



Australian Government

MSFGG4005 Set up, configure, upgrade and troubleshoot glass and glazing plant and ancillary equipment

Release: 1

MSFGG4005 Set up, configure, upgrade and troubleshoot glass and glazing plant and ancillary equipment

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers setting up, testing, adjusting, troubleshooting and quality assuring a range of glass and glazing processing plant and equipment. It includes non-numerical control (NC)/computer numerically controlled (CNC) production machines and processes for semi-automatic or automatic operation. Troubleshooting involves using testing equipment to identify problems and take corrective action.

Job roles require discretion, judgement and problem solving with complex technical difficulties resolved in consultation with appropriate technical advisers. Training of plant operators in correct operational procedures and techniques is required.

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

Pre-requisite Unit

Competency Field

Unit Sector

Glass and Glazing

Elements and Performance Criteria

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Identify plant set-up requirements	1.1	Required specifications for glass processing are identified and interpreted for process application
		1.2	Plant machinery and ancillary equipment are identified and checked for safe and effective operation, including emergency stops, gauges, guards and controls
		1.3	Procedures for checking the quality of glass produced, working condition of equipment, and quality requirements for each stage of the process are identified

2	Set machine/s	2.1	Sequence of glass processing operations is determined and plant machine/s set or programmed accordingly
		2.2	Plant machine/s and programs are adjusted to meet glass product specifications and operational requirements.
		2.3	Plant pre-start, start-up and set-up procedures are completed in accordance with manufacturer instructions and workplace procedures
3	Trial program	3.1	Plant is operated to process glass, observing all safety procedures
		3.2	Sample glass product is checked for compliance with specifications
		3.3	Program editing to change operational sequence, speed and tolerance requirements is undertaken as required to ensure processing conforms to specification
4	Identify abnormal plant and/or process performance	4.1	Tests are conducted to determine if plant machines and ancillary equipment is operating to specification and products produced meet quality standards
		4.2	Signs of equipment or product degradation and impending failure are recognised
5	Identify causes of substandard performance	5.1	Maintenance records are examined to ensure that plant machinery and equipment does not require simple maintenance
		5.2	Calibration records are accessed and equipment tested to determine if plant is operating within calibration
		5.3	All plant and testing variables are evaluated to identify possible causes of substandard performance and equipment isolated using appropriate elimination techniques
6	Rectify plant faults	6.1	Adjustments or corrections for plant and ancillary equipment are assessed and made as required
		6.2	Plant is checked to ensure correct operation
7	Instruct machine operator	7.1	Operator of set-up and programmed plant is instructed on correct operation of the plant ensuring that all safety procedures and devices are in place
		7.2	Operator is monitored to ensure plant is operated correctly

and remedial instruction provided where necessary

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency. Detail on appropriate performance levels for each furnishing unit of competency in reading, writing, oral communication and numeracy utilising the Australian Core Skills Framework (ACSF) are provided in the Furnishing Training Package Implementation Guide.

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included. Range is restricted to essential operating conditions and any other variables essential to the work environment.

Unit scope includes:

- setting up and programming semi-automatic and automatic machines in glass processing plants
- testing machines, ancillary equipment and processed glass products against operational specifications
- quality assurance of products and identifying faults and out of specification operation of glass plant machinery and ancillary equipment
- rectifying common plant faults or referring complex problems to appropriate technicians
- training plant operators on correct procedures

Work health and safety (WHS) requirements include:

- Commonwealth, state or territory legislation and regulations
- organisational safety policies and procedures
- the use of personal protective equipment and clothing
- firefighting equipment
- first aid equipment
- hazard and risk control and elimination of hazardous materials and substances
- manual handling, including lifting and carrying

Procedures include:

- work instructions
- standard operating procedures
- written, verbal or computer-based procedures

Organisational requirements include:

- legal, organisational and site guidelines, policies and procedures relating to own role and responsibility
- quality assurance
- procedural manuals

Glass plant/equipment include:

- quality and continuous improvement processes and standards
- ethical standards
- recording and reporting
- access and equity principles and practices
- equipment use, maintenance and storage
- environmental management (waste disposal, recycling and re-use guidelines)
- glass laminating plant
- glass toughening plant
- insulated glass plant
- glass silvering plant
- glass printing plant
- cutting (including water jet), seaming, edge grinding
- non-NC and CNC milling

Unit Mapping Information

No equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFGG4005 Set up, configure, upgrade and troubleshoot glass and glazing plant and ancillary equipment

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Performance Evidence

- Comply with all relevant safety requirements, including isolation or shutdown of machines, use of safety and lockout devices, and attachment of appropriate warning tags
- Interpret glass processing machine and ancillary equipment specifications for machine setting and maintenance
- Set-up and edit programs for at least three (3) different types of glass processing plant
- Conduct sample runs of machines and manage quality assurance by checking products against required standards
- Perform normal testing, setting and maintenance of machines, investigate improper operation, and identify and rectify operating problems, including adjustments/rectifications/modifications
- Document and communicate work-related information, including reporting of non-conforming outcomes and other problems
- Instruct machine operator on the correct sequence of operations and processing specifications
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems, interpret basic plans and follow safety procedures
- Avoid backtracking, work flow interruptions or wastage
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity

Knowledge Evidence

- Principles of operation of glass processing plant/equipment
- Interactions between plant units within the entire plant
- The architecture and location of the glass process/production equipment
- Specific glass plant process operations
- Interactions between glass plant items/processes
- Glass product specifications and quality standards
- Hierarchy of control and basis of control for glass plant/s
- Glass and glass processing plant technical specifications and repair manuals
- Principles and techniques of machine setting and adjustment
- Troubleshooting procedures for testing equipment, typical fault conditions and relevant fault finding procedures

- Maintenance and repair processes and techniques
- Workplace procedures and maintenance planning
- Procedures for attaching ancillary device(s) to non-NC/CNC machines
- Measuring devices/techniques for checking glass products
- Effects of changes to cutting feeds and speeds
- Hazards and control measures associated with computer controlled machines, including housekeeping

Assessment Conditions

- Assessors must:
 - hold training and assessment competencies as determined by the National Skills Standards Council (NSSC) or its successors
 - have vocational competency in the furnishing industry at least to the level being assessed with broad industry knowledge and experience, usually combined with a relevant industry qualification
 - be familiar with the current skills and knowledge used and have relevant, current experience in the furnishing industry.
- Assessment methods must confirm consistency of performance over time rather than a single assessment event and in a range of workplace relevant contexts.
- Assessment must be by observation of relevant tasks with questioning on underpinning knowledge and, where applicable, multimedia evidence, supervisor's reports, projects and work samples.
- Assessment is to be conducted on single units of competency or in conjunction with other related units of competency. Foundation skills are integral to competent performance in the unit and should not be assessed separately.
- Assessment must occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.
- Access is required to glass processing plant and ancillary equipment, relevant setting, operating, testing, maintenance and repair manuals for plant, glass products specifications, and quality standards and organisational procedures.

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