

STANDARDS AUSTRALIA

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RECONFIRMATION

OF

AS 1816.2—2007

Metallic materials—Brinell hardness test

Method 2: Verification and calibration of testing machines

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RECONFIRMATION NOTICE

Technical Committee MT-009 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 20 March 2017.

The following are represented on Technical Committee MT-009:

Australasian Institute of Surface Finishing  
Australian Chamber of Commerce and Industry  
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**Metallic materials—Brinell hardness test****Method 2: Verification and calibration of testing machines**

## PREFACE

This Standard was prepared by the Standards Australia Committee MT-006, Mechanical Testing of Metals to supersede AS 1816.2—2002, *Metallic materials—Brinell hardness test, Method 2: Verification and calibration of testing machines*.

This Standard is identical with, and has been reproduced from ISO 6506-2:2005, *Metallic materials—Rockwell hardness test, Part 2: Verification and calibration of testing machines*.

The objective of this Standard is to specify the method for verification and calibration of Brinell hardness testing machines.

The objective of this edition is to adopt the current edition of ISO 6506-2 to revise the method for verification and calibration of Brinell hardness testing machines.

## AS

- 1815 Metallic materials—Rockwell hardness test
  - 1815.1 Method 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T)
  - 1815.2 Method 2: Verification and calibration of testing machines (scales A, B, C, D, E, F, G, H, K, N, T)
  - 1815.3 Method 3: Calibration of reference blocks (scales A, B, C, D, E, F, G, H, K, N, T) (ISO 6508-3:2005, MOD)
- 1816 Metallic materials—Brinell hardness test
  - 1816.1 Method 1: Test method (ISO 6506-1:2005, MOD)
  - 1816.2 Method 2: Verification and calibration of testing machines (this Standard)
  - 1816.3 Method 3: Calibration of reference blocks
  - 1816.4 Method 4: Table of hardness values
- 1817 Metallic materials—Vickers hardness test
  - 1817.1 Method 1: Test method (ISO 6507-1:1997, MOD)
  - 1817.2 Method 2: Verification of testing machines
  - 1817.3 Method 3: Calibration of reference blocks
- 5016 Metallic materials—Conversion of hardness values

As this standard is reproduced from an International Standard, the following applies:

- (a) Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- (b) In the source text ‘this part of ISO 6506’ should read ‘this Australian Standard’.
- (c) A full point should be substituted for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian Standards as follows:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
ISO		AS	
376	Metallic materials—Calibration of force-proving instruments used for verification of uniaxial testing machines	2193	Calibration and classification of force measuring systems
6506	Metallic materials—Brinell hardness test	1816	Metallic materials—Brinell hardness test
6506-1	Part 1: Test method	1816.1	Part 1: Test method (ISO 6506-1:1999, MOD)
6506-3	Part 3: Calibration of reference blocks	1816.3	Method 3: Calibration of reference blocks
6507	Metallic materials—Vickers hardness test	1817	Metallic materials—Vickers hardness test
6507-1	Part 1: Test method	1817.1	Method: Test method (ISO 6507-1:1997, MOD)

The term ‘informative’ has been used in this Standard to define the application of the annex to which it applies. An ‘informative’ annex is only for information and guidance.

## 1 Scope

This part of ISO 6506 specifies a method of verification and calibration of testing machines used for determining Brinell hardness in accordance with ISO 6506-1.

It specifies a direct method for checking the main functions of machine operation and an indirect method suitable for the overall checking of the machine. The indirect method may be used independently for periodic routine checking of machine operation while in service.

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

This part of ISO 6506 is also applicable to portable hardness testing machines.

## 2 Normative references

The following referenced documents are indispensable for the application 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 376:2004, *Metallic materials — Calibration of force-proving instruments used for the verification of uniaxial testing machines*

ISO 6506-1:2005, *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 plunger holding the ball slides correctly in its guide;
- b) the ball-holder with a ball (from a lot verified in accordance with 4.3) is firmly mounted in the plunger;
- c) the test force is applied and removed without shock, vibration or overrun and in such a manner that the readings are not influenced;