



Australian Government

Assessment Requirements for MEM05085

Select welding processes

Release: 1

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Modification History

Release 1. Unit code changed. Changes to elements and performance criteria, performance evidence and knowledge evidence. Supersedes and is not equivalent to MEM05051 Select welding processes.

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 the ability to:

- follow work instructions, standard operating procedures (SOPs) and safe work practices
- match type and grade of base material from manufacturer's marks or documentation to specifications on at least two occasions
- identify properties of commonly used metals and alloys using reference information contained in materials and equipment suppliers handbooks, enterprise documentation or SOPs
- identify potential welding related contingencies and consider solutions
- identify and select appropriate welding process, considering process effects on materials on at least two occasions.

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 welding practices and procedures and use of personal protective equipment (PPE)
- hazards associated with the use of chemicals and the fumes emitted by welding processes
- properties and characteristics of common metals and materials used in welding including tensile strength, grade, heat resistance, density, physical properties, flammable limits and melting point to the extent required to inform selection of an appropriate welding process
- basic metallurgy principles associated with the effects of heat on alloys and grades of metals
- common metal and alloying elements used in welding
- common carbon steels, alloy steels and stainless steel grades used in welding
- uses and purposes of various metals and alloys
- distortion prevention measures for various metals
- different types of electrodes.

Assessment Conditions

- Assessors must:
 - have vocational competency in selecting welding processes 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.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Knowledge assessment may be either verbal or written but must adequately reflect the knowledge requirements of the unit in a functioning workplace.
- 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>