NZS 4229:2013 Concrete masonry buildings not requiring specific engineering design

Table of Contents

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Abbreviation
NZS 4229:2013
Valid from
27/03/2013
Replaces

Information provider
Standards New Zealand
Author
Standards New Zealand
Information type
New Zealand Standard
Format
PDF

Cited By
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Description

NZS 4229 sets a minimum standard for the design and construction of reinforced concrete masonry buildings.

When applied by architects, designers, builders, engineers, apprentices, building consent authorities, and building industry regulators, NZS 4229 provides these users with a cost effective means of compliance and practical guidance for designing and building to meet New Zealand Building Code requirements, without the need for specific engineering design.

It provides prescribed methods for the design and construction of reinforced concrete masonry buildings up to 10 metres in height, including domestic dwellings and most other residential buildings, and some commercial buildings.

The use of NZS 4229 during design and building provides consumers with assurance that their home has been built to meet the legislative requirements of the New Zealand Building Code.

Scope

This Standard is intended as a means of compliance with the following requirements of the New Zealand Building Code (NZBC):

- (a) Clause B1 Structure: Masonry constructed in accordance with this Standard and NZS 4210 will meet the requirements of B1.3.1, B1.3.2, and B1.3.4 for loads from B1.3.3(a), (b), (d), (f), (h), and (j), that is for loads arising from gravity, earth pressure, earthquake, wind, and human impact. This Standard covers masonry constructed to Observation Type B as defined in NZS 4230. Appendix A gives details of concrete masonry walls that are retaining soil. Appendix B gives details of free-standing cantilevered concrete masonry walls;
- (b) Clause B2 Durability: Masonry constructed in accordance with this Standard will be durable for at least 50 years and will therefore meet B2.3.1(a) of the New Zealand Building Code;
- (c) Clause E2 External Moisture: Construction in accordance with this Standard will ensure against damage to building components or dampness in the building as a result of external moisture entering through the masonry walls or the concrete slab-on-ground. This Standard ensures compliance with E2.3.2 and E2.3.3 of the New Zealand Building Code for walls and floors only.

This Standard is not a complete solution to Clause E2 as it does not contain provisions for the other elements of the building envelope such as roofing, exterior joinery, and flashings.

Where this Standard has provisions that are in non-specific or unquantified terms (such as where provisions are required to be appropriate, adequate, suitable, and the like), then these do not form part of the means of compliance with the New Zealand Building Code and shall be to the approval of the building consent authority.

NZS 4229:2013 Concrete masonry buildings not requiring specific engineering design

This document is CITED BY:

- B1/AS1 (First edition, amendment 15)

  NZS 4229:2013 is cited by Acceptable Solution B1/AS1: General from 14/12/2014

- B1/AS1 (First edition, Amendment 16)

  NZS 4229:2013 is cited by Acceptable Solution B1/AS1: General from 14/12/2014

- B1/AS1 (First edition, Amendment 13)

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- B1/AS1 (First Edition, Amendment 17)

  NZS 4229:2013 is cited by Acceptable Solution B1/AS1: General from 14/12/2014

- B1/AS1 (First edition, Amendment 12)

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- B1/AS1 (First edition, Amendment 14)

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- B1/AS3 (First edition, Amendment 13)

  NZS 4229:2013 is cited by Acceptable Solution B1/AS3: Small Chimneys from 14/02/2014

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- B1/AS3 (First Edition, Amendment 17)

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- B1/AS3 (First edition, amendment 15)

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- B1/AS3 (First edition, Amendment 14)

  NZS 4229:2013 is cited by Acceptable Solution B1/AS3: Small Chimneys from 14/02/2014

- E1/AS1 (First Edition, Amendment 10)

  NZS 4229:2013 is cited by Acceptable Solution E1/AS1: Surface Water from 01/01/2017

- G13/AS2 (Second Edition, Amendment 7)

  NZS 4229:2013 is cited by Acceptable Solution G13/AS2: Drainage from 14/02/2014

- G13/AS2 (Second Edition, Amendment 6)

  NZS 4229:2013 is cited by Acceptable Solution G13/AS2: Drainage from 14/02/2014

- G13/AS2 (Second Edition, Amendment 5)

  NZS 4229:2013 is cited by Acceptable Solution G13/AS2: Drainage from 14/02/2014

- CP01:2011 (Errata 1 January 2015)

  NZS 4229:2013 is cited by Code of Practice for Weathertight Concrete and Concrete Masonry Construction

Back

NZS 4229:2013 Concrete masonry buildings not requiring specific engineering design

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This document CITES:

New Zealand Standards

- AS/NZS 1170.0:2002

  NZS 4229:2013 cites AS/NZS 1170.0:2002 Structural Design Actions - General principles

- AS/NZS 1170.1:2002

  NZS 4229:2013 cites AS/NZS 1170.1:2002 Structural Design Actions - Permanent, imposed and other actions

- AS/NZS 1170.2:2011

  NZS 4229:2013 cites AS/NZS 1170.2:2011 Structural Design Actions - Wind Actions

- AS/NZS 1170.3:2003

  NZS 4229:2013 cites AS/NZS 1170.3:2003 Structural Design Actions - Snow and ice actions

- AS/NZS 4671:2001

  NZS 4229:2013 cites AS/NZS 4671:2001 Steel reinforcing materials

- NZS 1170.5 Supp 1:2004

NZS 4229:2013 cites NZS 1170.5 Supp 1:2004 Structural design actions - Part 5: Earthquake actions - New Zealand Commentary

- NZS 1170.5:2004

  NZS 4229:2013 cites NZS 1170.5:2004 Structural Design Actions - Part 5: Earthquake design actions - New Zealand

- NZS 3101.1&2:2006

  NZS 4229:2013 cites NZS 3101.1&2:2006 Concrete structures standard. The design of concrete structures

- NZS 3104:2003

  NZS 4229:2013 cites NZS 3104:2003 Specification for concrete production

- NZS 3109:1997

  NZS 4229:2013 cites NZS 3109:1997 Concrete construction

- NZS 3112.1:1986

  NZS 4229:2013 cites NZS 3112.1:1986 Methods of test for concrete - Tests relating to fresh concrete

- NZS 3112.2:1986

  NZS 4229:2013 cites NZS 3112.2:1986 Methods of test for concrete - Tests relating to the determination of strength of concrete

- NZS 3112.4:1986

  NZS 4229:2013 cites NZS 3112.4:1986 Methods of test for concrete - Part 4: Tests relating to grout

- NZS 3604:2011

  NZS 4229:2013 cites NZS 3604:2011 Timber-framed buildings

- NZS 4210:2001

  NZS 4229:2013 cites NZS 4210:2001 Code of practice for masonry construction: materials and workmanship

- NZS 4230:2004

  NZS 4229:2013 cites NZS 4230:2004 Design of reinforced concrete masonry structures

- NZS 4402.2.2:1986

  NZS 4229:2013 cites NZS 4402.2.2:1986 Methods of testing soils for civil engineering purposes - Soil classification tests - Determination of the liquid limit

- NZS 4402.2.6:1986

  NZS 4229:2013 cites NZS 4402.2.6:1986 Methods of testing soils for civil engineering purposes - Soil classification tests - Test 2.6 Determination of the linear shrinkage

- NZS 4402.6.5.2:1988

  NZS 4229:2013 cites NZS 4402.6.5.2:1988 Methods of testing soils for civil engineering purposes - Soil strength tests - Determination of the penetration resistance of a soil - Test 6.5.2 Hand method using a dynamic cone penetrometer

- NZS 4404:2010

  NZS 4229:2013 cites NZS 4404:2010 Land development and subdivision infrastructure

- NZS 4431:1989

  NZS 4229:2013 cites NZS 4431:1989 Code of practice for earth fill for residential development

Other

- ASTM E96/E96M-12

  NZS 4229:2013 cites ASTM E96/E96M-12 Standard Test Methods for Water Vapor Transmission of Materials

- Field Description of Soil and Rock

  NZS 4229:2013 cites Field Description of Soil and Rock - Guideline for the Field Description of Soils and Rocks in Engineering Purposes (2005)

Back

Close

Table of Contents

Figure B3 – Strip Footing For Cantilevered Walls (Solid Or Partially Filled) Where Footing Is On One Side Of Wall (For Use In Conjunction With Table B3 – See B4.3.2)

Figure B4 – Strip Footing Consisting Of Floor Slab On One Side Of A Cantilevered Wall (For Use In Conjunction With Table B4 – See B4.1.1(C))

Figure D1 – Example Calculation Of Roof Weight Contribution (See D3.4)

Figure D2 – Bracing Capacity Example (See D3.6)

Figure D3 – Strain And Force Diagram (See D4.2.2)