AS/NZS 1252:1996

Australian/New Zealand Standard®

High-strength steel bolts with associated nuts and washers for structural engineering

AS/NZS 1252:1996

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME/29, Fasteners. It was approved on behalf of the Council of Standards Australia on 2 April 1996 and on behalf of the Council of Standards New Zealand on 11 March 1996. It was published on 5 October 1996.

The following interests are represented on Committee ME/29:

Australian Chamber of Commerce and Industry Bureau of Steel Manufacturers of Australia Electricity Supply Association of Australia Fasteners Institute of Australia Federal Chamber of Automotive Industries Australia Metal Building Products Manufacturers Association Australia Metal Trades Industry Association of Australia New Zealand Manufacturers Federation

Review of Standards. To keep abreast of progress in industry, Joint Australian/ New Zealand 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 Joint Standards and related publications will be found in the Standards Australia and Standards New Zealand Catalogue of Publications; this information is supplemented each month by the magazines 'The Australian Standard' and 'Standards New Zealand', which subscribing members receive, and which give details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Joint Standards, addressed to the head office of either Standards Australia or Standards New Zealand, are welcomed. Notification of any inaccuracy or ambiguity found in a Joint Australian/New Zealand 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 94272.

© Copyright — STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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

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

Inclusion of copyright material in computer software programs is also permitted without 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 or Standards New Zealand at any time.

AS/NZS 1252:1996

Australian/New Zealand Standard®

High-strength steel bolts with associated nuts and washers for structural engineering

PUBLISHED JOINTLY BY:

STANDARDS AUSTRALIA 1 The Crescent, Homebush NSW 2140 Australia

STANDARDS NEW ZEALAND Level 10, Standards House, 155 The Terrace, Wellington 6001 New Zealand

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME/29 on Fasteners to supersede AS 1252—1983, *High strength steel bolts with associated nuts and washers for structural engineering*.

Major technical changes incorporated in this edition relate to the mechanical properties and testing requirements in order to align with the relevant ISO requirements. Other changes include the following:

- (a) Updating of reference documents.
- (b) Inclusion of a reference to SAA HB18.22/SANZ HB18.22 in relation to a manufacturer's declaration of conformity. The Handbook contains a definition of manufacturer and includes an example of a declaration of conformity which may be provided to a customer.
- (c) Revision of dimensions to align with ISO requirements.
- (d) Replacement of detailed requirements for materials, mechanical properties and test procedures with reference to separate Standards.
- (e) Modification of hardness requirements for hot-dip galvanized washers.
- (f) Editorial changes in accordance with current policy.

The identification marking on a fastener may now include that of a distributor or importer, this being a departure from the previously accepted practice of the marking being that of the fabricator of the product.

This Standard is based on and, except for the marking requirements for the nuts and bolts, is technically equivalent to the following ISO Standards for the relevant property class:

ISO

- 4775:1984 Hexagon nuts for high-strength structural bolting with large width across flats—Product grade B—Property classes 8 and 10
- 7411:1984 Hexagon bolts for high-strength structural bolting with large width across flats (thread lengths according to ISO 888)—Product grade C—Property classes 8.8 and 10.9
- 7415:1984 Plain washers for high-strength structural bolting, hardened and tempered

The dimensions of M12 products have not been included because the demand for this size is small.

The marking requirements given in AS 1252—1983 have been retained because the use of the letter 'S' used in conjunction with the property class symbol could be confused with the snug tight bolting category 8.8/S given in AS 4100—1990, *Steel structures*.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements to this Standard.

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

3

CONTENTS

| | | Page |
|------|---|------|
| SECT | ION 1 SCOPE AND GENERAL | |
| 1.1 | | . 4 |
| 1.2 | | |
| 1.3 | | |
| 1.4 | | |
| 1.5 | | |
| 1.6 | | |
| SECT | ION 2 HIGH-STRENGTH STEEL BOLTS | |
| 2.1 | METHOD OF MANUFACTURE | . 8 |
| 2.2 | 2 SHAPE, DIMENSIONS AND FINISH | . 8 |
| 2.3 | | |
| 2.4 | 4 TEST METHODS | . 9 |
| SECT | ION 3 HIGH-STRENGTH STEEL NUTS | |
| 3.1 | METHOD OF MANUFACTURE | . 16 |
| 3.2 | 2 SHAPE, DIMENSIONS AND FINISH | . 16 |
| 3.3 | MATERIAL AND MECHANICAL PROPERTIES | . 17 |
| 3.4 | TEST METHODS | . 17 |
| SECT | ION 4 FLAT ROUND WASHERS | |
| 4.1 | SHAPE, DIMENSIONS AND FINISH | . 20 |
| 4.2 | 2 MATERIAL AND HEAT TREATMENT | . 20 |
| 4.3 | 3 HARDNESS | . 20 |
| APPE | NDICES | |
| A | SUGGESTED SAMPLING PLAN FOR MECHANICAL PROPERTIES | . 22 |
| В | RECOMMENDED GAUGE AND METHOD FOR CHECKING THE | |
| | SQUARENESS OF THE THREAD TO THE FACE OF THE NUT | . 23 |
| C | ASSEMBLY TEST FOR COATED FASTENERS | . 24 |
| D | SQUARE TAPER WASHERS | . 25 |

Originated in Australia as AS B157 — 1960. Previous edition in Australia AS 1252 — 1983. Jointly revised and designated AS/NZS 1252:1996.



| | 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