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भारतीय मानक ब्यूरो

DRAFT FOR WIDE CIRCULATION

भारतीय मानक मसौदा

धात्विक सामग्री - रॉकवेल कठोरता परीक्षण

भाग 1: परीक्षण पद्धति

(*IS 1586 (Part 1) का छठा पुनरीक्षण*)

Draft Indian Standard

Metallic Materials — Rockwell Hardness Test

Part 1: Test Method

(*Sixth Revision of IS 1586* (*Part 1*))

ICS 77.040.10

Mechanical Testing of Metals Sectional Committee, MTD 03

Last date of comment: 11/07/2024

NATIONAL FOREWORD

This draft standard (Sixth Revision) is identical to ISO 6508-1 : 2023 'Metallic materials — Rockwell hardness test Part 1: Test method' issued by the International Organization for Standardization (ISO), and subject to its finalization, is to be adopted by the Bureau of Indian Standards on the recommendation of the Mechanical Testing of Metals Sectional Committee and approval of the Metallurgical Engineering Division Council.

This standard was originally published in 1960 and subsequently revised in 1968, 1988, 2000, 2012 and 2018. The sixth revision of this standard has been undertaken to align with the latest version ISO 6508-1 : 2023 to harmonize it with the latest developments that have taken place at international level.

This Indian Standard is published in three parts. Other parts in this series are:

Part 2 Verification and calibration of testing machines and indenters

Part 3 Calibration of reference blocks

The main changes compared to the previous edition are as follows:

1) removal of note related to the use of tungsten and steel ball indenters (Clause 1);
2) — removal of the year from the Normative References specified and various places throughout the body of the standard (Clause 2);
3) — addition of Clause 3, Terms and definitions;
4) — added additional information for the use of single-piece spherically tipped indenters (6.3 NOTE 1);
5) — added the table reference and table title (7.4);
6) — modified the uncertainty of the results section to only provide a single reference for the determination of uncertainty (Clause 9);

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

The text of ISO standard has been approved as suitable for publication as in Indian Standard without deviations. Certain terminologies and conventions are, however, not identical with those used in Indian Standard. Attention is especially drawn to the following:

a) Wherever the words `International Standard' appear referring to this standard, it should be read as `Indian Standard'

b) Comma (,) has been used as a decimal marker while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exists. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the edition indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
ISO 6508-2 : 2023, Metallic materials — Rockwell hardness test — Part 2: Verification and calibration of testing machines and indenters	IS 1586 (Part 2) : 2018 / ISO 6508-2 : 2015 Metallic materials - Rockwell hardness test: Part 2 verification and calibration of testing machines and indenters (*Fifth Revision*)	Identical
ISO 6508-3 : 2023, Metallic materials — Rockwell hardness test — Part 3: Calibration of reference blocks	IS 1586 : 2018 / ISO 6508-3:2015 Metallic materials - Rockwell hardness test Part 3 Calibration of reference blocks (*Fifth Revision*)	Identical

In reporting the result of a test or analysis made in accordance with this standard, is to be rounded off, it shall be done in accordance with IS 2 : 2022 'Rules for rounding off numerical-values (*second revision*)'.

The scope of the standard is as follows:

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).

The complete document/text of ISO 6508-1 : 2023 'Metallic materials — Rockwell hardness test Part 1: Test method' may be made available, on request to:

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