



Australian Government

PMC552041 Operate process ovens

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to PMC552041C Operate process ovens

Application

This unit of competency covers the skills and knowledge required to operate furnaces and ancillary equipment that is integral to the process. It applies to a large production context where the furnace is used in processes such as annealing, conditioning, laminating, mirroring, toughening and glass reheating.

This unit of competency applies to operators who are required to start up and shut down the equipment, monitor and adjust process parameters, perform test procedures and identify and rectify routine problems.

This unit of competency applies to an individual working alone or as part of a team or group and working in liaison with other shift team members, team leader and supervisor, as appropriate.

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

Pre-requisite Unit

Nil

Competency Field

Operations

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Prepare the annealing/toughening/reheating	1.1	Interpret job specifications
		1.2	Isolate appropriate line/equipment

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| | ting/laminating equipment | 1.3 | Undertake basic setup and removal of current moulds in accordance with manufacturer's and work instructions if required |
| | | 1.4 | Check that the quality and quantity of input glass is suitable for production run according to company requirements |
| | | 1.5 | Undertake equipment preparation and checks according to established procedures |
| | | 1.6 | Make machinery/equipment adjustments and final preparations to ensure that work instructions are met |
| | | 1.7 | Conduct product run/procedure to produce samples to confirm that quality meets specifications, if required |
| 2 | Anneal/toughen/reheat/laminate the products | 2.1 | Monitor equipment to ensure quality specifications are met |
| | | 2.2 | Identify routine variations to annealing/reheating process |
| | | 2.3 | Make routine operation adjustments according to established procedures to maintain product quality |
| | | 2.4 | Conduct product sampling and quality control checks according to standard procedures |
| | | 2.5 | Use ancillary equipment and observe safety procedures in accordance with enterprise requirements |
| | | 2.6 | Document and maintain records and production results according to enterprise requirements |
| 3 | Monitor and record reheating operation | 3.1 | Measure and record operating parameters, according to enterprise requirements |
| | | 3.2 | Adjust reheating equipment controls to ensure glass parameters are maintained to job specifications |
| | | 3.3 | Ensure appropriate records and log books of equipment operations are maintained to meet procedures |

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| 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 | Identify non-routine problems and report to designated person |
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| 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 |

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for 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.

Regulatory framework The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used.

Applicable legislation, regulations, standards and codes of practice include:

- health, safety and environmental (HSE) legislation, regulations and codes of practice relevant to the workplace, equipment and production processes and hazardous materials
- Australian/international standards relevant to the materials being used and products being made
- any relevant licence and certification requirements.

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state/territory or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and such requirements the legislative requirements take precedence.

Procedures All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or any combination of:

- job cards
- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant.

Tools and equipment Tools and equipment include:

- furnace/process oven as used for one or more of:

- annealing
- toughening
- reheating
- mirroring
- laminating
- ancillary equipment that is integral to the process.

Problems Routine problems must be resolved by applying known solutions.

Routine problems are predictable and include one or more of:

- temperature problems
- pressure problems
- equipment problems
- quality problems, such as:
 - poor optics
 - excessive breakage
 - non-uniform break pattern
 - incorrect cross bend
 - excessive bow
 - scratches
 - poor glass shape

Known solutions are drawn from one or more of:

- procedures
- training
- remembered experience.

Non-routine problems must be reported according to according to relevant procedures.

Hazards Hazards must be identified and controlled. Identifying hazards requires consideration of:

- high temperatures
- smoke, dust, vapours or other atmospheric hazards
- weight, shape, volume of materials to be handled
- hazardous products and materials
- sharp edges, protrusions or obstructions

- slippery surfaces, spills or leaks
- electricity
- gas
- gases and liquids under pressure
- noise
- rotational equipment or vibration
- plant services (steam, condensate, cooling water, etc)
- structural hazards
- equipment failures
- machinery, equipment and product mass
- limited head spaces or overhangs
- working at heights
- working in restricted or confined spaces
- other hazards that might arise.

Records and reports Records include one or more of:

- log books/sheets
- electronic records
- job/work sheets
- other records used for the smooth running of the plant.

Reports include one or more of:

- paper or electronic-based logs and reports
- verbal/radio reports
- reporting items found which require action.

Unit Mapping Information

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Links

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>