Title	**Describe non-destructive testing (NDT) technology used in mechanical engineering**		
Level	**4**	**Credits**	**3**

Purpose	People credited with this unit standard are able to: describe NDT technology used in mechanical engineering.

Classification	Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering

Available grade	Achieved

Guidance Information

Definition
Non-destructive testing (NDT) – the examination of materials and components in a way that doesn't change or destroy their characteristics or usefulness.

Outcomes and performance criteria

Outcome 1

Describe NDT technology used in mechanical engineering.

Performance criteria

1.1 The operating principles of NDT methods used in mechanical engineering are described.

Range NDT methods – visual inspection, liquid penetrant, acoustic emission, magnetic particle, eddy current, ultrasonic, radiographic (x-ray);
evidence of five methods is required.

1.2 The capabilities and limitations of NDT methods are described with reference to the materials suited to the method, the level of specialist knowledge required, and the interpretation and value of the data obtained.

Range NDT methods – visual inspection, liquid penetrant, acoustic emission, magnetic particle, eddy current, ultrasonic, radiographic (x-ray);
evidence of five methods is required.

1.3 NDT applications in mechanical engineering are described with reference to the benefits, reliability and costs.

Range evidence of three applications is required. At least one of these must refer to use of NDT in a preventive maintenance programme.

Replacement information	This unit standard and unit standard 27206 replaced unit standard 2410.

Planned review date	31 December 2023

Status information and last date for assessment for superseded versions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

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.