



SLOVENSKI STANDARD
oSIST prEN 16906:2015
01-september-2015

Tekoči naftni proizvodi - Določevanje kakovosti vžiga dizelskih goriv - Motorna metoda BASF

Liquid petroleum products - Determination of the ignition quality of diesel fuels - BASF engine method

Flüssige Petroleumprodukte - Bestimmung der Zündwilligkeit von Dieselkraftstoffen - BASF-Prüfmotor Methode

Produits pétroliers liquides - Détermination de la qualité d'allumage des combustibles Diesel - Méthode avec le BASF-moteur

Ta slovenski standard je istoveten z: prEN 16906

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ICS:

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English Version

Liquid petroleum products - Determination of the ignition quality of diesel fuels - BASF engine method

Produits pétroliers liquides - Détermination de la qualité
d'allumage des combustibles Diesel - Méthode avec le
BASF-moteur

Flüssige Petroleumprodukte - Bestimmung der
Zündwilligkeit von Dieselmotoren - BASF-Prüfmotor
Methode

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 19.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (prEN 16906:2015) has been prepared by Technical Committee CEN/TC 19 "Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin", the secretariat of which is held by NEN.

This document is currently submitted to the CEN enquiry.

The test method is based on DIN 51773^[1], which has been developed in DIN NA 062-06-43 AA "Engine testing of liquid fuels" and which is being used very successfully since more than 30 years. The described method is an alternative quantitative determination of the cetane number of middle distillate fuels intended for use in compression ignition engines. A correlation study between this method and EN ISO 5165:1998^[2] has been done and the results of this are incorporated in the precision report issued in 2014^[3].

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1 Scope

This European Standard specifies a test method for the determination of cetane numbers (“CN”) in diesel fuel oils using a standard single cylinder, four-stroke cycle, indirect injection engine. The cetane number provides a measure of the ignition characteristics of diesel fuel oil in compression ignition engines. The cetane number is determined at constant speed in a compression ignition test engine equipped with a swirl chamber.

This European Standard is applicable to distillate fuels and fatty-acid methyl esters (FAME) as well as paraffinic diesel fuels, including those containing FAME, ignition-improvers or other additives, intended for use in diesel engines. The Cetane Number scale comprises a range from zero to 100, but typical testing is currently performed in the range from about 40 to about 75 CN.

This engine test procedure may be used for other fuels such as synthetics and vegetable oils. However, samples with fuel properties that interfere with the gravity-based pre-supply pressure to the fuel pump e.g. due to high viscosity can only be used to a limited extent. Precision data for such fuels are not available at this stage. Precision data for paraffinic diesel fuels are currently under development.

NOTE For the purpose of this European Standard the expressions “%(m/m)” and “%(V/V)” are used to represent the mass fraction, respectively the volume fraction of a material.

WARNING — The use of this standard may involve hazardous materials, operations and equipment. This standard does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 3170, *Petroleum liquids — Manual sampling (ISO 3170)*

EN ISO 3171, *Petroleum liquids — Automatic pipeline sampling (ISO 3171)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

ignition quality

property of a fuel which causes a self-ignition under standard operating conditions in a diesel engine

3.2

ignition delay

ID

period of time between the start of fuel injection and the start of combustion

Note 1 to entry: Expressed in degrees of crank angle rotation (°CA).

3.3

cetane number

CN

measure of an ignition quality of a diesel fuel obtained by comparing it with reference fuel blends of known cetane numbers and the fuel to be measured in a standardized test engine under controlled conditions