




Safe Operating Procedures

SOPs are designed to help employees identify hazards, limitations, PPE, & safety training for specific equipment/tasks. Environmental Health and Safety, 414 J.M. Smith Hall

	Equipment/ Task Name	Using an Arc Welder
	Departments Impacted	Art & Architecture Department
	Purpose	An arc welder uses a welding power supply to create an electric arc between an electrode and the base material to create enough heat to melt metals at the welding point.

General Precautions:

A welding area of a minimum 35 feet in diameter must be established. Flammable materials must be removed from the welding area. A fire extinguisher with a minimum rating of 2A20B:C must be readily available to the welder. A fire alarm must be readily available. Ensure that ventilation is sufficient to avoid setting off a smoke detector fire alarm.

TASK	HAZARDS	CONTROLS
1. Close off welding area.	Flashing	Close welding curtain to shield outsiders from flashing.
2. Prepare for arc welding.	Inhalation of fumes	Turn on exhaust fan and timer.
	Flashing	Wear welding hood.
	Sparks	Wear welding jacket, apron, gloves, work shoes.
	Slag splatter	Wear welding jacket, apron, gloves, work shoes.
3. Turn on power and unwrap wire.	Tripping	Take care to keep wire untangled and free from under feet.
4. Insert arc welding rod in handle.	Pinch to fingers	Keep fingers away from pinch points.
5. Strike arc.	Flashing, sparks, slag splatter	Wear welding hood, welding jacket, apron, gloves, work shoes.
6. Allow material to cool on workbench.	Burn to hands or fingers	<ul style="list-style-type: none"> Wear glove. Chalk mark welded area "Hot"
7. Remove remainder of arc welding rod (if any) from handle, set aside on workbench to cool.	Burn to hands or fingers	Chalk mark welded area "Hot"
8. Wrap wire.	Tripping	Take care to keep wire untangled and free from under feet.
9. Use chipping hammer to remove excess slag.	Eye damage by flying debris from hammer strikes	Wear safety glasses.
	Injuring fingers with hammer	Use caution to avoid striking fingers or hands with hammer.

Required Training:	Required Personal Protective Equipment (PPE)
1. Operation of arc welder. 2. Operation of a fire extinguisher. 3. Location and use of the fire alarm.	1. Welding hood 2. Welding jacket and apron 3. Gloves 4. Safety glasses, work shoes

SOP ID	A008	Related Documents	Art Shop Manual	Creation/Revision Date	9/2018
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