



Australian Government

Department of Education, Employment and Workplace Relations

PMC553020C Prepare moulds and dies

Revision Number: 1

PMC553020C Prepare moulds and dies

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the preparation of moulds and dies, and includes the preparation of cases and frames. It involves selecting the necessary tools and materials, making dies to specification and ensuring finished product is to specification.
------------------------	---

Application of the Unit

Application of the unit	<p>This unit of competency applies to operators who are responsible for preparing cases and frames and making working moulds for specified products. The operator is able to make and check the mould against the procedures or other relevant standards/drawings.</p> <p>This unit of competency covers the making of moulds, models and dies for use in a variety of manufacturing operations, such as:</p> <ul style="list-style-type: none">• concrete products• clay products• ceramic products <p>This unit was developed for larger production contexts but it may also be relevant to craft practitioners producing ceramic work.</p>
--------------------------------	---

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

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. Prepare cases and frames	1.1. Check manufacturing schedule to determine type of mould to be made 1.2. Set up materials for case making to procedure 1.3. Make case to specification 1.4. Check case against requirements
2. Prepare and make working moulds	2.1. Pick the required case/frame 2.2. Make the working mould to procedures 2.3. Remove working mould from the case 2.4. Check, finish and store mould to procedures
3. Prepare dies	3.1. Check manufacturing schedule for type of die needed 3.2. Set up materials for die making to procedure 3.3. Make die to specifications 3.4. Remove working die from master die and prepare for use to procedure
4. Respond to problems	4.1. Identify possible routine and non-routine problems in the equipment or process 4.2. Determine problems needing action 4.3. Determine possible fault causes 4.4. Rectify problem using appropriate solution within area of responsibility 4.5. Report problems outside area of responsibility to designated person
5. Control hazards	5.1. Identify hazards from the job to be done 5.2. Identify other hazards in the work area 5.3. Assess the risks arising from those hazards 5.4. Implement measures to control those risks in line with procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- recognising situations which could cause production problems and taking appropriate action
- implementing enterprise's procedures and relevant regulatory requirements within appropriate time constraints and in a manner relevant to the operation of moulds and dies
- using and maintaining all required materials, tools and parts
- diagnosing and solving problems involved in the work
- achieving specified quality standards
- communicating effectively with team members, management and other departments
- reading and numeracy to interpret workplace documents and technical information

Required knowledge

Required knowledge includes:

- characteristics of different materials
- requirements from drawings, specifications or job sheets
- underlying causes of faults such as precipitated by:
 - materials
 - dimensions
 - allowance for shrinkage
 - damage to components

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

The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency.

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

Competence must be demonstrated in the ability to recognise situations requiring action and then in implementing appropriate corrective action. Consistent performance should be demonstrated. In particular look to see that:

- OHS requirements are met
- quality improvement techniques are applied
- emergency procedures are understood and applied
- waste is minimised.

Context of and specific resources for assessment

Assessment will require access to an operating plant over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations.

Assessment will occur over a range of situations which will include disruptions to normal, smooth operation.

Simulation or case studies/scenarios may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual plant and will include 'walk-throughs' of the relevant competency components. A bank of scenarios/case studies/what ifs and questions will be required to probe the reasoning behind observable actions.

Method of assessment

Individual enterprises may choose to add prerequisites and co-requisites relevant to their processes.

Guidance information for assessment

Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

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.

Procedures

All operations are performed in accordance with standard procedures and work instructions

Materials

Materials may include:

- additives
- body materials
- epoxy resins
- metal strapping
- plaster
- plastic
- release agents
- rubber
- slip
- timber
- water

Occupational health and safety (OHS)

All operations are subject to stringent OHS requirements and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and OHS requirements, the OHS requirements take precedence

Unit Sector(s)

Unit sector

Operational/technical

Competency field

Competency field	
------------------	--

Co-requisite units

Co-requisite units		