

Domain**PYROMETALLURGICAL PROCESSING****Title:****Conduct calcinations activities****Level: 3****Credits: 8****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 calcinations operations; conduct pre-operational checks; operate and monitor plant and equipment; carry out operator maintenance; and complete duties pertaining to calcinations activities.

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. *'Plant and equipment'* may include but is not limited to air-blowers; bag filters; calciner; electrostatic precipitator; silos; heat exchangers; weigh feeder; lines; gas train; conveyors; and valves.
4. Safe working practices include day-to-day observation of safety policies and procedures and compliance with emergency procedures.
5. Specifications refer to any, or all of the following: manufacturer's specifications and recommendations, and workplace specific requirements.
6. Performance of all elements in this unit standard must comply with relevant regulatory, legislative, workplace requirements and/or manufacturers' specifications.
7. 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 Qualifications Authority

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 calcinations operations

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, fuel, lubricants, 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 Environmental protection requirements are identified from the project environmental management plan and applied to the allocated task.
- 1.5 Work area is inspected and prepared according to workplace procedures.

Element 2: Conduct pre-operational checks

Performance Criteria

- 2.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 2.2 Plant and equipment are examined and substandard conditions are reported to appropriate personnel according to workplace procedures.
- 2.3 Functions of control and gauges are checked and adjusted where necessary to comply with manufacturer's specifications.
- 2.4 Plant start-up and shutdown procedures are conducted according to manufacturer's specifications.

Element 3: Operate and monitor plant and equipment

Performance Criteria

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.

- 3.2 Plant operation and catchment areas are continuously inspected and monitored according to manufacturer's specifications.
- 3.3 Equipment is adjusted and/or reagents added to approved operating parameters to optimise and maintain efficient calcining and to meet product targets according to workplace procedures.
- 3.4 If necessary, corrective and/or reporting actions are taken according to workplace procedures.
- 3.5 Operation of plant and equipment is consistent with environmental policy and other specified requirements.

Element 4: Carry out operator maintenance

Performance Criteria

- 4.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 4.2 Procedures for plant isolation and lock-out are implemented according to workplace procedures.
- 4.3 The work area is prepared in readiness for maintenance work to be carried out.
- 4.4 Periodic operator maintenance within scope of responsibility is carried out according to manufacturer's specifications and workplace procedures.

Element 5: Complete duties pertaining to calcinations activities

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

- 5.1 Plant and equipment, task-specific tools, personal protective and safety equipment, are cleaned, maintained and stored for further use according to workplace procedures.
- 5.2 Good housekeeping practices are maintained according to workplace procedures.
- 5.3 Reporting and recording requirements are met according to workplace procedures.
- 5.4 Work related documents are completed according to job requirements and workplace procedures.

Registration Data

Subfield:	Metallurgy
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