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| Title | Use flame cutting equipment to cut mild steel | | |
| Level | 2 | Credits | 2 |

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| Purpose | <p>This unit standard is for people working in the steel manufacturing sector.</p> <p>People credited with this unit standard are able to: prepare work site, equipment and materials for cutting; flame cut mild steel material; and extinguish flame, shut down and store equipment.</p> |
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| Classification | Steel Manufacturing > Steel Product Handling |
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| Available grade | Achieved |
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Explanatory notes

- 1 Definitions
Company documentation refers to the documented procedures, manufacturer's manuals and selected reference texts for the equipment and process.
Mild steel is carbon steel with a carbon equivalent < 0.45.
- 2 Legislation relevant to this unit standard includes but is not limited to – Health and Safety in Employment Act 1992, Resource Management Act 1991.
- 3 This unit standard must be assessed in a workplace environment.
- 4 Flame cutting competencies included do not extend to the preparation of steel for welding.

Outcomes and evidence requirements

Outcome 1

Prepare work site, equipment and materials for cutting.

Evidence requirements

- 1.1 Potential hazards are identified prior to cutting in accordance with company documentation.

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| Range | potential hazards include but are not limited to – fire and/or explosion, fumes, compressed gases, hot metals, damaged or faulty equipment. |
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- 1.2 Steps are taken to eliminate, isolate and minimise the hazards in accordance with company documentation and legislative requirements.
- Range hazards include but are not limited to – flammable materials, ventilation, spark fallout area, personal protective equipment.
- 1.3 The settings and functions of critical components and tools are described in accordance with company documentation.
- Range critical components and tools include but are not limited to – gas bottles, bulk supply, regulators, gauges, pressure settings, hoses, flashback arrestors, torches, mixers, tips, bottle keys and tip cleaners.
- 1.4 Consumables are identified and described in terms of company documentation.
- Range consumables include but are not limited to – gas types, tips.
- 1.5 Equipment is assembled and set up to work site requirements and/or manufacturers instructions.
- 1.6 Material is positioned and supported for cutting in accordance with company documentation.

Outcome 2

Flame cut mild steel material.

Evidence requirements

- 2.1 Torch is lit and flame is adjusted in accordance with manufacturer's instructions.
- 2.2 Cuts are initiated from an edge start and a pierce start.
- Range cuts include but are not limited to – plate to 25 mm thickness, hollow sections to 6.0 mm wall thickness.
- 2.3 Cuts are continuous and material parts readily.
- 2.4 Cutting performance problems are identified and addressed in accordance with company documentation.
- Range performance problems include but are not limited to – backfire, flashback, tip blockages, cutting speed, torch height, incorrect flame adjustment.

Outcome 3

Extinguish flame, shut down and store equipment.

Evidence requirements

- 3.1 Flame is extinguished and gas turned off in accordance with manufacturer's instructions.
- 3.2 Gas supply is turned off and regulators depressurised in accordance with manufacturer's instructions.
- 3.3 Torch and hoses are stored in accordance with company documentation.

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| Planned review date | 31 December 2012 |
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Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
|-----------------------|---------|---------------|--------------------------|
| Registration | 1 | 29 April 1998 | 31 December 2012 |
| Rollover and Revision | 2 | 15 March 2012 | N/A |

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| 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.

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.