
CONCRETE CONSTRUCTION
Post-tension concrete

level:	3
credit:	20
planned review date:	July 2008
sub-field:	Construction Trades
purpose:	People credited with this unit standard are able to: set up for the post-tensioning of concrete structures to the designed profiles; set up the equipment to apply the designed forces; apply the designed stressing forces; and complete work operations.
entry information:	Open.
accreditation option:	Evaluation of documentation and visit by NZQA and industry.
moderation option:	A centrally established national moderation system has been set up by the Building and Construction Industry Training Organisation.
special notes:	<ol style="list-style-type: none">1 Legislation relevant to this unit standard includes: Health and Safety in Employment Act, 1992.2 Reference material relevant to this unit standard includes: New Zealand Standard (NZS), NZS 3109:1997 Concrete construction. New Zealand Standards are available from Standards New Zealand, Wellington.3 Assessment against this unit standard must be undertaken on site. <i>On site</i> refers to a wide range of building and construction environments within which trade skills are required, and includes concrete production and concrete construction sites.

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Elements and Performance Criteria

element 1

Set up for the post-tensioning of concrete structures to the designed profiles.

Range: anchorages, tendon and/or cable, bar and/or ducts, jacking heads, duct profiles.

performance criteria

- 1.1 Materials and equipment are selected and prepared for post-tensioning in accordance with workplace practice, NZS 3109, manufacturer's specifications, and designed profiles.

Range: materials and equipment - barrels, wedges, anchorages, tendons and/or cables, bar and/or ducts.

element 2

Set up the equipment to apply the designed forces.

performance criteria

- 2.1 Materials and equipment are selected, positioned and prepared for post tensioning in accordance with workplace practice, NZS 3109, and the manufacturer's specifications.

element 3

Apply the designed stressing forces.

performance criteria

- 3.1 The specified minimum concrete strength is achieved and verified from field cured compression tests results for the structure to be post-tensioned.
- 3.2 Stress force is applied in accordance with workplace practice, NZS3109, and manufacturer's specifications.
- 3.3 The specified minimum grout strength at transfer as determined from field cured compression test results is achieved prior to release of anchorages and/or tendons, cables and/or bar.

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element 4

Complete work operations.

performance criteria

- 4.1 All operations are carried out with hazard control procedures in place for identified hazards in accordance with manufacturer's recommendations, site safety plan and Health and Safety in Employment Act, 1992.
- 4.2 Documentation is completed and processed in accordance with workplace practice.

Comments on this unit standard

Please contact the Building and Construction Industry Training Organisation bcitocs@xtra.co.nz if you wish to suggest changes to the content of this unit standard.

Please Note

Providers must be accredited by the Qualifications Authority or a delegated inter-institutional body before they can register credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for providers wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

This unit standard is covered by AMAP 0048 which can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.