

<b>Title</b>	<b>Maintain level measurement devices used in industry</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>10</b>

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

<b>Planned review date</b>	31 December 2021
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**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	N/A
Rollover and Revision	7	28 June 2018	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0003
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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 The Skills Organisation [reviewcomments@skills.org.nz](mailto:reviewcomments@skills.org.nz) if you wish to suggest changes to the content of this unit standard.