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# INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# SN/T 3518-2013

## Determination for kinematic viscosity of petroleum products. Stabinger viscometer

石油产品运动粘度的测定 斯塔宾格粘度计法

**(English Translation)**

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## Foreword

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

The standard reference ASTMD7042-11 "Determination Costa accusative viscometer method of liquid density and dynamic viscosity (kinematic viscosity and calculation) of Standard Test Method. " Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

Wood standard drafting units. People's Republic of China Jiangsu Entry-Exit Inspection and Quarantine Bureau, Ningbo Entry-Exit Inspection and Quarantine of People's Republic of China Bureau, China National Petroleum Corp. EAST lubricants plant, Anton Paar (Shanghai) Trading Company.

## 1 Scope

Wood standard specifies the method for determination of transparent or opaque liquid petroleum products dynamic viscosity and density. Kinematic viscosity by the same temperature Dynamic viscosity and density calculated.

This standard applies to shear stress and shear rate is proportional to the liquid, that Newtonian fluid.

This standard determines the base oil (40 °C dynamic viscosity in 2.05mPa. s ~ 456mPa. s, 100 °C in the dynamic viscosity 0.83mPa. s ~ 31.6mPa. s, 15 °C density within the precision 0.82g/cm3 ~ 0.92g/cm3 range). This standard can also be used Other petroleum products, and a wider viscosity, density and temperature measurement range, but the precision of the data may not apply.



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## 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 1995 Petroleum products Viscosity Index Calculation Method the basic calibration procedure ASTMD2162 standard viscometers and viscosity standard oil (Practiceforbasiccalibrationofmaster viscometersandviscosityoilstandards)

## 3 Terms and Definitions

The following terms and definitions apply to this document.

Dynamic viscosity the flow of liquid applied shear stress and shear rate of the ratio, expressed in a certain measure liquid flow shear stress friction.

Kinematic viscosity at the same temperature and the dynamic viscosity of the liquid density ratio represents a measure of the flow of the liquid under gravity when the frictional force.

Density

At a predetermined temperature, the number of unit volume contained in the mass of material.

The relative density at a given temperature, the ratio of the density of the standard material under the standard density and temperature of the substance. The standard for petroleum liquid substance is water.

## 4 Method summary

At a certain temperature, the sample is injected into the precise temperature of the measuring cell, the measurement cell contains one pair of concentric rotating cylinder and a U-shaped vibrating tube, combined calibration data through the cylindrical specimen under shear stress balance and rotation speed eddy viscosity resistance measured power



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