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

GB/T 17282-2012

Replacing GB/T 17282-1998

**Test method for estimation of mean relative molecular mass of
petroleum oils from viscosity measurements**

根据粘度测量值确定石油平均相对分子质量的方法

(English Translation)

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Foreword

This standard rule according to GB/T 1.1-2009 given draft.

This standard replaces GB/T 17282-1998 "Determination of kinematic viscosity oil according to molecular weight (relative molecular mass)", and GB/T 17282-1998 compared to the main technical changes are as follows.

--- Standard name from the original "based on the kinematic viscosity of the oil to determine the molecular weight (relative molecular mass) method" with "according to the viscosity measurement Determine the magnitude of the average molecular weight of the oil method";

--- Standard text "molecular weight (molecular weight)" were changed to "average molecular weight";

--- Remove the precision in the value of the unit (see Chapter 6, Chapter 5 of the 1998 edition);

--- Added "Quality Assurance and Control" (see Chapter 7);

--- Added "Test Report" (see Chapter 8).

This standard uses redrafted Law Amendment uses ASTM D2502-04 (2009) "is determined based on the average molecular oil viscosity measurements Standard Test Method for "quality.

This standard ASTM D2502-04 (2009) and the technical differences for the following reasons.

--- The standard unit of kinematic viscosity from "centistokes (cSt)" was changed to "square millimeters per second (mm²/s)", in order to comply with China's legal unit of measurement;

--- 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", and with GB/T 265 and GB/T 11137 instead ASTM D445 (See 4.1).

This standard made the following editorial changes.

--- Removed ASTM D2502-04 (2009) of Chapter 4, "meaning and purpose";

--- Removed ASTM D2502-04 (2009) of Chapter 7, "keywords." this standard by the National Standardization Technical Committee of Oil and Gas (SAC/TC355) and focal points.

This standard was drafted. China Petroleum Pipeline Company Limited Gas Pipeline Technology Research Center, Daqing Oilfield Engineering Limited the company, PetroChina Tarim Oilfield Company China Quality Inspection Center.

1 Scope

This standard specifies the value to determine the average molecular weight of the oil viscosity measurement method.

This standard applies to the average molecular weight of oil samples in the range of 250 to 700, including the usual petroleum fractions.

This standard does not apply to those composed of abnormal or relative molecular mass rather narrow range oil.

2 Normative references

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

GB/T 265 petroleum products Determination of kinematic viscosity and calculation of dynamic viscosity
GB/T 11137 dark petroleum products - Determination of kinematic viscosity (reverse - flow method) and calculation of dynamic viscosity

3 Method summary

Determination of 37.8 °C and 98.9 °C kinematic viscosity oil samples In H function table to identify the corresponding viscosity of 37.8 °C in H Value by using the H-value and viscosity of 98.9 °C, the viscosity, H function with the average molecular mass diagram to determine the mean relative points Sub-quality.

Step 4

4.1 according to GB/T 265 or GB/T 11137 Oil sample measured at 37.8 °C and 98.9 °C kinematic viscosity.

4.2 with a viscosity value of 37.8 °C 1 reads the look-up table corresponding H values. The values between two available adjacent linear interpolation calculation.

4.3 Figure A.1 viscosity, H function with the average molecular mass diagram, determine the corresponding H values to the ordinate and 98.9 °C, etc.

After the viscosity of the intersection of the line, along the abscissa reads the relative molecular mass. Available in determining the viscosity of 98.9 °C and so on line when linear interpolation be obtained.

Example. measured at 37.8 °C kinematic viscosity = 179mm²/s; 98.9 °C kinematic viscosity = 9.72mm²/s.

Isolated 179mm²/s in Table 1. H is 461; in viscosity, H function with the average molecular mass diagram, the value of H 461 and 98.9 °C the viscosity values of 9.72mm²/s, find the corresponding average molecular weight of 360 (as shown in Figure 1).