

<b>STN</b>	<b>Kvapalné ropné výrobky</b> <b>Stanovenie indikovaného cetánového čísla (ICN) v</b> <b>stredných palivových destilátoch</b> <b>Metóda kalibrácie primárnych referenčných palív</b> <b>s použitím spaľovacej komory s konštantným</b> <b>objemom</b>	<b>STN</b> <b>EN 17155</b>  65 6186
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Liquid petroleum products - Determination of indicated cetane number (ICN) of middle distillate fuels - Primary reference fuels calibration method using a constant volume combustion chamber

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

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English Version

Liquid petroleum products - Determination of indicated cetane number (ICN) of middle distillate fuels - Primary reference fuels calibration method using a constant volume combustion chamber

Produits pétroliers liquides - Détermination de l'indice de cétane indiqué (ICI) des distillats moyens - Méthode d'étalonnage avec carburants de référence primaires et chambre de combustion à volume constant

Flüssige Mineralölerzeugnisse - Bestimmung der indizierten Cetanzahl (ICZ) von Kraftstoffen aus Mitteldestillaten - Verfahren mittels Kalibrierung mit primären Bezugskraftstoffen unter Verwendung einer Verbrennungskammer mit konstantem Volumen

This European Standard was approved by CEN on 20 April 2018.

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This European Standard exists 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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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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**EN 17155:2018 (E)**

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**EN 17155:2018 (E)****European foreword**

This document (EN 17155:2018) 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 European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2019, and conflicting national standards shall be withdrawn at the latest by January 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Introduction**

This document is derived from standardization work within the Energy Institute (IP 617) and ASTM International. A similar technically equivalent test method is under development by ASTM International.

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 [1] is fully reported in Research Report IP 617 ILS [2].

This method is based on calibration by blends of primary reference fuels on a scale of 0 (1-Methylnaphthalene) and 100 (n-hexadecane) with the units of measurement being designated Indicated Cetane Number (ICN). The on-going performance of this test method will be monitored and evaluated through the existing European and American fuel exchange programmes.

The ICN value determined by this test method can provide a measure of the ignition characteristics of middle distillate fuels used in compression ignition engines. This test is for use by engine manufacturers, petroleum refiners and marketers, and in commerce as a specification aid to relate or match fuels and engines. This test is also applicable to non-conventional middle distillate fuels.

For the purpose of this standard, the abbreviation ICN (Indicated Cetane Number) is being used to discriminate it from other techniques.

For the moment the basics of one type of apparatus are described. Once more correlation data on different types of indicated cetane number testing equipment is available, CEN/TC 19 will consider revising this European Standard.

**EN 17155:2018 (E)****1 Scope**

This European Standard specifies a test method for the quantitative determination of the indicated cetane number (ICN) of middle distillate fuels and blending components, intended for use in compression ignition engines. The test method utilizes a constant volume combustion chamber with direct fuel injection into heated compressed air. Calibration of the apparatus using blends of primary reference materials over a scale of 0 to 100 enables fuel ignition delays, measured from the resulting pressure increase, to be used to determine and report ICN results.

This European Standard is applicable to middle distillate fuels of both petroleum and non-petroleum origin, hydrocarbon oils, oil-sands based fuels, blending components, fatty acid methyl esters (FAME), blends of fuel containing biodiesel material, diesel fuel oils containing cetane number improver additives, low-sulfur diesel fuel oils, aviation turbine fuels and polyoxymethylene dimethyl ether (OME). However, users applying this standard especially to unconventional distillate fuels are warned that the relationship between cetane number and combustion behaviour in real engines is not yet fully understood.

This European Standard covers the calibrated range of 35 ICN to 85 ICN.

NOTE 1 The analyser can measure ICN outside the calibrated range, but precision has not been determined.

NOTE 2 For the purpose of this standard, the expression “% (V/V)” is used to represent the volume fraction.

WARNING — The use of this standard can 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 users of this standard to take appropriate measures to ensure the safety and health of personnel prior to application of the standard, and fulfil statutory and regulatory requirements for this purpose.

**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)*

EN ISO 3696, *Water for analytical laboratory use — Specification and test methods (ISO 3696)*

ISO 1998-2, *Petroleum industry — Terminology — Part 2: Properties and tests*

ASTM D3703, *Hydroperoxide Number of Aviation Turbine Fuels, Gasoline and Diesel Fuels*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**