

Title	Inspect and repair refractory linings and crucibles used in metal forming processes		
Level	3	Credits	15

Purpose	<p>This unit standard is designed for training in the metal forming trade and covers the inspection and repair of refractory linings for ladles, furnaces, crucibles, and launders.</p> <p>People credited with this unit standard are able to: inspect and report on lining or crucible condition and repair or replacement requirements; and repair and/or replace lining or crucible and complete documentation.</p>
----------------	---

Classification	Mechanical Engineering > Metal Forming
-----------------------	--

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 References and legislation

Health and Safety at Work Act 2015 and supporting regulations.
 Hazardous Substances and New Organisms Act 1996.
 Resource Management Act 1991.
 WorkSafe New Zealand. *Health and Safety Guidelines on the Management of Hazards in the Metal Casting Industry*. Available at:
<http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/metal-casting-industry-health-and-safety-guidelines-for-the-management-of-hazards-in/metal-casting-hs-guidelines.pdf>.
- 2 Definitions

Accepted industry practice refers to approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors 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 the procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.

3 Assessment Information

All activities must comply with applicable workplace procedures and must be consistent with accepted industry practice.

Outcomes and performance criteria

Outcome 1

Inspect and report on lining or crucible condition and repair or replacement requirements.

Performance criteria

1.1 Lining or crucible is inspected for repair or replacement and reported.

Outcome 2

Repair and/or replace lining or crucible and complete documentation.

Performance criteria

2.1 The type of lining or crucible material to be repaired is defined in accordance with plant and process specification.

2.2 Defective lining is repaired or replaced.

Range patch, re-line.

2.3 Workplace safety procedures are followed.

2.4 Waste material disposed of in a controlled manner.

2.5 Work area is cleaned.

2.6 Documentation for repair is completed and status communicated to relevant workplace personal.

Planned review date	31 December 2022
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 October 1994	31 December 2012
Revision	2	14 April 1997	31 December 2012
Revision	3	5 January 1999	31 December 2012
Review	4	19 October 1999	31 December 2012
Review	5	19 May 2006	31 December 2016

Process	Version	Date	Last Date for Assessment
Rollover and Revision	6	17 November 2011	31 December 2018
Review	7	15 September 2016	31 December 2022
Review	8	17 August 2017	N/A

Consent and Moderation Requirements (CMR) reference	0013
--	------

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.