



Australian Government

**Assessment Requirements for MEM19009
Perform investment procedures for lost wax
casting process**

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM19009B Perform investment procedures for lost wax casting process

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
- identifying and interpreting specifications, job sheets or work instructions in performing investment procedures for lost wax casting process
- checking pre-assembled wax for security, size and weight and selecting, checking and cleaning sprue and investment materials and recording weights
- calculating and weighing out proportions of investment material and water and selecting and assembling appropriate flask size
- performing mixing, vibrating and vacuum procedures and operating steamer and process to evaluate 'low melt' wax
- inspecting flasks for residue prior to burn-out, positioning, storing flask and selecting appropriate burn-out procedure and equipment, including inspecting and adjusting oven or kiln cavity
- cleaning investment equipment of residue and disposing in accordance with procedures.

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)
- procedures for checking built wax
- casting methods and equipment and processes
- sprue and investment tools, equipment and materials
- techniques for sprue or tree styles and selection and application of the processes
- selection of flask and components for specific casting processes
- procedures and computations for mixing proportions, time calculations, volume and weights
- appropriate gloss off and set time allowance prior to base removal
- requirements for curing and set stage
- sequence and values for time, temperature and cam settings

- steamer process
- suitability of flask and investment for burn-out
- sequence, procedures, adjustments for variables
- procedures for storage and positioning
- procedures for cleaning, storage and removal of materials and reasons for housekeeping functions
- recording procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing investment procedures for lost wax casting process 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
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, 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>