

Metallic materials - Rockwell hardness test - Part 1: Test method (ISO 6508-1:2016)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/17

Obsahuje: EN ISO 6508-1:2016, ISO 6508-1:2016

Oznámením tejto normy sa ruší STN EN ISO 6508-1 (42 0360) z októbra 2015

STN EN ISO 6508-1: 2017

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN ISO 6508-1

August 2016

ICS 77.040.10

Supersedes EN ISO 6508-1:2015

English Version

Metallic materials - Rockwell hardness test - Part 1: Test method (ISO 6508-1:2016)

Matériaux métalliques - Essai de dureté Rockwell - Partie 1: Méthode d'essai (ISO 6508-1:2016)

Metallische Werkstoffe - Härteprüfung nach Rockwell -Teil 1: Prüfverfahren (ISO 6508-1:2016)

This European Standard was approved by CEN on 23 July 2016.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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

EN ISO 6508-1:2016 (E)

Contents	Page
European foreword	

European foreword

This document (EN ISO 6508-1:2016) 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 February 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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.

This document supersedes EN ISO 6508-1:2015.

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

Endorsement notice

The text of ISO 6508-1:2016 has been approved by CEN as EN ISO 6508-1:2016 without any modification.

INTERNATIONAL STANDARD

ISO 6508-1

Fourth edition 2016-08-15

Metallic materials — Rockwell hardness test —

Part 1: **Test method**

Matériaux métalliques — Essai de dureté Rockwell — Partie 1: Méthode d'essai



ISO 6508-1:2016(E)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2016, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Ch. de Blandonnet 8 • CP 401 CH-1214 Vernier, Geneva, Switzerland Tel. +41 22 749 01 11 Fax +41 22 749 09 47 copyright@iso.org www.iso.org

Cont	tents	Page
Forew	ord	iv
1	Scope	1
2	Normative references	1
3	Principle	1
4	Symbols, abbreviated terms and designations	2
5	Testing machine	4
6	Test piece	5
7	Procedure	5
8	Uncertainty of the results	7
9	Test report	7
10	Conversions to other hardness scales or tensile strength values	8
Annex	A (normative) Special HR30TSm and HR15TSm test for thin products	9
Annex	B (normative) Minimum thickness of the test piece in relation to the Rockwell hardnes	s10
Annex	C (normative) Corrections to be added to Rockwell hardness values obtained on convex cylindrical surfaces	13
Annex	D (normative) Corrections to be added to Rockwell hardness C scale values obtained on spherical test surfaces of various diameters	16
Annex	E (normative) Daily verification procedure	17
Annex	F (normative) Inspection of diamond indenters	20
Annex	G (informative) Uncertainty of the measured hardness values	21
Annex	H (informative) CCM — Working group on hardness	28
	I (informative) Rockwell hardness measurement traceability	
Bibliog	graphy	32

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).

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).

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 World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

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

This fourth edition cancels and replaces the third edition (ISO 6508-1:2015), of which it constitutes a minor revision in order to clarify the scope of this part of ISO 6508.

ISO 6508 consists of the following parts, under the general title *Metallic materials* — *Rockwell hardness test*:

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

Metallic materials — Rockwell hardness test —

Part 1:

Test method

1 Scope

This part of ISO 6508 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 (for instance, ISO 3738-1 and ISO 4498).

NOTE Attention is drawn to the fact that the use of tungsten carbide composite for ball indenters is considered to be the standard type of Rockwell indenter ball. Steel indenter balls are allowed to continue to be used only when complying with Annex A.

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 6508-2:2015, Metallic materials — Rockwell hardness test — Part 2: Verification and calibration of testing machines and indenters

ISO 6508-3:2015, Metallic materials — Rockwell hardness test — Part 3: Calibration of reference blocks

koniec náhľadu – text ďalej pokračuje v platenej verzii STN