

**Unit ID: 1507**

**Domain  
Title:**

**PYROMETALLURGICAL PROCESSING  
Handle bulk oxygen safely in a  
metallurgical plant**

**Level: 2**

**Credits: 4**

### **Purpose**

This unit standard is intended for those who carry out pyrometallurgy operations. People holding credit for this unit standard are able to: Plan and prepare for handling bulk oxygen; demonstrate knowledge relating to the handling of bulk oxygen; handle bulk oxygen; and complete duties pertaining to the handling of bulk oxygen.

### **Special Notes**

1. Entry information:

Prerequisite

- 1449 - *Comply with health, safety and environmental rules and regulations pertaining to processing operations; or demonstrated equivalent knowledge and skills.*

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

3. Safe working practices include day-to-day observation of safety policies and procedures and compliance with emergency procedures.

4. Specifications refer to any, or all of the following: manufacturer's specifications and recommendations, and workplace specific requirements.

5. Performance of all elements in this unit standard must comply with relevant regulatory, legislative, workplace requirements and/or manufacturers' specifications.

6. Regulations and legislation, including subsequent amendments, relevant to this unit standard may include but are not limited to the following:

- Labour Act, No. 11, 2007
- Mineral Act, No. 33, 1992
- Mine Health and Safety Regulations, 1999
- Regulations relating to the Health and Safety of employees at work, 1997 and all industry specific regulations, legislations, code of practice, or code of conduct.

## **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: Plan and prepare for handling bulk oxygen**

#### **Performance Criteria**

- 1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, explained, clarified and applied to the allocated task.
- 1.2 Safety and security requirements, including personal protective clothing and equipment are obtained from the site safety plan, workplace policies and procedures, explained, and applied to the allocated task.
- 1.3 Equipment, tools, accessories selected to carry out tasks are checked for consistency with the requirements of the job, their usability and any faults rectified or reported prior to commencement of work.
- 1.4 Clearance to handle bulk oxygen is obtained according to workplace policies and procedures.
- 1.5 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.
- 1.6 Work area is inspected and prepared according to workplace procedures.

### **Element 2: Demonstrate knowledge relating to the handling of bulk oxygen**

#### **Range**

The specified principal components of the bulk oxygen handling system may include but are not limited to vaporiser, oxygen injection lance and pipe line, storage vessel, auxiliary systems, instrumentation, interlock systems and safety devices.

### **Performance Criteria**

- 2.1 The actions and conditions pertaining to a safe, healthy work environment when handling bulk oxygen process are described.
- 2.2 The importance of handling bulk oxygen is explained in terms of achieving specified production requirements.
- 2.3 The specified principal components of the bulk oxygen handling system are identified and their functions are explained in terms of design and operational requirements.
- 2.4 Hazards and associated risks pertaining to the handling of bulk oxygen are identified through relevant risk assessment procedures.
- 2.5 Corrective actions, in case of sub-standards conditions and problems encountered, are described.
- 2.6 The colour coding and symbolic signs pertaining to the bulk oxygen handling process are explained in terms of legal and operational requirements.

### **Element 3: Handle bulk oxygen**

#### **Performance Criteria**

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 3.2 The bulk oxygen system is started according to workplace procedures.
- 3.3 The bulk oxygen process is monitored and controlled according to workplace procedures.
- 3.4 If necessary, corrective and/or reporting actions are taken according to workplace procedures.

### **Element 4: Complete duties pertaining to the handling of bulk oxygen**

#### **Range**

Housekeeping may include but is not limited to ensure the work area is ready for next user; remove work materials to designated locations; correctly identify waste and re-usable material; and remove waste and re-usable materials to designated locations.

#### **Performance Criteria**

- 4.1 The bulk oxygen system is stopped according to workplace procedures.

- 4.2 Task-specific tools, personal protective and safety equipment, are cleaned, maintained and stored for further use according to workplace procedures.
- 4.3 Good housekeeping practices are maintained according to workplace procedures.
- 4.4 Reporting and recording requirements are met according to workplace procedures.
- 4.5 Work related documents are completed according to job requirements and workplace procedures.

### **Registration Data**

<b>Subfield:</b>	Metallurgy
<b>Date first registered:</b>	28 September 2016
<b>Date this version registered:</b>	28 September 2016
<b>Anticipated review:</b>	2021
<b>Body responsible for review:</b>	Namibia Training Authority