



Australian Government

Assessment Requirements for MEM19001 Perform jewellery metal casting

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM19001B Perform jewellery metal casting

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 and drawings for performing jewellery metal casting
- undertaking numerical operations and calculations associated with performing jewellery metal castings
- identifying and weighing metals and their alloys appropriate to the correct wax-to-metal ratios
- setting up, checking and operating equipment
- heating metals and alloys and maintaining furnace temperatures to achieve jewellery metal casting temperature
- applying safe casting procedures working within heating timeframe constraints and tapping molten metal, making allowances for adequate solidification time
- cleaning, storing and disposing of casting materials and consumables in accordance with SOPs.

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)
- identification of precious metals and alloys
- properties of jewellery metals in relation to casting
- calculations for proportions and quantities of alloys
- data recording procedures
- consequences of poor work practices
- equipment preparation and operating procedures
- burn-out cycles and testing procedures for heat register or control device
- procedures for checking and maintaining inert gas supply and delivery seals and vacuum systems
- melting points of various metals and alloys

- furnace start-up and shutdown procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing jewellery metal casting 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>