



Australian Government

Department of Education, Employment and Workplace Relations

MEM04008B Fettle and trim metal castings/forgings

Release: 1

MEM04008B Fettle and trim metal castings/forgings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers fettling and trimming metal castings and assessing the quality of the casting.
------------------------	---

Application of the Unit

Application of the unit	This unit applies to dressing and assessing quality of metal castings/forgings in production and jobbing environments. Band: A Unit Weight: 4
--------------------------------	--

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM18001C	Use hand tools
	MEM18002B	Use power tools/hand held operations

Employability Skills Information

Employability skills	This unit contains employability skills.
-----------------------------	--

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
---	--

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine job requirements	1.1. Job requirements are correctly determined from instructions and specifications. 1.2. Correct mouldings and/or castings/forgings are located and arranged for efficient processing.
2. Observe safety requirements	2.1. Personal protective equipment is selected and used correctly. 2.2. Castings/forgings are handled using manual or mechanical handling methods appropriate to the task. 2.3. Castings/forgings are stored or positioned in a safe manner.
3. Identify excess material for removal	3.1. Casting is removed from mould and/or sand media is removed from casting as required. 3.2. Castings/forgings are visually checked as suitable for further processing, and excess metal is correctly identified according to standard operating procedures.
4. Select correct tools and equipment	4.1. Cleaning method is selected appropriate to casting and job requirements. 4.2. Rumbling/shot blast/sand blast equipment is set to specification and used in accordance with standard operating procedures as required. 4.3. Appropriate hand tools are selected and used for the given task. 4.4. Appropriate power tools and accessories are selected and used for the given task.
5. Remove excess material	5.1. Excess metal (e.g. runners, risers and flashing) is removed using methods and equipment appropriate to the task and to standard operating procedures. 5.2. Excess metal suitable for recycling is identified according to standard operating procedures. 5.3. Excess metallic materials are identified from specifications and isolated as required according to standard operating procedures.
6. Quality assess castings/forgings	6.1. Castings/forgings are visually checked for conformance with specifications to standard operating procedures. 6.2. Non-conforming castings/forgings are rejected or set aside and identified for further consideration or remedial action according to standard operating

ELEMENT	PERFORMANCE CRITERIA
	procedures. 6.3. Faults are reported/recorded as required according to standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- interpreting written instruction sketches and drawings
- identifying castings
- visually inspecting castings
- fettling and trimming metal castings/forgings
- conducting a final inspection

Required knowledge

Look for evidence that confirms knowledge of:

- accept/reject/rework criteria
- fettling requirements
- fettling tools
- fettling standards
- handling and storage requirements
- use and application of personal protective equipment
- safe work practices and procedures
- hazards and control measures associated with fettling and trimming metal castings/forgings
- excess metals suitable for recycling

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to fettle and trim metal castings/forgings. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, i.e. the candidate is not in productive work, then appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with fettling and trimming metal castings/forgings or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

EVIDENCE GUIDE**Guidance information for assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Hand tools

Dedicated tools for fettling and trimming: files, chisels, hammers etc.

Power tools

Saws, croppers, grinding disks/belts (including grades), swing and pedestal grinders etc.

Unit Sector(s)**Unit sector****Co-requisite units**

Co-requisite units		

Competency field

Competency field	Casting and moulding
------------------	----------------------