



Australian Government

Assessment Requirements for MEM04007 Pour molten metal

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM04007B Pour molten metal

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, SOPs and standard test data sheets
- preparing manual pour of molten metal, including selecting equipment as required, and checking condition of mould and appropriate ladle
- checking temperature of molten metal for conformance against specification, sequencing pouring method and identifying the capacity of the required pour
- transferring ladle to furnace after preheating/preparing to receive molten metal
- filling and transferring the ladle to the pouring area in a safe and effective manner and adding additives as required to molten metal
- maintaining quality of metal by removing slag/dross, monitoring temperature and undertaking chemical analysis and applying any remedial action
- pouring molten metal safely at an appropriate and continuous rate after informing personnel in immediate area that a pour is to take place to required specifications, pouring a test bar as required
- emptying excess metal and cleaning and maintaining ladle.

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)
- types and pouring characteristics of metals
- types and characteristics of ladles
- procedures for maintaining condition and integrity of ladle
- procedures for safe handling and transference of molten metal
- metal treatments, applications and procedures for making additions to molten metal
- slag and dross removing procedures
- techniques for sampling and testing molten metal
- pouring procedures
- metal identification and tagging procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in pouring molten metal 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>