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

SN/T 3101-2012

**Estimation of net and gross heat of combustion of burner and
diesel fuels**

(English Translation)

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Foreword

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

This standard reference ASTM D4868-00 (2010) "boiler fuel and diesel fuel burning calories and total calories net estimated standard test Test method "(in English).

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 density, sulfur content, moisture and ash content of fuel oil and other indicators to estimate the gross calorific value and net calorific value approach. heat Value in SI units, ie megajoules per kilogram.

This standard applies to the accuracy of estimation of boiler fuel and diesel fuel heating value less demanding. Since this is purely a standard experience side Law applies only from the ordinary conventional refining process of crude oil production, in line with the specifications in this section Note 2 liquid hydrocarbon fuel, and only Density of 750kg/m³ ~ 1000kg/m³ while the aromatics content is not too high calorific value fuel estimate is valid.

Note 1: There are other more accurate calculation methods for aviation fuels, such as SH/T 0679, GB/T 2429 and ASTM D3338, etc., but these standards We need to be tested more indicators.

Note 2: Through a variety of different types of fuel sample typical precise experiments, it was found that only when the sample belongs to the refined fuel type, density, sulfur Content, moisture and ash content and the calorific value and other indicators will have a reasonable correlation can be used to estimate the heat value of the fuel. Even match this category, individual fuel Estimation error may be greater material. After by the oil sands bitumen and shale oil refining fuel limited number of verified and found that this standard is Efficiency possible. The standard can be used to estimate fuel types and specifications in Appendix A.

This standard does not apply to the calorific value of pure hydrocarbons calculations. It can

not be used in place of actual measured values of the calorific value.

Note: Measurement techniques gross calorific value and net calorific value are GB/T 384, ASTM D240 and ASTM D4809 like.

When the calorific value of the sample can not be measured or inconvenient to get through, and the estimate can be used to meet the requirements, this standard can be used as an estimate Method, but it can not be used in place of actual measurements of calorific value.

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 253 Kerosene (GB/T 253-2008, ASTM D3699-2005, NEQ) GB/T 260 Petroleum products - Determination of water content GB/T 384 Petroleum products - Determination of calorific value GB/T 388 Petroleum products - Determination of sulfur content (bomb method) GB/T 508 Petroleum products - Determination of ash (GB/T 508-1985, ISO 6245. 1982, NEQ) GB/T 1884 crude oil and liquid petroleum products - Laboratory determination of density (density meter method) (GB/T 1884-2000, ISO 3675.

1998, MOD)

GB/T 2429 aviation fuel net heat value calculation method (GB/T 2429-1988, ISO 3648. 1976, NEQ) GB/T 11133 Liquid petroleum products - Determination of water (Karl Fischer method) GB/T 11140 Petroleum products - Determination of sulfur content wavelength dispersive X-ray fluorescence spectrometry (GB/T 11140-2008, ASTM D2622:2007, MOD)