



Australian Government

MEM07043 Identify causes of faulty aluminium extrusions

Release: 1

MEM07043 Identify causes of faulty aluminium extrusions

Modification History

Release 1. Supersedes and is equivalent to MEM07043A Identify causes of faulty aluminium extrusions

Application

This unit of competency defines the skills and knowledge required to systematically examine aluminium extrusions produced on solid and hollow dies for faults that are both die, and non-die related and tracing the reasons for the faults.

It includes determining the most appropriate corrective action for the fault and, where appropriate, providing recommendations to extruder operators, die designers and die manufacturers.

Where the selection and use of power tools/hand held operations is required Unit MEM18002 Use power tools/hand held operations should also be selected.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 6

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools

Competency Field

Machine and process operations

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|---|--|
| 1 | Determine job requirements | 1.1 Follow standard operating procedures (SOPs) |
| | | 1.2 Comply with work health and safety (WHS) requirements at all times |
| | | 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 Identify job requirements from specifications, drawings, job sheets or work instructions |
| | | |
| 2 | Collect information on faulty extrusion | 2.1 Liaise with extruder operator on die service or fault correction requests |
| | | 2.2 Access and examine die in accordance with procedures |
| | | 2.3 Examine extruder records and identify any previous die corrections |
| | | 2.4 Consult with die designer on faults, where required |
| | | 2.5 Examine extruder maintenance records and liaise with maintenance department |
| | | |
| 3 | Interpret die drawing and specifications | 3.1 Identify layout and pre-forming of die apertures |
| | | 3.2 Identify bearing and pocket design/specification |
| | | 3.3 Identify measurements and tolerances for bearings, die components and die support system |
| | | 3.4 Identify bolster and spacer specification for die |
| | | 3.5 Identify press specifications |
| | | 3.6 Identify speed estimate for die |
| | | 3.7 Identify ports and bridges for hollow dies |

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
4	Examine faulty extrusions	4.1	Check extrusions for shape distortion
		4.2	Check extrusion measurements are to specification
		4.3	Inspect surface finish of extrusions for defects
		4.4	Identify whether faults apply from the start to the end of extrusion runouts
		4.5	Make a preliminary assessment as to whether faults are related to die or die support system or other factors
5	Check for faults not related to die or die support system	5.1	Examine die and billet heating and temperature records and confirm heating and temperature was to specification
		5.2	Confirm extruder was run at correct speed and other settings were to specification
		5.3	Examine billet history and determine if billet was recycled or faulty
		5.4	Confirm with maintenance department that extruder is free of mechanical, electrical, control or structural faults
6	Identify die and die support related faults	6.1	Access die and die support system
		6.2	Inspect die for overall wear, dishing, damage and other defects
		6.3	Inspect bearings for shortening, surface defects, loss of specified angle and clearances
		6.4	Determine if die can be corrected, scrapped or returned to manufacturer
		6.5	Inspect die support system and components for defects and die slide misalignment
7	Record cause of fault and	7.1	Prepare recommendations for die correction and obtain any required approvals

Elements describe the essential outcomes.

communicate as required

Performance criteria describe the performance needed to demonstrate achievement of the element.

7.2 Prepare recommendations for any changes to process or temperature settings and distribute, as appropriate

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>