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

GB/T 12152-2007

Replacing GB 12153-1989

**Water for boiler and cooling system-Determination of mineral
oil**

锅炉用水和冷却水中油含量的测定

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Foreword

This standard also replace the GB/T 12152-1989 "boiler water and cooling water analysis method of determination of oil by infrared spectrophotometry" GB/T 12153-1989 "Determination of UV boiler water and cooling water for spectrophotometric analysis of oil." This standard GB/T 12152-1989 and GB/T 12153-1989 standard content has been adjusted and combined. The standard proposed by the People's Republic of China Petroleum and Chemical Industry Association. This standard by the National Standardization Technical Committee of Chemical Water Treatment Chemicals Branch (SAC/TC63/SC5) centralized. This standard was drafted. Tianjin Chemical Engineering Research and Design Institute, China Petroleum & Chemical Corporation water treatment chemicals assessment center. The main drafters of this standard. Li Lin, Jindong, Bai Ying, Shao Hongqian, Zhuchuan Jun. This standard replaces the standard release case.

--- GB/T 12152-1989;

--- GB/T 12153-1989. Determination of boiler water and cooling water and oil content

1 Scope

GB/T 12152-2007 is the Chinese national standard on water for boiler and cooling system-determination of mineral oil, in the field of chemical technology. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 13 August 2007 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 February 2008. Classification: ICS 71.040.40, CCS G76. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the method for determination of boiler water and cooling water and oil content. The standard infrared spectrophotometry for boiler feed water, return water and chemical production equipment cooling water, the oil content of 0.1mg/L ~ Determination of 100mg/L, but also applies to other water samples Determination of oil content; UV spectrophotometry applied to thermal power plant boiler feedwater Water, return water and chemical production equipment cooling water - Determination of oil content of 4.0mg 0.1mg/L ~ /L of.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 6682 analytical laboratory use specifications and test methods (GB/T 6682-1992, neq ISO 3696. 1987)

3 Infrared spectrophotometry

3.1 Principle Methyl mineral oil, methine significant absorption at 3.41 μ m wavelength within a certain range of concentrations its absorption into the value of the oil content Directly proportional. Law carbon tetrachloride extraction of oil in water samples, and then use an infrared spectrophotometric quantitative determination. Under normal circumstances, applied to the determination of boiler feed water, production water returned no interference exists; the determination of circulating cooling water, an organic phosphine in a Under general dose nor interfere with the determination. Determination of criteria used oil may have the following two options. to hexadecane and iso-octane mixture of equal volumes of oil as standard, known standard mixture. In this case the measurement result should be multiplied by school Positive factors 1.4. in the return water from the production or circulating cooling water extracted oil or oil composition to be measured close to mineral oil as standard oil.

3.2 Reagents and materials The method of the reagents and water, unless otherwise specified, shall use analytical reagent and in line with GB/T 6682 three water requirements. Safety Tips. The standard used carbon tetrachloride irritating, should pay attention to protection. When contacted, rinse with plenty of water, avoid Avoid inhalation or contact with the skin.

3.2.1 over anhydrous sodium sulfate.

3.2.3 n-hexadecane.

3.2.4 iso-octane.

3.2.5 sulfuric acid solution. 1 + 1.

3.2.6 Standard Oil. extract oil or mineral oil.

3.3 instruments and equipment The following general laboratory instruments and equipment.

3.3.1 infrared spectrophotometer or infrared oil analyzer with 10mm, 50mm cuvette.

3.3.2 extraction or separation funnel. 1000mL.