



"making your skills a priority"

Course Title: Weld Workpieces Using the Oxy-Acetylene Gas Welding Process in the Down-hand Position

SAQA ID: 243072

NQF Level: 2

Credits: 10

Course Description:

This course is designed to provide learners with the knowledge and skills necessary to perform welding on workpieces using the oxy-acetylene gas welding process in the down-hand position. The course covers the fundamentals of oxy-acetylene welding, including equipment setup, welding techniques, safety practices, and quality control measures. Through hands-on practice, learners will gain proficiency in executing quality welds on various metal workpieces.

Course Objectives:

By the end of this course, learners will be able to:

- Understand the principles and applications of oxy-acetylene gas welding.
- Set up and operate oxy-acetylene welding equipment safely and effectively.
- Perform welds on workpieces in the down-hand position using oxy-acetylene techniques.
- Identify and address common welding defects and challenges.
- Comply with safety regulations and practices while welding.

Benefits of Completing this Course:

- Acquire practical skills in oxy-acetylene gas welding, a fundamental welding technique used in many industries.
- Enhance employability in the welding and fabrication sectors.
- Develop a comprehensive understanding of welding quality standards and inspection techniques.
- Gain confidence in the safe operation of welding equipment.
- Receive a recognized qualification that supports career advancement in welding.

Who Should Attend:

- Individuals seeking to start a career in welding or fabrication.
- Current welders looking to enhance their skills in oxy-acetylene welding.
- Apprentices and trainees in welding programs.
- Supervisors and quality control personnel in welding environments.



Assessment:

Assessment will be based on the learner's ability to:

- Demonstrate knowledge of oxy-acetylene welding principles and equipment.
- Set up and operate welding equipment in a safe manner.
- Perform quality welds on workpieces using oxy-acetylene techniques.
- Engage in discussions and practical activities related to welding safety and techniques.

Specific Outcomes and Assessment Criteria:

By successfully completing this SAQA Unit Standard, learners will demonstrate competency in the following:

1. Understand Oxy-Acetylene Welding Principles:

- Explain the fundamentals of the oxy-acetylene gas welding process and its applications.
- Discuss the properties of gases used in oxy-acetylene welding and their significance.
- Assessment Criteria: Written assessment covering oxy-acetylene welding principles and applications.

2. Set Up Welding Equipment:

- Identify and assemble the components of oxy-acetylene welding equipment.
- Adjust equipment settings according to the materials being welded.
- Assessment Criteria: Practical exercise demonstrating correct setup of oxy-acetylene equipment for specific welding tasks.

3. Perform Welds in the Down-hand Position:

- Execute welds on workpieces using the oxy-acetylene gas welding process in the down-hand position.
- Apply proper welding techniques to achieve high-quality welds.
- Assessment Criteria: Practical assessment of performing quality welds, evaluated on appearance, penetration, and consistency.

4. Identify and Address Welding Defects:

- Recognize common defects associated with oxy-acetylene welding, such as burn-through and excessive spatter.
- Implement corrective actions to address identified defects in welds.
- Assessment Criteria: Written assessment on identifying welding defects and corrective measures.



"making your skills a priority"

5. Comply with Safety Regulations:

- Explain safety procedures and practices relevant to oxy-acetylene welding.
- Demonstrate the proper use of personal protective equipment (PPE) and safe work practices.
- Assessment Criteria: Group discussion and practical assessment on safety standards and practices in welding operations.

By completing this course, learners will gain essential skills in oxy-acetylene gas welding, enabling them to perform quality welds on various workpieces and maintain safety standards in welding environments.