

Unit ID: I&C09.

Domain

Control and Instrumentation

Title:

**Demonstrate knowledge of pressure
Measurement**

Level: 2

Credits: 2

Purpose

This unit standard specifies the competencies required to demonstrate knowledge of pressure Measurement. It includes demonstrating knowledge of pressure measurement and calibrates pressure transmitters and gauges. This unit standard is intended for those who work in instrumentation industry.

Special Notes

1. Entry information:

Prerequisite
 - none
2. Assessment evidence may be collected from a real or a simulated real workplace in which electronics instrumentation operations are carried out.
3. The evidence required to demonstrate competency in this unit must be relevant to workplace operations
4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' specifications and/or company's guidelines and instructions.
5. Glossary of terms:
 - '*Specifications*' refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements.
6. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act 2007, No. 11, 2007
 - NOSA
 - Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.
7. Performance of all elements in this unit standard must comply with industry standards.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available

from the Namibia Qualifications Authority and the Namibia Training Authority on www.nta.com.na

Elements and Performance Criteria

Element 1: Demonstrate knowledge of pressure measurement

Range

Pressure measurement may include but is not limited to pressure calculations, relative pressure measurement SI unit.

Performance Criteria

- 1.1 Knowledge of pressure measurement theory is demonstrated in terms of operational principles, scales and units used and conversion of units.
- 1.2 Types of pressure measurement devices and gauges are described in terms of operating principles and materials of construction for components.
- 1.3 Signal transmission used in pneumatic and electronic instruments and main components used in their pressure transmitters are described.
- 1.4 Types of connections such as piping, tubing and wiring are explained.
- 1.5 Various pressure measurement techniques stated and explained.
- 1.6 Characteristics of the various pressure measuring techniques explained.
- 1.7 Advantages and disadvantage of the various pressure measuring techniques is described.
- 1.8 The methods of pressure instrument installation are described.

Element 2: Calibrate pressure transmitters and gauges

Performance Criteria

Range

Vacuum transmitter, low pressure transmitter, pressure switch, pressure gauge.

- 2.1 Test equipment deadweight, manometer, air test equipment, dedicated test equipment.
- 2.2 Test equipment is selected according to the accuracy and range of the device.
- 2.3 Safe work procedures are explained and followed.
- 2.4 Calibrate transmitters and gauges using adjustments appropriate to the equipment.
- 2.5 Types and causes of typical measurement errors are identify.

2.6 Record test results in accordance with industry requirements

Registration Data

Subfield:	Electrical Engineering
Date first registered:	
Date this version registered:	
Anticipated review:	
Body responsible for review:	Namibia Training Authority