



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

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Code for design and construction of filling station

汽车加油加气加氢站技术标准

(English Translation)

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1 General provisions	
1.0.1 This standard is formulated, in order to implement relevant national guidelines	

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and policies in the design and construction of fueling stations, unify technical requirements, achieve safety and applicability, advanced technology, economical rationality.

1.0.2 This standard is applicable to the design and construction of newly built, expanded, reconstructed automobile oil fueling stations, gas stations, oil and gas combined fueling stations, oil and hydrogen combined fueling stations, gas and hydrogen combined fueling stations, oil and gas and hydrogen combined fueling stations.

1.0.3 The design and construction of vehicle oil fueling, gas fueling, hydrogen fueling stations shall not only comply with this standard, but also comply with the relevant current national standards.

2.1.1 Fueling station

It is a place for fueling motor vehicles with vehicle fuel, including gasoline, diesel, LPG, CNG, LNG, hydrogen, liquid hydrogen. It is a generic term of oil fueling station, gas fueling station, oil and gas combined fueling station, oil and hydrogen combined fueling station, gas and hydrogen combined fueling station, oil and gas and hydrogen combined fueling station

2.1.2 Oil fueling station

A place which has oil storage facilities AND uses fuel dispensers to refuel motor vehicles with gasoline (including methanol gasoline, ethanol gasoline), diesel and other vehicle fuels.

2.1.3 Gas fueling station

It is a place which has gas storage facilities AND uses a gas dispenser to refill motor vehicles with vehicle gas, such as LPG, CNG or LNG.

2.1.4 LPG fueling station

A place where LPG automobile gas storage cylinders are filled with LPG for vehicles AND other convenient services can be provided.

2.1.5 CNG fueling station

A general term for various CNG fueling stations.

2.1.6 Conventional CNG fueling station

A place where gas is taken from the natural gas pipeline outside the station, processed and pressurized, AND vehicle CNG is charged to CNG storage cylinder through a gas dispenser.

2.1.7 Primary CNG fueling station

A place where gas is taken from the natural gas pipeline outside the station, processed and pressurized, AND CNG is charged for the CNG long tube trailer or tube bundle container serving the secondary CNG gas fueling station, through CNG dispensing pole.

2.1.8 Secondary CNG fueling station

A place where CNG is transported in by a CNG long-tube trailer or a tube-bundle container, charged for the automobile CNG gas storage cylinders, through a gas dispenser.

2.1.9 LNG fueling station

A place which has LNG storage facilities and uses LNG dispenser to fuel the vehicle LNG to the LNG vehicle's gas storage cylinders.

3.0.1 Gasoline, diesel, LPG, LNG, liquid hydrogen can be supplied to automobile

fueling stations by means of tank car or tank-type container transportation or pipeline transportation; CNG and hydrogen can be supplied by long-tube trailers or tube-bundle containers or pipeline delivery.

3.0.2 The scale of automobile oil fueling, gas fueling and hydrogen fueling stations shall be determined according to resource conditions, market demand, surrounding environment and other factors. Oil fueling stations, gas fueling stations, hydrogen fueling stations can be jointly built, in accordance with Article 3.0.12 ~ Article 3.0.23 of this standard.

3.0.3 The portable fueling device shall not be used in places other than the enterprise's own use, temporary or specific places; it shall be built separately. The design and installation of oil fueling stations, which use portable fueling devices, shall comply with the current industry standard "Technical specification for portable filling device in automobile filling station" SH/T 3134 and the relevant provisions of Article 6.4 of this standard.

3.0.4 The design of ethanol gasoline facilities in oil fueling stations shall not only comply with the provisions of this standard, but also comply with the relevant provisions of the current national standard "Code for design of automobile ethanol gasoline storage and transportation" GB/T 50610.

3.0.5 Electric vehicle charging facilities can be set up in vehicle oil fueling, gas fueling

and hydrogen fueling stations. The design of electric vehicle charging facilities shall not only comply with the provisions of this standard, but also comply with the relevant provisions of the current national standard "Design code for electric vehicle charging station" GB 50966.

4 Site choice of station

4.0.1

The site selection of vehicle oil fueling, gas fueling and hydrogen fueling stations shall meet the requirements of relevant planning, environmental protection and fire safety. It shall be selected in a location which has convenient transportation and user convenience.

4.0.2

In the central area of the city, it shall not build the grade I vehicle oil fueling, gas fueling and hydrogen fueling stations and primary CNG fueling stations.

4.0.3

The vehicle oil fueling, gas fueling and hydrogen fueling stations in urban built-up areas should be close to urban roads; however, it should not near the intersection of urban arterial roads.

4.0.4

The safety distance -- BETWEEN gasoline and diesel process equipment in oil fueling stations and various combined stations AND buildings (structures) outside the stations -- shall not be less than the provisions in Table 4.0.4.

4.0.9

In Table 4.0.4 ~ Table 4.0.8 of this standard, the starting and ending points for the calculated spacing of equipment or buildings (structures) shall comply with the provisions of Appendix A of this standard.

4.0.10

In Tables 4.0.4 ~ 4.0.8 of this standard, the division of protection categories for important public buildings and civil buildings shall comply with the provisions of Appendix B of this standard.

4.0.11

In Table 4.0.4 ~ Table 4.0.8 of this standard, the definitions of "open flame location" and "spark emitting location", as well as the division of "category A, B, C, D, E items" and "category A, B, C liquid" shall comply with the relevant provisions of the current national standard "Code of design on building fire protection and prevention" GB 50016.

4.0.12

The overhead power lines shall not cross the operation area of the vehicle oil fueling, gas fueling and hydrogen fueling station. Overhead communication lines shall not cross the operation area of hydrogen fueling facilities, in gas fueling stations and hydrogen fueling combined stations.