








## SOP - Welding - Arc







**DO NOT use this plant\* or complete this task unless you have been inducted in its safe use and operation by an Authorised Experienced Operator**

This SOP may not cover all possible hazards and risks and should be referred to as a control measure in the risk assessment process. Additional training may be required for high risk plant/work. Site and task may change required PPE.

### PERSONAL PROTECTIVE EQUIPMENT

- |   |   |   |
|---|---|---|
|  Eye protection must be worn            |  Long and loose hair must be contained or covered. |  Welding mask must be worn             |
|  Foot protection and spats must be worn |  Hand protection must be worn                      |  Protective body clothing must be worn |
|  High visibility clothing must worn     |   |   |

### POTENTIAL HAZARDS AND RISKS

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|--|--|
|  <b>Explosion</b><br>Explosion of gases, vapours or liquids  |  <b>Slips, Trips, Falls</b><br>Slip, trip, fall due to uneven or slippery work surfaces |
|  <b>Manual Task Injury</b><br>Manual task injury from incorrect manual handling techniques   |  <b>Other</b><br>Exposure to radiation<br>Burn injury                                   |
|  <b>Electrical shock or burn</b><br>Electrical shock or burn from damaged or poorly maintained electrical leads and cables<br>Electrical shock or burn from damaged or poorly maintained electrical leads and cables |  <b>Exposure to Dust/Fumes</b><br>Exposure to other emissions released by the plant     |

### PRE-OPERATIONAL SAFETY CHECKS

- ✓ Complete site specific risk assessment
- ✓ Complete a Hot Works Risk Assessment Checklist outside designated work area
- ✓ Complete visual plant check before operation
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Ensure that guards are fitted, secured and functional in accordance with manufacturers guidelines
- ✓ Ensure welding mask lens is not damaged
- ✓ Keep area clean and free of grease, oil and any other contaminants
- ✓ Keep the welding equipment, work area and your gloves dry to avoid electric shocks
- ✓ Ensure all welding equipment is in good working order
- ✓ Start the fume extraction unit if required
- ✓ Ensure welding flash screens are in place before commencement of task if required

### OPERATING PROCEDURES

- ✓ Ensure no person or animal is endangered when operating plant
- ✓ Keep welding leads as short as possible and uncoil them to minimise inductance
- ✓ Ensure work return earth cables make firm contact to provide a good electrical connection
- ✓ Ensure the electrode holder has no electrode in it before turning on the welding machine

- ✓ Ensure current is correctly set according to electrode selection
- ✓ Ensure workpiece has been prepared to be free of any contaminants
- ✓ Regularly inspect the tungsten electrode for damage. Turn all power off before changing electrode
- ✓ Before making adjustments bring plant to a complete standstill and isolate

### ENDING OPERATIONS

- ✓ Allow plant to cool before performing any maintenance, refuelling or cleaning
- ✓ Remove electrode stub from the holder and switch off power source
- ✓ Ensure plant is in good working order and stored in the appropriate location

### DO NOT

- ✗ Do not use if plant is faulty. Attach an Out of Service tag and report fault to your supervisor
- ✗ Do not operate in wet areas or if rain is pending
- ✗ Do not wear loose jewellery
- ✗ Do not use bare hands and never wrap electrode leads around yourself
- ✗ Do not use mobile phone while operating plant

\*Plant in this SOP refers to any machinery, equipment, appliance, container, implement and tool.