



Australian Government

Assessment Requirements for MEASTR0024 Weld aircraft components using the plasma arc welding process

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA434 Weld aircraft components using the plasma arc welding process.

Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- use plasma arc welding (PAW) techniques to weld at least three simulated aircraft components to the standards specified by the regulators Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA) and to specifications during scheduled or unscheduled maintenance and as specified in the CAAP 33-1(1) Aircraft manual welding – Approvals and Qualifications select materials used in the construction of aircraft components that are suitable for PAW
- apply PAW to components where it is specified as either a fabrication or repair technique
- safely apply advanced gas tungsten arc welding skills and principles in the context of welding aircraft components or materials.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- regulatory requirements applicable to aircraft welding
- standards applicable to aircraft welding, including:
 - regulations relating to required test pieces
 - process specifications
 - repair manuals
 - overhaul manuals
 - Australian and New Zealand Standards
- 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
- the use of PAW in relation to specified aircraft parent metal groups, including:
 - aluminium alloys
 - magnesium alloys

- carbon steels and low alloy steels
- corrosion and heat resisting steels
- nickel alloys
- copper-based alloys
- titanium alloys
- work health and safety (WHS) precautions applicable to PAW and applicable personal protective equipment (PPE).
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Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA) and (CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in welding aircraft components using the PAW process. The following conditions must be met for this unit:

- Test pieces specified for each parent metal group for which approval is sought shall be completed in either 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.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>