	Unit ID: 258
Domain	**METAL FABRICATION-BOILERMAKING**
Title:	**Lay out and fabricate pipe joints using the parallel line development method as part of metal fabrication operations**
Level: 3	**Credits: 6**

Purpose

This unit standard specifies the competencies required to lay out and fabricate pipe joints by using the parallel line development method as part of metal fabrication operations. It includes laying out pipe joints, fabricating pipe joints and cleaning up. This unit standard is intended for those who work as boilermakers.

Special notes

1. Entry information

   Prerequisite:
   - *Unit 228* – Apply safety rules and regulations in a metal fabrication work environment or demonstrated equivalent knowledge and skills.

2. To demonstrate competence, at a minimum, evidence is required of laying out and fabricating four different pipe joints for two different projects using the parallel line development method. 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.

3. Material includes pipes and all types of tubing.

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

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

6. *'Specifications'* refers to any, or all of the following: manufacturers' specifications and recommendations, site and 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 1992

   and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this Subfield may be awarded by institutions who meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with 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 www.nta.com.na.

Elements and Performance Criteria

Element 1: Lay out pipe joints

Performance Criteria

1.1 The front and top view of the object is displayed to specifications.

The circumference of the object is calculated as per job requirements.

Pipe is laid out according to drawing.

Oblique pipe is laid out using the step-off method.

Element 2: Fabricate pipe joints

Performance Criteria

2.1 Material is prepared prior to fabrication in accordance as per plan.

2.2 Materials marked off and dimensions checked in accordance with the plan.

2.3 Jigs and templates are made as required.

2.4 Material is cut and formed using appropriate machinery and tools in accordance with the plan.

2.5 Equipment is operated during fabrication tasks in accordance with manufacturers' specifications.

2.6 Material is assembled using appropriate methods in accordance with the plan and specifications.

2.7 Distortion is prevented and controlled by applying appropriate techniques in accordance with job requirements.

2.8 Final assessment is performed in accordance with the plan.

Element 3: Complete work and clean up

Performance Criteria

3.1 Work is completed and appropriate personnel notified in accordance with worksite procedures.

3.2 Work area is cleared of waste, cleaned, restored and secured in accordance with worksite procedures.

3.3 Tools and equipment are cleaned, checked, maintained and stored in accordance with worksite procedures.

3.4 Work completion details are finalised in accordance with worksite procedures.

Registration Data

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