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

GB/T 8017-2012

Replacing GB/T 8017-1987

**Standard test method for vapor pressure of petroleum products
-- Reid Method**

石油产品蒸气压的测定 雷德法

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB/T 8017-1987 "petroleum products Determination of vapor pressure (Reid Method)", and GB/T 8017-1987 compared to the main Changes are as follows.

- In order to meet China's national conditions, this standard adds support for adding oxygenates gasoline sample test content;
- This standard increases the process (B method) horizontal bath Determination of vapor pressure of petroleum products;
- 8.1.1 of this standard in the preparatory work clearly states how to verify the amount of sample into the container;
- This standard 8.1.2 on how to prepare the sample container air saturation have a more clearly defined;
- 8.2.3 This standard frequency of the instrument in shaking bath before been clearly defined;
- The standard Chapter 12 of the report on the results accurate to 0.25kPa, and for adding oxygenates gasoline sample results reported for the special requirements;
- 13.1.1 and 13.1.2 of this standard with few changes to the repeatability and reproducibility requirements, and increased gasoline oxygenate added Repeatability and reproducibility of the sample;
- Appendix B of this standard increases the vapor pressure tester (horizontal bath) technical requirements;
- This standard increased by reference.

This standard uses redrafted law revision by the United States Society for Testing and

Materials standard ASTM D323:2008 "Petroleum products vapor pressure standard Standard Test Method (Reid method)." this standard ASTM D323:2008 compared to the structure have more adjustment, listed in Appendix A of this standard and ASTM D323.

2008 reg number control list.

This standard ASTM D323. The main technical differences and the reasons for 2008 are as follows.

--- Removed ASTM D323. help content about 1.7 units in 2008, because this standard have adopted International System of Units;

--- On normative references, this standard has been adjusted technical differences, in order to adapt our technical conditions, the adjusted situation Focus is reflected in the status of Chapter 2, "Normative references", the specific adjustments are as follows.

- National Standard GB/T 4756 instead of petroleum and petroleum products ASTM D4057 manual sampling method (see Chapter 2);

- National Standard GB/T 514 instead of ASTM E1 glass thermometer liquid specifications (see Chapter 2);

--- In order to meet our determination containing oxygenates gasoline vapor pressure, increased according ASTM D4953:2006 "oxygenate gasoline Standard Test Method for Vapor Pressure of oil (dry) "to add oxygenates gasoline samples A and B method step test method improvements Claim;

--- The ASTM D323:2008 Chapter 5 meaning and purpose of the content as the standard introduction, prepared to meet the requirements of the standard;

--- Add oxygenates to gasoline to increase the sample test results reporting requirements (see 12.2);

--- 13.1 in Table 1 and Table 2, in the form of injection increases 100kPa ~ 110kPa sample repeatability and reproducibility of the reference range, Since ASTM D323:2008 not covered 100kPa ~ 110kPa sample repeatability and reproducibility of the reference range, this standard in order to maintain and GB/T 8017-1987 convergence, thus increasing 100kPa ~ 110kPa reference sample repeatability and reproducibility Range; adding oxygenates gasoline samples for the determination of repeatability and reproducibility requirements, according ASTM D4953:2006 in

13.1 Table 1 and Table 2 were increased accordingly;

--- Removed ASTM D323:2008 Chapter 15 keywords, because the content is not part of our standard content;

--- Increase the informative Appendix A "of the standard reg number and ASTM D323:2008 reg number control";

--- Increased by reference.

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

This standard by the National Standardization Technical Committee of petroleum products lubricants oil and lubricants and fuels Technical Committee (SAC/TC280/SC1) centralized.

This standard was drafted. China Petroleum & Chemical Corporation Research Institute of Petroleum.

Introduction

Vapour pressure is an important physical properties of volatile liquid. Petroleum products and crude oil present methods for determining the initial boiling point higher than 0 °C in when the vapor pressure of 37.8 °C.

Vapor pressure for motor gasoline and aviation gasoline is a very critical factor affecting its startup, high temperature or high-latitude warming and operation when air resistance trend. In some areas the law limits the maximum vapor pressure of gasoline, as an important measure to prevent air pollution.

The vapor pressure of the crude oil production and refining operations, initial refining processing is important.

Vapor pressure can also be an indirect measurement method as volatile petroleum solvent evaporation rate.

Petroleum products - Determination of Reid vapor pressure method Warning. This standard is not intended for all associated with its use are security issues recommendations. Users before you apply this standard has the responsibility Establish appropriate safety and health practices and determine the applicability of regulatory limitations related. Special precautions listed in Chapter 6, and 8.1.3.2, 8.1.4.2, 8.2.6.3, 9.3.6.3, 10.3, 10.6.2, B.1.4, B.1.6, B.3 and C.3 in.

1 Scope

1.1

standard provides for the determination of gasoline, petroleum products and other volatile method of volatile oil vapor pressure.

1.2

A standard method for the determination of the vapor pressure of less than 180kPa gasoline (containing only include methyl tertiary butyl ether (MTBE) in gasoline) and Other petroleum products. A step to improve the law applicable to 35kPa ~ 100kPa gasoline and add gasoline oxygenates sample.

1.3

This standard applies its improved method step B semi-automatic bath level meter, the same applies to the determination of step A and Its Improvement Gasoline and other petroleum products. But in the laboratory to determine their precision comparison test, using only gasoline and adding oxygenates Samples of gasoline.

1.4

C standard method for the determination of the vapor pressure of more than 180kPa sample.

1.5

D standard method for the determination of the vapor pressure of about 50kPa aviation gasoline.

Note: Due to the gas chamber in the original atmospheric pressure offset external atmospheric pressure, so the Reid vapor pressure method is at 37.8 °C absolute vapor pressure. Expressed in kPa.

Reid vapor pressure method different from the real vapor pressure of the sample, which is due to the lesser number of local space relative molecular mass of the sample evaporation and water vapor Steam and air presence.

1.6

This standard does not apply to the determination of the vapor pressure of liquefied petroleum gas for LPG vapor pressure measurement method See GB/T 6602 or ASTM D6897. Crude oil vapor pressure measurement precision of the method has not been determined. GB/T 11059 is a method for determining the vapor pressure of the crude oil, IP481 is a crude method of air saturated vapor pressure measurement.

1.7

standard for adding steps to improve gasoline oxygenate test sample preparation, sample transfer, sample status verification, determination Step, test report and precision required to do a particular description, see 4.3, 8.1.3.2, 8.1.4.2, 8.2.1, 8.2.2, 8.2.4, 8.2.5, 8.2.6.1, 9.2, 9.3.2, 9.3.4, 9.3.5, 12.2, 13.1.1 13.1.2 Table 1 and Table 2.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 514 Petroleum products test glass liquid thermometer technical conditions GB/T 4756 petroleum liquids hand sampling method