

Safe Work Instruction - Welding Arc - Electric

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

This SWI 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. 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

- Slips, Trips, Falls**
Slip, trip, fall due to uneven or slippery work surfaces
- Explosion**
Explosion of gases, vapours or liquids
- Manual Task Injury**
Manual task injury from incorrect manual handling techniques
- Other**
Exposure to radiation
Burn injury
Exposure to other emissions released by the plant

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Complete site specific risk assessment
- ✓ Complete a Hot Works Risk Assessment Checklist if outside designated work area
- ✓ Complete visual plant check before operation
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Keep area clean and free of grease, oil and any other contaminants
- ✓ Ensure gas hoses and other plant are clean, in good condition and do not create a trip hazard
- ✓ Check that the area is well ventilated, start fume extraction unit required
- ✓ Ensure oxy hoses are fitted
- ✓ Ensure welding flash screens are in place

OPERATING PROCEDURES

- ✓ Check that the oxygen and acetylene regulator are correctly adjusted
- ✓ Check that both blowpipe valves are closed
- ✓ Slowly open the cylinder valves on each cylinder for half a turn only
- ✓ Screw in the regulator adjusting knobs slowly until the delivery pressure gauges register 70kaPa
- ✓ Purge and check the constant oxygen gas flow;
 - open the oxygen blowpipe valve for 2 seconds and check the delivery gauge
 - If necessary re-adjust the oxygen regulator to achieve a 70kaPa pressure
 - Close the oxygen blowpipe valve
- ✓ Purge and check the constant acetylene gas flow:

- Open the acetylene blowpipe valve for 2 seconds and check the delivery gauge
- If necessary re-adjust the acetylene regulator to achieve a 70kaPa pressure
- Close the acetylene blowpipe valve

LIGHTING UP

- ✓ Open the acetylene blowpipe valve slightly and light the blowpipe with a flint lighter
- ✓ Continue to slowly open the acetylene valve until the flame no longer produces soot
- ✓ Slowly open the oxygen blowpipe valve until a neutral flame is produced

ENDING OPERATIONS

- ✓ Close the acetylene blowpipe valve first
 - ✓ Then close the oxygen blowpipe valve
 - ✓ Close down both cylinder valves
 - ✓ Open oxygen blowpipe valve to allow the gas to drain out
 - ✓ When oxygen gauges read zero, unscrew regulator-adjusting knob
 - ✓ Close oxygen blowpipe valve
 - ✓ Turn off acetylene cylinder valve
 - ✓ Open acetylene blowpipe valve and release gas
 - ✓ When acetylene gauges read zero, release regulator adjusting knob
 - ✓ Close acetylene blowpipe valve
 - ✓ Ensure both cylinder bottles are kept secured and in an upright position
- Ensure plant is in good working order and stored in the appropriate location

DO NOT

- ✘ Do not use if plant is faulty. Attach a DO NOT OPERATE tag and report fault to your supervisor
- ✘ Do not leave plant running unattended
- ✘ Do not wear loose jewellery
- ✘ Do not use mobile phone while operating plant

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