

**Domain**                      **Control and Instrumentation**

**Title:**                      **Select, use and maintain power tools and equipment**

**Level: 2**

**Credits: 4**

### Purpose

This unit standard specifies the competencies required to select, use and maintain power tools and equipment. It includes selecting power tools and equipment pertaining to specific job requirements, using fixed power tools, using portable power tools and equipment, and maintaining power tools, equipment and their accessories. This unit standard is intended for those who work in instrumentation industry.

### Special Notes

1. Entry information:

Prerequisite

- *Unit I&C01 - Apply and maintain safety rules in Instrumentation and Control Workplace environment.*
- *Unit I&C02 - Plan and organise work in electronic work environment*

2. Assessment evidence may be collected from a real or a simulated workplace in which instrumentation operations are carried out.

3. To demonstrate competence, at a minimum, requires evidence of the ability to select, use and maintain different tools and equipment when performing instrumentation tasks. In performing these tasks ensure identification of requirements and finishing of the tasks, selection and use of appropriate processes, tools and equipment and completing all work to specification.

4. All inspection, operation and maintenance procedures associated with the use of tools and equipment

5. Power source includes pneumatic, hydraulic and electrical. The range of power tools include but is not limited to drilling machines, jig saw, grinders, brushes, riveters, blower, vacuum, heat gun wrenches (including impact type), saws, tacks.

6. Maintaining power tools includes but is not limited to clamping, changing blades, replacing, adjustment or setting up, cleaning, lubricating and tightening.

7. Safety precautions include the use of personal protective equipment, electrical safety and fire protection.

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, No.11, 2007
- 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).

### **Elements and Performance Criteria**

#### **Element 1 Select power tools and equipment pertaining to specific job requirements**

##### **Performance Criteria**

- 1.1 Power tool and equipment is selected according to the task requirement.
- 1.2 Pre-operational check is carried out in terms of safety requirements and function.
- 1.3 Hazards associated with the use of power tools and equipment is recognised and necessary precautions taken according to work site procedures.
- 1.4 Faulty and unsafe tools and equipment are identified and reported.
- 1.5 Personal safety equipment is selected according to tools and equipment requirement

#### **Element 2: Use fixed power tools**

##### **Range**

Fixed power tools include but not limited to pedestal drill, bench grinder,

##### **Performance Criteria**

- 2.1 Fixed power tools are selected and set up according to job requirements.
- 2.2 Personal protective equipment applicable to the task is worn.
- 2.3 All guards and securing mechanisms are effectively utilised in terms of job requirements.
- 2.4 Fixed power tools are used safely and in accordance with manufacturers' specifications.

#### **Element 3: Use portable power tools and equipment**

### **Performance Criteria**

3.1 Portable power tools and equipment are selected in accordance to the available power source.

3.2 Portable power tools and equipment are set up according to job requirements.

3.3 Personal protective equipment applicable to the task is worn.

3.4 Portable power tools and equipment are used safely and in accordance with manufacturers' specifications

### **Element 4: Maintain power tools, equipment and their accessories.**

#### **Performance Criteria**

4.1 Power tools and equipment are cleaned after use according to work site practices and/or manufactures specifications.

4.2 Power tools are lubricated after use according to manufacturer's specifications.

4.3 Power tools are inspected for incurred defects in accordance to work site procedures and manufacturer's specifications.

4.4 Accessories are secured and minor defects repaired in accordance to work site procedures.

4.5 Portable power tools and accessories are stored in accordance to work site 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