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| Title | Maintain level measurement devices used in industry | | |
| Level | 3 | Credits | 10 |

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| Purpose | People credited with this unit standard are able to: <ul style="list-style-type: none"> – reconfigure or calibrate a pressure measurement device used for level measurement; – calibrate or reconfigure a level measurement system; and – service level measurement devices. |
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| Classification | Industrial Measurement and Control > Industrial Measurement and Control - Maintenance |
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| Available grade | Achieved |
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Guidance Information

- 1 This unit standard has been developed for learning and assessment in a workplace environment.
- 2 References
 - ANSI/ISA-51.1-1979 (R1993) *Process Instrumentation Terminology*;
 - Electricity Act 1992;
 - Electricity (Safety) Regulations 2010;
 - Health and Safety at Work Act 2015 and associated regulations;
 - ISSN 0114-0663, *New Zealand Electrical Codes of Practice*, available from Worksafe, <https://worksafe.govt.nz/>;
 - Approved code of practice for the design, safe operation, maintenance and servicing of boilers, <https://worksafe.govt.nz/>;
 - CSP19 – ISSN 0110-9316, *Code of Safe Practice for the use of industrial gauges containing sealed radioactive sources 2005* (Ministry of Health, New Zealand); and all subsequent amendments and replacements.
- 3 Definitions
 - Industry requirements* – includes all asset owner requirements; manufacturers' specifications; enterprise requirements which cover the documented workplace policies, procedures, specifications, and business requirements; and quality management requirements relevant to the workplace in which the assessment is carried out.
 - Service* – planned activity during normal operation that involves inspection, cleaning, testing, adjusting, or making minor repairs to a piece of equipment to ensure that it works properly.
- 4 Recommended skills and knowledge: Unit 2632, *Demonstrate knowledge of level measurement systems used in industry*; and Unit 28078, *Demonstrate knowledge of industrial measurement processes, standards, and calibration*.

Outcomes and performance criteria

Outcome 1

Reconfigure or calibrate a pressure measurement device used for level measurement.

Performance criteria

1.1 Identify type and cause of typical errors.

Range may include but is not limited to – temperature, wet leg, wear.

1.2 Select test equipment according to the accuracy and range of devices.

Range may include but is not limited to – deadweight tester, manometer, air test equipment, dedicated test equipment.

1.3 Explain and follow safe work procedures.

Range may include but is not limited to – process isolation, loop isolation

1.4 Calibrate or reconfigure devices, as specified by the data sheet.

Range may include but is not limited to – zero, span, linearity, head correction.

1.5 Document test results in accordance with industry requirements.

Outcome 2

Calibrate or reconfigure a level measurement system.

Range level measurement systems – displacer, ultrasonic, radar, nuclear radiation, capacitive, resistive, conductive; evidence of one measurement system is required.

Performance criteria

2.1 Explain and follow safe work procedures.

Range may include but is not limited to – radio activity, tank product.

2.2 Calibrate or reconfigure level measurement systems as specified by the data sheet.

2.3 Document test results in accordance with industry requirements.

Outcome 3

Service level measurement devices.

Range level measurement devices – differential pressure, float, sight glass, displacer, ultrasonic, radar, nuclear radiation, capacitive, resistive, conductive; evidence of two devices is required.

Performance criteria

3.1 Locate, interpret, and apply technical information for servicing equipment.

3.2 Explain and follow safe work procedures.

Range may include but is not limited to – isolation, filled systems, chemical (oxygen/oil), pressure.

3.3 Service and test level measurement devices to ensure correct and continued operation.

Range may include but is not limited to – tools, materials, parts, techniques, specifications.

3.4 Produce reports and documentation in accordance with industry requirements.

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| Replacement information | This unit standard was replaced by skill standard 40239. |
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
|-----------------------|---------|------------------|--------------------------|
| Registration | 1 | 31 October 1995 | 31 December 2013 |
| Revision | 2 | 30 October 1997 | 31 December 2013 |
| Revision | 3 | 3 April 2001 | 31 December 2013 |
| Review | 4 | 22 June 2001 | 31 December 2013 |
| Review | 5 | 19 May 2008 | 31 December 2019 |
| Review | 6 | 21 November 2013 | 31 December 2027 |
| Rollover and Revision | 7 | 28 June 2018 | 31 December 2027 |
| Review | 8 | 30 January 2025 | 31 December 2027 |

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| Consent and Moderation Requirements (CMR) reference | 0003 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.