



Australian Government

MSFGG4007 Manage glass processing plant shutdown and re-start

Release: 1

MSFGG4007 Manage glass processing plant shutdown and re-start

Modification History

Release 1 - New unit of competency

Application

This unit of competency covers the coordination of the shutdown and re-starting of a glass production or processing plant in a safe and efficient manner due to a planned or an unplanned shutdown or emergency situation. It does not apply to individual plant operators shutting down individual production units or following directions during a shutdown and would typically be exercised by the leading plant technician on a shift.

This unit requires the exercise of discretion as the plant technician's responses are governed by the cause of the shutdown and the plant's responses to that. It requires the coordination of all personnel involved in the shutdown to ensure it happens in as orderly a fashion as possible and that the plant is left in the best condition possible for a quick re-start.

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	Manage shutdown sequence	1.1	Glass plant safety systems are checked and verified to ensure that the unit has been made safe
		1.2	The reason for, or cause of, the plant shutdown is identified by troubleshooting the system and utilising all available data and information systems
		1.3	Confirmation of the identified shutdown is obtained from operators to verify both the nature and the reliability of the shutdown

		1.4	Procedures are initiated to rectify the fault or shutdown cause through either repair of the operational fault or readjustment before returning the system to start-up status
2	Conduct start-up process	2.1	All start-up permissives are satisfied prior to start-up process being commenced
		2.2	Start-up is conducted according to procedures and in a safe and efficient manner, ensuring a return to normal operation is achieved
3	Document shutdown and start-up process	3.1	All logs and workplace documentation relating to the shutdown/start-up process are completed ensuring all details, actions and responses are accurately recorded
		3.2	Any further ongoing production problems are recorded and reported to appropriate persons or authority

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.

Reasons for glass processing plant shutdown include:

- planned (e.g. for maintenance or other planned work)
- unplanned (e.g. in response to a plant upset or equipment failure)
- emergency (e.g. in response to an automatic shutdown sequence or plant trip)

Shutdown includes:

- shutdown 'to cold' (e.g. complete plant shutdown and purging of all process materials from equipment)
- short shutdown to allow minor work 'warm shutdown' (e.g. partial shutdown, with retention of some or all of process materials)

Shutdown actions include:	- managing a plant trip and restart 'hot shutdown' (e.g. short duration shutdown in response to a plant upset or trip) - coordinating the shift team - implementing emergency procedures - using the permit to work system (for repairs required) - performing all operations according to procedures
Relevant personnel include:	- panel technicians - outside technicians - technicians seconded to a shutdown role - other relevant personnel
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
Appropriate action includes:	- determining problems needing action - determining possible fault causes - rectifying problem using appropriate solution within area of responsibility - following through items initiated until final resolution has occurred - reporting problems outside area of responsibility to designated person
Procedures include:	- work instructions - standard operating procedures - formulas/recipes - batch sheets - temporary instructions - any instructions provided for the smooth running of the plant - written, verbal or computer-based procedures
Glass plant/equipment include:	- glass laminating plant - glass toughening plant - insulated glass plant - glass silvering plant - glass printing plant - cutting (including water jet), seaming, edge grinding and computer numerically controlled (CNC) milling
Organisational	legal, organisational and site guidelines, policies and

- requirements include:**
- procedures relating to own role and responsibility
 - quality assurance
 - procedural manuals
 - quality and continuous improvement processes and standards
 - WHS procedures
 - emergency and evacuation
 - 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)

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 MSFGG4007 Manage glass processing plant shutdown and re-start

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Performance Evidence

- Consistently:
 - recognise early warning signs of equipment/processes needing attention or with potential problems
 - determine and analyse the range of possible plant problem causes and the most likely cause
 - take appropriate action to ensure a timely return to full performance
 - recognise obvious problems in related plant areas and make an appropriate contribution made to their solution
- Shutdown and re-start a glass processing plant safely and efficiently
- Communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- 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 tolerances
- Hierarchy of control and basis of control for glass plant/s
- Communication protocols (e.g. radio, phone, computer, paper and permissions/authorities)
- Routine glass processing plant problems, faults and their resolution
- Relevant alarms and actions
- Complex process drawings (e.g. piping and instrumentation diagrams (P&ID), probability of failure on demand (PFD), and cause and effect)
- Plant process idiosyncrasies
- Correct methods of starting, stopping, operating and controlling glass processing plants
- Corrective action appropriate to the problem cause
- Function and troubleshooting of major glass processing plant components and their problems

- Process control philosophies and strategies
- Emergency shutdown procedures
- Physics, chemistry and mathematics relevant to the process

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 control systems for glass processing plant and equipment, workplace documentation, procedures and job requirements.

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