

**Metallic materials - Brinell hardness test - Part 2:
Verification and calibration of testing machines (ISO
6506-2:2014)**

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NATIONAL FOREWORD

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English Version

Metallic materials - Brinell hardness test - Part 2: Verification and calibration of testing machines (ISO 6506-2:2014)

Matériaux métalliques - Essai de dureté Brinell - Partie 2: Vérification et étalonnage des machines d'essai (ISO 6506-2:2014)

Metallische Werkstoffe - Härteprüfung nach Brinell - Teil 2: Überprüfung und Kalibrierung der Prüfmaschinen (ISO 6506-2:2014)

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 6506-2:2014) 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of an identical text or by endorsement, at the latest by March 2015, and conflicting national standards shall be withdrawn at the latest by March 2015.

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

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Endorsement notice

The text of ISO 6506-2:2014 has been approved by CEN as EN ISO 6506-2:2014 without any modification.

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Metallic materials — Brinell hardness test —

Part 2:

Verification and calibration of testing machines

1 Scope

This part of ISO 6506 specifies methods of direct and indirect verification of testing machines used for determining Brinell hardness in accordance with ISO 6506-1, and also specifies when these two types of verification has to be performed.

The direct verification involves checking that individual machine performance parameters fall within specified limits whereas the indirect verification utilizes hardness measurements of reference blocks, calibrated in accordance with ISO 6506-3, to check the machine's overall performance.

If a testing machine is also to be used for other methods of hardness testing, it has to be verified independently for each method.

This part of ISO 6506 is applicable to both fixed location and portable hardness testing machines. For machines that are incapable of satisfying the specified force-time profile, the direct verification of force and testing cycle can be modified by the use of [Annex B](#).

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.

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

ISO 6506-1:2014, *Metallic materials — Brinell hardness test — Part 1: Test method*

ISO 6506-3, *Metallic materials — Brinell hardness test — Part 3: Calibration of reference blocks*

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

3 General conditions

Before a Brinell hardness testing machine is verified, the machine shall be checked to ensure that it is properly set up in accordance with the manufacturer's instructions.

Especially, it should be checked that

- a) the mount holding the ball-holder slides correctly in its guide,
- b) every ball-holder with a ball used during the calibration is firmly held in the mount,
- c) the test force is applied and removed without shock, vibration, or overrun and in such a manner that the readings are not influenced, and
- d) if the indentation diameter measuring system is integrated into the machine,
 - the change from removing the test force to measuring mode does not influence the diameter measurements,