AS 1816—1990

Australian Standard®

Metallic materials—Brinell hardness test

This Australian Standard was prepared by Committee MT/6, Mechanical Testing of Metals. It was approved on behalf of the Council of Standards Australia on 21 June 1990 and published on 10 December 1990.

The following interests are represented on Committee MT/6:

Aluminium Development Council

Bureau of Steel Manufacturers of Australia

CSIRO, Division of Applied Physics

Confederation of Australian Industry

Department of Defence

Federal Chamber of Automotive Industries

Metal Trades Industry Association of Australia

National Association of Testing Authorities, Australia

Railways of Australia Committee

Society of Automotive Engineers—Australasia

University of Sydney

University of Wollongong

Additional interests participating in preparation of Standard:

Calibrating organizations

Testing and research organizations

Review of Australian Standards. To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This Standard was issued in draft form for comment as DR 87212.

AS 1816—1990

Australian Standard®

Metallic materials—Brinell hardness test

AS 1816—1990 first published in part as B81—1941 (endorsement of BS 240—1937 without amendment). AS B81—1941 revised and redesignated AS B81.1—1955 (endorsement of BS 240—1937 with amendment). Second edition 1963 (endorsement of BS 240.1—1962 with amendment). AS B81.1—1963 and redesignated AS 1816.1—1977. AS B81.2 first published 1954 (endorsement of BS 240.2—1950 without amendment) Second edition 1968. AS B81.2—1968 revised and redesignated AS 1816.2—1976. AS 1816.1—1977 and AS 1816.2—1976 revised, amalgamated and redesignated AS 1816—1990.

AS 1816—1990 2

PREFACE

This Standard was prepared under the direction of the Standards Australia Committee on Mechanical Testing of Metals to supersede AS 1816, *Method for Brinell hardness test*, Part 1—1977: *Testing of metals*, and Part 2—1976: *Calibration of the testing machine*.

In this edition, the testing and calibration requirements have been combined into the one Standard for simplification and the avoidance of duplication.

This edition was prepared at the request of the National Association of Testing Authorities, Australia to alleviate problems associated with calibration in relation to cost, adequacy and range of hardness blocks available for user checks.

© Copyright - STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

AS 1816—1990

CONTENTS

3

		Page
SECTIO		
1.1	SCOPE	
1.2	REFERENCED DOCUMENTS	
1.3	DEFINITIONS	4
1.4	PRINCIPLE OF TEST	4
1.5	DESIGNATION OF BRINELL HARDNESS	
1.6	TABLES OF HARDNESS VALUES	5
1.7	HARDNESS CONVERSIONS	5
SECTIO	N 2 TESTING OF METALS	
2.1	SCOPE OF SECTION	6
2.2	RELATION OF FORCE TO BALL DIAMETER	
2.3	TESTING MACHINE	
2.4	INDENTER	
2.5	MEASURING APPARATUS	
2.6	SUPPORT OF TEST PIECE	
2.7	PERFORMANCE OF MACHINE	
2.8	MAINTENANCE OF THE TESTING MACHINE BY THE USER .	
2.9	TEST PIECE	
2.10	TEST PROCEDURE	
2.10	RECORD OF TEST RESULTS	
2.11	TEST REPORT	
2.12	TEST REPORT	11
SECTIO		
3.1	GENERAL	12
3.2	PRELIMINARY INSPECTION	12
3.3	INDENTING FORCES	
3.4	CALIBRATION OF BALLS	12
3.5	MEASURING APPARATUS	12
3.6	PERFORMANCE TEST	
3.7	RECORD OF RESULTS	13
3.8	REPORT OF COMPLETE CALIBRATION	13
SECTIO	N 4 PARTIAL CALIBRATION OF THE TESTING MACHINE	
4.1	GENERAL	14
4.2	PRELIMINARY INSPECTION	
4.3	INDENTING PROCEDURE	
4.4	ASSESSMENT OF PERFORMANCE	14
4.5	RECORD OF RESULTS	
4.6	REPORT OF PARTIAL CALIBRATION	15
		10
SECTIO	N 5 CALIBRATION OF STANDARD HARDNESS BLOCKS	
5.1	GENERAL	16
5.2	REQUIREMENTS FOR STANDARD HARDNESS BLOCKS	16
5.3	CALIBRATION OF STANDARD HARDNESS BLOCKS	16
5.4	STANDARDIZING MACHINE	
SECTIO	N 6 CALIBRATION OF BALL INDENTERS	
6.1	GENERAL	18
6.2	SURFACE CONDITION	
6.3	DIAMETER	
6.4	HARDNESS	
0.4	HANDINDSS	10
ADDENIE	NIV A TARLES OF RRINELL HARDNESS VALUES	10



	This is a free preview.	Purchase the e	entire publication	at the link below:
--	-------------------------	----------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation