

Unit ID: 1460

Domain

METALLURGICAL PROCESSING - CORE

Title:

Operate and monitor valve system

Level: 2

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 operate valve systems; prepare valves for operation; operate valve systems; carry out operator maintenance; and complete duties pertaining to the operation of the valve system.

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 to operate valve systems

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: Prepare valves for operation

Performance Criteria

- 2.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 2.2 Operation of valves and valve systems is checked by demonstrated knowledge of valve operation and fundamental operating principles.
- 2.3 Valves required for operation are checked against site-specific operating pressures, temperatures, volume, velocities and material requirements where applicable.
- 2.4 Valves required for operation are prepared or sequenced ensuring that they are either closed or opened as required, to regulate the flow of liquids and systems flow rates in a safe and efficient manner.
- 2.5 Operational condition of valves is checked to minimise risk of leakages and failures.

Element 3: Operate valve systems

Performance Criteria

- 3.1 Workplace hazards and associated risks are identified, minimised or eliminated according to workplace procedures and legislative requirements.
- 3.2 Correct valve operation is monitored against incidents such as vibration, chatter, cycling, and sticking.
- 3.3 If necessary, corrective and/or reporting actions are taken according to workplace procedures.
- 3.4 Valve sequences are regulated or altered to control the flow rates of fluid during the process to meet changing production conditions and demand.

Element 4: Carry out operator maintenance

Range:

Operator maintenance may include but is not limited to clean and lubricate valve stems, threads and other operational parts; identification of valve and regulator faults; and isolation of jammed or sticking valves.

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 valve 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 operation of the valve system

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

Subfield:	Metallurgy
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