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

GB 50074-2014

Replacing GB 50074-2002

Code for design of oil depot

石油库设计规范

(English Translation)

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1 General

1.0.1

This specification is formulated to implement relevant national guidelines and policies in the design of oil depots, unify technical requirements, and achieve safety and applicability, advanced technology, and economical rationality.

1.0.2

This code is applicable to the design of new construction, expansion and reconstruction of oil depots. This specification does not apply to the following flammable and combustible liquid storage and transportation facilities.

- 1 Storage and transportation facilities for flammable and combustible liquids in the plant area of petrochemical enterprises;
- 2 Oil product stations (storages) in oil and gas fields;
- 3 The oil transportation station attached to the oil pipeline;
- 4 Underground water-sealed stone cave oil depots, underground salt cavern oil depots, natural cave oil depots, and artificially excavated oil storage caverns;
- 5 Independent liquefied hydrocarbon storage (including normal temperature liquefied petroleum gas storage and low temperature liquefied hydrocarbon storage);
- 6 Liquefied natural gas storage;
- 7 The total capacity of storage tanks is greater than or equal to 1,200,000m³, and only crude oil is stored in oil reserves.

1.0.3

In addition to implementing this code, the design of oil depots should also comply with the relevant current national standards.

2.0.1 Oil depot

An independent facility for sending, receiving, and storing crude oil, refined oil, and other flammable and combustible liquid chemicals.

2.0.2 Super oil depot

Oil depots that store both crude oil and non-crude oil flammable and combustible liquids, and the calculated total capacity of the storage tanks is greater than or equal to 1,200,000m³.

2.0.3 Oil depot attached to an enterprise

Petroleum depots set up within the boundaries of non-petrochemical enterprises and serving the production or operation of the enterprises.

2.0.4 Storage tank

Equipment for storing flammable and combustible liquids.

2.0.5 Fixed roof tank fixed roof tank

A storage tank in which the periphery of the tank roof is fixedly connected to the top of the tank wall.

2.0.6 External floating roof tank

A storage tank whose top cover floats on the liquid surface.

2.0.7 Internal floating roof tank

A tank with floating trays inside a fixed roof tank.

2.0.8 Vertical tank

A collective term for fixed roof storage tanks, external floating roof storage tanks and internal floating roof storage tanks.

2.0.9 Above ground tank above ground tank

Above the ground, the general term for vertical storage tanks and horizontal storage tanks built in the open air.

2.0.10 Buried horizontal storage tank underground storage oil tank

The horizontal storage tank is buried underground by directly covering soil or filling sand (fine soil) in the tank, and the highest liquid level in the tank is lower than the lowest elevation of 0.2m on the ground within 4m outside the tank.

2.0.11 Buried vertical oil tank

It is a vertical oil storage tank independently installed in a tank chamber or a protective body buried in soil.

2.0.12 Buried horizontal oil tank

Horizontal oil tanks that are directly covered with soil or buried, including buried horizontal oil tanks.

2.0.13 Buried oil tank

A collective term for soil-covered vertical oil tanks and soil-covered horizontal oil tanks.

2.0.14 Pan internal floating roof tank

The floating roof has no compartments, buoys or other floats, and only relies on the basin-shaped floating roof to directly contact the liquid with an internal floating roof storage tank.

2.0.15 Open-top bulk-headed internal floating roof

The ring-shaped open compartment is arranged around the floating roof, and the middle is only the inner floating roof of a single-layer plate.

2.0.16 Pressure storage tank pressurized tank

Storage tanks whose design pressure is greater than or equal to 0.1MPa (gauge pressure on tank top).

2.0.17 Low-pressure storage tank low-pressure tank

Storage tanks whose design pressure is greater than 6.0kPa and less than 0.1MPa (gauge pressure on tank top).

2.0.18 Single-deck floating roof

An annular sealed cabin is arranged around the floating roof, and the middle is only a single-layer floating roof.

2.0.19 Double-deck floating roof

The entire floating roof is a floating roof composed of compartments.

2.0.20 Tank group a group of tanks

A group of above ground storage tanks arranged within the same fire dike.

2.0.21 Tank farm

An area consisting of one or more tank banks or earth-covered storage tanks.

2.0.22 Fire dike dike

It is a structure used to prevent flammable and combustible liquid from overflowing and fire spreading when the storage tank leaks.

2.0.23 Dike dividing dike

It is a structure that divides a storage tank group into multiple areas in order to reduce the influence range of flammable and combustible liquid flooding when a small amount of leakage accident occurs in the storage tank in the fire dike.

2.0.24 Nominal volume of tank

The calculated and rounded nominal capacity of the storage tank.

2.0.25 Calculate nominal volume of tank

According to the different fire hazards of stored liquids, the total capacity of the storage tank is converted by multiplying the storage tank capacity by a certain coefficient.

2.0.26 Operating room for tank

The location where the inlet and outlet valves of soil-covered oil tanks are frequently operated.

2.0.27 Flammable liquid flammable liquid

A liquid with a flash point below 45°C.

2.0.28 Combustible liquid combustible liquid

A liquid with a flash point higher than or equal to 45°C.