

SOP (OXY ACETYLENE)

SS-WHS-SAF-000

Authorised By:
Rev 1 19/03/2024



TASK	Oxy Acetylene					
HAZARDS	Flying debris	☐	Heat / cold	☐	Electricity	☐
	Cuts / laceration	☐	Dust	☐	Rollover	☐
	Pinch / crush	☐	Noise / vibration	☐	Plant interaction	☐
	High pressure	☒	Fire / Explosion	☒	Flashback	☒
	Fumes	☒	Burns	☒	Eye damage	☒
PPE REQUIRED						

PRE-START CHECKS

1. Ensure all personnel are trained and authorized to operate the equipment.
2. Inspect the cylinders for any visible damage, leaks, or signs of wear.
3. Check that the regulators, hoses, and fittings are connected and in good condition.
4. Verify that flashback arrestors are installed on the oxygen and acetylene lines.
5. Confirm that fire extinguishing equipment (e.g., fire extinguisher, fire blanket) is readily available in case of emergency.

SAFE OPERATING PROCEDURE

1. Wear appropriate personal protective equipment (PPE) including safety glasses, welding helmet, gloves, and flame-resistant clothing.
2. Open the oxygen cylinder valve slowly and fully, then adjust regulator as advised.
3. Repeat the same process for the acetylene cylinder, ensuring the pressure does not exceed the recommended limit.
4. Light the acetylene torch using a friction lighter, keeping the torch pointed away from yourself and others.
5. Adjust the acetylene flow to produce a neutral flame by gradually opening the oxygen valve until the flame stops smoking and becomes sharp.
6. Position the torch tip approximately 1/8 to 1/4 inch from the workpiece, and adjust the flame as necessary for cutting or welding.
7. Preheat the metal until its cherry red before applying the oxygen jet to initiate a cut.
8. During welding, maintain the torch angle and distance to achieve proper penetration and fusion.
9. Be vigilant for any signs of flashback or backfire, such as popping or hissing noises, and shut off the torch immediately if detected.
10. After use, close the acetylene valve first, followed by the oxygen valve, and bleed off any remaining gas from the hoses.

POST-OPERATION PROCEDURE

1. Shut off the regulators and bleed the hoses to release any remaining gas pressure.
2. Inspect the equipment for any damage or leaks, and report any issues.
3. Store cylinders in an upright position, secured to prevent tipping or damage.
4. Clean the torch tip and hoses to remove any debris or contaminants.
5. Ensure all equipment is properly stored in a designated area, and the work area is clear of any flammable materials.