

Petroelum liquids - Manual sampling

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NATIONAL FOREWORD

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Standard on kinnitatud Eesti Standardikeskuse 19.06.2002 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 19.06.2002 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
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Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 75.080

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EUROPEAN STANDARD
NORME EUROPÉENNE
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EN ISO 3170

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English version

**Petroleum liquids - Manual sampling (ISO 3170:1988, including
Amendment 1:1998)**

Produits pétroliers liquides - Echantillonnage manuel (ISO
3170:1988, amendement 1:1998 inclus)

Flüssige Mineralölerzeugnisse - Manuelle Probenahme
(ISO 3170:1988 einschließlich Änderung 1:1998)

This European Standard was approved by CEN on 20 September 1998.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Foreword

The text of the International Standard from Technical Committee ISO/TC 28 "Petroleum products and lubricants" of the International Organization for Standardization (ISO) has been taken over as an European Standard by Technical Committee CEN/TC 19 "Petroleum products, lubricants and related products", the secretariat of which is held by NNI.

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 March 1999, and conflicting national standards shall be withdrawn at the latest by March 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, 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 3170:1988, including Amendment 1:1998 has been approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

ISO
3170

Second edition
1988-09-01



INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Petroleum liquids — Manual sampling

Produits pétroliers liquides — Échantillonnage manuel

Reference number
ISO 3170: 1988 (E)

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 3170 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This second edition cancels and replaces the first edition (ISO 3170 : 1975), of which it constitutes a technical revision. It also includes a procedure for transfer and subsequent handling of the sample to ensure delivery of a representative portion thereof into laboratory apparatus or storage for possible reconciliation.

Annex A of this International Standard is for information only.

Introduction

This International Standard should be applied in combination with ISO 3171, *Petroleum liquids — Automatic pipeline sampling*.

The purpose of this International Standard is to standardize conditions for obtaining a sample of liquid/semi-liquid hydrocarbons from a tank, drum or pipeline. If the hydrocarbon materials to be sampled are of non-homogeneous character showing significant variations in composition or containing sediments and water, samples taken manually should not be expected to be representative, but enable the degree of non-homogeneity to be assessed and estimates of quality and quantity to be made.

It is realized that in many countries some or all of the items covered by this International Standard are the subject of mandatory regulations imposed by the laws of those countries; such regulations must be rigorously observed. In cases of conflict between such mandatory regulations and this International Standard, the former shall prevail.

Petroleum liquids — Manual sampling

1 Scope

1.1 This International Standard specifies the procedures to be used for obtaining, by manual methods, samples of liquid hydrocarbons, tank residues and deposits from fixed tanks, railcars, road vehicles, ships and barges, drums and cans, or from liquids being pumped in pipelines (see 4.3).

1.2 It applies to the sampling of liquid petroleum products, crude oils and intermediate products, which are stored in tanks at or near atmospheric pressure, or transferred by pipelines, and are handled as liquids at temperatures from near ambient up to 100 °C.

The sampling procedures specified are not intended for the sampling of special petroleum products which may be the subject of other International Standards, such as aviation fuels, electrical insulating oils, liquefied petroleum gases, liquefied natural gases, bitumen and chemical products, nor to unstabilized crude oils having a Reid vapour pressure above 180 kPa (1,8 bar).

1.3 Two basic manual sampling methods are available:

- tank sampling;
- pipeline sampling.

When a batch is received or consigned, either tank or pipeline sampling, or both, may be possible. However, if both methods are used, the two sets of samples shall not be mixed.

1.4 Procedures are specified which minimize or eliminate losses of light ends from samples. Such losses can occur during handling or transfer of samples thereby making them non-representative of the bulk material.

1.5 If the procedures intended for obtaining representative samples of stocks or movements of homogeneous petroleum

liquids are applied to non-homogeneous liquids having significant variations in composition or containing sediments and/or water, the samples may not be representative.

1.6 The sampling procedures specified are intended to provide samples for the following purposes:

- a) the determination of the oil quality;
- b) the determination of the water content of the oils;
- c) the determination of other contaminants that are not considered to be part of the liquid transferred.

If the sampling conditions for the purposes a), b) and c) are in conflict, separate samples are required.

1.7 Sampling procedures for tank contents that are not homogeneous are specified that enable the degree of non-homogeneity to be assessed and estimates of quality and quantity to be made.

1.8 Procedures for the sampling of residues and deposits in tanks are included, together with techniques for liquid hydrocarbons under inert gas pressure.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3171 : 1988, *Petroleum liquids — Automatic pipeline sampling*.