BS EN ISO 6507-3:2018

BSI Standards Publication

Metallic materials - Vickers hardness test

Part 3: Calibration of reference blocks

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National foreword

This British Standard is the UK implementation of EN ISO 6507-3:2018. It is identical to ISO 6507-3:2018. It supersedes BS EN ISO 6507-3:2005, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/101/5, Indentation hardness testing.

A list of organizations represented on this committee can be obtained on request to its secretary.

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of an identical text or by endorsement, at the latest by September 2018, and conflicting national standards shall be withdrawn at the latest by September 2018.

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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

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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