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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

This Standard was published on 3 December 2016.

The following are represented on Committee ME-029:

Association of Accredited Certification Bodies

Australian Engineered Fasteners and Anchors

Australian Industry Group

Australian Steel Institute

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Materials Australia

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Part 2: Ve assemblie

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

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ISBN 978 1 76035 646 0

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MET/23, Fasteners, to supersede, in part, AS/NZS 1252:1996, *High-strength steel bolts with associated nuts and washers for structural engineering*.

This Standard is a companion document to AS/NZS 1252.1, *High-strength steel bolts with associated nuts and washers for structural engineering—Part 1: Technical requirements*. The verification testing specified in this Standard is additional to the testing required by AS/NZS 1252.1.

The objective of this Standard is to give provisions for verification testing of high-strength steel bolt assemblies for structural engineering, to suppliers, specifiers, designers, procurement agencies and purchasers and third-party certification bodies, to provide

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

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

Part 2: Verification testing for bolt assemblies

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE OF STANDARD

This Standard specifies requirements for verification testing of high-strength steel bolt assemblies for structural engineering, which is testing undertaken by the supplier who supplies the product to the market in Australia and New Zealand.

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 conformity of production;

(b) production process control; or

(c) management systems.

NOTES:

1 Specific initial type testing or product testing requirements, such as test methods and specific [illegible] are found in AS/NZS 1252.1.

2 Evaluation procedures, base documents referred to as engineering control of production, production quality control, or factory inspection.

3 Specific requirements for management systems are found in other standards, e.g. the ISO 9000 family of quality management standards, and AS/NZS ISO 9001.

1.3 APPLICATION

1.3.1 General

Verification testing in accordance with this Standard shall be undertaken by the supplier [illegible] in accordance 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 verification testing [illegible] and for third-party conformity assessment bodies undertaking assessment activities.

NOTES:

1 When undertaking [illegible] in accordance with this Standard, the supplier may be required by specifiers to undertake verification testing in accordance with this Standard for verifying product conformity by any of the following:

(a) Individual batches of product.

(b) [illegible] more product types, or even to specific [illegible]

1.3.2 Legislation

[illegible] in conjunction with the legislation, by-laws, guidelines and regulations of regulatory authorities [illegible] this Standard needs to be read in conjunction with [illegible] regulations of regulatory authorities in the region of any [illegible]

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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 in products conforming with the requirements of AS/NZS 1252.1 and the supplier's compliance with

2.2 RESPONSIBLE PARTY

The party responsible for establishing and

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.

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TABLE 2.1

MINIMUM SAMPLING AND TESTING

CHARACTERISTICS			
	Dimensional tolerances (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
Not required	Geometric tolerances	Not required	Geometric tolerances

Note

Width across flats (s)

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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:		
Tensile test to rupture	3	0
Proof load test	3	0
Surface integrity—non-destructive	3	0
Surface integrity—destructive	Not required	
Chemical composition	Not required	
Metallurgical characteristics	Not required	
Coating	3	0
Other specified characteristics	3	0
Nuts:		
Proof load test	3	0
Hardness	3	0
Washers:		
	3	0
Assemblies:		
Assembly test	3	0

nd assessment

ment shall be undertaken in the following steps:

om from the assembly lot.

mples required.

(a) For any characteristic, if the number of nonconforming test results is greater than or equal to 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 nonconforming, a sample of additional assemblies of the sample size specified in Table 2.3, for the number of nonconformances, shall be taken from the assembly lot and tested for the particular nonconforming parameter(s).

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

If any of the additional test results demonstrate nonconformance, then the assembly lot shall be deemed to be nonconforming and the supplier shall be informed and the nonconforming assembly lot is not put into the market. The supplier shall

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TABLE 2.
AND TESTING
MINIMUM SAMPLING
SIGNIFICANT TESTS AND EXAMINATIONS FOR SAMPLING

Initial test sample size = 3		Initial test sample size = 8	
Sample size	Acceptance No. (Ac)	Sample size	Acceptance No. (Ac)
Initial sample	0	Initial sample	1
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

2.3.7 *Testing laboratory*

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

NOTE: In countries where ILAC (MRA) laboratory accreditation is not available, accreditation by the International Accreditation New Zealand (IANZ) or National Association of Testing Authorities (NATA) in New Zealand may be used.

2.3.8 *Verification test reports*

Review of those verification testing results that are applicable to the product for which conformity is to be established with part or the assessment of product conformity to this Standard.

The following minimum information shall be included on all supplied test reports:

(a) Date of testing.

(b) Printed name, position and signature of the person authorizing the report, with date of issue.

(c) Identification number of the manufacturing or sample lot 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 tested, as appropriate.

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(a) Conclusions

ith this Standard

Clause 2.3.3.2 of [illegible] (ISO/IEC 17065:2012 modified).

the supplied test report(s) with the verification testing program cified in Clauses 2.3.3.3 to 2.3.3.8, inclusive, as applicable to the duct type(s) for which product conformity is required to be

ents permitted.

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The party responsible for establishing product conformity in accordance w will establish—

(a) compliance with the verification testing requirements as defined in Clauses 2.3.3.3 to 2.3.3.8, inclusive, of this Standard; and

(b) compliance of requirements spec batch(es) or pro established.

he conformity assessment process

2.3.5 Outcome of t

ty responsible for establishing product conformity in accordance with this Standard may [illegible] the outcome of the review. Where no deficiencies are observed, 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 2.2

cannot be established the specific shall be noted as [illegible]

obtain positive conformity outcome.

as of ion w

r record that [illegible] ion on this public

SECTION 3 ATTESTATION OF PRODUCT CONFORMITY

3.1 SCOPE OF SECTION

This Section specifies the requirements for an attestation of product conformity based on 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 Declaration of Conformity (SDoC) that is applicable to the batch(es) or product type(s) for which product conformity is required to be established. The SDoC may be based, in part, upon conformity assessment to this Standard that has been carried out by a third-party product certification body; however, the verification testing component of the conformity 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 ISO/IEC 17050.1 and AS/NZS ISO/IEC 17050.2 and include 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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