

Title	Mechanically cut fabrication materials under supervision		
Level	2	Credits	8

Purpose	People credited with this unit standard are, under supervision, able to prepare for, perform, and verify the mechanical cutting of materials.
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Classification	Mechanical Engineering > Engineering - Fabrication
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Available grade	Achieved
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Explanatory notes

- 1 This unit standard is designed for people who are performing mechanical cutting operations using hand and foot powered equipment and hand held power tools under supervision in the fabrication industry.
- 2 The fabrication industry involves working with a wide range of material types, sections and thicknesses. Material types include – low carbon and alloy steels, stainless steels, aluminium alloys, copper alloys, plastics. Shapes include – sheet materials, plate, sections.
- 3 Assessment must involve more than one material type, more than one shape and more than one thickness, with a material range of either:
 - a 0.4mm to 6mm sheet and plate
 - light walled pipe
 - small structural section, angle, and rolled hollow section
 - or
 - b 3mm plate upwards
 - heavy walled pipe
 - large cross sectional angle, beam and rolled hollow section.
- 4 Assessment must be across a range of cutting operations. Hand and foot powered cutting operations may include – cold chisels, files, hacksaws, drills, taps, dies, stud removers, notchers, guillotines, shears, fly presses. Hand held power tools may include – shears, nibblers, circle cutters, jig saws, hole punches, drills.
- 5 *Enterprise procedures* – documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, housekeeping standards, charging of time and materials, management of drawings and documentation, procedures to comply with legislative and local body requirements.

6 *Job specifications* refer to client's instructions, drawings, and/or contract.

Outcomes and evidence requirements

Outcome 1

Prepare for mechanical cutting of materials under supervision.

Evidence requirements

- 1.1 Cutting equipment and lubricants are identified and selected in accordance with job specifications.
- 1.2 Material properties are verified with supervisor.
- 1.3 Equipment is inspected and checked in readiness to achieve job specifications.
- 1.4 Tools are sharpened and set to achieve desired results in accordance enterprise procedures.
- 1.5 Potential hazards are identified and preventative action is taken in accordance with enterprise procedures.

Outcome 2

Perform mechanical cutting of materials under supervision.

Evidence requirements

- 2.1 Blade clearances are confirmed to achieve shearing in accordance with job specifications.
- 2.2 Materials are cut in accordance with enterprise procedures.
- 2.3 Cut edges conform to job specifications.

Outcome 3

Verify mechanical cutting of materials under supervision.

Evidence requirements

- 3.1 Cut materials are inspected and measured for compliance to job specifications.
- 3.2 Non-conformance to job specifications is identified and reported to supervisor.

Planned review date	31 December 2019
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	31 October 1994	31 December 2014
Revision	2	14 April 1997	31 December 2014
Revision	3	5 January 1999	31 December 2014
Review	4	4 April 2001	31 December 2014
Revision	5	11 November 2005	31 December 2014
Review	6	17 July 2009	31 December 2014
Review	7	24 October 2014	N/A

Consent and Moderation Requirements (CMR) reference

0013

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.