

SAFE OPERATING PROCEDURE

Task / Equipment Description: Arc Welding
















Potential Hazards and Risks:

- Electric shock
- Radiation burns to eyes and body
- Burns due to hot or molten materials
- Fumes
- Flying sparks
- Fire or explosion

DO NOT use this equipment unless you have been trained in its safe use and operation.

Required Personal Protective Equipment (PPE)

PPE ✓	Welding Gloves	Hearing Protection	Head Protection	Eye Protection	Eye (UV) Protection	Safety Footwear	FaceVisor / Welding	Dust Mask	Half Face Mask (P2)	Breathing Appartus	Hi-Vis Apparel	Full Body Clothing	Harness
													
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Cover all skin and remove all jewellery.

Keep a fire extinguisher nearby

ALWAYS

Ensure you have been appropriately trained to operate the welding equipment safely

Inspect the welding equipment to ensure that it operates correctly and is in good condition

Ensure appropriate identified PPE is worn

Make sure both hands are free to perform the task

Ensure the work area is clean, clear and there is no oil, grease or flammables within eleven (11) metres

Put up welding screens in an enclosed space to protect others

Advise other workers when you are going to weld so they do not inadvertently enter the workspace

Keep the welding equipment, the workspace and your gloves dry to avoid electric shocks

NEVER

Never use bare hands and never wear any rings and jewellery

Never operate welding equipment in wet or damp conditions

Never use faulty equipment. Report it to the supervisor immediately.

Never weld in poor ventilated areas

Never wrap the electrodes around you

Never use the welding equipment if the electrode holder and leads are not in good condition

This document does not replace training; it is provided as a guide to the safe use of this type of equipment. Refer to the manufacturer's manual or training documents for further information. This is a non-specific document and must be assessed against your particular brand of equipment and the working environment. Where necessary a Task Specific Risk Assessment should be undertaken.

Safe Operating Procedure:

1. Pre-Operation – Safety Checks:
 - Complete Hot Work Permit (if appropriate)
 - Only experienced operators can use the welding equipment
 - Advise other workers you will be commencing welding
 - Check the area for slips and tripping hazards, oil grease or any other flammables
 - If you are working in an enclosed space erect welding screens, outdoors establish a hazard zone with signage or temporary barriers
 - Check that all of the equipment is in good working order, if not place an out of service tag on the equipment and report to a supervisor
 - Ensure fume extraction unit is on before beginning welding and over/near work area
 - Make sure all work is clamped prior to starting weld to prevent movement
 - Ensure all PPE is worn AT ALL TIMES
 - Read Material Safety Data Sheets for all metals, consumables, coatings and cleaners
2. Operation – Safety Procedures:
 - Keep welding leads as short as possible and coil them to minimise inductance
 - Ensure work return cables make firm contact with work or bench to ensure a positive electrical connection
 - Ensure the electrode holder has no electrode in it before turning on the welding machine
 - Ensure the current is correctly set according to the electrode selection
 - Take care to avoid welding flashes
 - Stop welding, isolate equipment with out of service tag/lock out equipment if any faults are found and report immediately
 - Store welded work in designated hot work areas to prevent accidental burns
3. Post-Operation – Housekeeping:
 - Switch off the welding machine when work is complete
 - Switch off the power source and remove electrode stud from holder
 - Hang up electrode holder and welding cables
 - Treat the cylinders with care. Report damage to cylinders to Diamond Hire.
 - Secure the welding equipment during travel

For further information:

- Safe Work Australia – Welding Processes Code of Practice
- Australian Standards – AS/NZS 1554 Structural Steel Welding