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**PROFESSIONAL STANDARD OF THE PEOPLE'S**

**REPUBLIC OF CHINA**

**中华人民共和国石油化工行业标准**

SH/T 0248-2006

Replacing SH/T 0248-1992

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**Diesel and domestic heating fuels -  
Determination of cold filter plugging  
point**

**柴油和民用取暖油冷滤点测定法**

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## Foreword

This standard modifies and applies the standard of England Energy Research Society IP 309/99 *Diesel and domestic heating fuels-Determination of cold filter plugging point*.

This standard is redrafted based on the IP 309/99.

In order to adapt to China national situation, this standard makes some modifications during the application of IP 309/99. These technical differences was marked with vertical mongline in the blank of the pages in which have the involved clauses. The main difference between this standard and IP 309/99 are as follows:

---The reference standards in this standard quote the relevant national standards in our country.

---Cancelling annex A *Specifications for Thermometer* in IP 309/99, changing into two thermometers GB-36 and GB-37 which are conform to the requirement of GB/T 514 *Specification for liquid-in-glass thermometers for testing of petroleum products*.

This standard reserves the regulation in SH/T 0248-1992 *Distillate fuels-Determination of cold filter plugging point* that the temperature of specimens should reach  $30^{\circ}\text{C}\pm 5^{\circ}\text{C}$  before the specimens are put into the cold bath.

For convenience, this standard also makes the following editorial modifications:

---Cancelling the chapter for keywords in IP 309/99.

---Modifying the expressions of repeatability and reproducibility based on customs in our country.

This standard replaces SH/T 0248-1992 *Distillate fuels-Determination of cold filter plugging point*, SH/T 0248-1992 refers and adopts IP 309/83.

Comparing to SH/T 0248-1992, the main changes of this standard are as follows:

---The name of this standard is changed into *Diesel and domestic heating fuels-Determination of cold filter plugging point*.

---This standard adds the contents about the operating steps and degree of precision of the automatic instruments.

---The hole size of filter screen in this standard is 45um (330mesh), the hole size of filter

screen in SH/T 0248-1992 is 363mesh.

----This standard adds a chapter for sampling.

----The instrument cleaning solvent in this standard is n-heptane and acetone, the cleaning solvent in SH/T 0248-1992 is megilp.

----This standard adds the provisions that the instruments should be calibrated regularly with the calibration reference substance.

----This standard cancelling the provisions in SH/T 0248-1992 that the sample which its cold filter plugging point is above  $-3^{\circ}\text{C}$  should be cooled in cold bath which its temperature is  $-17^{\circ}\text{C}$ . Change the initial temperature of cold bath of specimen into  $-34^{\circ}\text{C}\pm 0.5^{\circ}\text{C}$ .

----This standard adds that the test can be conducted immediately after the test glasses insert into the annular tubes.

----SH/T 0248-1992 requires to determine the cold filter plugging point of the specimens, however, this standard requires: "when the specimen has been cooled to  $-51^{\circ}\text{C}$ , and has not yet reached the cold filter plugging point, then stopping the test and reporting the result that the specimen is unplugged at the temperature of  $-51^{\circ}\text{C}$ ".

----The degree of precision in this standard is different from the degree of precision in SH/T 0248-1992.

This standard is proposed by Sinopec Group.

This standard is under the jurisdiction of Sinopec Research Institute of Petroleum Processing.

Drafting units of this standard: Sinopec Research Institute of Petroleum Processing

Main drafters of this standard: Chenjie, Guotao.

The historical version replaced by this standard is as follows:

----SH/T 0248-1992.

# **Diesel and domestic heating fuels-determination of cold filter plugging point**

## **1. Scope**

1.1 This standard regulates the method that using the manual and automatic instruments to test the diesel and domestic heating fuels-determination of cold filter plugging point. The manual and automatic instruments can be used in referee test.

1.2 This standard is applicable for the distillate fuel, including the fuels that containing the flow improver or other additives and being used by crude oil engine and domestic heating devices.

1.3 The test results of this standard can be used to evaluate the lowest temperature for the normal flow of fuel in the fuel system.

Note: the cold filter plugging point of diesel oil is usually close to the using fuel cut-off temperature; except for the distillate fuel which installs the filter-paper filter in the fuel supply system or the fuel that its cold filter plugging point is at least 12°C lower than its cloud point. The operation temperatures of domestic heating devices are not required strictly; it can work normally under the temperature which is slightly lower than the test result of cold filter plugging point for domestic heating fuels.

1.4 This standard involves in some dangerous materials, operations and devices, but it doesn't put forward suggestions on all the relevant security issues. Therefore, it is necessary for users to establish the appropriate safety and counter measures and the relevant management system before using this standard.

## **2 Normative references**

The articles contained in the following documents have become this document when they are quoted herein. For the dated documents so quoted, all subsequent modifications (Including all corrections) or revisions made thereafter do not apply to this standard. However, the parties that reach an agreement according to this standard are encouraged to study whether the latest versions of these documents may be used. For the undated documents so quoted, the latest versions (including all modification sheets) apply to this

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