SLOVENSKI STANDARD
SIST EN 13303:2017

01-november-2017

Nadomešča:
SIST EN 13303:2009

Bitumen in bitumenska veziva - Določanje izgube mase industrijskih bitumnov po segrevanju

Bitumen and bituminous binders - Determination of the loss in mass after heating of industrial bitumen

Bitumen und bitumenhaltige Bindemittel - Bestimmung des Masseverlustes von Industriebitumen nach Erwärmung

Bitumes et liants bitumineux - Détermination de la perte de masse au chauffage des bitumes industriels

Ta slovenski standard je istoveten z: **EN 13303:2017**

ICS:

75.140	Voski, bitumni in drugi naftni proizvodi	Waxes, bituminous materials and other petroleum products
91.100.50	Veziva. Tesnilni materiali	Binders. Sealing materials

SIST EN 13303:2017 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13303

September 2017

ICS 75.140; 91.100.50

Supersedes EN 13303:2009

English Version

Bitumen and bituminous binders - Determination of the loss in mass after heating of industrial bitumen

Bitumes et liants bitumineux - Détermination de la perte de masse au chauffage des bitumes industriels

Bitumen und bitumenhaltige Bindemittel - Bestimmung des Masseverlustes von Industriebitumen nach Erwärmung

This European Standard was approved by CEN on 1 May 2017.

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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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European foreword

This document (EN 13303:2017) has been prepared by Technical Committee CEN/TC 336 “Bituminous binders”, the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2018, and conflicting national standards shall be withdrawn at the latest by March 2018.

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

This document supersedes EN 13303:2009.

The primary objective of this revision has been to delete the mercury containing thermometer as reference. Other changes are:

- The method can be performed at various test temperatures, but 163 °C is the reference temperature.
- Clause 9 Expression of results has been made more precise.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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.

1 Scope

This European Standard specifies a method for the determination of the loss in mass of industrial bitumen after heating. The method is used to detect volatile components. The method can be performed at various test temperatures, but 163 °C is the reference temperature.

NOTE The users of the method are encouraged to gather comparative information on binders using this standard, EN 13303 and EN 12607–2 [1] at 163 °C to facilitate the transition to the use of only one standard.

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 to 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 58, *Bitumen and bituminous binders - Sampling bituminous binders*

EN 1426, *Bitumen and bituminous binders - Determination of needle penetration*

EN 12594, *Bitumen and bituminous binders - Preparation of test samples*

3 Terms and definitions

For the purposes of this document, the following term and definition applies.

3.1
loss on heating
ratio in between the loss in mass after heating a sample and its initial mass, expressed as a percentage of the latter

4 Principle

A weighed sample is heated for a specified time at a specified temperature and is re-weighed at the conclusion of the heating period.

5 Apparatus

5.1 Oven, electrically heated and conforming to the performance requirements for ovens ventilated by natural convection and for operating temperatures up to 180 °C.

The oven shall be rectangular with minimum interior dimensions of 330 mm in each direction. The oven shall have in front a tightly fitting hinged door, which shall provide a clear opening, substantially the same as the interior height and width of the oven.

The oven shall be adequately ventilated by convection currents of air and for this purpose shall be provided with openings for the entrance of ambient air and egress of heated air and vapours. These openings may be of any size and arrangement provided the temperature requirements of the test are met.

The reference point for the temperature is specified in 7.8.

NOTE If the oven is equipped with a thermometer that requires visual reading, the door may contain a window with dimensions of at least 100 mm × 100 mm, and with two sheets of glass separated by an air space, through which a vertical thermometer (5.3) located as specified in 7.8, may be read without opening the door, or the oven may be provided with an inner glass door through which the thermometer may be observed on opening the outer door momentarily.

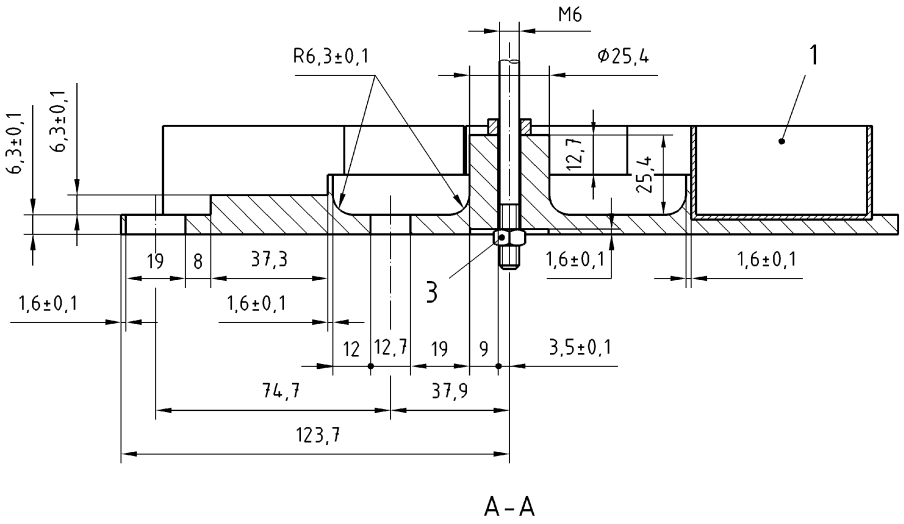
5.2 Rotating shelf (see Figures 1 and 2)

The oven shall be provided with a circular metal shelf having a minimum nominal diameter of 250 mm. The shelf shall be suspended by a vertical shaft and centred with respect to the horizontal interior dimensions. The shelf shall be provided with a mechanical means of rotating it at the rate of 5 r/min to 6 r/min. The shelf shall be vertically located as close to the centre of the oven as permitted by compliance with the requirements of the procedure regarding placement of the sensor of the temperature measuring device.

NOTE An example of the shelf is shown in Figures 1 and 2.

Dimensions in millimetres

Tolerances not mentioned on the figure are equal to 0,5 mm



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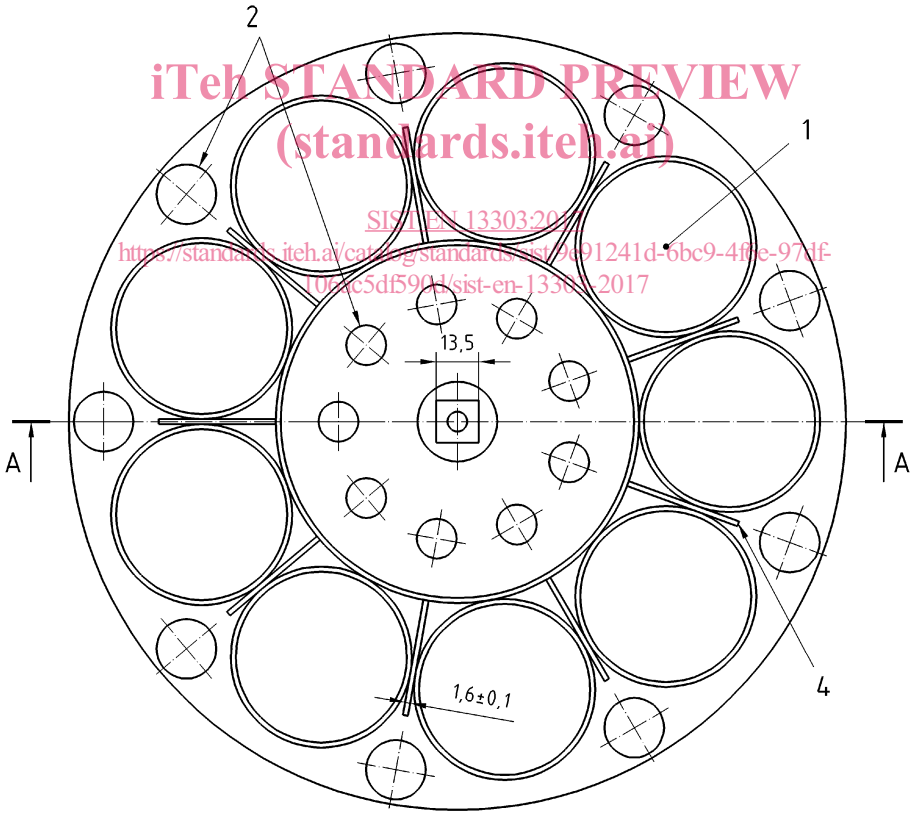

Key

1 Position of boxes
2 9 × 2 holes spaced equally
3 Nut of 6
4 9 ribs spaced equally

Figure 1 — Aluminium shelf (example)

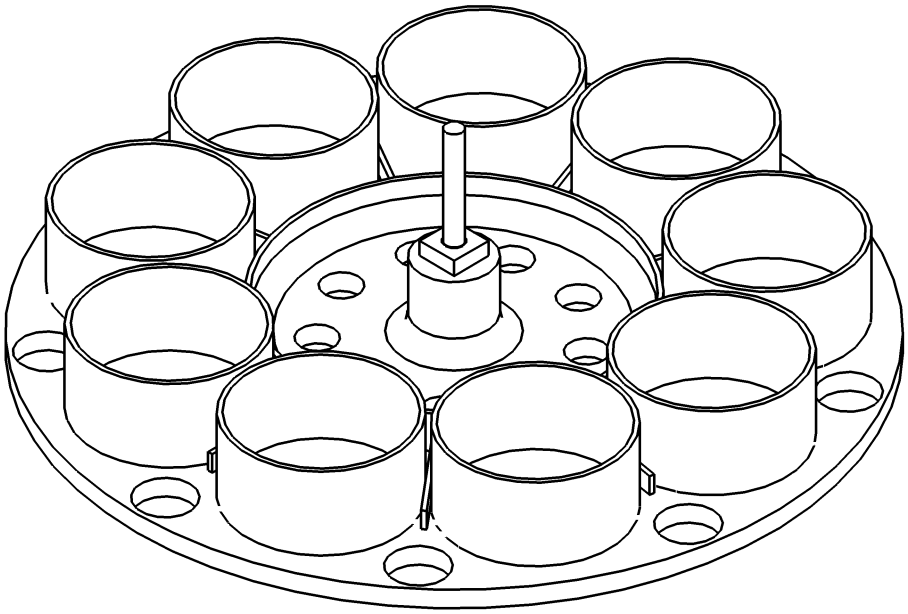

Figure 2 — 3D representation of the aluminium shelf (example)

5.3 Temperature measuring device.

A temperature measuring device (combining sensor and reading unit) shall

— have a range from at least 155 °C to 170 °C,

— be readable to 0,1 °C or less and,

— have an accuracy of 0,5 °C or better.

Sensors based on platinum resistance thermometers have been found suitable but other principles are also allowed. The thermal response time of the sensor shall be comparable with the former used reference (see informative Annex A). The temperature measuring device shall be calibrated regularly.

A solid stem mercury thermometer (which used to be the former reference thermometer as described in Annex A) is also allowed if national regulations permit its use.

5.4 Test sample container, metal or glass, cylindrical in shape, and with a flat bottom.

The inside dimensions shall be approximately: diameter, 55 mm and depth, 35 mm i.e. conforming to the dimensions of the container specified in EN 1426 for penetration lower than (160 × 0,1) mm.

5.5 Balance, with a reading accuracy of 0,01 g.

6 Sampling

The material under test shall be sampled in accordance with EN 58 and prepared in accordance with EN 12594.