

ICS 75.060
CCS E 24



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 26980-2011

**Liquefied natural gas (LNG) vehicular fueling systems code
(English Translation)**

Issued on: September 29, 2011

Implemented on: January 1, 2012

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

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Foreword

This Standard is drafted in accordance with the rules given in GB/T1.1-2009.

This Standard uses the re-drafting method to modify USA National Fire Protection Association NFPA 52 "Vehicle Fuel System Specification", English version of 2006. For the purpose of comparison, a list of the comparison between the clause of this Standard and the clause of NFPA 52.2006 is given in Annex A; a list of the technical differences and between the clause of this Standard and the clause of NFPA 52.2006 and their causes is listed in Annex B.

For ease of use, this Standard has also made the following modifications.

- a) MODIFY the name;
- b) DELETE the clauses not related to LNG and Annexes A to E, mainly use the clauses related to LNG fueling facilities and relevant clauses in NFPA 52.2006;
- c) In normative references, use China's national standard to replace relevant foreign standards.

This Standard is proposed by National Technical Committee on Petroleum of Standardization Administration of China (SAC/TC 355).

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Liquefied natural gas (LNG)

vehicular fueling systems code

1 Scope

This Standard specifies the reasonable protection measures for the prevention of fire and explosion in the fueling facilities of liquefied natural gas (LNG) vehicular fueling system.

This Standard apply to the design, installation, operation and maintenance of various types of fueling facilities, with a container capacity of not more than 265 m³, of liquefied natural gas (LNG) vehicular fueling system and LNG-CNG (compressed natural gas) conversion facilities.

This Standard does not apply to facilities, equipment and structural devices that have been built or approved for construction and installation prior to the entry into force of this Standard, unless otherwise stated.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this document. For undated references, the latest edition (including all modifications) applies to this document.

GB 150-1998 Steel pressure vessels

GB 8624-2006 Classification for burning behavior of building materials and products

GB/T 8923-1988 Rust grades and preparation grades of steel surfaces before application of paints and related products

GB 9448-1999 Safety in welding and cutting

GB 12955-2008 Fire resistant door sets

GB 16809-2008 Fire resistant windows

GB 18442-2001 Cryo-insulation pressure vessels

GB/T 20368-2006 Production, storage and handling of liquefied natural gas (LNG)

GB/T 20801-2006 Pressure piping code

GB 50016-2006 Code of design on building fire protection and prevention

GB 50058-1992 Electrical installations design code for explosive atmospheres and fire hazard

GB 50191-1993 Design code for anti-seismic of special structures

GB 50235-1997 Code for construction and acceptance of industrial metallic piping

JB/T 4711-2003 Coating and packing for pressure vessels transport

JB/T 6697-2006 Basic specifications of electric equipment for motor vehicles and internal-combustion engine

ISO 15500 Compressed natural gas (CNG) fuel system components

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

3.1

labeled

Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization, which is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, AND the labeling indicates compliance with appropriate standards or performance in a specified manner.

3.2

listed

Equipment, materials, or services included in a list published by an organization, which is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.3

building

The operating pressure set in a LNG equipment or a container during normal use.

3.11

dike

A structure used to establish an impounding area.

3.12

emergency shutdown device (ESD)

A device that disconnects LNG from one point to the rest from either local or remote locations.

3.13

fail-safe

A design feature that provides for the maintenance of safe operating conditions in the event of a malfunction of control devices or an interruption of an energy source.

3.14

fixed liquid level device

A device that indicates when the container is filled to its maximum permitted filling volume.

3.15

fuel dispenser system

All the pumps, meters, piping, hose and controls used for the delivery of LNG to, and the removal of vapor from, a vehicle.

3.16

fueling connector

A device connects to the vehicular fueling system through the fueling hose or the fueling arm, including a shut-off valve for delivering LNG or vaporized gas.

3.17

fueling facility