

**Domain****Instrumentation and Control****Title:****Tune and adjust control loop****Level: 5****Credits: 2****Purpose**

This unit standard specifies the competencies required to tune and adjust control loop. This unit standard is intended for those who work in instrumentation industry.

**Special Notes**

1. Entry information:

Prerequisite

- *Unit I&C32 - Apply knowledge of Signal Conditioners*

2. Assessment evidence may be collected from a real or an simulated realistic in which Instrument and Control operations are carried out.

3. To demonstrate competence, minimum evidence of selecting tuning method, including Control loop tuning and adjustment.

4. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' guidelines and instructions

4. Glossary of terms:

- *specifications'* refers to any, or all of the following: manufacturers' specifications and recommendations, workplace specific requirements

5. Regulations and legislation relevant to this unit standard include the following:

- Labour Act 2007, No. 11, 2007
- IEEE 315
- IEEE 518
- Regulations relating to the health & safety of employees at work under Schedule 1 (2) of the Labour Act No.11 of 2007
- And all subsequent amendments

6. 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. All approved unit standards, qualifications and national assessment arrangements are available on the Namibia Training Authority website [www.nta.com.na](http://www.nta.com.na)

## **Element 1: Tune and adjust control loop**

### **Performance criteria**

- 1.1. Personal and process safety precautions and procedures are followed.
- 1.2. Tuning activities are coordinated with other process activities and personnel in accordance with process control procedures.
- 1.3. Relevant sources of technical information are referenced. Technical information includes but is not limited to process operations manual and manufacturers' instructions.
- 1.4. Control loop tuning and adjustment is carried out using appropriate tuning methods. Tuning methods include but are not limited to Ziegler Nichols Tuning
- 1.5 Method, systematic trial and error, initial controller settings, ultimate sensitivity and reaction curve.
- 1.6. Documentation is updated in accordance with company procedures

### **Registration Data**

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