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Road vehicles — Liquefied natural gas (LNG) fuel system components —

Part 6: Pressure regulator

Véhicules routiers — Équipements pour véhicules utilisant le gaz naturel liquéfié (GNL) comme combustible —

Partie 6: Régulateur de pression

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 fuels*.

ISO 12614 consists of the following parts, under the general title *Road vehicles — Liquefied natural gas (LNG) fuel system components*:

— *Part 1: General requirements and definitions*

— *Part 2: Performance and general test methods*

— *Part 3: Check valve*

— *Part 4: Manual valve*

— *Part 5: Tank pressure gauge*

— *Part 6: Pressure regulator*

— *Part 7: Pressure relief valve*

— *Part 8: Excess flow valve*

— *Part 9: Gas-tight housing and ventilation hose*

— *Part 10: Rigid fuel line in stainless steel*

— *Part 11: Fittings*

— *Part 12: Rigid fuel line in copper and its alloys*

— *Part 13: Pressure control regulator*

— *Part 14: Differential pressure fuel content gauge*

— *Part 15: Capacitance fuel content gauge*

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— *Part 16: Heat exchanger – vaporizer*

— *Part 17: Natural gas detector*

— *Part 18: Gas temperature sensor*

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Road vehicles — Liquefied natural gas (LNG) fuel system components —

Part 6: Pressure regulator

1 Scope

This part of ISO 12614 specifies tests and requirements for the pressure regulator, a liquefied natural gas fuel system component intended for use on the types of motor vehicles defined in ISO 3833. This part of ISO 12614 is applicable to vehicles using natural gas in accordance with ISO 15403 (mono-fuel, bi-fuel, or dual-fuel applications). It is not applicable to the following:

1) fuel containers;

2) stationary gas engines;

3) container mounting hardware;

4) electronic fuel management;

5) refueling receptacles.

NOTE 1 It is recognized that miscellaneous components not specifically covered herein can be examined to meet the criteria of this part of ISO 12614 and tested according to the appropriate functional tests.

NOTE 2 All references to pressure in this part of ISO 12614 are to be considered gauge pressures unless otherwise specified.

NOTE 3 This part of ISO 12614 is based upon a working pressure for natural gas as a fuel of 1,6 MPa (16 bar). (1 bar = 0,1 MPa = 105 Pa; 1 MPa = 1 N/mm^2.) Other working pressures can be accommodated by adjusting the pressure by the appropriate factor (ratio). For example, a 2 MPa (20 bar) working pressure system will require pressures to be multiplied by 1,25.

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 12614-1, *Road vehicles — Liquefied natural gas (LNG) fuel system components — Part 1: General requirements and definitions*

ISO 12614-2, *Road vehicles — Liquefied natural gas (LNG) 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 12614-1 and the following apply.

3.1
lock-up pressure
stabilized outlet pressure of the regulator at 0 (zero) flow

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