Author:	Paul Roberts	Revision #:	2
Approved by:	Chris Peoples	Date Issued:	July 2022

SAFE OPERATING PROCEDURES

Welding, Oxy-Acetylene Cutting SOP 11A-40

Hazard Review		
Lifting	Debris in Eyes	Burns to Eyes, Exposed Skin
Fire	Burning Clothes	Explosion
Pinching, Cutting, Crushing	Confined Space	Toxic Fumes
Required Personal Protective Equipment (PPE) (Based on job specific hazard review)		
Safety Vest	Safety Shoes	Welding Helmet/Goggles
Welding Gloves/Sleeves	Helmet	Flame Resistant Clothing

1. Do not attempt to use oxy-acetylene cutting equipment until properly trained.
2. Avoid exposing cylinder to excess heat, oil and grease.
3. Check work area for flammable and combustible materials and keep fire extinguisher nearby.
4. Relocate flammable materials within a 35’ radius prior to welding
5. Relocate combustible materials within a 35’ radius or cover with suitable flame-resistant material and fire watch should be provided.
6. The employee must wear eye and foot protection.
7. Never use oxygen as substitute for compressed air or feed into confined space.
8. Keep an adequate space between your work and the cylinders.
9. Acetylene should never be used above 15 PSI.
10. Use a striker to light the torch, not matches or lighters. Do not re-light the torch from hot metal.
11. Use correct pressures and tip sizes.
12. Never wrap hose or hang torch around cylinder valves or regulators.
13. When parallel lengths of oxygen and acetylene hose are taped together for convenience and to prevent tangling, not more than 4 inches out of 12 inches shall be covered by tape.
14. Hoses should have flashback arresters of the correct type.
15. Have good ventilation while cutting.
16. Respiratory protection may be required in confined spaces. Hazard assessment will determine need for respiratory protection.
17. A Hot Work Permit is required in confined spaces or areas where flammable or combustible materials are present.
18. Never cut or weld on any container that has held a flammable substance without ensuring venting and purging with inert gas such a nitrogen or compressed air. A 4-gas meter should be used to verify Lower Explosive Limit is safe prior to actual cutting or welding.
19. Keep hoses away from sparks, hot metal, sharp surfaces, and from being run over by heavy equipment.
20. Always stand to one side of any oxy-acetylene outfit when turning on the cylinders.
21. Never move a cylinder by dragging, sliding, or rolling.
22. Keep protective cap in place and avoid striking it against something that could cause a spark.
23. Identify oxygen and acetylene tanks by labeling, not by color code alone.

24. Blow out cylinder valves before attaching regulator.
25. Release regulator screw before opening valve. Open cylinder valve slowly.
26. Do not allow cylinders to lie in horizontal position.
27. Do not pick up cylinders using the valve protector cap.
28. Acetylene valve should not be opened more than one half turn. Oxygen valve should be fully opened when in use.
29. If the cylinder valves leak or function improperly, do not attempt to repair. Contact the supplier.
30. Cylinders shall be properly secured to prevent them from being knocked over.
31. Cylinders shall not be transported with gauges attached.
32. Release pressure on regulators when work is finished.
33. Light the acetylene gas before opening the oxygen valve.
34. Oxygen/acetylene cylinder carts must be secure cylinders by chain and maintain them in upright position to prevent from tipping over.
35. For oxygen/acetylene cylinder carts stored indoors, carts must have a noncombustible barrier of at least 5' high having a fire-resistance rating of at least one-half hour. Reference pictures below.

Related SOP's	
General SOP's. .....Chapter 10	Welding, Arc……..11A-39
Structural Steel Fabrication……..11B-77	Confine Space Entry 11E-1