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Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/ natural gas blends fuel system components —

Part 11: Excess flow valve

Véhicules routiers — Composants des circuits d'alimentation pour hydrogène gazeux comprimé (CGH2) et mélanges de gaz naturel et hydrogène —

Partie 11: Valve de limitation de débit

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.

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A list of all parts in the ISO 12619 series can be found on the ISO website.

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Road vehicles — Compressed gaseous hydrogen (CGH2) and hydrogen/natural gas blends fuel system components —

Part 11: Excess flow valve

1 Scope

This document specifies tests and requirements for the excess flow valve, a compressed gaseous hydrogen (CGH_2) and hydrogen/natural gas blend fuel system component intended for use on the types of motor vehicles defined in ISO 3833.

It is applicable to vehicles using CGH_2 in accordance with ISO 14687-1 or ISO 14687-2 and hydrogen/natural gas blend using natural gas in accordance with ISO 15403-1 and ISO/TR 15403-2. It is not applicable to the following:

a) liquefied hydrogen (LH_2) fuel system components;

b) fuel containers;

c) stationary gas engines;

d) container mounting hardware;

e) electronic fuel management;

f) refuelling receptacles;

g) fuel cell vehicles.

NOTE 1 It is recognized that miscellaneous components not specifically covered herein can be examined to meet the criteria of this document and tested according to the appropriate functional tests.

NOTE 2 All references to pressure in this document are considered gauge pressures unless otherwise specified.

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.

ISO 12619-1, *Road vehicles — Compressed gaseous hydrogen (CGH_2) and hydrogen/natural gas blend fuel system components — Part 1: General requirements and definitions*

ISO 12619-2, *Road vehicles — Compressed gaseous hydrogen (CGH_2) and hydrogen/natural gas blend fuel system components — Part 2: Performance and general test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 12619-1 and the following apply.

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

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

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

3.1
internal excess flow valve
excess flow valve installed inside the cylinder or cylinder valve

3.2
external excess flow valve
excess flow valve installed outside the cylinder or cylinder valve

3.3
shut-off type excess flow valve
excess flow valve that stops flow when in the closed position

3.4
flow-limiter type excess flow valve
excess flow valve that limits flow when activated

Note 1 to entry: The device resets automatically when the excess flow condition is no longer present.

3.5
activation pressure
differential pressure flow or other condition specified by the manufacturer at which the excess flow valve is activated

4 Marking

Marking of the component shall provide sufficient information to allow the following to be traced:

a) the manufacturer's or agent's name, trademark or symbol;

b) the model designation (part number);

c) the operating specifications (working pressure, temperature range, excess flow valve type, activation flow or ΔP, maximum flow when activated).

The following additional markings are recommended:

— the direction of flow (when necessary for correct installation);

— the type of fuel;

— the electrical ratings (if applicable);

— the symbol of the certification agency;

— the type approval number;

— the serial number or date code;

— a reference to this document, i.e. ISO 12619-11:2017.

This information can be provided by a suitable identification code on at least one part of the component when it consists of more than one part.

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