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

中华人民共和国国家标准

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GB 50074-2014

Code for design of oil depot
石油库设计规范

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Implemented on May 01, 2015

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Code for design of compressed air station

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**Notice on Issuing National Standard *Code for design of oil
depot* by Ministry of Housing and Urban-Rural Development**

The Code for design of oil depot approved now is the national standard, its number is GB 50074-2014, and it is implemented from May 1, 2015. In which, the 4.0.3, 4.0.4, 4.0.10, 4.0.11, 4.0.12, 4.0.15, 5.1.3, 5.1.7, 5.1.8, 6.1.1, 6.1.15, 6.2.2, 6.4.7, 6.4.9, 8.1.2, 8.1.9, 8.2.8, 8.3.3, 8.3.4, 8.3.5, 8.3.6, 12.1.5 (1), 12.2.6, 12.2.8, 12.2.15, 12.4.1, 14.2.1, and 14.3.14 articles (clauses) are compulsory articles, and must be strictly executed. The original national standard *Code for design of oil depot* GB 50074-2002 is abolished simultaneously.

The Standard is published and distributed by the China Planning Press organized by standard rating research institution of our Ministry.

**Ministry of Housing and Urban-Rural Development of the People's Republic of
China**

July 13, 2014

Foreword

This Standard is formed by revising the original national standard *Code for design of oil depot* GB 50074-2002 according to the requirements of *Notice on <issuing formulated and revised plan (the second batch)> of 2007 project construction standard* (JB [2007] No. 126.

When the Standard is revising, the drafting group of standard has carried out the wide investigation, summarized design, construction and management experiences of our oil depot for dozens of years, learned related standards of the developed industry countries, and widely asked for opinions about design, construction, scientific research and management, discussed and repeatedly modified many problems for many times, and finalized through examination.

After being revised, the Standard includes 16 chapters and 2 annexes in total, and the main content includes: general, terms, basic provisions, site selection, site layout, storage bank, combustible and flammable liquid pump stations, inflammable and flammable liquid loading and unloading facilities, technique and heat distribution pipeline, combustible and flammable liquid barrel filling bucket facilities, workshop oil supply station, fire control facility, water feeding, drainage and sewage treatment, electricity, automatic control and telecommunication, heating and ventilation, etc.

Compared with the original national standard *Code for design of oil depot* GB 50074-2002, the main content revised this time is:

1. Enlarge the application scope, bring the liquid chemicals into the application scope of the Standard to solve the problem that the previous liquid chemical depot has not application scope.
2. Specific to the grade classification of the oil depot, give corresponding calculation coefficients for the total capacity of the storage tank of the oil depot according to the stored liquid with different fire disaster risks.
3. Limit the total calculation capacity of the storage tank of the primary oil depot, and add the content of the special-grade oil depot.
4. Add the provisions about the external pipeline.
5. Add provisions about automatic control and telecommunication system.

6. Cancel the content about manual cave depot.
7. Improve the safety protective standard of the oil depot.

The Article marked by black word in the Standard is compulsory article and must be strictly executed.

The Ministry of the Housing and Urban-Rural Development is responsible for managing the Standard and interpreting the compulsory articles; the China Petrochemical Corporation is responsible for the daily management, and Sinopec Engineering Incorporation is responsible for the interpretation of the main technical content. Every unit shall combine the project practice, seriously sum up experiences, and pay attention to accumulate data during the implementation process of the Standard. In case that it needs to modify or supplement, please send opinions to Sinopec Engineering Incorporation (address: #21, Beilian Park, Anhui, Chaoyang District, Beijing; Zip code: 100101) for future reference in revising.

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1 General Provisions

1.0.1 In order to carry out and execute related national policy in design of oil depot, unify the technical requirements, and achieve safety and applicable, advanced technology, and reasonable cost, this Standard is formulated.

10.2 This Standard is applicable to the design of newly built, extended and reconstructed oil depot.

This Standard is not applicable to the following flammable and combustible liquid storage and transportation facilities;

1 Flammable and combustible liquid storage and transportation facilities in the oil chemical enterprise plant area;

2 Oil station (depot) in oil gas field;

3 Oil transportation station field affiliated to the oil transportation pipeline;

4 Underground water seal stone cavern oil depot, underground salt cave oil depot, natural cave oil depot, artificially excavated oil storage cave depot;

5 Independent liquefied hydrocarbon storage tank (including constant-temperature liquefied petroleum gas storage tank, low-temperature liquefied hydrocarbon storage tank);

6 Liquefied natural gas storage tank;

7 The total capacity of storage tank is not less than 1200000 m³, and the oil storage tank is only used for storing the crude oil.

1.0.3 Except for executing this Standard, the design of the oil depot shall comply with provisions of the current national related standards.

2 Terms

2.0.1 Oil depot

It is an independent facility for receiving and distributing, and storing crude oil, finished-product oil and other flammable and combustible liquid chemicals.

2.0.2 Super oil depot

The oil depot can store crude oil as well as the non-crude oil type flammable and combustible liquids, and the total capacity of the storage tank is not less than 1200000 m³.

2.0.3 Oil depot attached to an enterprise

It is arranged in the border of the non-oil chemical industry enterprise and served for production or running of this enterprise.

2.0.4 Tank

It is the device for storing flammable and combustible liquid.

2.0.5 Fixed roof tank

The periphery of the tank roof is fixedly connected with the top part of the tank wall.

2.0.6 External floating roof tank

The top cover of the tank is floated on the liquid face.

2.0.7 Internal floating roof tank

The fixing roof is equipped with a floating disk.

2.0.8 Vertical oil tank

It is the joint name of the fixed roof tank, the external floating roof tank, and the internal floating roof tank.

2.0.9 Above ground tank

It is the joint name of the vertical oil tank and horizontal tank constructed in the open air above the ground.

2.0.10 Underground storage oil tank

It is buried at underground by directly earthing or filling sand (fine soil) in the tank pond, the highest liquid level in the tank is lower than the lowest elevation 0.2 m at the ground within 4 m scale out of the tank.

2.0.11 Buried vertical oil tank

The vertical oil tank is independently arranged in the soil-buried tank room or the



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