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

GB/T 8928-2008

Replacing GB/T 8928-1988

**Standard test method for density of semi-solid and solid
asphalt**

固体和半固体石油沥青密度测定法

(English Translation)

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Foreword

The standard American Society for Testing and Materials standard ASTM D70-03 "semi-solid bituminous materials densitometry (pycnometer method)" (in English Version) and ASTM D2320-98 (2003) "Solid coal tar pitch density (relative density) assay (pycnometer method)" (in English) Consistency not equivalent.

The main differences between standard and ASTM D70-03 and ASTM D2320-98 (2003) as follows.

- ASTM D70-03 the proportion of cylindrical and conical bottle there are two types of this standard uses a cylindrical rather than tapered pycnometer;
- This standard uses the International System of Units, delete ASTM D2320-98 (2003) Central Africa International System of Units;
- The standard uniform of solid and semi-solid petroleum pitch relative density calculation formula;
- This standard specifies the semi-solid petroleum pitch density precision, without using precision ASTM D70-03 regulations.

This standard replaces GB/T 8928-1988 "asphalt gravity and density determination." This standard compared with GB/T 8928-1988 the main changes are as follows.

- The standard name from "petroleum pitch gravity and density determination" to "solid and semi-solid petroleum asphalt density determination";
- Increased in Chapter 2, normative references, Chapter 5, meaning and purpose, balance 6.2 6.6 vacuum pump or water pump and Chapter 7 sampling.

This standard by the National Standardization Technical Committee on products and lubricant oil (SAC/TC280) proposed.

The standard by the China University of Petroleum (East China) Heavy Oil Research Institute.

1 Scope

This standard specifies the test method for the determination of solid and semi-solid petroleum pitch density using the pycnometer method. This standard does not apply to the determination phase Density less than 1.000 of solid bitumen.

This standard does not involve the use of relevant safety requirements, standards, responsibility of the user to develop appropriate safety procedures before using the application.

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 11147 bitumen sampling method

3 Terms and Definitions

The following terms and definitions apply to this standard.

Under standard test temperature mass divided by volume, denoted by ρ .

Under standard test temperature for a given ratio of the mass of the volume of material quality and the same volume of water, referred to as D.

Note: The relative density is the specific gravity.

4 Summary

Using gravity bottle at a predetermined temperature, were measured in the same volume of quality asphalt and water, according to the formula to calculate the petroleum pitch the relative density and density.

5 Significance and Uses

In terms of volume and quality for each other.

6 Instruments and Materials

6.1

pycnometer. glass, bottle and cork carefully grind, with tight. Cork diameter of 22mm ~ 26mm, with its axis Center, middle hole diameter of 1.0mm ~ 2.0mm, smooth on the surface of the cork, the lower surface is concave, so that air from the hole Escape, a recessed portion at the center of the height of 4.0mm ~ 6.0mm. Cover with cork pycnometer volume 24mL ~ 30mL, mass not exceeding 40g. Pycnometer schematically in Figure 1.

6.2

Balance. a sense of the amount of 0.0005g.

6.3

water bath. to maintain the water temperature at the test temperature ± 0.1 °C.

6.4

Thermometer. glass thermometer, total immersion, the minimum scale 0.1 °C, indexing is 1 °C, measuring range 0 °C ~ 30 °C. Meet the accuracy and Other requirements of the temperature sensitive device can be used.