

Title	Inspect and repair patterns in the metal forming industry		
Level	3	Credits	10

Purpose	<p>This unit standard is intended primarily for use in the training of personnel in the metal forming industry.</p> <p>People credited with this unit standard are, under supervision, able to: prepare to inspect and repair; inspect; and repair patterns in the metal forming industry.</p>
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Classification	Mechanical Engineering > Metal Forming
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Available grade	Achieved
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Guidance Information

- 1 Recommended unit standards for entry:
Unit 21911, *Demonstrate knowledge of safety on engineering worksites*;
Unit 21912, *Apply safe working practices on an engineering worksite*.
- 2 Legislation
Health and Safety at Work Act 2015 and supporting regulations.
Resource Management Act 1991 and subsequent amendments.
Hazardous Substances and New Organisms Act 1996.
- 3 Definitions
Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the metal forming industry sector as examples of best practice.
Metal forming refers to the metalworking process of creating metal parts and objects through, for example, sand casting, die casting, investment casting, continuous casting, centrifugal casting, forging, extrusion, three-dimensional additive metal manufacturing.
Workplace procedures refer to documented policies and procedures set by the organisation carrying out the work, and to documented or other directions provided to staff, and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, product quality specifications, references, Approved Codes of Practice, housekeeping standards, environmental considerations, and procedures to comply with legislative and local body requirements relevant to the industry sector.
- 4 Range
Evidence of at least five inspections and three repairs is required.

- 5 Assessment Information
- a All activities must comply with relevant legislative and/or regulatory requirements.
 - b All activities must comply with applicable workplace procedures and must be consistent with accepted industry practice.
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Outcomes and performance criteria

Outcome 1

Prepare to inspect and repair patterns in the metal forming industry.

Performance criteria

- 1.1 Patterns specifications, layout drawings, and material are established in accordance with job sheet, and are verified with supervisor.
- 1.2 Tools, equipment, and materials for repairs are sourced and verified with supervisor.

Outcome 2

Inspect patterns in the metal forming industry.

Performance criteria

- 2.1 Patterns are inspected for damage, and deterioration.
Range dimensions, tolerance, finishing, damages.
- 2.2 Damage is identified and reported to the supervisor.
- 2.3 Deterioration is identified and reported to the supervisor.

Outcome 3

Repair patterns in the metal forming industry.

Performance criteria

- 3.1 Patterns are repaired.
- 3.2 Replacement parts are made or obtained and installed.
Range parts may include but are not limited to – broken boss, lug, gusset, core print.
- 3.3 Dimensions of repaired patterns are measured to ensure they are within specified tolerance, and are verified with supervisor.
- 3.4 Repaired patterns surface finish are within specification.

- 3.5 Repaired patterns are confirmed as functionally meeting the requirements of specification, and are verified with supervisor.

Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	22 August 2019	N/A

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>.

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.