



**Australian Government**

**Assessment Requirements for DEFWDV017  
Employ thermal cutting and welding tools  
(non-load bearing) in an underwater  
environment**

# **Assessment Requirements for DEFWDV017 Employ thermal cutting and welding tools (non-load bearing) in an underwater environment**

## **Modification History**

Release 1. This is the first release of this unit of competency in the DEF Defence Training Package.

## **Performance Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying relevant legislation, standards, and organisational policies and procedures
- completing underwater cutting and welding operations safely
- cutting 12 mm steel plates
- identifying and addressing relevant cutting/welding workplace hazards and problems
- operating generator to support welding tasks in an underwater environment
- operating thermal cutting and welding tools underwater
- planning for cutting and welding underwater
- stabilising a generator
- undertaking underwater welding activities including:
  - preparing surface of work object for cut or weld
  - controlling voltage and amperage of arc welding equipment
  - turning on gas supplies
  - adjusting ratios of oxygen and acetylene
  - controlling pressure of oxy acetylene torch
  - making cuts and welds ensuring minimal distortion to object
  - inspecting and cleaning cuts and welds
  - developing power gradually without surging
- using a number of thermal cutting and welding tools (non-load bearing) in an underwater environment work tasks:
  - at depths between 5 metres and 20 metres
  - on at least one night work task
- welding manual metal arc using electric welding equipment.

## **Knowledge Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of

the requirements of the elements and performance criteria and include knowledge of:

- dive equipment
- dive physics
- dive physiology and medicine including:
  - heat and cold illnesses
  - compression illnesses
  - decompression illnesses
- diving descent and ascent techniques
- general diving safety awareness including:
  - diving in harbours
  - diving in tidal waters, currents and tides
  - diving on and/or near a ship's bottom
  - lost/separated
  - entrapment/foul lines
  - marine animal threats
  - pollution/weeds
  - working in confined spaces
- oceanography
- relevant cutting/welding workplace hazards and problems
- relevant legislation, standards, and organisational policies and procedures
- thermal cutting and welding principles and techniques.

## Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- ocean with a range of oceanic, diurnal and nocturnal environments
- applicable documentation including organisational procedures, regulations, codes of practice

and operation manuals.

When practicable, assessment should relate to the diver's vocational focus.

## Links

Companion Volume -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>