

Unit ID: 230

DOMAIN:

METAL FABRICATION-CORE

Title:

**Use hand tools for metal fabrication
operations**

Level: 1

Credits: 4

Purpose

This unit standard specifies the competencies required to use hand tools for metal fabrication operations. It includes identification and inspection of tools according to task requirements as well as use of hand tools. The unit standard is intended for those who work as welders and boilermakers.

Special Notes

1. Entry information

Prerequisite:

- 228 - Apply safety rules and regulations in a metal fabrication work environment or demonstrated equivalent knowledge and skills.

2. Glossary of terms:

- *Measuring hand tools* include but are not limited to steel rule, measuring tape, protractor, vernier, caliper and folding rule.
- *Checking hand tools* include but are not limited to plumb bob, spirit level, rafters square, straight edge, inside and outside calipers, feeler gauges and combination set.
- *Forming and cutting hand tools* include but are not limited to hacksaw, files, chisels, hammers and drills.
- *Marking out hand tools* include but are not limited to straight edge, prick punch, centre punch, scribe, chalk contour maker, centre finder, dividers, combination set chalk line and trammels.
- *Fastening hand tools* include but are not limited to spanners, adjustable spanners, vice grip, bench vice and riveting gun.
- *Tool aids* include but are not limited to drifts, Tommy bars, pliers, anvil, scraper and clamps.

3. To demonstrate competence, at a minimum, evidence is required of the safe and correct use of different hand tools in undertaking three simple metal fabrication tasks. These tasks should be performed ensuring correct identification of requirements and finishing of the tasks, correct selection and use of appropriate processes, tools and equipment and completing all work to specification.

4. Assessment evidence may be collected from a real workplace or a simulated real workplace or an appropriate simulated realistic environment in which welder and boilermaker operations are carried out.

5. Performance of all elements in this unit standard must comply with manufacturers' instructions and workplace specific requirements.

6. 'Specifications' refers to any or all of the following: manufacturers' specifications and recommendations, workplace specific requirements.
7. Regulations and legislation relevant to this unit standard include the following:
 - Occupational Health and Safety Regulations No.18 1997
 - Labour Act 6 of 1992and all subsequent amendments.

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: Select and inspect hand tools

Performance Criteria

- 1.1 Appropriate hand tools are selected and inspected in accordance with task requirements.
- 1.2 Unsafe and faulty tools are identified and marked for repair in accordance with designated procedures.
- 1.3 Routine maintenance of tools is undertaken according to standard operational procedures and techniques.

Element 2: Use hand tools

Performance Criteria

- 2.1 Hand tools are used to produce desired outcomes in line with job specifications.
- 2.2 All safety requirements are adhered to before, during and after use of hand tools.
- 2.3 Personal protective equipment is selected and used in line with enterprise and legislative requirements.
- 2.4 Hand tools are cleaned, checked and stored safely in appropriate location in accordance with enterprise and manufacturers' requirements.

Registration Data

Subfield:	Mechanical Engineering
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Anticipated review:	2012
Body responsible for review:	Namibia Training Authority