AS/NZS 4672.2:2007

Australian/New Zealand Standard™

Steel prestressing materials

Part 2: Testing requirements

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee BD-084, Steel Reinforcing and Prestressing Materials. It was approved on behalf of the Council of Standards Australia on 14 August 2006 and on behalf of the Council of Standards New Zealand on 9 June 2006.
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The following are represented on Committee BD-084:

AUSTROADS
Association of Consulting Engineers Australia
Australian Chamber of Commerce and Industry
Australian Post Tensioning Association
Australian Steel Association
Australian Wire Industry Association
Bureau of Steel Manufacturers of Australia
Business New Zealand
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AS 1310 first published 1972.
Second edition 1987.
AS 1311 first published 1972.
Second edition 1987.
AS 1313 originated as AS A144—1963.
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AS A144—1971 revised and redesignated AS 1313—1972.
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AS 1310—1987, AS 1311—1987 and AS 1313—1989 revised, amalgamated and redesignated (in part) AS/NZS 4672.2:2007.

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PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee BD-084, Reinforcing and Prestressing Materials, to supersede, in part, AS 1310—1987, *Steel wires for tendons in prestressed concrete*, AS 1311—1987, *Steel tendons for prestressed concrete—7-wire stress-relieved steel strand for tendons in prestressed concrete* and AS 1313—1989, *Steel tendons for prestressed concrete—Cold-worked high-tensile alloy steel bars for prestressed concrete*.

This Standard is to be read in conjunction with AS/NZS 4672.1, *Steel prestressing materials*, Part 1: *General requirements*.

The objective of this Standard is to set out the frequency of material testing necessary to ensure compliance with the requirements of AS/NZS 4672.1.

Reference has been made to European Standards prEN 10138-1 to 4, *Prestressing Steels*, as a basis for determining the minimum testing frequency. The terms ‘Unit of manufacture’ and ‘Unit of product’ have been introduced to assist in determining the frequency of testing. prEN has additional requirements for third party quality assurance, which is not applicable at this time.

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1 SCOPE

This Standard sets out the minimum rate of testing of wire, strand and bar for prestressing of permanent structures necessary to comply with the requirements of AS/NZS 4672.1.

NOTE: Manufacturing control should apply to all aspects of production from steel melting to the dispatch of the final product.

2 APPLICATION

Prestressing steel shall be sampled and tested in accordance with Clauses 5 and 7. The results shall satisfy both short- and long-term requirements for each unit of manufacture in accordance with Clauses 8 and 10.

Where long-term quality levels are not available, prestressing steel shall be sampled, tested and evaluated in accordance with Clause 12.

3 REFERENCED DOCUMENTS

AS	
1391	Metallic materials—Tensile testing at ambient temperature
AS/NZS	
4672	Steel prestressing materials
4672.1	Part 1: General requirements
ISO	
15630	Steel for the reinforcement and prestressing of concrete—Test methods
15630-3	Part 3: Prestressing steel

4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

4.1 Type of product

Each diameter of wire, strand or bar including those with surface indentations.

4.2 Unit of manufacture

A quantity of product (finished wire, strand or bar) of the same nominal surface geometry and diameter, of the same nominal strength and of the same ductility class; produced by the same feed material, process, equipment and conditions in a continuous production run.

4.3 Unit of product

A quantity of product comprising a subdivision of a unit of manufacture, not exceeding 3.5 t of wire or strand or 15 t of bar, generally in the form as delivered to the customer.