



Australian Government

MEM24007 Perform ultrasonic thickness testing

Release: 1

MEM24007 Perform ultrasonic thickness testing

Modification History

Release 1. Supersedes and is equivalent to MEM24007B Perform ultrasonic thickness testing.

Application

This unit of competency defines the skills and knowledge required to perform ultrasonic thickness testing in a range of industrial applications including fabrications, structures and components across a wide range of industries where knowledge of metallurgy associated with the level of application in this unit is required.

Ultrasonic 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.

Materials and chemicals which are subject to codes and regulations - for example, chemicals, explosives, solvents, dangerous materials, acids, or noxious waste products - are subject to safe work habits and must be stored and used in accordance with safe work practices.

This unit should not be selected when unit MEM24008 Perform ultrasonic testing has already been selected.

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: A

Unit Weight: 2

Pre-requisite Unit

MEM11011 Undertake manual handling

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

MEM18001 Use hand tools

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 work health and safety (WHS) requirements at all times 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs 1.4 Identify job requirements from specifications, job sheets or work instructions
2. Prepare inspection areas for ultrasonic thickness testing	2.1 Clean inspection areas and prepare for testing using appropriate procedures and materials 2.2 Carry out preparation processes in accordance with the relevant procedures 2.3 Assess inspection areas visually for obvious discontinuities
3. Perform tests	3.1 Identify nominated ultrasonic thickness test from SOPs 3.2 Prepare test equipment in accordance with manufacturers' instructions 3.3 Carry out ultrasonic tests in accordance with relevant standards 3.4 Maintain ultrasonic test equipment and store in accordance with SOPs
4. Report the results of ultrasonic thickness test(s)	4.1 Identify and confirm basic thicknesses and explain in accordance with organisational standards and/or procedures 4.2 Report test results including an accurate identification of location and size of discontinuities in accordance with organisational standards and/or procedures

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.

Discontinuities include one or more of the following:	• thickness measurement of corrosion • delamination of nonferrous or ferrous alloys from composite materials.
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Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM24007B Perform ultrasonic thickness testing.

Links

Companion Volume implementation guides are found in VETNet -

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