



FRED SHEARER & SONS, INC.
 ESTABLISHED 1916

Job Hazard Analysis		JHA # 3
Job/Task Title: Arch and Wire Welding		
Safe Job Procedure:		Revised 1/2024
<p>This JHA is for the safe and successful use of an arc or wire welder. Special emphasis is placed on mitigating fire, electrical and burn hazards.</p>		
<p align="center">Required PPE: Hard Hat, Welding Hood, Safety Glasses, Hi-Vis Vest, Leather Gloves, Leather Gauntlet, and Work Boots</p>		
<p align="center">Review JHA 23,24,25,26,28,30,31: Power Tools and Equipment, MEWP and Aerial Lift, Cut-shop, Material Handling, Scaffolding, Cleanup/Covering</p>		
Step #1 Work Area Inspection		
Steps to Complete Job	Hazards	Preventive Measures
Survey and set up the work area.	Workers can be cut on sharp materials and sharp edges, slip/trip/fall hazards, and being struck by loose debris or unsecure materials.	1) Hard Hat, Safety Glasses, Hi-Vis vest, Gloves, Cut Resistant Sleeves (framing, cutting, grinding), and Boots.
		2) Identify, eliminate, or mark all trip hazards such as, open holes, slippery conditions, rolling stock, or changes in elevations.
		3) Correct or note any changes in work area since last leaving it.
		4) Pickup loose materials and remove debris from work area.
Identify any stored energies in the work area that could be released due to the work being performed, or by being damaged.	Workers could release unknown or unsuspected energy due to damage, removal of system components, or exposure of system components.	1) Relocate stored energy components or system from work area.
		2) Deenergize and install LOTO (JHA #31) procedures to stored energy source.
		3) Install bulletproofing or mitigation to protect stored energy source.
		4) Barricade and tag area around stored energy source.



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Walk area to ensure that there is adequate lighting and electrical power supply.	Lack of lighting can impair the ability to see, causing trips, falls, cuts, etc. Lack of sufficient electrical power can cause circuit overloads and excessive number of electrical cords in the area.	1) Have temporary task lighting provided before work begins.
		2) Have temporary power provided before work begins.
		3) Minimize electrical cords in area. Verify the cords in use are rated for their expected use.
		4) All cords and lighting to be GFCI protected.
		5) All cords to be tested and marked according to current Assured Grounding protocol.
Coordinate work in the area with other trades.	Possible confusion and conflict due to multiple trades working in a limited area.	1) Communicate with other trades to avoid creating a hazardous situation by trade stacking. Coordination.

Step #2 Set Up Work Area

Steps to Complete Job	Hazards	Preventive Measures
Setting up equipment and welding work area.	Worker has the potential to be exposed to electrical hazards, fire hazards, strain, and sprains.	1) Stretch and flex before beginning of shift and after lunch. Stretch throughout the shift when needed to reduce or eliminate muscle strains.
		2) Obtain Hot Work Permit or verify that welding is permitted in the work area before starting work.
		3) Supervisor to ensure that all work is carried out by qualified personnel. Wabo certification must be current to perform welding work.
		4) Competent individual to walk work area to ensure area is ready for welding activities and to verify that no combustible materials are in the immediate vicinity.
		5) Welding area is to be well ventilated.
		6) Verify that correct electrical connections are available i.e., voltage and amperage.
		7) Verify that a Fire Extinguisher is readily available.
		8) Provide fire blanket where needed.
		9) Set-up a workstation that minimizes reaching, bending, kneeling, and lifting.
		10) Shield welding arc from others working in the surrounding area.
		11) STOP ALL WELDING in rainy or wet conditions.



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Step #3 Welding Materials		
Steps to Complete Job	Hazards	Preventive Measures
Welding Materials.	Worker will be exposed to burns, flying debris and sparks or slag, UV rays, and hazardous fumes.	1) Wear required welding PPE; Welding Hood, Welding Gloves, and Welding Jacket or Leather Gauntlet.
		2) Wear a respirator or supplied air hood when needed. Always ensure there is adequate ventilation in work area.
		3) Use appropriate shade of lens for the work being performed.
		4) Be sure to protect exposed skin from UV rays.
		5) Only trained and competent individuals are to be operating equipment.
		6) Use screens to shield other workers in the area from UV Rays.
Step #4 End of Shift Procedure		
Steps to Complete Job	Hazards	Preventive Measures
End of shift procedure.	Worker has the potential of being exposed to a fire.	1) All Hot Work stops 30 minutes before the end of shift. Implement a Fire Watch over the work area with a trained employee.
		2) Store equipment in the job shack or gang box when no longer using.