

## SOP - Plasma Cutter

**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.



Hearing protection must be worn



Foot protection and spats must be worn



Oil free leather gloves must be worn



Minimum P2 face mask or respirator must be worn when airborne dust or fumes are created



Appropriately rated Welding mask must be worn



Protective body clothing must be worn

### POTENTIAL HAZARDS AND RISKS

- ⓘ Exposure to High Pressure Fluid**  
Injury from exposure to high pressure fluids
- ⓘ Cutting, Stabbing or Puncturing**  
Injury from contact with moving parts  
**Injury from sharp or flying object**
- ⓘ Electrical Shock or Burn**  
Electrical shock or burn from plant contact with live electrical conductors  
Electrical shock or burn from damaged or poorly maintained electrical leads and cables
- ⓘ Manual Task Injury**  
Manual task injury from awkward body posture
- ⓘ Slip, Trips, Falls**  
Slip, trip, fall due to uneven or slippery work surfaces  
Slip, trip, fall due to electrical leads obstructing walkways
- ⓘ Other**  
Burn injury  
Hearing damage from excessive noise  
Exposure to toxic fumes  
Exposure to radiation  
Exposure to other emissions released by the plant

### PRE-OPERATIONAL SAFETY CHECKS

- ✓ Complete site specific risk assessment
- ✓ Complete visual plant check before operation
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Ensure material to be cut poses no hazard. Consult the manufacturers Safety Data Sheets (SDS) for specific technical data and precautionary measures concerning any materials or coating on materials cut with this equipment
- ✓ Ensure the work area is clean and clear of grease, oil and any flammable materials
- ✓ Keep the equipment, work area and gloves dry to avoid electric shocks
- ✓ Ensure the gloves, handpiece and work leads are in good condition
- ✓ Ensure other people are protected from flashes by closing curtain to welding bay or erecting screens
- ✓ Ensure fume extraction unit is on before beginning cutting operation. Ensure machine is used in a well-ventilated area if not used in a welding bay

### OPERATING PROCEDURES

- ✓ Keep clear of moving plant parts
- ✓ Operate plant to the conditions of the work area

- ✓ Check power lead is in good working order and does not create a trip hazard
- ✓ Keep leads and air hose clear of the work and protect them against damage from hot, sharp or heavy contact
- ✓ Ensure machine is correctly set up for current air flow
- ✓ Ensure work return earth cables make firm contact to provide a good electrical connection
- ✓ Ensure there are no water puddles anywhere near the work area
- ✓ Take particular care to avoid accidental UV welding flash to skin and eyes
- ✓ Ensure while plasma cutting always make efforts to insulate yourself from ground and from your workpiece
- ✓ Always turn the power "OFF" before changing tips, electrodes, electrode adapters, baffles, brass ends or heat shields

### ENDING OPERATIONS

- ✓ Ensure the welder and fume extraction are switched off
- ✓ Ensure the air regulator is off and the unit secured
- ✓ Hang up the handpiece, hoses and cables appropriately

- ✓ Allow plant to cool before performing any maintenance, refuelling or cleaning
- ✓ 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 leave plant running unattended
- ✗ Do not weld or cut containers that have held combustible liquids or gases
- ✗ Do not heat or cut metals coated with or containing materials that emit toxic fumes, unless coating is removed from the work surface
- ✗ Do not cut in confined spaces, or where the ventilation is considered not to be adequate
- ✗ Do not use the plasma cutter in areas where combustible or explosive gases or materials are located
- ✗ Do not adjust the clamp while you are cutting
- ✗ Do not touch any parts of the plasma cutter that are electrically connected
- ✗ Do not use oxygen, only air supplied from compressor to be used
- ✗ Do not wear loose jewellery
- ✗ Do not use mobile phone while operating plant

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