interoperability requirements.

1 Scope

This document defines the minimum requirements to ensure the interoperability of public hydrogen refuelling points including refuelling protocols that dispense gaseous hydrogen to road vehicles (e.g. Fuel Cell Electric Vehicles*)* complying with applicable regulations.

The safety and performance requirements for the entire hydrogen refuelling station (HRS), addressed in accordance with existing relevant European and national legislation, are not included in this document.

NOTE Guidance on considerations for hydrogen refuelling stations (HRS) is provided in ISO/TS 19880-1.

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 17124, *Hydrogen fuel — Product specification and quality assurance — Proton exchange membrane (PEM) fuel cell applications for road vehicles*

EN ISO 17268, *Gaseous hydrogen land vehicle refuelling connection devices (ISO 17268)*