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

GB/T 18610.2-2016

**Crude oil - Determination of carbon residue - Part 2: Micro
method**

原油 残炭的测定 第2部分：微量法

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Foreword

GB/T 18610 "determination of crude oil residue" is divided into two parts. Part 1. Khamn's Law; Part 2. Trace method. This part is part 2 of GB/T 18610. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part of the National Oil and Gas Standardization Technical Committee (SAC/TC355) proposed and centralized. This part of the drafting unit. China Petroleum Liaohe Petroleum Engineering Co., Ltd., Daqing Oilfield Engineering Co., Ltd., China Petrochemical Petrochemical Research Institute. This part of the main drafters. Tan Hongzhi, Zhang Xiaoqi, Wei Zhe, Li Shuang, Gu Jie, Zhao Hui bell. Determination of residual carbon in crude oil Part 2. Trace method WARNING - Personnel using this standard should have practical experience in formal laboratory work. This standard does not indicate all possible security questions question. It is the user's responsibility to take appropriate safety and health measures.

1 Scope

GB/T 18610.2-2016 is the Chinese national standard on crude oil - determination of carbon residue - part 2: micro method, in the field of petroleum and related technologies. 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 14 June 2016 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 January 2017. Classification: ICS 75.040, CCS E21. 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 part of GB/T 18610 specifies the method for the determination of carbon residue by micro-methods. This part applies to crude oil with a water content (mass fraction) of not more than 0.5% and a residual carbon value (mass fraction) of 0.01% to 30.0%.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document. Petroleum liquid manual sampling method

GB/T 4756 Crude oil - Determination of water content - Distillation method GB/T Automatic sampling of oil and liquid pipelines GB/T Test method for dehydration of crude oil SY/T 6520 Pressure kettle method

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Residue carbon residue The residue formed by the evaporation and pyrolysis of the sample under the conditions specified in this section. The value of the residue to the sample of the mass fraction Said.

4 Method summary

A sample of the sample was weighed and heated to 500 ° C in an inert (nitrogen) gas stream for a certain period of time. Then the sample The vials are placed in a desiccator and then weighed to calculate the residual carbon residue value.

5 Instruments and materials

5.1 trace residue detection equipment see Figure 1. Mainly consists of the following components.

a) raw coke oven. should be able to hold the bottle rack, and can 10 °C/min ~ 40 °C/min heating rate of heating to 500 °C, in the exhaust The pipe outlet is equipped with a condensing tank. The shape and size of the coke oven are shown in Fig. The coke oven exhaust pipe should be connected to other exhaust systems On the discharge of oil vapor and the exhaust pipe should not be negative pressure. If this is not met, the instrument should be installed in a fume hood.

b) Vials. made of soda lime glass or borosilicate glass, flat bottom. The capacities were 2 mL, 4 mL, 10 mL, respectively. 2mL vials outside Diameter of about 12mm, height of about 37mm, wall thickness of about 1mm, its shape and size shown in Figure 3; 4mL vial diameter of about 12mm, high