



Australian Government

MEM24010 Perform radiographic testing

Release: 1

MEM24010 Perform radiographic testing

Modification History

Release 1. Supersedes and is equivalent to MEM24010B Perform radiographic testing.

Application

This unit of competency defines the skills and knowledge required to operate radiographic testing equipment in a range of industrial applications including fabrications, structures and components across a wide range of industries to Level 2 (AS 3669 Non-destructive testing – Qualification and approval of personnel – Aerospace and AS ISO 9712 Non-destructive testing — Qualification and certification of NDT personnel) or equivalent.

Radiographic tests are performed on critical component or structural zones., Re-assessment of competency may be required at regular intervals in accordance with Australian Standards or other relevant standards. Actual and potential defects are to be considered, together with ongoing abnormalities.

All testing must be completed with particular attention to personal and work health and safety (WHS) regulations and ionizing radiation equipment materials and chemicals, which are subject to codes and regulations, must be stored, used, and transported in accordance with safe work practices.

Where interpretation of technical drawings is required unit MEM09002 Interpret technical drawing should also be selected.

Where the selection and use of engineering measurement is required unit MEM12023 Perform engineering measurements should also be selected.

Where the selection and use of power tools are required unit MEM18002 Use power tools/hand held operations should also be selected.

No licensing or legislative requirements apply to this unit at the time of publication. Certification against Australian Standards may be achieved where assessment in this unit of competency is carried out in conjunction with an examining authority as described in AS ISO 9712 Non-destructive testing — Qualification and certification of NDT personnel.

Band: B

Unit Weight: 6

Pre-requisite Unit

MEM11011 Undertake manual handling

MEM13018 Work safely with ionizing radiation

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

MEM18001 Use hand tools

MEM24012 Apply metallurgical principles

Competency Field

Non-destructive testing

Unit Sector

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine job requirements	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with WHS requirements at all times 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs 1.4 Identify job requirements from specifications
2. Prepare inspection areas for radiographic testing	2.1 Identify inspection area and clean and prepare for testing using appropriate procedures and materials 2.2 Carry out preparation processes in accordance with the relevant procedures and statutory requirements 2.3 Assess inspection areas visually and identify obvious discontinuities
3. Select and prepare radiographic test	3.1 Select the most appropriate radiographic test for the material and/or application 3.2 Select appropriate testing and processing equipment and set up for various geometries in accordance with standards and/or procedures 3.3 Optimise quality of radiographic test
4. Perform tests and maintain equipment	4.1 Carry out radiographic tests in accordance with relevant standards, codes and specifications 4.2 Set up radiographs and carry out for specialised applications 4.3 Process films to maximise quality of image and achieve optimum results 4.4 Check radiographic testing equipment for defects and maintain and store in accordance with procedures and manufacturer instructions
5. Monitor and ensure radiation safety	5.1 Set up and maintain safety controls 5.2 Minimise radiation exposure to employees and general public 5.3 Select radiation monitoring equipment and use

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
6. Interpret and report the results of radiographic tests	6.1 Establish conditions necessary to view and interpret radiographs 6.2 Interpret and evaluate radiographs in accordance with applicable codes, standards and specifications 6.3 Report test results in accordance with organisational procedures, accepted industry practices and customer service requirements

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Preparation processes include:	<ul style="list-style-type: none"> • surface cleaning and drying.
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Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM24010B Perform radiographic testing.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>