
HEALTH AND SAFETY PROCEDURE 301 – Welding, Cutting, Brazing

1.0 PURPOSE

The purpose of this procedure is to provide guidelines for the execution of tasks to enhance worker health and safety and prevent property damage.

2.0 SCOPE

This Procedure applies to all Westlake employees and contract employees working at Westlake, Plaquemine Operations.

3.0 PROCEDURE

3.1 For any welding, cutting, brazing activities, the following procedures shall be followed where applicable:

- 3.1.1 HSP – 203 Hot Work,
- 3.1.2 HSP – 200 Safe Work Permit,
- 3.1.3 HSP – 202 Confined Space Entry
- 3.1.4 HSP – 300 Personal Protective Equipment,
- 3.1.5 HSP – 307 Safe Process Piping, Equipment & Vessel Opening

NOTE: The following are additional requirements when welding, cutting, or brazing.

3.2 Welding

- 3.2.1 Good housekeeping must be maintained during all cutting and welding operations. Keep the working area and floor clean and clear of electrode stubs, scraps of metal, and other material.
- 3.2.2 Cable connections should be tight and cable insulation shall be inspected daily prior to use.
- 3.2.3 Proper eye protection shall be worn while welding or by anyone coming in contact with welding operations.
- 3.2.4 Persons adjacent to welding operations shall be protected from the welding rays. Screens or shields used for this purpose must be constructed of noncombustible or flameproof materials.
- 3.2.5 Wearing wet gloves or wet shoes while welding is prohibited. Boots

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and gloves should be kept dry.

- 3.2.6 Do not stand in water when welding or cutting; instead, stand on a dry platform made of wood or some other non-conductive material.
- 3.2.7 Never leave an electrode holder on a table or in contact with a grounded metallic surface (place it on the support provided for that purpose).
- 3.2.8 Never weld on closed containers or on containers that have held combustible materials without first cleaning them and verifying non-explosive atmosphere.
- 3.2.9 Frames of arc welding machines shall be properly grounded.
- 3.2.10 For a non-gas powered machine, AC power from welding receptacle or other AC power source, electrical cable connections must be performed by a qualified electrician.
- 3.2.11 Use the proper terminals on the arc welding machine for the power line voltage connection.
- 3.2.12 Both leads should be brought as close to the work site as possible. Grounding should be as close to the work as possible.

3.3 Cutting

- 3.3.1 Cutting should be done away from the operator to avoid the possibility of molten metal spraying into the face or onto clothing.
- 3.3.2 Properly support all piping or materials prior to cutting to prevent from falling.
- 3.3.3 Cylinders must not be hoisted without the use of an approved hoisting cradle.
- 3.3.4 Compressed gas cylinders must not be transported by a motorized vehicle or stored without protective caps in place.
- 3.3.5 Users of cylinders shall check frequently for damage, dents, cuts, corrosion, pitting, etc. This will insure the safe use of cylinders.

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- 3.3.6 After replacing a cylinder or if a leak is suspected, connections shall be checked for leaks with a leak detecting solution or soapy water following connection.
- 3.3.7 Cylinders that are found to be defective or in poor condition shall be tagged and removed from service.
- 3.3.8 Cylinders shall be stored in groups according to the type of gas. A sign must be posted designating each group.
- 3.3.9 Empty and full cylinders must be stored separately.
- 3.3.10 The protective caps shall be kept on cylinders, full or empty, at all times except when the cylinder is being used.
- 3.3.11 Cylinders shall be in an upright position and secured at all times.

3.4 Handling Oxygen/Acetylene Cylinders and Equipment

- 3.4.1 All equipment used for cutting operations such as cylinders, regulators, valves, and torches, must be kept free of grease and oil.
- 3.4.2 When welding, cutting, or brazing is suspended for 30 minutes or greater such as during breaks, lunch, or overnight:
 - 3.4.2.1 Equipment must be brought to a safe condition
 - 3.4.2.2 Torch valves must be closed and gas applied to the torch must be positively shut off.
 - 3.4.2.3 Gauges and hoses should not be left hooked up overnight.
 - 3.4.2.4 Welding electrodes must be removed from holders and located so that accidental contact cannot occur.
- 3.4.3 Open cylinder valves slowly. Open fully when in use to eliminate possible leakage around the cylinder valves and regulator stem.
- 3.4.4 Purge valves, regulators, lines and torches before use.
Stand to one side of oxygen regulators when opening the oxygen cylinder valve.

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- 3.4.5 Stand to one side of oxygen regulators when opening the oxygen cylinder valve.
- 3.4.6 Keep cylinders away from exposure to high temperatures. Remember, the pressure in an oxygen cylinder increases with the temperature.
- 3.4.7 Cylinders of oxygen shall not be stored closer than 20 feet to cylinders of fuel gas unless a 5-foot protective barrier is installed between them with a ½ hour fire rating.
- 3.4.8 Mark empty cylinder either "Empty" or "MT" with chalk as soon as they are taken out of service.
- 3.4.9 If a cylinder leaks around a valve or a fuse plug, tag it to indicate the fault, move it to a safe area and immediately notify stores to pick it up.
- 3.4.10 Keep the regulators in good repair. Do not use a leaking (creeping) regulator. DO NOT TRANSPORT BOTTLES WITH REGULATORS ATTACHED.
- 3.4.11 Use a spark lighter for lighting a torch. (Cigarette lighters are prohibited)
- 3.4.12 Acetylene shall not be used at a pressure greater than 15 psi. Never repair a hose by binding it with tape.
- 3.4.13 Cylinders shall be kept far enough away from the actual welding or cutting operation so that sparks, hot slag or flame will not reach them. When this is impractical, fire resistant shields shall be provided.
- 3.4.14 Cylinders shall be placed where they cannot become part of an electrical circuit. Electrodes shall not be struck against a cylinder to strike an arc.



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Revision History

Rev	Changes	Approved	Date
6	<i>Westlake branding. Added more specific requirements about wet conditions.</i>	H. Garner	7/1/2017
6	<i>Updated Westlake Logo, added "Current Review Date" to header. No content updates.</i>	H. Garner	3/16/2023