



Australian Government

Department of Education, Employment and Workplace Relations

PMC552044C Operate fibre forming equipment

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the operation of fibre forming/ extrusion equipment used for the manufacture of glass fibres. It involves preparing formation equipment for production, operating and monitoring equipment, undertaking sampling and quality checks, rectifying routine problems and undertaking minor maintenance.
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Application of the Unit

Application of the unit	This unit of competency applies to operators who are responsible for operating, monitoring and maintaining float forming equipment within the manufactured mineral products industry. This competency includes the operation of all ancillary equipment. This competency is typically performed by operators working either independently or as part of a work team. At all times they would be liaising with other members of the team.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare forming equipment	1.1. Interpret job specifications and set up the appropriate equipment in accordance with work instructions 1.2. Check materials stocks for quality and quantity suitable for production 1.3. Prepare all consumables for production 1.4. Undertake equipment preparation and checks according to established procedures
2. Operate forming equipment	2.1. Start up equipment in accordance with work instructions 2.2. Form glass by directing product flow in accordance with work instructions and safety requirements 2.3. Ensure forming processing equipment is operated in accordance with established enterprise procedures
3. Monitor and record forming equipment operation	3.1. Monitor equipment to ensure that quality specifications are met 3.2. Make operation adjustments according to established procedures to maintain product quality 3.3. Conduct product sampling and quality control checks according to enterprise procedures to maintain forming specifications 3.4. Monitor application of size over glass fibres to ensure quality specifications are met 3.5. Use and observe ancillary equipment and safety procedures in accordance with enterprise requirements 3.6. Document and maintain records and production results according to enterprise requirements 3.7. Identify and report processing problems to a designated person for rectification
4. Rectify routine problems	4.1. Identify the range of faults that can occur during the operation 4.2. Determine and rectify fault causes in accordance with procedures 4.3. Identify and rectify equipment failure causes in accordance with procedures 4.4. Ensure appropriate records and log books of equipment operations are maintained to meet procedures 4.5. Identify non-routine problems and report to

ELEMENT	PERFORMANCE CRITERIA
	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 process conditions which will lead to out of specification production
- implementing the enterprise's standard procedures and work instructions and relevant regulatory requirements within appropriate time constraints and in a manner relevant to the operation of the process and equipment
- reading and numeracy to interpret workplace documents and technical information

Required knowledge

Required knowledge includes:

- composition and nature of the glass
- startup and shutdown processes
- construction and limitations of the equipment
- out of specification situations
- importance of safety procedures and personal protective equipment (PPE)
- quality problems which may include:
 - broken packs
 - mixed and damaged material
 - double winding
 - forming positions
 - break and stoppages
 - poor glass quality
- distinguish between causes of faults such as:
 - raw materials
 - equipment
 - types of defects/faults
 - electrical/instrumental

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

It is essential that the equipment and operating parameters be understood and that the importance of critical material properties is known. Competence must be demonstrated in the ability to recognise and analyse potential situations requiring action and then in implementing appropriate corrective action.

Consistent performance should be demonstrated. In particular look to see that:

- equipment setup is completed in accordance with work instructions
- signals and alarms are responded to immediately
- process measurements are continually made, observed and interpreted
- operating supply levels are maintained
- equipment problems are identified and responded to immediately
- quality is maintained to customer specifications.

Competence must be demonstrated in the operation of all ancillary equipment to the level required for this unit of competency.

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

EVIDENCE GUIDE	
	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. 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
Equipment	Equipment may include: • forming equipment • size application equipment • communication equipment • hand tools • safety clothing and equipment
Typical problems	Typical problems may include: • winding and sliver problems • equipment problems including condition and cleaning of equipment • quality problems
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
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		