

Metallic materials - Brinell hardness test - Part 3: Calibration of reference blocks

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Calibration of reference blocks

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 6506-3:2006 sisaldab Euroopa standardi EN ISO 6506-3:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 6506-3:2006 consists of the English text of the European standard EN ISO 6506-3:2005.</p> <p>This document is endorsed on 27.02.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This part of ISO 6506 specifies a method for the calibration of reference blocks to be used in the indirect verification of Brinell hardness testing machines as described in ISO 6506-2.</p>	<p>Scope: This part of ISO 6506 specifies a method for the calibration of reference blocks to be used in the indirect verification of Brinell hardness testing machines as described in ISO 6506-2.</p>
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ICS 77.040.10

Võtmesõnad: blocks, brinell hardness, calibration, hardnesstests, metallurgical products, reference sample, test equipment, tests

English Version

**Metallic materials - Brinell hardness test - Part 3: Calibration of
reference blocks (ISO 6506-3:2005)**

Matériaux métalliques - Essai de dureté Brinell - Partie 3:
Etalonnage des blocs de référence (ISO 6506-3:2005)

Metallische Werkstoffe - Härteprüfung nach Brinell - Teil 3:
Kalibrierung von Härtevergleichsplatten (ISO 6506-3:2005)

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Foreword

This document (EN ISO 6506-3:2005) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 1 "Steel - Mechanical testing", 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of an identical text or by endorsement, at the latest by June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

This document supersedes EN ISO 6506-3:1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 6506-3:2005 has been approved by CEN as EN ISO 6506-3:2005 without any modifications.

**Metallic materials — Brinell hardness
test —**

**Part 3:
Calibration of reference blocks**

Matériaux métalliques — Essai de dureté Brinell —

Partie 3: Étalonnage des blocs de référence



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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 6506-3 was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*.

This second edition cancels and replaces the first edition (ISO 6506-3:1999) which has been technically revised.

ISO 6506 consists of the following parts, under the general title *Metallic materials — Brinell hardness test*:

- *Part 1: Test method*
- *Part 2: Verification and calibration of testing machines*
- *Part 3: Calibration of reference blocks*
- *Part 4: Table of hardness values*

Introduction

Attention is drawn to the fact that in this part of ISO 6506, only the use of the hardmetal ball indenter is specified.

The designation of the Brinell hardness is HBW and should not be confused with the former designation HB, or HBS when a steel ball indenter was used.

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Metallic materials — Brinell hardness test —

Part 3: Calibration of reference blocks

1 Scope

This part of ISO 6506 specifies a method for the calibration of reference blocks to be used in the indirect verification of Brinell hardness testing machines as described in ISO 6506-2.

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 376:2004, *Metallic materials — Calibration of force-proving instruments used for verification of uniaxial testing machines*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 6506-1:2005, *Metallic materials — Brinell hardness test — Part 1: Test method*

ISO 6506-2:2005, *Metallic materials — Brinell hardness test — Part 2: Verification and calibration of testing machines*

3 Manufacture of reference blocks

3.1 The block shall be specially manufactured for use as a hardness-reference block.

NOTE Attention is drawn to the need to use a manufacturing process which will give the necessary homogeneity, stability of structure and uniformity of surface hardness.

3.2 Each metal block to be calibrated shall be of a thickness not less than:

- 16 mm for 10 mm balls;
- 12 mm for 5 mm balls;
- 6 mm for smaller balls.

NOTE 12 mm for 10 mm balls may be used only if the hardness of the reference block is greater than 150 HBW.

3.3 The reference blocks shall be free of magnetism. It is recommended that the manufacturer shall ensure that the blocks, if of steel, have been demagnetized at the end of the manufacturing process.