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Natural gas fuelling stations - LNG stations for fuelling vehicles (ISO 16924:2016)

Erdgastankstellen - Tankstellen für verflüssigtes Erdgas (LNG) zur Betankung von Fahrzeugen (ISO 16924:2016)

Stations-service de gaz naturel - Stations GNL pour le ravitaillement de véhicules (ISO 16924:2016)

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Natural gas fuelling stations - LNG stations for fuelling vehicles (ISO 16924:2016)

Stations-service de gaz naturel - Stations GNL pour le ravitaillement de véhicules (ISO 16924:2016)

Erdgastankstellen - Tankstellen für verflüssigtes Erdgas (LNG) zur Betankung von Fahrzeugen (ISO 16924:2016)

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 326.

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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European foreword

The text of ISO 16924:2016 has been prepared by Technical Committee ISO/PC 252 “Natural gas fuelling stations for vehicles” of the International Organization for Standardization (ISO) and has been taken over as prEN ISO 16924:2017 by Technical Committee CEN/TC 326 “Natural Gas Vehicles - Fuelling and Operation” the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document has been prepared under the standardization request M/533 given to CEN by the European Commission and the European Free Trade Association in the framework of Directive 2014/94/EU on the deployment of alternative fuels infrastructure.

The standardization request M/533 focuses on interoperability aspects of the alternative fuels infrastructure, which for LNG fuelling stations are covered in this document by the following items:

- Fuelling pressure (service pressure): This document requires that the pressure of LNG at the nozzle is lower than the maximum allowable working pressure of the vehicle tank.
- Connector profile: The harmonized connector profile is described in EN ISO 12617:2017, that specifies LNG refuelling nozzles and receptacles constructed entirely of new and unused parts and materials for road vehicles powered by LNG, and which is referenced in this document.

In addition to interoperability aspects, the following aspects are relevant for applying this document in Europe:

- Fuel quality: The quality of LNG for use as automotive fuel is covered in EN 16723-2:2017, that specifies the requirements and test methods for natural gas, biomethane and blends of both.
- Fuel labelling: The fuel label for LNG at dispensers is covered by EN 16942:2016, that lays down harmonized identifiers for marketed liquid and gaseous fuels, and which has also been developed to support Directive 2014/94/EU.

Endorsement notice

The text of ISO 16924:2016 has been approved by CEN as prEN ISO 16924:2017 without any modification.

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**Natural gas fuelling stations — LNG
stations for fuelling vehicles**

*Stations-service de gaz naturel — Stations GNL pour le ravitaillement
de véhicules*

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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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/PC 252, *Natural gas fuelling stations for vehicles*.

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Natural gas fuelling stations — LNG stations for fuelling vehicles

1 Scope

This document specifies the design, construction, operation, maintenance and inspection of stations for fuelling liquefied natural gas (LNG) to vehicles, including equipment, safety and control devices.

This document also specifies the design, construction, operation, maintenance and inspection of fuelling stations for using LNG as an onsite source for fuelling CNG to vehicles (LCNG fuelling stations), including safety and control devices of the station and specific LCNG fuelling station equipment.

NOTE Specific CNG equipment is dealt with in ISO 16923.

This document is applicable to fuelling stations receiving LNG and other liquefied methane-rich gases that comply with local applicable gas composition regulation or with the gas quality requirements of ISO 13686.

This document includes all equipment from the LNG storage tank filling connection up to the fuelling nozzle on the vehicle. The LNG storage tank filling connection itself and the vehicle fuelling nozzle are not covered in this document.

This document includes fuelling stations having the following characteristics:

- private access;
- public access (self-service or assisted);
- metered dispensing and non metered dispensing;
- fuelling stations with fixed LNG storage;
- fuelling stations with mobile LNG storage;
- movable fuelling stations;
- mobile fuelling stations;
- multi-fuel stations.

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 4126 (all parts), *Safety devices for protection against excessive pressure*

ISO 9606-1, *Qualification testing of welders — Fusion welding — Part 1: Steels*

ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction*

ISO 12617, *Road vehicles — Liquefied natural gas (LNG) refuelling connector — 3,1 MPa connector*

ISO 13709, *Centrifugal pumps for petroleum, petrochemical and natural gas industries*