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Road vehicles - Blended fuels refuelling connector (ISO 16380:2014, including Amd 1:2016)

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

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/18

Obsahuje: EN ISO 16380:2018, ISO 16380:2014, ISO 16380:2014/Amd 1:2016

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 16380

June 2018

ICS 75.200

English Version

Road vehicles - Blended fuels refuelling connector (ISO 16380:2014, including Amd 1:2016)

Véhicules routiers - Pistolet de remplissage pour les mélanges de carburants gazeux (ISO 16380:2014, y compris Amd 1:2016)

Straßenfahrzeuge - Betankungsanschluss für Mischkraftstoffe (ISO 16380:2014, einschließlich Amd 1:2016)

This European Standard was approved by CEN on 2 February 2018.

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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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EN ISO 16380:2018 (E)

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European foreword

The text of ISO 16380:2014, including Amd 1:2016 has been prepared by Technical Committee ISO/TC 22 “Road vehicles” of the International Organization for Standardization (ISO) and has been taken over as EN ISO 16380:2018 by Technical Committee CEN/TC 301 “Road vehicles” 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of an identical text or by endorsement, at the latest by December 2018, and conflicting national standards shall be withdrawn at the latest by December 2018.

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Endorsement notice

The text of ISO 16380:2014, including Amd 1:2016 has been approved by CEN as EN ISO 16380:2018 without any modification.

INTERNATIONAL STANDARD

ISO 16380

First edition
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Road vehicles — Blended fuels refuelling connector

Véhicules routiers — Pistolet de remplissage pour les mélanges de carburants gazeux

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 25, *Vehicles using gaseous fuel.*

Introduction

A nozzle certified to this International Standard will be functionally compatible from a safety and performance perspective with all listed receptacles of compatible profile and system pressure. Similarly, a receptacle certified to this International Standard will be functionally compatible from a safety and performance perspective with all listed nozzles of compatible profile and system pressure.

As there can eventually be many different kinds of nozzles and receptacles available from a variety of manufacturers which, for safety reasons, shall all be compatible with each other, this International Standard specifies a series of receptacle profiles. These standard profiles incorporate the design specifications (mating materials, geometry, and tolerances) which can be considered in the certification of a submitted nozzle or receptacle.

The construction and performance of nozzles and receptacles are based on the observation that four main parameters affect user safety and system compatibility.

Road vehicles — Blended fuels refuelling connector

1 Scope

This International Standard applies to compressed blended fuels vehicle nozzles and receptacles hereinafter referred to as devices, constructed entirely of new, unused parts and materials. Compressed blended fuels fuelling connection nozzles consist of the following components, as applicable:

a) Receptacle and protective cap (mounted on vehicle) (see Clause 7);

b) Nozzle (mounted on dispenser side) (see Clause 5).

This International Standard applies to devices which have a service pressure of 20 MPa, 25 MPa, and 35 MPa hereinafter referred to in this International Standard as [see 9.1 c)]:

— size 1: M200, M250, and M350;

— size 2: N200 and N250.

This International Standard refers to service pressures of 20 MPa, 25 MPa, and 35 MPa for size 1 and 20 MPa and 25 MPa for size 2.

This International Standard applies to devices with standardised mating components (see 5.8 and 7.7).

This International Standard applies to connectors which

a) prevent blended fuels vehicles from being fuelled by dispenser stations with working pressures higher than the vehicle fuel system working pressure,

b) allow blended fuels vehicles to be fuelled by dispenser stations with working pressures equal to or lower than the vehicle fuel system working pressure,

c) allow blended fuels vehicles to be fuelled by dispenser stations for compressed natural gas,

d) allow blended fuels vehicles to be fuelled by compressed natural gas dispenser stations with working pressures equal to or lower than the vehicle fuel system working pressure,

e) prevent blended fuels vehicles size 1 being refuelled on blended fuels dispenser stations equipped with a size 2 nozzle and vice versa,

f) prevent natural gas vehicles from being fuelled by blended fuels station, and dispensers, and

g) prevent pure hydrogen vehicles from being fuelled by blended fuels station dispensers.

This International Standard is applicable to mixtures of hydrogen from 2 % to 30 % in volume and compressed natural gas containing:

a) natural gas in accordance with ISO 15403-1 and ISO 15403-2;

b) pure hydrogen in accordance with ISO 14687-1 or ISO/TS 14687-2.

All references to pressures (MPa) throughout this International Standard are to be considered gauge pressures unless otherwise specified.

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.

ISO 1431-1, *Rubber, vulcanized or thermoplastic — Resistance to ozone cracking — Part 1: Static and dynamic strain testing*

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

ISO 11114-4, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 4: Test methods for selecting metallic materials resistant to hydrogen embrittlement*

ISO 14175, *Welding consumables — Gases and gas mixtures for fusion welding and allied processes*

ISO 14687-1, *Hydrogen fuel — Product specification — Part 1: All applications except proton exchange membrane (PEM) fuel cell for road vehicles*

ISO/TS 14687-2, *Hydrogen Fuel — Product Specification — Part 2: Proton exchange membrane (PEM) fuel cell applications for road vehicles*

ISO 15500-2:2012, *Compressed natural gas (CNG) fuel system components — Part 2: Performance and general test methods*

ISO 15403-1, *Natural gas — Natural gas for use as a compressed fuel for vehicles — Part 1: Designation of the quality*

ISO/TR 15403-2, *Natural gas — Natural gas for use as a compressed fuel for vehicles — Part 2: Specification of the quality*

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