Australian Government

Assessment Requirements for MEA434 Weld aircraft components using the plasma arc welding process

Release: 2

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Modification History

Release 2. Equivalent to MEA434 Weld aircraft components using the plasma arc welding process with amended prerequisite codes.

Performance Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria under the specified conditions of assessment, and must include:

- safely applying advanced gas tungsten arc welding skills defined in unit MEM05044B Perform welds to code standards using gas tungsten arc welding process, and adapting them to perform PAW of specified aircraft parent metal group materials or components to the standards specified by the relevant Regulator (CASA or the ADF)
- applying welding principles (unit MEM05026C Apply welding principles) in the context of PAW of aircraft components or materials
- inspecting PAW process equipment for serviceability with particular emphasis on the orifice
- identifying weld requirements from applicable documentation
- selecting and correctly using items of PPE applicable to PAW of aircraft components.

Evidence is required of the ability to produce plasma arc welds to required specifications consistently across the range of components that are being fabricated or repaired, while applying all relevant safety precautions. The ability to do this must be demonstrated through the production of the test pieces specified for the welding process and parent metal group in the CAAP 33-1(0) Aircraft manual welding: approvals and qualifications or RAAF Specification Engineering W5003 Welders – Qualification for Aircraft, Missile and Aerospace Fusion welding.

Knowledge Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- regulatory requirements applicable to aircraft welding
- standards applicable to aircraft welding
- the procedure for assessment of weld test pieces
- equipment required for PAW and its operation and maintenance requirements
- the relative advantages of the plasma process for welding and cutting
- the composition of gases used in the PAW process
- safety precautions applicable to PAW and applicable PPE.

Assessment Conditions

- Test pieces specified for each parent metal group for which approval is sought may be completed in the workplace or a simulated workplace. The individual must be provided with all required equipment, consumables, PPE, materials and data/drawings relating to the test pieces that are required for the approvals being sought.
- Assessment of test pieces must be carried out in a testing facility that meets the requirements specified by the applicable Regulator.
- Assessment methods are specified in the CAAP 33-1(0) Aircraft manual welding: approvals and qualifications or RAAF Specification Engineering W5003 Welders – Qualification for Aircraft, Missile and Aerospace Fusion welding.
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371