

STANDARD OPERATING PROCEDURES

Oxy-Fuel Gas Welder

DO NOT use this machine unless you have received authorization from the Shop Coordinator



Eye protection must be worn at all times.



Long and loose hair must be contained.



Oil-free leather gloves must be worn.



Goggles (or equivalent) with the correct shade lens must be worn when welding or cutting.



Appropriate protective clothing must be worn.



Pants must not be rolled up nor tucked into boots.



Respiratory protection may be required.



Sturdy closed-toe footwear must be worn.



Rings and jewelry must not be worn.

Potential Hazards and Injuries

- Fire or explosion (trauma/burns)
- Fumes (respiratory hazard)
- Radiation (eye & skin damage)
- Molten metal/Hot surfaces (burn hazard)
- Flying sparks (burn hazard)

Pre-Operational Safety Checks

- ✓ Locate and ensure you are familiar with all valves, check valves, flashback arrestors, and regulators.
- ✓ If using a portable welding unit, ensure the unit is on a reasonably level surface to avoid tip over.
- ✓ Check workspaces, walkways, and routing of gas hoses to ensure no slip/trip hazards are present.
- ✓ Ensure the work area is clean and clear of grease, oil and any flammable or combustible materials.
- ✓ Ensure your jacket, gloves, torch and hoses are in good condition (e.g., no cuts, tears, burns, melts, cracks, or kinks).
- ✓ Ensure cylinder gages read zero pressure, are in good condition (e.g., glass not cracked), and the regulator T-handles are unscrewed until slightly loose.
- ✓ Ensure torch valves are closed.
- ✓ Ensure cylinder valve protectors are installed securely.
- ✓ Start the fume extraction unit before welding or cutting. (Required unless the Fire Marshal has allowed welding in areas without fume extraction.)
- ✓ Review the SDSs for the rod and gases to be used.
- ✓ Ensure personal hydration as PPE and direct exposure to heat can increase risk of heat illness.

Safe Practices During Operation

- ✓ Stand to the side of the regulator gages when opening cylinder valves or adjusting regulators.
- ✓ Use only a striker to light the torch.
- ✓ Ignite acetylene first with torch's acetylene valve slightly open and without much delay, and adjust flame. Then open the torch's oxygen valve to the desired flame.
- ✓ Keep hoses away from hot surfaces at all times.
- ✓ Monitor hoses more closely during cutting operations.
- ✓ Bend upper end of rod to avoid poking hazard.
- ✓ Close the torch valves in manufacturer-specific order.

Ending Operations and Cleaning Up

- ✓ Close cylinder valves; then purge hoses and regulators; and, then ensure torch valves are closed.
- ✓ Unscrew regulator T-handles until slightly loose.
- ✓ Hang up the torch and hose.
- ✓ Turn off the fume extraction unit.
- ✓ Inspect area for fire risk, and label any hot items.
- ✓ Leave the work area in a safe, clean and tidy state.

DON'T

- ⊗ Don't use faulty equipment; report it immediately.
- ⊗ Don't leave the welder running unattended.
- ⊗ Don't drape cables over body.
- ⊗ Don't weld on drums, tanks, painted or plated materials, etc. without permission.

SOP must be used in conjunction with an effective training program