

Title	Use non-destructive testing (NDT) methods to test metal surfaces for defects		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to use non-destructive testing (NDT) methods to test metal surfaces for defects.
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Classification	Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering
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Available grade	Achieved
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Prerequisites	Unit 21912, <i>Apply safe working practices on an engineering worksite</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 Unit 27205, *Describe non-destructive testing (NDT) technology used in mechanical engineering*, is recommended for entry into this unit standard.
- 2 Reference
Health and Safety at Work Act 2015.
- 3 Definitions
Industry practice – approved codes of practice and standardised procedures accepted by the wider mechanical engineering industry sectors as examples of best practice.
Non-destructive testing (NDT) – the examination of materials and components in a way that doesn't change their characteristics or destroy their usefulness.
Workplace procedures – procedures used by the organisation carrying out the work and applicable to the tasks being carried out. Examples are – standard operating procedures, safety procedures, equipment operating procedures, codes of practice, quality management practices and standards, procedures to comply with legislative and local body requirements.
- 4 Range
Evidence of surface checking is required using the hand spray dye penetrant method, and the magnetic particle method.
- 5 All activities must be consistent with accepted industry practice and comply with workplace procedures.

Outcomes and performance criteria

Outcome 1

Use non-destructive testing (NDT) methods to test metal surfaces for defects.

Performance criteria

- 1.1 The level and extent of surface testing required is established from documentation prior to commencing work.
- Range examples of documentation – job card, inspection or maintenance schedule, inspection criteria.
- 1.2 Parts are cleaned and tested.
- 1.3 Test results are interpreted and checked for conformance against the test specification for the parts.
- 1.4 Non-conforming parts are identified for repair or replacement.
- 1.5 Test results are recorded.

Replacement information	This unit standard and unit standard 27205 replaced unit standard 2410.
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Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 April 2011	31 December 2022
Review	2	25 January 2018	N/A

Consent and Moderation Requirements (CMR) reference	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Competenz qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.