NZS 3603:1993

TIMBER STRUCTURES STANDARD

Amendments No 1&2&4 Appended

SUPERSEDING NZS 3603:1990
AND NZS3615:1981

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Section 6 Plywood

Section 7 Round timbers

Section 8 Glued laminated timber

Section 9 Design for fire resistance

Section 10 Testing of timber structures

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RELATED DOCUMENTS

Reference is made in this document to the following:

NEW ZEALAND STANDARDS

NZS 3601:1973	Metric dimensions for timber
NZS 3602:1990	Code of practice for specifying timber and wood-based products for use in building
NZS 3604:1990	Code of practice for light timber frame buildings not requiring specific design
NZS 3605:1992	Timber piles and poles for use in building
NZS 3606:1987	The manufacture of glue laminated timber
*NZS 3614:1971	Specification for the manufacture of construction plywood
NZS 3615:1981	Specification for strength properties and design methods for construction plywood
NZS 3618: - - - -	Mechanical stress grading of timber
Part 1:1984	Specification for the mechanical stress grading of timber
Part 2:1984	Rules for mechanical stress grading of timber
NZS 3621:1987	Standard names of commercial timbers in New Zealand
NZS 3631:1988	New Zealand national timber grading rules
NZS 4203:1992	Code of practice for general structural design and design loadings for buildings (known as the Loadings Standard)
NZMP 9:1989	Fire properties of building materials and elements of structure
NZMP 3640:1992	Specification of the minimum requirements of the New Zealand Timber Preservation Council Inc.

AUSTRALIAN/NEW ZEALAND STANDARDS

AS/NZS 1530.4-1990	Fire-resistance test of elements of building construction
AS/NZS 2269-0000	Structural plywood (in preparation)
AS/NZS 4063:1992	Timber-stress-graded – In-grade strength and stiffness evaluation

AUSTRALIAN STANDARDS

AS 1649-1974	Methods for the determination of basic working loads for metal fasteners for timber
AS 1720-	Timber structures (known as SAA timber structures code)
Part 1-1988	Design methods
AS 1748-1978	Mechanically stress-graded timber
AS 2754-	Adhesives for timber and timber products
Part 1-1985	Adhesives for plywood manufacture

* To be superseded by joint AS/NZS Standard (in preparation)

OTHER DOCUMENTS

CAN 3-086-M84 Engineering design in wood (working stress design) Forest Research Institute: Forest Products Division Report FP/TE 28 and Forest Products Laboratory Report FP/TE 99 (unpublished)

NZNSEE Bulletin, Vol. 19, No 2 June 1986, "Horizontal Timber Diaphragms for Wind and Earthquakes", Smith, Dowrick and Dean.

Proceedings, 1988 International Conference on Timber Engineering, Seattle, USA, pages 251-256 "Moment Resisting Nail Plate Joints", R Hunt and A H Bryant.

The New Zealand Building Code Handbook and Approved Documents (NZBC).

Timber Use Manual. New Zealand Timber Industry Federation.

American Institute of Timber Construction Manual.

US Department of Agriculture, Report FPL 34

University of Canterbury, Report CE 89/1

RELATED LEGISLATION

Building Act 1991
Engineers Registration Act 1924

The users of this Standard should ensure that their copies of the above-mentioned New Zealand Standards, overseas and referenced Standards are the latest revisions or include the latest amendments. Such amendments are listed in the annual Standards New Zealand *Catalogue* which is supplemented by lists contained in the monthly magazine *Standards* issued free of charge to committee and subscribing members of Standards New Zealand.

FOREWORD

This Standard sets out the requirements for the design of timber buildings and building elements. This edition is a soft conversion of NZS 3603:1990, which was in the working stress design format, into a limit states design format. The intention is to give the same design solutions for most cases, i.e. it is calibrated to existing practices, so that existing relativities are maintained. Eventually it is expected that adjustments will be made on the basis of reliability analyses to achieve consistent levels of performance between differing materials, load types and building types.

In recent years in-grade testing has provided a means of establishing characteristic stresses for building timbers and, where sufficient information is available, stress levels have been set on this basis rather than as previously derived from the testing of small clear specimens.

Other significant changes in this edition include the introduction of a section on fire resistance (from the Standards New Zealand MP 9 publication, with minor changes) and a section on plywood design (superseding NZS 3615, with major changes). The design stresses for glue laminated timber are now derived from sawn timber stresses, using the same methods as in AS 1720.1.

REVIEW OF STANDARDS

Suggestions for improvement of this Standard will be welcomed. They should be sent to the Chief Executive, Standards New Zealand, Private Bag 2439, Wellington 6001.