

## PERFORM SPOT AND SEAM RESISTANCE WELDING

**UNIT CODE: ENG/OS/WEF/CR/05/6/A**

### UNIT DESCRIPTION

This unit of competency specifies competencies required for material preparation, setting up of spot and seam welding equipment and application of safety in spot and seam welding. It also includes competencies in thermal joining of metals using two copper electrodes and pressure.

### ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA <i>(Bold and italicized terms are elaborated in the Range)</i>
1. Set up spot welding equipment and materials	1.1 Interpreted working drawings as per job specifications 1.2 Materials, tools and equipment are selected as per job specifications 1.3 Prepared surface joint as per the working drawings 1.4 Set up <b><i>spot welding equipment</i></b> as per job specifications
2. Carry out spot welding	2.1 Safety and health is observed as per Workplace procedures and OSHA 2.2 Welded workpieces using spot process as per job specifications and ISO 9606-1 standard 2.3 Examined weld joint as per ISO 17637 standard 2.4 Housekeeping is conducted in accordance with workplace procedures as workplace procedures
3. Set up seam welding equipment and materials	3.1 Working drawings are interpreted as per job specifications 3.2 Materials, tools and equipment are selected as per job specifications 3.3 Joints are prepared as per working drawings 3.4 Set up <b><i>seam welding equipment</i></b> as per job specifications
4. Carry out seam welding	4.1 Observed safety as per workplace procedures and OSHA 4.2 Performed seam weld process as per job specification and ISO 9606-1 standard 4.3 Examined the weld joint as per ISO 17637 standards

	4.4 Housekeeping is conducted as per workplace procedures
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### **RANGE**

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

<b>Variable</b>	<b>Range</b>
1. Spot welding equipment may include but is not limited to:	<ul style="list-style-type: none"> <li>• Spot welding PPE</li> <li>• Spot welding machine</li> <li>• Spot welding accessories</li> </ul>
2. Seam welding equipment may include but is not limited to:	<ul style="list-style-type: none"> <li>• Seam welding PPE</li> <li>• Seam welding machine</li> <li>• Seam welding accessories</li> </ul>
3. Materials may include but is not limited to:	<ul style="list-style-type: none"> <li>• Mild steel</li> </ul>

### **REQUIRED KNOWLEDGE**

The individual needs to demonstrate knowledge of:

- Workplace procedures and OSHA
- Spot welding equipment
- Seam welding equipment
- Surface preparation
- Spot welding operation and specification procedure
- Seam welding operation and specification procedure
- BS and ISO welding standards
- Spot and seam welding safety procedures
- Application of spot and seam welding

- Spot and seam welding workplace housekeeping procedures

## REQUIRED SKILLS

The individual needs to demonstrate the following skills:

- Interpreting working drawings
- Preparing surfaces for welding
- Spot welding techniques
- Seam welding techniques
- Product assessment
- Workplace housekeeping procedures

## EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

<p>1. Critical Aspects of Competency</p>	<p><b><i>Assessment requires evidence that the candidate:</i></b></p> <ul style="list-style-type: none"> <li>1.1 Observed safety and health as per Workplace procedures and OSHA</li> <li>1.2 Selected materials, tools and equipment</li> <li>1.3 Prepared surfaces as per working drawings</li> <li>1.4 Set up spot welding equipment in accordance with job specifications</li> <li>1.5 Set up seam welding equipment in accordance with job specifications</li> <li>1.6 Welded workpieces using spot process as per job specification and ISO 9606-1 standard</li> <li>1.7 Welded workpieces using seam process as per job specification and ISO 9606-2 standard</li> <li>1.8 Welded work pieces are examined as per ISO 17637 standard</li> <li>1.9 Conducted housekeeping according to work place procedures</li> </ul>
<p>2. Resource</p>	<p><b><i>The following resources must be provided:</i></b></p>

Implications	<p>2.1 Fully equipped welding workshop meeting OSHA standards</p> <p>2.2 Spot welding equipment</p> <p>2.3 Seam welding equipment</p> <p>2.4 Personal Protective Equipment</p>
3. Methods of Assessment.	<p>Competency may be assessed through:</p> <p>3.1 Observation</p> <p>3.2 Oral questioning</p> <p>3.3 Written tests</p> <p>3.4 Projects</p>
4. Context of Assessment.	<p>Candidate will be assessed</p> <p>4.1 On job</p> <p>4.2 Off job</p> <p>4.3 During industrial attachment</p>
5. Guidance information for assessment.	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended..</p>

## **PERFORM UNDERWATER ARC WELDING**

**UNIT CODE: ENG/OS/WEF/CR/06/6/A**

### **UNIT DESCRIPTION**