Australian Government

Department of Education, Employment and Workplace Relations

PMC553072B Model fibrous plaster products

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to make a model of a final fibrous plaster product which may be used as a prototype or as a basis for the later production of the item.

Application of the Unit

Application of the unit	This unit of competency applies to plaster modellers who are responsible for producing from, sections, samples or designs, a variety of specialty fibrous plaster products which may include non-standard geometric shapes, architectural renovation, restoration and/or replication of existing features. This competency is generally performed by an experienced modeller or a trainee modeller under supervision.

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. Determine work piece to be produced	1.1. Discuss required attributes of the work piece with supervisor or as appropriate the client 1.2. Determine dimensions and geometry of the work piece 1.3. Identify the profile, pattern and specific features required to be replicated 1.4. Establish and/or plan fixing or anchoring points and the best way to facilitate this in the work piece 1.5. Plan the production method and determine materials and equipment needs.
2. Set up work area and equipment	2.1. Establish work area including anchor points for slides or screeds as necessary 2.2. Develop templates required to produce the work piece 2.3. Mark out the correct dimensions and work piece geometry and check against templates or slide radii 2.4. Establish and position any support materials required to develop and sustain the work piece during production 2.5. Position any lifting or anchoring materials and check that these do not inhibit templates or screeds 2.6. Test the functionality of the slides and ensure that all parts of the proposed work piece can be accessed
3. Generate profile of required work piece	3.1. Produce a segment of the desired profile and ensure that this matches the requirements of the original design 3.2. Mount the sample to facilitate replication or to produce appropriate surface detail on the work piece 3.3. Lubricate the sample for replication and the supporting work plate to facilitate ease of stripping of the completed work piece
4. Produce work piece	4.1. Set up the supporting material in a manner which avoids interference with the screed or template 4.2. Prepare plaster mix and ensure fibre strand is available 4.3. Build up rough outline of the work piece adding fibre as the process proceeds 4.4. Form up the desired shape by moving the sample, template or mould to facilitate development of the desired profile or by screeding off

ELEMENT	PERFORMANCE CRITERIA
	4.5. Build in anchor points or reinforcing at desired positions as the work proceeds 4.6. Hollow out the work piece to minimise the mass of the object, as appropriate 4.7. Check the profile to ensure compliance with the desired product 4.8. Check the work piece for dimensional accuracy
5. Strip and inspect completed work piece	5.1. Remove any external supports from the work piece after the plaster has dried 5.2. Dismantle slides if used 5.3. Clean and put away tools and fitments used in the production process 5.4. Remove the work piece and inspect for errors, damage or porosity 5.5. Clean up any excrescences and remove any waste material 5.6. Coat the surface of the finished product according to organisational requirements to protect the surface 5.7. Remove finished product to storage and shipment
6. Control hazards	6.1. Identify hazards during the process or within the work area 6.2. Assess the risks arising from those hazards 6.3. Implement measures to control those risks in line with procedures and duty of care
7. Respond to problems	7.1. Identify possible problems in equipment or process 7.2. Determine problems needing action 7.3. Determine possible fault causes 7.4. Rectify problem using appropriate solution within area of responsibility 7.5. Follow through items initiated until final resolution has occurred 7.6. Report problems outside area of responsibility to designated person

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- using and maintaining all required materials, tools and parts
- 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 production of fibrous plaster products
- diagnosing and solving problems involved in the work
- communicating effectively with team members, management and in some cases, clients
- reading and numeracy to interpret workplace documents and technical information

Required knowledge

Required knowledge includes:

- specified quality standards
- characteristics of different materials
- requirements from drawings, specifications or job sheets
- distinguish between causes of faults such as:
  - materials faults
  - dimensional inaccuracies
  - inappropriate allowance for material shrinkage

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	In all plants it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.
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
Products	Products may include: • ornamental castings including scotias, cornices and arches • centre pieces (both reinforced and un-reinforced) • ornamental recessed panels
Equipment and unit operations	This unit of competency includes all such items of equipment and unit operations which form part of the modelling process. These may include: • slides • templates • reinforcing materials • separation agents • lifting equipment (for large work)
Fibre	Fibre may be glass fibre or other appropriate fibre
Typical problems	Typical problems may include: • incorrect calculations or setting out • inappropriate plaster mixtures • variations in ambient temperature • inappropriate placement of reinforcing or anchor points
Occupational health and safety (**OHS**)	The identification and control of hazards and the application of OHS is to be in accordance with current, applicable legislation and regulations, and company procedures. All work is carried out at all times in accordance with these requirements

Unit Sector(s)

Unit sector	Operational/technical

Competency field

Competency field	

Co-requisite units

Co-requisite units		