



**SLOVENSKI STANDARD**  
**SIST EN ISO 16859-3:2016**

**01-januar-2016**

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**Kovinski materiali - Preskus trdote po Leebu - 3. del: Kalibracija referenčnih preskusnih etalonov (ISO 16859-3:2015)**

Metallic materials - Leeb hardness test - Part 3: Calibration of reference test blocks (ISO 16859-3:2015)

Metallische Werkstoffe - Härteprüfung nach Leeb - Teil 3: Kalibrierung von Härtevergleichsplatten (ISO 16859-3:2015)

Matériaux métalliques - Essai de dureté Leeb - Partie 3 : Etalonnage des blocs de référence (ISO 16859-3:2015)

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EUROPEAN STANDARD

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## Metallic materials - Leeb hardness test - Part 3: Calibration of reference test blocks (ISO 16859-3:2015)

Matériaux métalliques - Essai de dureté Leeb - Partie 3  
: Etalonnage des blocs de référence (ISO 16859-  
3:2015)

Metallische Werkstoffe - Härteprüfung nach Leeb - Teil  
3: Kalibrierung von Härtevergleichsplatten (ISO  
16859-3:2015)

This European Standard was approved by CEN on 10 July 2015.

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## European foreword

This document (EN ISO 16859-3:2015) 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of an identical text or by endorsement, at the latest by April 2016, and conflicting national standards shall be withdrawn at the latest by April 2016.

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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The text of ISO 16859-3:2015 has been approved by CEN as EN ISO 16859-3:2015 without any modification.

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INTERNATIONAL  
STANDARD

ISO  
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**Metallic materials — Leeb hardness  
test —**

**Part 3:  
Calibration of reference test blocks**

*Matériaux métalliques — Essai de dureté Leeb —*

*Partie 3: Etalonnage des blocs de référence*

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## ISO 16859-3:2015(E)

## 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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary Information](#)

The committee responsible for this document is ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*.

ISO 16859 consists of the following parts, under the general title *Metallic materials – Leeb hardness test*:

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

# Metallic materials — Leeb hardness test —

## Part 3: Calibration of reference test blocks

### 1 Scope

This part of ISO 16859 specifies a method for the calibration of reference test blocks that are used for the indirect verification of Leeb hardness testers according to ISO 16859-2 and for the periodic checking according to ISO 16859-1.

The procedures necessary to ensure metrological traceability of the calibration machine are also specified.

### 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 16859-1, *Metallic materials — Leeb hardness test — Part 1: Test method*

ISO 16859-2, *Metallic materials — Leeb hardness test — Part 2: Verification and calibration of the testing devices*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

### 3 Manufacture of reference test blocks

**3.1** The block shall be specially manufactured for use as a reference test block.

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

**3.2** The uniformity of the metallic reference test block shall meet the requirements specified in [7.2](#) and [Table 3](#).

**3.3** The impact nature of a Leeb test requires a reference test block with a minimum mass and thickness, as specified in [Table 1](#).

NOTE Examples of common dimensions of reference test blocks are specified in [Annex C](#).