

Under revision ^{Dup.} See DR 84090
of April 1984

Amendment 1 - July 1983
" 2 - October 1986

AS 1475, Part 2—1983
UDC 693.28
SIB (21)F11

OBSOLETE TAS NOV/DEC 1988

SUPERSEDED BY AS 3700-1988

WITHDRAWN

Australian Standard 1475, Part 2—1983

TAS SEPTEMBER 1990

SAA BLOCKWORK CODE Part 2—REINFORCED BLOCKWORK



STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter



This Australian standard was prepared by Committee BD/55, Concrete Block Masonry. It was approved on behalf of the Council of the Standards Association of Australia on 30 November 1982 and published on 5 April 1983.

The following interests are represented on Committee BD/55:

Acceptable Standards of Construction Committee, New South Wales
Association of Consulting Engineers, Australia
Brick Development Research Institute
Cement and Concrete Association of Australia
Confederation of Australian Industry
Concrete Masonry Association of Australia Co-op. Limited
CSIRO, Division of Building Research
Department of Transport and Construction
Department of Public Works, N.S.W.
Departments of Local Government
Experimental Building Station
Master Builders Federation of Australia
University of Melbourne

To keep abreast of progress in industry, Australian standards are subject to continuous 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 their standards are up-to-date. Full details of all SAA publications will be found in the Annual List of Australian Standards; these details are supplemented by listings in the SAA monthly journal 'The Australian Standard'. Information on the Annual List and 'The Australian Standard' may be obtained from any sales office of the Association, where details are also available of the current status of individual standards. Suggestions for improvements to published standards, addressed to the head office of the Association, are welcomed.

This standard was issued in draft form for comment as DR 80081.

D.p.

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AMENDMENT No 2
to
AS 1475.2—1983
SAA BLOCKWORK CODE
PART 2—REINFORCED BLOCKWORK

REVISED TEXT

SUMMARY: References to AS 1500 are replaced by AS 2733 Concrete Masonry Units.
Published on 6 October 1986.

AMDT
No 2
OCT.
1986

Substitute AS 2733 for AS 1500 (now withdrawn) in the following places:

- a) page 3, Clause 1.2.1—7th reference standard
 - b) page 6, Clause 2.2—third line.
 - c) page 9, Clause 4.6.1, in the Note—first and last lines.
 - d) page 10, Clause 4.6.1, (2nd paragraph) first line.
-

STANDARDS ASSOCIATION OF AUSTRALIA

Incorporated by Royal Charter

AMENDMENT No 1

to

AS 1475, Part 2—1983**SAA BLOCKWORK CODE****PART 2—REINFORCED BLOCKWORK****CORRECTION***SUMMARY:* This correction applies to Clause 4.10.3.3.

Published on 4 July 1983.

Page 14. Clause 4.10.3.3.*Delete existing line (a) and substitute:*(a) not less than $\frac{0.03F'_m}{F_s}$; and*Delete existing line (b) and substitute:*(b) not greater than $\frac{F'_m}{2f_{sy}} \times \frac{600}{600 + f_{sy}}$ AMDT
No 1
JULY
1983

AUSTRALIAN STANDARD

CONCRETE BLOCKWORK IN BUILDINGS

known as the
SAA BLOCKWORK CODE

Part 2 REINFORCED BLOCKWORK

AS 1475, Part 2—1983

First published1983

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.



ISBN 0 7262 2891 5

22 MAR 1983

PREFACE

This standard was prepared by the Association's Committee on Concrete Block Masonry. It is based on information published by the Concrete Masonry Association of Australia and widely used in Australia as a reference for the design and construction of reinforced blockwork. This type of construction is not covered by AS 1475, Part 1 which deals with unreinforced blockwork.

CONTENTS

	<i>Page</i>
SECTION 1. SCOPE AND GENERAL	
1.1 Scope	3
1.2 Referenced Documents	3
1.3 Definitions	3
1.4 Notation	3
1.5 New Materials and Methods	4
1.6 Preliminary Information to be Provided in Drawings	5
1.7 Design and Supervision	5
SECTION 2. MATERIALS	
2.1 General	6
2.2 Blocks	6
2.3 Mortar	6
2.4 Grout	6
2.5 Reinforcement	6
SECTION 3. GENERAL DESIGN CONSIDERATIONS	7
SECTION 4. STRUCTURAL ANALYSIS AND DESIGN	
4.1 Applied Forces	8
4.2 Stability	8
4.3 Analysis	8
4.4 Linear Elastic Analysis	9
4.5 Simplified Analysis of Frames	9
4.6 Characteristic Strengths	9
4.7 Design—General	10
4.8 Slenderness Requirements	10
4.9 Design for Axial Forces	13
4.10 Design for Bending	14
4.11 Design for Shear Forces	14
4.12 Design for Combined Forces	15
4.13 Reinforcement	15

©Copyright — STANDARDS ASSOCIATION OF AUSTRALIA 1983

Users of standards are reminded that copyright subsists in all SAA publications. No part of this publication may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing of the Standards Association of Australia.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

for

CONCRETE BLOCKWORK IN BUILDINGS

PART 2—REINFORCED BLOCKWORK

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard sets out requirements for the design and construction of reinforced concrete blockwork in buildings and structures.

Structures into which only nominal reinforcement is incorporated need not comply with this standard provided that the structures comply with AS 1475, Part 1.

NOTE: AS 1475, Part 1 covers the use of unreinforced concrete blockwork. Where common requirements apply, references to AS 1475, Part 1, are noted herein.

1.2 REFERENCED DOCUMENTS.

1.2.1 Direct References. The following standards are referred to in this standard:

AS 1012	Methods of Testing Concrete Part 3—Determination of Properties Related to the Consistence of Concrete Part 9—Determination of Compressive Strength of Concrete Specimens
AS 1170	SAA Loading Code Part 1—Dead and Live Loads Part 2—Wind Forces
AS 1302	Steel Reinforcing Bars for Concrete
AS 1303	Hard-drawn Steel Reinforcing Wire for Concrete
AS 1475	SAA Blockwork Code Part 1—Unreinforced Blockwork
AS 1480 2733 AS 1500	SAA Concrete Structures Code SEE AMENDMENT 2 Concrete Building Blocks
AS 2121	SAA Earthquake Code

NOTE: The Preface to AS 1475, Part 1, contains a further listing of references applicable to common requirements.

1.2.2 Supplementary References. The following standards may assist users of this standard:

AS 1317	Blended Cements
AS 1379	Ready-mixed Concrete
AS 1509	SAA Formwork Code
AS 2193	Methods for Calibration and Grading of Force-measuring Systems of Testing Machines
AS 2253	Methods for Field Measurement of the Reduction of Airborne Sound Transmission in Buildings
AS A123	Mortar for Masonry Construction

1.3 DEFINITIONS.

1.3.1 Application. For the purpose of this standard, the definitions given in Clauses 1.5.2 and 1.5.3 of AS 1475, Part 1, together with those contained in Clauses 1.3.2 and 1.3.3 herein, apply.

1.3.2 Administrative Definitions.

1.3.2.1 Approved—approved by the Building Authority, or approved by the designer or supervisor, as applicable.

1.3.3 Technical Definitions.

1.3.3.1 Deep beam—a beam for which the ratio of span to overall depth is less than—

- (a) for a simply supported beam 2.0; or
- (b) for a continuous beam 2.5.

1.3.3.2 Fitment—a unit of reinforcement commonly known as tie, stirrup, helix, hoop or the like.

1.3.3.3 Isolated pier—a member that—

- (a) is subjected primarily to a vertical compression load;
- (b) can resist flexure about box axes by reinforcement tied in two directions;
- (c) complies with the stress requirements of this standard; and
- (d) has a width to thickness ratio not greater than 4 to 1.

1.3.3.4 Net area—area of blocks, cores or blockwork, as variously defined in this standard, used for calculating stresses and/or permissible loads or forces.

1.3.3.5 Reinforced blockwork—blockwork in which steel reinforcement is embedded and bonded in such a manner that the two materials act together in resisting forces.

1.4 NOTATION. The symbols used in this standard shall have the following meanings with respect to the structure, or member, or conditions to which the specific rule applies, unless otherwise defined elsewhere in the standard; unless otherwise stated, a dimension shall mean a specified dimension:

a = the ratio—

effective height:effective thickness; or
effective length:effective thickness;

whichever is the lesser

A_b = the total net area of block contained in the cross-section of a member

A_{bc} = the area of block in contact with a bearing surface