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ICS 75.040
CCS E21

SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3190-2012

Determination of aluminium, silicon, vanadium, nickel, iron, sodium, calcium, zinc and phosphorus in crude oil and residual fuel oil. Ashing, fusion-inductively coupled plasma emission spectrometry

原油及残渣燃料油中铝、硅、钒、镍、铁、钠、钙、锌、磷的测定 灰化碱熔-电感耦合等离子体发射光谱法

(English Translation)

Issued on: May 7, 2012 **Implemented on: November 16, 2012**

Issued by: General Administration of Customs

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Foreword

Accordance with the standards GB/T 1.1-2009, rules GB/T 20001.4-2001 given draft.

This revised standard adopts IP501/05 "residual fuel oil in aluminum, silicon, vanadium, nickel, iron, sodium, calcium, zinc and phosphorus determination ashing alkali fusion -Inductively Coupled Plasma Atomic Emission Spectrometry "(in English).

Compared with this standard IP501/05, mainly to do the following changes.

--- The standard name of the "residual fuel oil" to "crude and residual fuel oil";

--- The scope of the standard by the "residual fuel oil" to "crude and residual fuel oil";

--- Chapter 2, according to GB/T 1.1-2009 requirements to prepare normative references, and references to standards of appropriate National standard;

--- The precision of each element in the form test wavelength adjusted to 7.5.4 and adds test wavelength aluminum and silicon;

--- Narrative precision by GB/T 20001.4-2001 requirements were modified.

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.

This standard was drafted. People's Republic of China Ningbo Exit Inspection and Quarantine.

1 Scope

This standard specifies the use of ash alkali fusion - Determination of petroleum and its products are aluminum, silicon, vanadium, nickel, iron, inductively coupled plasma atomic emission spectrometry, Sodium, calcium, zinc, phosphorus method.

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This standard applies to petroleum products, aluminum, silicon, vanadium, nickel, iron, sodium, calcium, zinc, phosphorus and measured. Determination of the elements as described in Table 1 FIG.

Table 1 Unit measurement range of each element in milligrams per kilogram (mg/kg)

Range of elements

Aluminum 5 to 150

Si 10 to 250

Sodium 1-100

1 ~ 400 V

Nickel 1 to 100

Iron 2 to 60

Calcium 3 - 100

Zinc 1 to 70

Phosphorus 1 - 60

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 4756 petroleum liquids hand sampling method Laboratory use specifications and test methods GB/T 6682 Analysis

3 Method summary

Weighed portion of the sample, ignited and burned, heated in a muffle furnace, to remove the residual carbon. Tetraborate two lithium/lithium fluoride melt flux residues Thereof, the molten mixture is dissolved in tartaric acid and hydrochloric acid solution. After dilution with water, the solution is sucked into the inductively coupled plasma optical emission Spectrometer detected by comparing the sample and standard solutions in emission intensity of a specific wavelength, calculate the concentration of the sample solution measured elements Degrees, and then calculating the concentration of elements in the sample.

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