

Unit ID: 1404

Domain

HYDROMETALLURGY PROCESSING

Title:

**Make-up a sodium cyanide solution in a
metallurgical plant**

Level: 3

Credits: 6

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 to make-up a sodium cyanide solution; conduct pre-operational checks; make-up a cyanide solution; carry out operator maintenance; and complete duties pertaining to the cyanide make-up 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 hydrometallurgy operations are carried out.

3. The following types of cyanide apply to this unit standard: Flake sodium cyanide and Liquid sodium cyanide.

4. Safe working practices include operating in a self-contained breathing apparatus, 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 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 to make-up a sodium cyanide solution

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, 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 Cyanide emergency equipment is verified and examined according to workplace procedures.
- 2.3 The cyanide making up system is examined and substandard conditions are reported to appropriate personnel according to workplace procedures.

Element 3: Make-up a cyanide solution

Performance Criteria

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

- 3.2 The start-up of the cyanide make-up system is conducted according to manufacturer's specifications and workplace procedures.
- 3.3 The cyanide solution make-up process is monitored and controlled according to manufacturer's specifications and workplace procedures.
- 3.4 The safe and optimum production is ensured through effective communication according to workplace procedures.
- 3.5 If necessary, corrective and/or reporting actions are taken according to workplace procedures.
- 3.6 The making of cyanide solution is conducted consistently 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 cyanide make-up system 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 the cyanide make-up 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

- 5.1 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

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