



Australian Government

Assessment Requirements for MEM05070 Write and proof programs for NC/CNC thermal cutting machines

Release: 1

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Modification History

Release 1. New Unit.

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:

- identify and interpret customer specifications, engineering drawings, and other applicable reference documents for information relevant to writing programs for numerical control (NC)/computer numerical control (CNC) thermal cutting machines
- identify materials and consumables compliance against job specifications
- identify required thermal operations to be incorporated in the NC/CNC thermal cutting program
- determine coordinates for cutting path and producing operation sheets for the program and process
- record using the machine controller of weld coordinates and torch movements
- use software including G and M codes and canned cycles and sub-routines for programming thermal cutting operations
- trial the program ensuring the thermal cutting machine operates safely and correctly and cuts to specification
- edit the thermal cutting machine program to ensure compliance with specifications
- access and use the NC/CNC thermal cutting machine file library of shapes.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge 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:

- safety features and requirements of NC/CNC thermal cutting machines
- types of NC/CNC thermal cutting machines and their applications
- standard NC/CNC thermal cutting machine programming including the role of G and M codes and comments, and input controls for NC/CNC thermal cutting machine programs
- default positions, zero point, and other datum points used by NC/CNC thermal cutting machines
- system menus and commands including:
 - thermal cutting machine specific parameters
 - job specific parameters

- procedures for trialling and editing thermal cutting machine programs via software and the machine controller
- procedures for manual operation of the thermal cutting machine.

Assessment Conditions

- Assessors must:
 - have vocational competency in writing and proofing programs for NC/CNC thermal cutting operations 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>