

Title	Cut heavy fabrication materials		
Level	4	Credits	15

Purpose	<p>This unit standard is for use in training of fabrication trades and covers cutting of heavy fabrication materials.</p> <p>People credited with this unit standard are able to: prepare for cutting of heavy fabrication materials; cut heavy fabrication materials; and inspect materials after cutting.</p>
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Classification	Mechanical Engineering > Engineering - Fabrication
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Available grade	Achieved
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Explanatory notes

- 1 References

Health and Safety in Employment Act 1992.
 Accident Compensation Corporation and Department of Labour. *Metal Industry Guidelines for Safe Work*. Wellington: ACC, 2007. Available from <http://www.acc.co.nz>.
- 2 Definitions

Industry practice – safe and sound practices accepted by the fabrication industry.
Job specifications – instructions relevant to the safe completion of the specific task, such as technical specifications, assembly instructions, drawings, parts lists, standards, codes of practice, test and commissioning procedures, and verbal instructions.
Safety guidelines – guidelines for the safe operation of machinery and tools, such as those listed in the references, as well as guidelines for specific machines in workshops.
Worksite procedures – operational procedures put in place by the candidate's employer. These include site safety procedures, equipment operating procedures, job procedures, quality assurance, and procedures for the handling and disposal of materials and waste.
- 3 Range
 - a All activities must demonstrate safe working practices.
 - b All activities must be completed independently and reported within reasonable timeframes.
 - c Materials must be of 3mm or greater thickness.
 - d Materials may include – plate, heavy structural sections, angles, channels, pipes, tubes.
 - e Cutting machines may include guillotines, croppers, cutoff saws, drop saws, punches and notches, jig saws, band saws and bevellers. Source of power may include electrical, mechanical, pneumatic, or hydraulic with manual or computer control systems.

- f Hand-held power tools may include – shears, nibblers, circle cutters, hole punches, drills, angle grinders.
- g Evidence of at least six unique projects is required.

Outcomes and evidence requirements

Outcome 1

Prepare for cutting of heavy fabrication materials.

Evidence requirements

- 1.1 Preparation includes verification of requirements, planning of work sequences, and identification of potential problems.
- 1.2 Potential hazards are identified and addressed in accordance with the safety guidelines.
- 1.3 Materials are selected and characteristics ascertained in respect to cutting in accordance with job specifications and or instructions.
- 1.4 Cutting machines, lubricants, and equipment are selected and checked for readiness in accordance with worksite procedures.
- 1.5 Cutting allowances are determined in accordance with job specifications and industry practice.
- 1.6 Machines are set and settings verified to achieve specified results in accordance with job specifications, industry practice, and worksite procedures.

Outcome 2

Cut heavy fabrication materials.

Evidence requirements

- 2.1 Materials are cut in accordance with job specifications and worksite procedures.
- 2.2 Cut edges are deburred to conform to job specifications in accordance with industry practice and worksite procedures.
- 2.3 Machines are maintained in clean and safe condition and ready for next use.
- 2.4 Waste materials are disposed of and unused material stored in accordance with worksite procedures.

Outcome 3

Inspect materials after cutting.

Evidence requirements

- 3.1 Cut materials are inspected for compliance with specifications, and any deviations noted, in accordance with worksite procedures.
- 3.2 Completion of work is reported in accordance with worksite procedures.

Replacement information	<p>This unit standard and unit standard 25702 were replaced by unit standard 30272.</p> <p>This unit standard and unit standard 25702 replaced unit standard 2421 and unit standard 2425.</p>
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 July 2009	31 December 2022
Review	2	20 July 2017	31 December 2022

Consent and Moderation Requirements (CMR) reference	0013
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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.