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Australian/New Zealand Standard™

High-strength steel fastener assemblies

Bolts, nuts and washers

AS/NZS 1252.2:2016

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-029, Fasteners. It was approved on behalf of the Council of Standards Australia on 25 November 2016 and by the New Zealand Standards Approval Board on 9 December 2016.

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The following are represented on Committee ME-029:

Association of Accredited Certification Bodies
Association of Wall and Ceiling Industries of
Australasian Corrosion Association
Australian Chamber of Commerce and Industry
Australian Engineered Fa
Australian Industry Grou
Australian Steel Institute
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PREFACE

Australia/Standards New Zealand
, AS/NZS 1252:1996, *High-strength*
ural engineering.

quirements. The verification testing specified in this Standard is additional to the testing
quired by AS/NZS 1252.1.

e objective of this Standard is to give provisions for verification testing of high-strength

PREFACE

This Standard was prepared by the Joint Standards
Committee MF-024, Fasteners, to supersede, in part
steel bolts with associated nuts and washers for structu

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

High-strength steel fastener assemblies for structural engineering—Bolts, nuts and washers

Part 2: Verification testing for bolt assemblies

1.1 SCOPE OF STANDARD

This Standard is for structural engineering and provides a [illegible] for structural engineering [illegible] provides [illegible]

NOTE: The verification testing is additional to the testing required by AS/NZS 1252.1.

1.2 EXCLUSIONS

This Standard does not specify requirements for—

(a) product testing as related to manufacture and ongoing control of production;

(b) production process control; or

(c) management systems.

NOTES:

1 Specific initial type testing or product testing requirements [illegible] requirements related to ongoing control of production [illegible]

2 Production process control is also sometimes referred to as ongoing control of production [illegible] production quality control, or factory inspection.

3 Specific requirements for management systems are found in other standards, e.g. the [illegible] AS/NZS ISO 9001.

1.3 APPLICATION

1.3.1 General

Verification testing in accordance with this Standard shall be [illegible] who first puts the product into the market in Australia or New Zealand. Compliance with this Standard shall be required by specifiers (e.g. designers, procurement agencies and purchasers) to provide confidence by verification testing that the product meets the requirements of AS/NZS 1252.1.

This Standard also provides supplementary requirements for product certification testing and for third-party bodies in carrying out their conformity assessment activities.

NOTES:

1 When ordering fastener assemblies this Standard should be specified.

2 The application of this Standard for verifying product conformity may be limited to one or more product types, or even to specific batches of product.

1.3.2 Legislation

This Standard needs to be read in conjunction with the legislation, by-laws, guidelines and regulations of regulatory authorities.

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SECTION 2 HIGH-STRENGTH BOLT VERIFICATION TESTING

2.1 SCOPE OF SECTION

This Section specifies the requirements for the verification testing that is used to provide confidence that a product's conformity with the requirements of AS/NZS 1252.1 is maintained.

2.2 RESPONSIBLE PARTY

The party responsible for establishing product conformity, based on verification testing programs set out within this Standard, shall be the supplier.

The [illegible] assembly shall meet the requirements of AS/NZS 1252.1, with respect to—

(i) functional characteristics; and

(ii) identification (packaging),

as detailed in the relevant Clauses of that Standard.

13).

TABLE 2.1

MINIMUM SAMPLING AND TESTING

Dimensional characteristic (see Note)	Sample size	Acceptance no. (Ac)
Bolts:		
Width across flats (*s*)	3	0
Width across corners (*e*)	Not required	—
GO thread gauge	3	0
NO GO thread gauge	3	0
Geometric tolerances	Not required	
Nuts:		
Width across flats (*s*)	3	0

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TABLE 2.2

MINIMUM SAMPLING AND TESTING PLAN FOR VERIFICATION TESTING—MECHANICAL CHARACTERISTICS

Dimensional characteristic	Sample size	Acceptance no. (Ac)
Bolts:		
Ultimate tensile strength	3	0
Proof load test	3	0
Surface integrity—non-destructive	8	0
Surface integrity—destructive		Not required
Chemical composition		Not required
Metallurgical characteristics		Not required
Coating	3	
Other specified characteristics	3	
Nuts:		
Proof load test	3	0
Hardness	8	0
Washers:		
[illegible]		
Assemblies:		
Assembly test	3	0

2.3.3.5 *Sampling, testing and assessment*

Sampling, testing and assessment shall be undertaken in the following steps:

(a) Select samples at random from the assembly lot.

(b) [illegible] the number of samples required.

(c) Record the number of nonconforming characteristics and assemble the assembly lot if [illegible] the number is [illegible] number (Ac).

(d) For any characteristic, if the number of nonconforming test results is greater than the acceptance number (Ac), then reject the assembly lot.

2.3.3.6 *Re-testing in case of nonconforming product*

Where a test indicates that an assembly lot is not [illegible] of the sample size specified in Table 2.3, for the [illegible] taken from the assembly lot and tested for the par[illegible]

If the additional test results demonstrate conformance, then the assembly lot shall be deemed to comply, and all of the additional results included in the records.

If any of the additional test results demonstrate nonconformance, then the assembly lot shall [illegible] informed and the nonconforming assembly lot is not put into the market. The supplier shall [illegible] processing [illegible] nonconforming product.

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TABLE 2.

AND TESTING

MINIMUM SAMPLING

Initial test sample size = 3			Initial test sample size = 8		
Sample size	Acceptance No. (Ac)	Sample size	Acceptance No. (Ac)	(C)	
3	0	8 (initial sample)	0		
(initial sample)					
20	1	50	1		
50	2	125	2		
Lot to be rejected	3	Lot to be rejected	3		

Initial tests in accordance with sampling plan of Table

2.3.3.7 *Testing laboratory*

Testing shall be performed by a laboratory accredited by a signatory to the Laboratory Accreditation Corporation (ILAC) through their Mutual Recognition (MRA) for the tests specified in this Standard. The appropriate logo or further ILAC (MRA) signatory shall be noted on the test certificate.

NOTE: In Australia, ILAC (MRA) [illegible] (NATA) in New Zealand, they include International Accreditation

2.3.3.8 *Verification test reports*

Review of those verification testing results that are applica conformity is to be established with form this Standard.

The following minimum information shall

(a) Date of testing.

(b) Printed name, position and signature issue.

(c) Identification number of the manufacturing lot sufficient to allow traceability.

(d) Number of items tested.

(e) Designation of bolts, nuts and washers.

(f) Marking of bolts, nuts and washers.

(g) Coating or surface finish.

(h) Lubrication type and condition.

(i) Test clamp length, where relevant.

(j) Details of the test set-up and devices used for measurement.

(k) Testing conditions (where the testing procedure allows options).

(l) Any remarks concerning implementation of the tests, including any special testing conditions and procedures.

(m) Test results in accordance with AS/NZS 1252.1 and this Standard.

(n) Where relevant, specifications for the tensioning of the fasteners relevant to the manufacturing lot or assembly lot tested, as appropriate

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(c) Conclusions

(d) Reference to Australian Standard (i.e. AS/NZS 1252.2)

2.3.4 Review of the verification process

The party responsible for establishing product conformity in accordance with this Standard will establish—

(a) compliance with the verification testing requirements as defined in Clause 2.3.3.2 of this Standard; and

(b) compliance of the supplied test report(s) with the requirements specified in Clauses 2.3.3.3 to 2.3.3.8, in respect of the batch(es) or product type(s) for which product conformity is established.

conformity assessment process

2.3.5 Outcome of the

Clause 2.3.4. Where it is established that the applicable product complies with this Standard, an attestation of product conformity shall be prepared in accordance with Clause 3.2.

SECTION 3 ATTESTATION OF PRODUCT CONFORMITY

3.1 SCOPE OF SECTION

This Section specifies the requirements for an attestation of product conformity to the verification testing outlined in Section 2.

3.2 ATTESTATION OF PRODUCT CONFORMITY

Attestation of compliance with this Standard shall take the form of a Supplier's Decl of Conformity (SDoC) that is applicable to the batch(es) or product type(s) fo product conformity is required to be established. The SDoC may be based, in pa conformity assessment to this Standard that has been carried out by a third-party certification body; however, the verification testing component of the c assessment remains the responsibility of the supplier who first puts the product into the market in Australia or New Zealand.

The issued SDoC shall comply with AS/NZS 13050.1 and AS/NZS 13050.2 and the following:

(a) Statement from the supplier that the bolt assembly type(s) covered by the SDoC complies with AS/NZS 1252.1 and this Standard.

(b) Test report numbers for the verification testing carried out under the responsibility of

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ISO
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