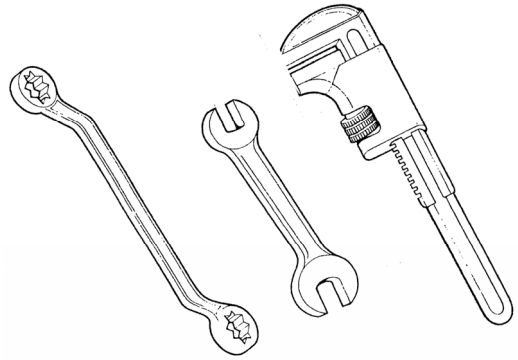
Trade of Plumbing

Module 1: Thermal Process and Mild Steel Pipework

Unit 10: Oxy-Acetylene Welding

Phase 2



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Document Release History

Date	Version	Comments
June 2006	V.1.0	
04/03/14	2.0	SOLAS transfer

Module 1 –Thermal Process and Mild Steel Pipework

Unit 10 – Oxy-acetylene Welding

Duration – 77.5 Hours

Learning Outcome:

By the end of this unit each apprentice will be able to:

- Adjust gas pressure regulators for oxy-acetylene welding.
- Butt weld mild steel pipe and plate.
- Branch weld mild steel pipe.
- Describe the different types of welding flame and welding techniques.

Key Learning Points:

Rk **Oxy-acetylene welding process.**

Rk **Types of welding flame.**

Sk **Flame adjustment.**

Sk **Setting gas pressures.**

Sk **Welding techniques - leftward, rightward.**

Rk **Welding positions.**

Rk **Types of joints.**

Rk **Types of welding rods.**

Rk **Weld defects.**

Rk **Welding faults - backfire flashback etc.**

Sk **Welding mild steel plate.**

Sk **Preparation of mild steel pipe for butt and branch welding.**

Sk **Butt and branch welding pipe by rotation and in fixed position.**

H **Oxy-acetylene welding hazards, hot metal, sparks etc.**

P **Working independently.**

Sk **Interpretation of drawings.**

P **Good working practice.**

Sk **Pressure testing pipework.**

Training Resources:

- Classroom facilities.
- Information sheets.
- Workshop facilities.
- Sample finished welds.

Exercise:

Apprentice to answer sample questions:

1. State the purpose of the following components:

   a) Regulator

   b) Flashback arrestor

   c) Hose check valves

   d) Mixing chamber
2. Describe the safety precautions to be observed when welding in confined spaces.
3. List 3 ways in which an acetylene cylinder can be identified.
4. Describe the correct procedures when lighting up and shutting down oxy-acetylene welding plant.
5. Set up oxy-acetylene welding plant and check for leaks.
   - Butt weld and branch weld mild steel pipe Nos. 2.1.10a and 2.1.10b in the curriculum document.
   - Describe using a sketch the three types of oxy-acetylene flame.
   - Describe the rightward welding technique.

Key Learning Points Code:

M = Maths D= Drawing RK = Related Knowledge Sc = Science

P = Personal Skills Sk = Skill H = Hazards

About Unit 10

This unit is primarily a skill based unit, please refer to your instructor.

Self Assessment

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