

Domain

PYROMETALLURGICAL PROCESSING

Title:

**Shut down a furnace for long-term
maintenance**

Level: 3

Credits: 10

Purpose

This unit standard is intended for those who carry out metallurgical processing operations. People holding credit for this unit standard are able to: Plan and prepare for shutting down furnace; demonstrate knowledge relating to the shutdown of a furnace for long-term maintenance; shut down the furnace for long-term maintenance; and complete duties pertaining to the shutdown process.

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 processing 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.

Elements and Performance Criteria

Element 1: Plan and prepare for shutting down furnace

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, attachments and 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 The shutdown system is examined and sub-standard conditions dealt with according to workplace 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 shutdown of a furnace for long-term maintenance

Range

Principal components include shutdown system components; auxiliary systems; safety devices; and lock out systems.

Performance Criteria

- 2.1 The actions and conditions pertaining to a safe, healthy environment when shutdown a furnace for long-term maintenance are described.
- 2.2 The importance of the shutdown process is described in terms of achieving specified production requirements.
- 2.3 Hazards and associated risks are identified through relevant risk assessment procedures.
- 2.4 The principal components, applicable of the shutdown system, are identified and their functions described in terms of design and operational requirements.
- 2.5 The communication requirements pertaining to shutdown process are described.
- 2.6 Corrective actions, in case of sub-standard conditions and problems be encountered, are described.

Element 3: Shut down the furnace for long-term maintenance

Performance Criteria

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 3.2 The shutdown process is according to plant standard task and workplace procedures.
- 3.3 The shutdown process is monitored and controlled according to plant standard task and workplace procedures.
- 3.4 Operational problems encountered are dealt with and/or reported according to workplace procedures.
- 3.5 The shutdown process is conducted in line with environment protection requirements and workplace procedures.
- 3.6 The work area is prepared in readiness for maintenance work to be carried out.
- 3.7 Lock out procedures are adhered to according to workplace procedures.

Element 4: Complete duties pertaining to the shutdown process

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

Registration Data

Subfield:	Metallurgy
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