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Nafta ja vedelad naftasaadused. Õli koguste arvutamine. Osa 2: Dünaamiline mõõtmine

Petroleum and liquid petroleum products -
Calculation of oil quantities - Part 2: Dynamic
measurement

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 4267-2:2000 sisaldab Euroopa standardi EN ISO 4267-2:1995 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 11.01.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 4267-2:2000 consists of the English text of the European standard EN ISO 4267-2:1995.</p> <p>This document is endorsed on 11.01.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: Käesolev standard määratleb mitmeid termineid (sõnades või sümbolites), mida kasutatakse mõõdetud naftakoguste arvutamisel.</p>	<p>Scope:</p>
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ICS 75.180.30

Võtmesõnad: arvutamisreeglid, mahu mõõtmine, naftasaadused, süsivesinikud, veeldatud naftagaasid

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Descriptors: Calculation, oil quantity, petroleum products, measurement.

English version

Petroleum and liquid petroleum products

Calculation of oil quantities

Part 2: Dynamic measurement

(ISO 4267-2:1988)

Pétrole et produits pétroliers liquides –
Calcul des quantités de pétrole – Partie 2:
Mesurage dynamique (ISO 4267-2:1988)

Mineralöl und flüssige Mineralölerzeug-
nisse – Berechnung von Ölmengen – Teil 2:
Dynamische Messung (ISO 4267-2:1988)

This European Standard was approved by CEN on 1995-09-09 and is identical to the ISO Standard as referred to.

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

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 4267-2:1988 Petroleum and liquid petroleum products – Calculation of oil quantities – Dynamic measurement, which was prepared by ISO/TC 28 'Petroleum products and lubricants' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 19 'Petroleum products, lubricants and related products' as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by April 1996 at the latest.

In accordance with the CEN/GENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 4267-2:1988 was approved by CEN as a European Standard without any modification.

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0 Introduction

Before the compilation of this publication, words and expressions employed in dynamic measurement calculations were interpreted slightly differently by different people, and there was a lack of coherence in their use. In addition, because data were spread over so many standards, there was difficulty in readily comparing the finer points of calculations.

Rules for rounding, and the choice of how many significant figures entered each calculation, were open to a variety of interpretations. For different operators to obtain identical results from the same data, the rules for sequence, rounding and significant figures have to be defined. This International Standard aims, among other things, at defining the minimum set of rules required. Nothing in this International Standard precludes the use of more precise determinations of temperature, pressure and density or the use of more significant digits, by mutual agreement among the parties involved.

This International Standard aims at consolidating and standardizing calculations pertaining to the metering of petroleum liquids, and at clarifying terms and expressions by eliminating local variations of such terms. The purpose of standardizing calculations is to produce the same answer from the same data regardless of the computing system used.

Although ISO/TC 28 standards use 15 °C as a standard reference temperature, it is recognized that individual countries may use other reference temperatures, for example 20 °C, 12 °C or 60 °F.

This standard sets minimum levels of accuracy for industrial calculations, but, if parties consider agreeing to set tighter requirements, it is important to demonstrate whether such requirements can be met. Future technological progress in meter proving and operation may justify a tighter specification for calculation procedures.

1 Scope and field of application

This International Standard defines the various terms (be they words or symbols) employed in the calculation of metered

petroleum quantities. Where two or more terms are customarily employed in the oil industry for the same quantity, a preferred term is selected.

This International Standard also specifies the equations which allow the values of correction factors to be computed. It also gives rules for the sequence, rounding and significant figures to be employed in a calculation. It provides tables which may be used to look up specific correction factors should it not be desired to calculate them by manual as well as computer methods. The calculation of prover base volumes, meter factors and measurement tickets is also covered.

The field of application of this International Standard is the volumetric measurement of liquid hydrocarbons, including liquefied petroleum gases, by meter and prover. It does not include two-phase fluids (though it may be found useful in such situations) except in so far as sediment and water may be mixed in with crude oil.

2 References

ISO 91-1, *Petroleum measurement tables — Part 1: Tables based on reference temperatures of 15 °C and 60 °F.*

ISO 2715, *Liquid hydrocarbons — Volumetric measurement by turbine meter systems.*

ISO 5024, *Petroleum liquids and gases — Measurement — Standard reference conditions.*

ISO 7278-2, *Liquid hydrocarbons — Dynamic measurement — Proving systems for volumetric meters — Part 2: Pipe provers.*¹⁾

ISO 8222, *Petroleum measurement systems — Calibration — Temperature corrections for use with volumetric reference measuring systems.*

ISO 9770, *Petroleum products — Compressibility factors for hydrocarbons in the range 638 kg/m³ to 1 074 kg/m³.*¹⁾

1) At the stage of draft.