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Metallic materials - Vickers hardness test - Part 3: Calibration of reference blocks (ISO 6507-3:2018)

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Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 07.03.2018.	Date of Availability of the European standard is 07.03.2018.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 77.040.10

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

Metallic materials - Vickers hardness test - Part 3: Calibration of reference blocks (ISO 6507-3:2018)

Matériaux métalliques - Essai de dureté Vickers - Partie 3: Étalonnage des blocs de référence (ISO 6507-3:2018)

Metallische Werkstoffe - Härteprüfung nach Vickers - Teil 3: Kalibrierung von Härtevergleichsplatten (ISO 6507-3:2018)

This European Standard was approved by CEN on 18 January 2018.

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European foreword

This document (EN ISO 6507-3:2018) has been prepared by Technical Committee ISO/TC 164 “Mechanical testing of metals” in collaboration with Technical Committee ECISS/TC 101 “Test methods for steel (other than chemical analysis)” 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of an identical text or by endorsement, at the latest by September 2018, and conflicting national standards shall be withdrawn at the latest by September 2018.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 ISO 6507-3:2005.

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Endorsement notice

The text of ISO 6507-3:2018 has been approved by CEN as EN ISO 6507-3:2018 without any modification.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*.

This fourth edition cancels and replaces the third edition (ISO 6507-3:2005), which has been technically revised.

The main changes compared to the previous edition are as follows:

— requirements have been added for the maximum test surface area of the reference block;

— requirements have been revised for the maximum uncertainty of the line intervals on the stage micrometer;

— requirements for the calibration and verification of the measuring system have been revised per ISO 6507-2;

— requirements for the uniformity of the reference block hardness have been revised to account for different numbers of calibration indentations;

— the timing requirements for the approach velocity and the time duration at maximum test force have been revised to indicate a target time value;

— Annex A has been revised.

A list of all parts in the ISO 6507 series can be found on the ISO website.

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Metallic materials — Vickers hardness test —

Part 3: Calibration of reference blocks

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1 Scope

This document specifies a method for the calibration of reference blocks to be used for the indirect verification of Vickers hardness testing machines, as specified in ISO 6507-2.

The method is applicable only for indentations with diagonals ≥0,020 mm.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 376, *Metallic materials — Calibration of force-proving instruments used for the verification of uniaxial testing machines*

ISO 6507-1, *Metallic materials — Vickers hardness test — Part 1: Test method*

ISO 6507-2, *Metallic materials — Vickers hardness test — Part 2: Verification and calibration of testing machines*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Manufacture of reference blocks

4.1 General

The block shall be specially manufactured for use as a hardness-reference block using a manufacturing process that will give the necessary homogeneity, stability of structure, uniformity of surface hardness and time-dependent stability in hardness.

4.2 Thickness

The thickness of the reference block shall not be less than 5 mm.

4.3 Test surface area

The test surface area of the reference block shall not exceed 40 cm^2.

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