



Australian Government

Assessment Requirements for MEM48010 Determine and supervise heat treatment of metal

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSATCM405A Determine and supervise heat treatment of 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 and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- selecting appropriate scientific principles to suit specific heat treatment applications
- selecting appropriate techniques and associated software and hardware technologies to suit specific applications in heat treatment on at least two occasions
- applying and manipulating appropriate formulas for heat treatment applications involving engineering calculations
- applying appropriate calculations to engineering situations
- referring solutions to the original aim of the application
- quoting solutions for the application in appropriate units using appropriate significant figures
- quoting limitations of solutions for the application due to assumptions, scientific principles and techniques used
- presenting solutions for the application on at least two occasions, referring to the original aim of the application including elimination or containment of risks and establishing of safety procedures.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

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)
- scientific techniques and principles of heat treatment
- limitations of scientific principles of heat treatment
- special heat treatments
- nonferrous heat treatments
- significant figures appropriate to the process, data and results
- risks and safety procedures appropriate to heat treatment of metals and alloys.
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Assessment Conditions

- Assessors must:
 - have vocational competency in determining and supervising heat treatment of 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 that 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.
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Links

Companion Volume implementation guides are found in VETNet -

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