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

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**Technical specifications for oil-contained wastewater treating
process**

含油污水处理工程技术规范
(English Translation)

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Foreword

To implement the "Environmental Protection Law of the People's Republic of China" and the "Water Pollution Control Law of the People's Republic of China", regulate oily sewage treatment workers this standard is formulated for the construction and operation management of the project, prevention and control of environmental pollution, protection of the environment and human health.

This standard specifies the technical requirements for process design, safety and environmental protection, construction and acceptance in oily wastewater treatment projects.

Appendix A of this standard is an informative annex.

This standard was formulated by the Science and Technology Standards Department of the

Ministry of Environmental Protection.

This standard is mainly drafted by. Jiangxi Jindalai Environmental Research and Development Center Co., Ltd., Huazhong University of Science and Technology, Beijing Environmental Protection Science Research Research Institute.

This standard was approved by the Ministry of Environmental Protection on October 12, 2010.

This standard has been implemented since January 1, 2011.

This standard is explained by the Ministry of Environmental Protection.

Technical specification for oily wastewater treatment engineering

1 Scope of application

This standard specifies the basic requirements for the design, construction, acceptance, operation and maintenance management of oily wastewater treatment projects.

This standard is applicable to sewage treatment projects mainly based on oil pollution, which can be used as environmental impact assessment, environmental protection facility design and construction, and construction.

The technical basis for the completion and environmental protection acceptance of the project and the operation and management after the completion of the project will be established.

2 Normative references

The contents of this standard refer to the terms in the following documents. For undated references, the valid version applies to this standard.

GB 50014 Outdoor Drainage Design Code CJJ 60 sewage treatment operation and maintenance and safety technical regulations "Measures for Completion and Acceptance of Construction Projects (Engineering)" (National Planning Commission Construction [1990] No. 215) Measures for the Administration of Environmental Protection Acceptance for Completion of Construction Projects (Order No. 13 of the State Environmental Protection Administration)

3 Terms and definitions

The following terms and definitions are in accordance with this standard.

Grease oil and grease A compound of ethanol or glycerol (glycerol) and a fatty acid, referred to as a fatty acid glyceride. At room temperature, liquid fatty acid glycerides, it is called oil; solid fatty acid glyceride, called fat.

Oily wastewater

Refers to the sewage where the main pollutant is oil.

Oil floating oil

Refers to the oil particle diameter of more than 100 μm , which can float faster after standing, and the oil film of the continuous phase floats on the water surface.

Dispersed oil

It refers to the oil particle size of 10 ~ 100 μm , suspended in the sewage with tiny oil beads, unstable, easy to form floating oil after standing.

Emulsified oil

Refers to the oil particle size of less than 10 μm , generally 0.1 ~ 2 μm , forming a stable emulsion. And the oil droplets are more dispersed in the sewage.

stable.

Dissolved oil

It is dispersed in sewage by molecular state or chemical method to form a stable homogeneous system, and the particle size is generally less than 0.1 μm .

Adjusting the grease trap and adjusting the oil separation tank Refers to a sewage treatment structure used to regulate water quality, water volume and oil separation function.

Oil separation tank

Refers to a sewage treatment structure designed to separate oil slicks.

Air floatation

Refers to the treatment method in which the air microbubbles are combined with the oil particles to increase the buoyancy of the oil particles and to quickly separate the oil in the oily sewage.

3.10

Coarse granulation of oil water Refers to the difference in affinity between the oil and water relative to the coalescing material, so that the fine oil beads accumulate on the surface of the coalescing material into larger particles or oil films.

Thereby achieving the process of oil-water separation.

3.11

Primary treatment of oil wastewater Refers to the treatment stage of oil-water separation using grease traps.

3.12

Secondary treatment of oil wastewater Refers to the treatment stage of oil-water separation by air flotation, coarse granulation, compaction, filtration or the like.

4.1 Design water quantity

The designed water quantity shall be determined according to the current national industrial water consumption regulations or calculated according to formula (1).

$$Q = KxqxS \quad (1)$$

Where. Q--the total amount of oily sewage produced daily, m³/d;

q--The amount of sewage produced per unit of product, m³/piece;

S--Total number of products produced per day, pieces;

K--variation coefficient, determined according to production process or experience.

4.2 Design water quality

4.2.1

Oil-containing sewage produced by the metal processing industry, oleochemical industry, etc., the pollutants are oils, surfactants and suspended impurities.

4.2.2

Oily sewage produced by slaughtering and meat processing industry and catering industry contains animal and vegetable oils with strong biodegradability.

4.2.3

The design quality should be determined based on the survey data or with reference to similar industrial water quality.

5.1 General provisions

5.1.1

Oily sewage should be treated separately to ensure that the urban sewage treatment system or subsequent sewage treatment process is normal.

run.

5.1.2

Oily wastewater treatment project should select the appropriate treatment process according to the water quality characteristics of oily sewage in different industries, and according to the sewage discharge Let go and local environmental protection requirements, after technical and economic comparison.