



Australian Government

MSMPMC305 Heat accelerate the curing of precast concrete

Release: 1

MSMPMC305 Heat accelerate the curing of precast concrete

Modification History

Release 1. New unit. Supersedes and is equivalent to PMC552007 Heat accelerate the curing of precast concrete.

Application

This unit describes the skills and knowledge required to operate steam curing and ancillary equipment to accelerate the curing of precast concrete.

This unit applies to operators who are required to take responsibility for own outputs and follow established procedures to prepare, monitor and adjust the equipment and load and discharge moulds or products. Operators are also required to work autonomously and apply their own judgement to interpret information; monitor processes; identify and address routine and non-routine problems and control hazards.

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

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

Nil

Competency Field

Operations

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare the equipment for production	1.1 Conduct equipment pre-start procedures and visual checks 1.2 Set up and configure equipment start-up function in accordance with procedures and/or work instructions 1.3 Ensure appropriate pre-setting period has been observed 1.4 Load mould containing green concrete product onto transfer car and move to steam chamber 1.5 Cover mould as specified

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.6 Close and secure the steam chamber
2. Operate and monitor equipment	2.1 Start up, operate and monitor equipment in accordance with established enterprise procedures and manufacturer specifications 2.2 Monitor operating pressures and temperatures 2.3 Ensure the rate at which the concrete temperature increases is even, and that it doesn't exceed maximum temperature specified 2.4 Adjust and control equipment to ensure correct product quality 2.5 Complete appropriate records and logs
3. Shut down equipment	3.1 Shut down steam and depressurise chamber 3.2 Allow product to cool gradually and evenly 3.3 Open the chamber and discharge cured product 3.4 Complete appropriate records and logs 3.5 Ensure transfer cars are clear of all product and left ready for reuse
4. Prepare equipment for maintenance	4.1 Isolate equipment 4.2 Remove any broken materials safely 4.3 Make sure area is clear and safe for maintenance
5. Rectify routine problems	5.1 Identify and rectify faults and equipment failure 5.2 Maintain records and log books of equipment operations 5.3 Identify non-routine problems and report to designated person
6. Control hazards	6.1 Identify hazards in the curing area 6.2 Assess the risks arising from those hazards 6.3 Implement measures to control those risks 6.4 Shut down equipment in an emergency

Foundation Skills

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

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

Unit Mapping Information

Release 1. New unit. Supersedes and is equivalent to PMC552007 Heat accelerate the curing of precast concrete.

Links

Companion Volume Implementation Guides are available at VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMPMC305 Heat accelerate the curing of precast concrete

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and:

- set up, configured and operated the steam curing equipment on at least 1 occasion, including:
 - recognising possible causes of the following routine problems:
 - steam pressure differentials
 - time cycle irregularities
 - raw material variations
 - mechanical abnormalities
 - electrical and instrument reading failure.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- principles of heat curing process
- equipment and ancillary equipment, including:
 - functions, limitations
 - start-up, operation and shutdown procedures
 - relevant personal protective equipment (PPE)
 - the potential effects of equipment operation in relation to quality of product and output
- composition and nature of finished product
- the potential effects of variations in raw materials in relation to quality of product and output
- routine problems and factors which may affect product quality or production output, their probable causes and relevant corrective actions,
- sequence of isolation procedures and related hazards
- signals and alarms
- enterprise production schedules
- work health and safety (WHS) requirements relevant to work outcome
- heat curing hazards and:
 - their possible causes
 - potential consequences

- risk control procedures.
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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - heat curing equipment and ancillary equipment
 - raw materials
 - specifications, procedures and job sheets
- modelling of industry operating conditions, including:
 - routine and non-routine problems.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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