



SLOVENSKI STANDARD

SIST EN ISO 6506-3:2001

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Nadomešča:

SIST EN 10003-3:1996

SIST EN 10109-3:1996

Kovinski materiali - Preskus trdote po Brinellu - 3. del: Kalibracija primerjalnih ploščic (ISO 6506-3:1999)

Metallic materials - Brinell hardness test - Part 3: Calibration of reference blocks (ISO 6506-3:1999)

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Metallische Werkstoffe - Härteprüfung nach Brinell - Teil 3: Kalibrierung von Härtevergleichsplatten für die Prüfung von Härteprüfmaschinen nach Brinell (ISO 6506-3:1999)

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Matériaux métalliques - Essai de dureté Brinell - Partie 3: Etalonnage des blocs de référence (ISO 6506-3:1999)

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77.040.10 Mehansko preskušanje kovin Mechanical testing of metals

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en

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EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN ISO 6506-3

September 1999

ICS 77.040.10

English version

**Metallic materials - Brinell hardness test - Part 3: Calibration of
 reference blocks (ISO 6506-3:1999)**

Matériaux métalliques - Essai de dureté Brinell - Partie 3:
 Etalonnage des blocs de référence (ISO 6506-3:1999)

Metallische Werkstoffe - Härteprüfung nach Brinell - Teil 3:
 Kalibrierung von Härtevergleichsplatten für die Prüfung von
 Härteprüfmaschinen nach Brinell (ISO 6506-3:1999)

This European Standard was approved by CEN on 8 July 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
 COMITÉ EUROPÉEN DE NORMALISATION
 EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of the International Standard ISO 6506-3:1999 has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 1 "Steel testing", the secretariat of which is held by AFNOR.

This European Standard supersedes EN 10003-3:1994.

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 2000, and conflicting national standards shall be withdrawn at the latest by March 2000.

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

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Endorsement notice
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The text of the International Standard ISO 6506-3:1999 was approved by CEN as a European Standard without any modification.

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NOTE: Normative references to International Standards are listed in annex ZA (normative).

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INTERNATIONAL
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**Metallic materials — Brinell hardness
test —**

Part 3:
Calibration of reference blocks

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*Matériaux métalliques — Essai de dureté Brinell —
(Partie 1: Étalonnage des blocs de référence)*

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Reference number
ISO 6506-3:1999(E)

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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 3.

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.

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

This first edition of ISO 6506-3 cancels and replaces ISO 726:1982, of which it constitutes a technical revision as follows:

- Expansion of clause 8, concerning an accompanied document for the reference blocks.
- Addition of clause 9 concerning the validity of the reference blocks.

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

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

Introduction

The force values in this part of ISO 6506 were calculated from kilogram force values. They were introduced before the SI-system was adopted. It was decided to keep the values based on the old units for this part of ISO 6506 but for the next revision it will be necessary to consider the advantage of introducing rounded values of test force and possible consequences on the hardness scales.

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 which are intended for use in the indirect verification of Brinell hardness testing machines as described in ISO 6506-2.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 6506. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 6506 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 376, *Metallic materials — Calibration of force-proving instruments used for the verification of uniaxial testing machines.*

ISO 3878, *Hardmetals — Vickers hardness test.*

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

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

ISO 6506-2:1999, *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 no less than

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

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

3.4 The flatness of the two surfaces and the parallelism of the reference block shall be in accordance with Table 1.