



Australian Government

Assessment Requirements for MEM04024 Produce moulds and cores by hand

Release: 2

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Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM04024 Produce moulds and cores by hand (Release 1).

Release 1. Supersedes but is not equivalent to MEM04005C Produce moulds and cores by hand (jobbing).

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- planning the production of moulds and cores by hand, including identifying job requirements and materials from instructions or specifications, job set up, and sequence operations for maximum safety and efficiency
- assembling pattern to specification, including selecting, inspecting and setting up pattern equipment to conformance and identifying damaged patterns for repair or replacement
- preparing to produce moulds and cores by positioning core in prints utilising chaplets and chills and vent to specification, closing mould, selecting and positioning appropriate moulding/core making equipment, selecting appropriate moulding media and securing mould
- producing mould and core by selecting or manufacturing a pouring basin, ramming mould and cores with flat joints, using parting and stripping systems, positioning and securing loose pieces, vents, risers and runners, and removing pattern and loose pieces from mould and core box
- inspecting, cleaning, repairing and painting mould according to specification
- disposing of unwanted treated sand according to legislative requirements and SOPs
- completing all proformas and standard workplace forms as required.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- metal casting process
- pattern types and their application in a casting process
- pattern assembly techniques
- procedures for selecting a moulding box to match job and pattern

- principles and processes for selection of ancillary components
- sand types and their bonding systems
- compaction processes
- parting and stripping systems
- mould requirements including vents, runners, risers and other methoding requirements
- finishing and closing techniques
- core placement
- pouring requirements
- securing systems
- pattern care and storage
- environmental requirements.

Assessment Conditions

- Assessors must:
 - have vocational competency in producing moulds and cores by hand at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015 or its replacement* and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>