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

Classification
Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering

Available grade
Achieved

Prerequisites
Unit 21912, *Apply safe working practices on an engineering worksite*, or demonstrate equivalent knowledge and skills.

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.

Planned review date

31 December 2023

Status information and last date for assessment for superseded versions

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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.