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BSI Standards Publication

Metallic materials — Rockwell hardness test

Part 1: Test method

bsi.

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National foreword

This British Standard is the UK implementation of EN ISO 6508-1:2023. It is identical to ISO 6508-1:2023. It supersedes BS EN ISO 6508-1:2016, which is withdrawn.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 committee manager.

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English Version

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This European Standard was approved by CEN on 13 November 2023.

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European foreword

This document (EN ISO 6508-1:2023) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee CEN/TC 459/SC 1 “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of an identical text or by endorsement, at the latest by June 2024, and conflicting national standards shall be withdrawn at the latest by June 2024.

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

This document supersedes EN ISO 6508-1:2016.

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Endorsement notice

The text of ISO 6508-1:2023 has been approved by CEN as EN ISO 6508-1:2023 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 document 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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This document was prepared by Technical Committee ISO/TC 164, *Mechanical testing of metals*, Subcommittee SC 3, *Hardness testing*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 459, *ECISS - European Committee for Iron and Steel Standardization*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition cancels and replaces the fourth edition (ISO 6508-1:2016), which has been technically revised.

The main changes are as follows:

— removal of note related to the use of tungsten and steel ball indenters (Clause 1);

— removal of the year from the Normative References specified and various places throughout the body of the standard (Clause 2);

— addition of Clause 3, Terms and definitions;

— added additional information for the use of single-piece spherically tipped indenters (6.3 NOTE 1);

— added the table reference and table title (7.4);

— modified the uncertainty of the results section to only provide a single reference for the determination of uncertainty (Clause 9);

— modified Annex G to remove the “procedure without bias (M2)” method for determining uncertainty.

A list of all parts in the ISO 6508 series can be found on the ISO website.

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Metallic materials — Rockwell hardness test —

Part 1: Test method

1 Scope

This document specifies the method for Rockwell regular and Rockwell superficial hardness tests for scales A, B, C, D, E, F, G, H, K, 15N, 30N, 45N, 15T, 30T, and 45T for metallic materials and is applicable to stationary and portable hardness testing machines.

For specific materials and/or products, other specific International Standards apply (e.g. ISO 3738-1 and ISO 4498).

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 6508-2, *Metallic materials — Rockwell hardness test — Part 2: Verification and calibration of testing machines and indenters*

ISO 6508-3, *Metallic materials — Rockwell hardness test — Part 3: Calibration of reference blocks*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Symbols, abbreviated terms and designations

According to Table 1, Table 2, Table 3, and Figure 1.

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