INTERNATIONAL STANDARD

ISO 10307-1

Second edition
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Petroleum products — Total sediment in residual fuel oils —

Part 1: Determination by hot filtration

Produits pétroliers — Insolubles existants dans les fuel-oils résiduels —

Partie 1: Détermination par filtration à chaud

Reference number
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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 10307-1 was prepared by Technical Committee ISO/TC 28, *Petroleum products and lubricants*.

This second edition cancels and replaces the first edition (ISO 10307-1:1993), which has been technically revised. It also incorporates the Technical Corrigendum ISO 10307-1:1993/Cor.1:1997.

ISO 10307 consists of the following parts, under the general title *Petroleum products — Total sediment in residual fuel oils*:

— *Part 1: Determination by hot filtration*

— *Part 2: Determination using standard procedures for ageing*

Petroleum products — Total sediment in residual fuel oils —

Part 1:
Determination by hot filtration

WARNING — The use of this part of ISO 10307 could involve hazardous materials, operations and equipment. The document does not purport to address all of the safety problems associated with its use. It is the responsibility of the user of this part of ISO 10307 to establish appropriate safety and health practices, and determine the applicability of regulatory limitations prior to use.

1 Scope

This part of ISO 10307 specifies a method for the determination of total sediment in residual fuel oils having a maximum viscosity of 55 mm^2/s at 100 °C, and for blends of distillate fuels containing residual components. The maximum total sediment covered by the precision evaluations of this method is 0,50 % (m/m) for residual fuels and 0,40 % (m/m) for distillate fuels containing residual components. Some fuels could exceed the maximum filtration time specified in this method due to factors other than the presence of significant quantities of insoluble organic or inorganic material.

For the determination of sediment insoluble in toluene, see ISO 3735[1)].

NOTE 1 The method can also be used for the assessment of total sediment after regimes of fuel pre-treatment designed to accelerate the ageing process (see ISO 10307-2).

NOTE 2 Significant amounts of sediment in a residual fuel oil can cause fouling of facilities for handling and present problems in burner mechanisms. Sediment can accumulate in storage tanks, on filter screens or on burner parts, resulting in obstruction to flow of oil from the tank to the burner.

NOTE 3 For the purposes of this International Standard, the terms "% (m/m)" and "% (V/V)" are used to represent mass and volume fractions of a material, respectively. These expressions are deprecated under the International System and according to ISO 31-0, *Quantities and units — Part 0: General principles*, which specifies that mass and volume fractions be expressed as "mass fraction of xx %" (symbol ω) and "volume fraction of xx %" (symbol φ).

2 Normative references

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

ISO 3170:2004, *Petroleum liquids — Manual sampling*

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

ISO 6353-2:1983, *Reagents for chemical analysis — Part 2: Specifications — First series*

ISO 6353-3:1987, *Reagents for chemical analysis — Part 3: Specifications — Second series*

1) ISO 3735, *Crude petroleum and fuel oils — Determination of sediment — Extraction method*.