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

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**Liquefied petroleum gases
(English Translation)**

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1 Scope

This standard specifies the classification and marking, requirements and test methods, inspection rules, marking, packaging, transportation, storage, handover acceptance, safety of liquefied petroleum gas products.

This standard applies to liquefied petroleum gas, which is used as industrial and civil fuel.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB 150 Steel pressure vessels

GB 190 Packing symbol of dangerous goods

GB 5842 Liquefied petroleum gas cylinders (GB 5842-2006, ISO 4706:1989, NEQ)

GB 12268 List of dangerous goods

GB/T 12576 Liquefied petroleum gases - Calculation of vapor pressure and relative density

GB 13690 General rule for classification and hazard communication of chemicals

GB 14193 Rules for filling of liquefied gas cylinders

GB 18180 The requirements for the safety operation of gas carrier

GB 50016 Code of design on building fire protection and prevention

GB 50028 Code for design of city gas engineering

SH/T 0125 Test method for hydrogen sulfide in liquefied petroleum gas (lead acetate method) (SH/T 0125-1992, eqv ISO 8819-1987)

SH/T 0221 Determination method for density or relative density of liquefied petroleum gas (pressure hydrometer method) (SH/T 0221-1992, eqv ISO 3993-1984)

SH/T 0222 Determination method for total sulphur content of liquefied petroleum gas (coulometric method)

SH/T 0230 Determination method for composition of liquefied petroleum gas (chromatography method)

SH/T 0231 Determination method for hydrogen sulfide of liquefied petroleum gas (chromatography method)

SH/T 0232 Determination method for copper strip corrosion of liquefied petroleum gas (SH/T 0232-1992, eqv ISO 6251:1982)

SH/T 0233 Sampling method for liquefied petroleum gas

SY/T 7509 Determination of LPG residues

"Regulations on Safety Technology Supervision of Pressure Vessel " (ZJJGF [1999] No.154)

"Regulations on Safety Supervision of Cylinder" (ZJJGF [2000] No.250)

"Regulations on Safety Supervision of Liquefied Gas Railway Tank Car" ((87) HSZ No.1174)

"Regulations on Safety Supervision of Liquefied Gas Tanker" (LBF [1994] No.262)

3.1 Product classification

This standard is divided into 3 varieties, according to the composition and volatility of

LPG: Commercial propane (used when high volatility is required), commercial butane (used when low volatility is required), commercial propane-butane mixture (used when medium volatility is required).

Sampling shall be carried out in accordance with SH/T 0233. The sampling amount shall meet the required quantity for the exit-factory inspection or type inspection items.

5.4 Judgment rules

If the exit-factory inspection results meet the technical requirements in Chapter 4, the batch of products is judged to be qualified.

5.5 Re-inspection rules

If the exit-factory inspection results do not meet the technical requirements in Table 1, re-take double amount of sample from the same batch of products, according to SH/T 0233, to carry out re-inspection of the unqualified items. If the re-inspection results still do not meet the technical requirements of Table 1, the batch of products is judged to be unqualified.

6 Marking, packaging, transportation, storage

6.1

According to GB 12268, liquefied petroleum gas belongs to the flammable gas of category 2, item 2.1 of hazardous chemicals; its hazard marking is carried out according to GB 13690 and GB 190.

6.2

The liquefied petroleum gas storage tank shall be located in the storage tank area.

Liquefied petroleum gas storage sites shall meet the requirements of GB 50016 and GB 50028. It shall be equipped with eye-catching signs, such as "flammable products, no fire".

6.3

LPG shall be stored in LPG storage tanks or special cylinders for LPG. The design, manufacture, use, maintenance of liquefied petroleum gas storage tanks shall comply with the provisions of GB 150, meanwhile meet the requirements of the "Regulations on Safety Technical Supervision of Stationary Pressure Vessel". The storage of liquefied petroleum gas shall comply with the requirements of the "Regulations on Safety

Supervision of Gas Cylinder" and the requirements of GB 5842. Fill cylinders according to the requirements of GB 14193; overfilling is strictly prohibited.

6.4

When liquefied petroleum gas is transported by railway tanker, car tanker or special ship, in addition to the implementation of the "Regulations on Safety Supervision of

Special Equipment", railway tanker transportation shall comply with the requirements of the "Regulations on Safety Management for Liquefied Gas Railway Tanker"; car tanker transportation shall comply with the requirements of the "Regulations on Safety

Supervision of Liquefied Gas Car Tankers"; the transportation of steel cylinders shall comply with the requirements of the "Regulations on Safety Supervision of Gas Cylinders". Ship transportation shall comply with the provisions of GB 18180.

7.1 Handover

7.1.1

The receiving and delivery organizations or transportation department shall ensure the supply of clean and compliant car tankers, railway tankers or ships; conduct inspections in accordance with specifications. If the requirements are not met, the car tanker provider shall be responsible for cleaning or replacing qualified car tankers and ships. If there is any objection to the qualification of the vessel, it will not be filled.

7.1.2

The delivery organization shall determine the quality, according to the test results of the delivered product. If it is qualified, it will deliver the product AND give the product quality certificate.

7.2 Sample retention

7.2.1

When the liquefied petroleum gas is handed over for acceptance, the retained samples and the amount of retained samples, for arbitration inspection, shall be determined, through negotiation between the handover parties.

7.2.2

The cylinder for sample retention must be clean. The label should indicate the manufacturer, delivery address, delivery organization, sample name, sample certificate number, sampling location, date, name of the sampler.

7.2.3

The sample retention cylinder shall be kept in a cool, dry, dark room. The retention period is generally one month. The seal must be kept intact, during the retention period.

7.3 Acceptance

When receiving the goods, the buyer has the right to sample the quality of the products received. If the products are found not to meet the quality specified in the standard, they will entrust the organization, which is agreed by both parties, OR the arbitration organization, to make a ruling on the analysis of the reserved samples in 7.2.