

Domain	RIGGING	Unit ID: 986
Title:	Remove metals using air-carbon arc gouging process	
Level: 3		Credits:4

Purpose

This unit standard specifies the competencies required to remove metals using air-carbon arc gouging process. It includes describing and assembling the air-carbon arc gouging equipment, selecting, assembling and conducting pre operational checks on air-carbon arc gouging equipment, gouging work pieces, inspecting gouged work pieces and caring and storing gouging consumables and equipment. This unit standard is intended for those who work in lifting machine operations environment.

Special Notes

1. Entry information:
Prerequisite:
 - *937 - Apply safety rules and regulations in lifting machine operations or demonstrated equivalent knowledge and skills.*
2. Assessment evidence may be collected from a real workplace, or an appropriate simulated realistic environment in which lifting machine operations are carried out.
3. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' specifications, guidelines and instructions.
4. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act, No. 11, 2007
 - Regulations relating to the Health and Safety of employees at work, 1997 and all subsequent amendment.

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 on www.nta.com.na.

Elements and Performance Criteria

Element 1: Describe and assemble the air-carbon arc gouging equipment

Range

Parts may include but are not limited to hoses, hose clamps, air supply cylinder, gauges, gouging electrode holder and non-return valves.

Power source requirements may include but are not limited to direct (DC) or alternating (AC) current supply.

Performance Criteria

- 1.1 The importance of correct assembly of the air-carbon arc gouging equipment, and the consequences of incorrect assembly, is explained with reference to the manufacturer's requirements.
- 1.2 Basic and major components of the air-carbon arc gouging equipment are identified and the explanation of function and purpose is correct in terms of manufacturer's requirements and standards.
- 1.3 Parts and components are assembled in line with manufacturer's specifications.

Element 2: Select and conduct pre operational checks on air-carbon arc gouging equipment

Range

Resources to include: manufacturer's operational and specifications manual, worksite practices and safety and environmental issues.

Performance Criteria

- 2.1 Verification, identification and selection of air-carbon arc gouging equipment is carried out as specified per job requirements.
- 2.2 Unsafe and defective equipment are identified and reported.
- 2.3 Identification and rectification of hazards relate to gouging process is carried out in accordance with standard work site practices.
- 2.4 Pre operational checks are carried out in accordance with manufacturer's specifications.

Element 3: Gouge work pieces

Range

Gouging parameter may include heat input, metal transfer mode, gouging technique, and consumable handling.

Material type to be gouged may include but are not limited to low and medium carbon steels over 6mm thick.

Resources to be used may include but are not limited to gouging equipment, tools, protective clothing and equipment and gouging instruction sheet.

Performance Criteria

- 3.1 Safety precautions are adhered to during gouging process.
- 3.2 Work piece are cleaned after gouging as per worksite practices to remove all contaminated surfaces.
- 3.3 Gouging parameters and air pressure settings are established to job requirements and manufacturer's specifications.
- 3.4 Metal is removed by gouging to suit job requirements.

Element 4: Inspect gouged work pieces

Performance Criteria

- 4.1 Gouged work piece is inspected and conform to specifications as reflected on drawing.
- 4.2 Inspection methods and procedures selected are conducive to job requirements.
- 4.3 Defects removals are determined visually or with the aid of dye penetrant inspection method when required.
- 4.4 Excess material or defects are removed.
- 4.5 Documentation is completed in line with worksite procedures.

Element 5: Care and store gouging consumables and equipment

Range

Tools and equipment cared for is limited to defect reporting and stored in a usable condition for next user.

Performance Criteria

- 5.1 Tools and equipment are care for as per worksite practices.
- 5.2 Tools and equipment are stored to conform to worksite practices and procedures.
- 5.3 Gouging consumables are stored in line with worksite practices and procedures.

Registration Data

Subfield:	Lifting, Shifting and Secure Loads
Date first registered:	27 September 2012
Date this version registered:	27 September 2012
Anticipated review:	2015
Body responsible for review:	Namibia Training Authority