Australian Government

Assessment Requirements for AURVTW003 Carry out advanced gas metal arc welding on vehicle body sections

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standard defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- use gas metal arc welding (GMAW) equipment to carry out the following welds:
  - three butt welds to 0.8 mm and 1.2 mm panel steel in the following positions:
    - down hand
    - vertical
    - horizontal
  - two lap welds to 0.8 mm and 1.2 mm panel steel in the following positions:
    - vertical
    - horizontal
  - three plug welds to 0.8 mm and 1.2 mm panel steel in the following positions:
    - down hand
    - vertical
    - horizontal
  - two butt welds on dissimilar material thickness 0.8 mm to 1.2 mm panel steel in the following positions:
    - down hand
    - horizontal.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS), and occupational health and safety (OHS) requirements relating to carrying out advanced GMAW on vehicle body sections, including procedures for:
  - selecting and using personal protective equipment (PPE) when working with GMAW equipment, including approved welding helmet
  - using specialist welding tools and equipment
  - using protective screens and fume extraction system
  - manually handling vehicle components and GMAW equipment
  - identifying and controlling hazards
- environmental requirements, including procedures for trapping, storing and disposing of waste materials
- GMAW equipment manufacturer operating procedures
- original equipment manufacturer (OEM) or authorised agency welding standards
- material and consumable preparation techniques, including characteristics of different metal types, including high strength steels (HSS)
- procedures for setting up and operating GMAW equipment
- methods and techniques for advanced GMAW, including:
  - GMAW silicone bronze process
  - weld speed
  - weld angle
  - weld distance
  - welding positions
  - welding of dissimilar metal thicknesses
  - distortion control techniques
  - GMAW testing, including:
    - non-destructive inspection
    - destructive testing
  - identification and rectification of weld defects, including:
    - porosity
    - lack of penetration
    - excessive weld build-up
    - excess heat
    - undercut
    - weld distortion
    - heat affected zone
- procedures for safeguarding vehicle electronics during GMAW
- post-weld inspection procedures.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the GMAW that they have carried out, e.g. work orders.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- automotive repair workplace or simulated workplace
- workplace instructions
- GMAW equipment operating instructions
- PPE required for GMAW
- body sections specified in the performance evidence requiring GMAW
- protective screens and fume extraction system
- standard or inverter GMAW equipment
- tools, equipment, consumables and materials appropriate for carrying out advanced GMAW.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1

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