

Title	Operate a press for non-ferrous metal extrusions		
Level	3	Credits	10

Purpose	People credited with this unit standard are able to: demonstrate knowledge of extrusion press operations; operate an extrusion press; and shut down an extrusion press operation.
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Classification	Manufacturing Skills > Manufacturing Processes
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Available grade	Achieved
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Guidance Information

1 References

Legislation relevant to this unit standard includes but is not limited to the: Health and Safety in Employment Act 1992; Resource Management Act 1991; Hazardous Substances and New Organisms Act 1996 and any subsequent amendments.

2 Definitions

Basic machine maintenance – routine actions that ensure operational integrity.

Examples may include but are not limited to: cleaning, replenishing, lubricating, minor adjustments, and minor trouble shooting.

Industry practice – safe and sound trade practices generally accepted by competent persons within the manufacturing industry.

Worksite procedures – documents that include: worksite rules, codes, and practices; equipment operating instructions; documented quality management systems; and health and safety requirements.

3 Assessment information

All work practices must meet recognised codes of practice and documented worksite safety procedures (where these exceed the codes) for personal, product, and worksite safety), and must also meet the obligations required under current legislation.

Competence is to be demonstrated on three occasions of operating a press for non-ferrous extrusions.

For assessment against this unit standard, the candidate is expected to have full responsibility for operating the press. Unit standard 4805, *Perform non-ferrous extrusion process operations* is designed to be assessed against under supervision.

4 Recommended skills and knowledge:

Unit 4805, *Perform non-ferrous extrusion process operations*.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of extrusion press operations.

Performance criteria

- 1.1 Product, production, and equipment terminology is used in accordance with industry practice.
- 1.2 Key components of an extrusion press are described in terms of their purpose, capacity, and principles of operation.
- Range billet or log furnace, press, tooling, puller (where used), product shear.
- 1.3 Product specifications and drawings are interpreted to establish production requirements in accordance with industry practice.
- 1.4 Start up and shut down are described in terms of effects on neighbouring machines and equipment.
- Range upstream, downstream.

Outcome 2

Operate an extrusion press.

Performance criteria

- 2.1 Machine and equipment safety devices and personal protective equipment are used in accordance with job requirements and worksite procedures.
- 2.2 Personnel affected by the start up procedure are advised in accordance with worksite procedures.
- Range may include but is not limited to – immediate location, neighbouring machines.
- 2.3 Machine is started in accordance with worksite procedures.
- 2.4 Raw material identification, loading, and preheating are co-ordinated to meet production schedule and product specification.
- 2.5 Extrusion press operations are co-ordinated with supporting services in accordance with worksite procedures.
- Range die preheating and changing, inspection, cooling, stretching or straightening, cutting, sorting, ageing (where required), planning.
- 2.6 Extrusion press condition is monitored and reported in accordance with worksite procedures.

- 2.7 Extrusion press variables are monitored and controlled to meet product specifications and production schedule in accordance with worksite procedures.
- Range extrusion speed, break through pressure, billet temperature, product exit temperature, run out tension, quenching.
- 2.8 Product is checked and processing faults are identified, and rectified and/or reported in accordance with worksite procedures.
- 2.9 Non-conforming product is sorted and processed in accordance with worksite procedures.
- Range may include but is not limited to – placed on hold, re-worked, disposed of.
- 2.10 Conforming product is removed, handled, and stored in accordance with worksite procedures.

Outcome 3

Shut down an extrusion press operation.

Performance criteria

- 3.1 Personnel affected by the shut down procedure are advised in accordance with worksite procedures.
- Range may include but is not limited to – immediate location, neighbouring machines.
- 3.2 Machine is shut down in accordance with worksite procedures.
- 3.3 Basic machine maintenance and/or housekeeping is performed in accordance with worksite procedures.
- 3.4 Scrap and/or waste processing is performed in accordance with worksite procedures.
- 3.5 Recording and/or reporting is carried out in accordance with worksite procedures.
- Range may include but is not limited to – hard copy and/or electronic recording and/or reporting.

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	27 June 1995	31 December 2023
Revision	2	14 April 1997	31 December 2023
Revision	3	5 January 1999	31 December 2023
Review	4	26 July 2005	31 December 2023
Review	5	18 March 2011	31 December 2023
Review	6	26 August 2021	31 December 2023

Consent and Moderation Requirements (CMR) reference

0013

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