



Australian Government

Assessment Requirements for MEM05027 Perform aluminothermic welding

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM05027A Perform aluminothermic welding

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 from sketches, sketches and verbal or written job instructions for aluminothermic welding, including location of welds
- preparing site for welding by obtaining appropriate permits, identifying site/job hazards and implementing hazard control measures and assessing weld location
- selecting and setting up welding equipment and consumables
- welding materials consistently to specification
- cleaning and inspecting welds for conformance in accordance with SOPs and completing records.

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 welding practices and procedures and use of personal protective equipment (PPE)
- relevant safety, work health and safety (WHS) and environmental procedures and regulations
- principles of the aluminothermic welding process chemical reaction
- common types of welding imperfections and defects and their causes (e.g. cracks, porosities, mould off centre, stresses in materials, pre-heating offset, sand inclusions and moisture)
- workplace procedures for the welding of materials using the aluminothermic technique
- problems that can occur during the welding of materials using the aluminothermic technique and action that can be taken to report or resolve the problems
- contents of relevant technical manuals and instructions
- characteristics of plant and equipment, hardware and components used in welding activities
- impact on work activities of regulatory requirements
- impact of other work activities on welding integrity
- workplace documentation requirements

- site inspection techniques.

Assessment Conditions

- Assessors must:
 - have vocational competency in performing aluminothermic welding 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>