

function — *of beauty*

Hot Work Program

FOB-EHS-028

Function of Beauty 5570 Snyderstown Rd. Paxinos, PA 17824

Hot Work Program

1.0 Purpose

- 1.1 Function Inc. will protect employees and other individuals from hazards associated with hot work operations while complying with all regulatory requirements for the safe operation of such equipment.
- 1.2 This program establishes guidelines to guard against fires from heat-producing operations performed by using portable equipment away from the shop area.
- 1.3 Employees must be aware of procedures to follow when welding, grinding, cutting or conducting other hot work operations.

2.0 Definitions

- 2.1 **Brazing and Soldering** - Soldering and brazing use molten metal to join two pieces of metal. The metal added during both processes has a melting point lower than that of the workpiece, so only the added metal is melted, not the workpiece. Brazing produces a stronger joint than does soldering, and often is used to join metals other than steel, such as brass. Brazing can also be used to apply coatings to parts to reduce wear and protect against corrosion.
- 2.2 **Cutting/Grinding** - Any process which produces sparks capable of igniting combustible or flammable materials and transmits heat to the work material from a hot gas.
- 2.3 **Designated Area** - A permanent location designed for or approved for hot work operations to be performed regularly.
- 2.4 **Fire Watch** - Trained personnel who are in attendance during the entire hot work operation and are immediately available to extinguish a fire or take other effective action if needed.
- 2.5 **Hot Work** - Any process that can be a source of ignition when flammable material is present or can be a fire hazard regardless of the presence of flammable material in the workplace. Common hot work processes are welding, soldering, cutting and brazing.
- 2.6 **Hot Work Permit** – A document issued for the purpose of authorizing a specified activity.
- 2.7 **Welding** – Joining together (metal pieces or parts) by heating the surfaces to the point of melting using a blowtorch, electric arc, or other means, and uniting them by pressing, hammering, etc.

3.0 Responsibilities

3.1 The Environmental Health & Safety Department

- 3.1.1 Ensures that a written plan is in place to establish a program for the hot work and hot work permitting.
- 3.1.2 Reviews the program periodically and monitors work areas to ensure compliance with this program.
- 3.1.3 They are also responsible for coordinating training for applicable employees on hot work safety and permitting.

3.2 **Manager/Supervisor**

- 3.2.1 The manager/supervisor ensures that only authorized and trained employees perform hot work. The manager/supervisor ensures that designated employees complete required training prior to performing hot work and complete permits as required.

3.3 **Employees**

- 3.3.1 Employees are responsible for complying with this program. Employees only perform hot work if trained to do so and with a completed permit. Affected employees complete training as required.

4.0 Implementation

4.1 Inspection

- 4.1.1 Maintenance & EHS staff will inspect the area to identify the fire hazards, safety precautions, or special equipment needed to perform the job safely.

4.2 Hot Work Permit

- 4.2.1 A Hot Work Permit must be completed prior to the commencement of any hot work.
 - 4.2.1.1 EHS staff will completely fill out the Hot Work Permit (Appendix 1 - Hot Work Permit Example).
 - 4.2.1.2 Permits are not required when welding in a designated hot work area.
 - 4.2.1.3 After the completion of all hot work, the permit will be returned to the EHS Department for archiving.

4.2.1.4 EHS staff will ensure that all contractors are aware of this permit system.

4.3 Fire Hazards

4.3.1 If the object to be welded or cut cannot readily be moved, all movable fire hazards in the vicinity will be relocated away from the work site.

4.4 Safety Screen

4.4.1 If there is welding where ultraviolet light radiation could harm the eyes of anyone passing by, the individual performing the hot work will install an approved noncombustible or flameproof screen or shield, no lower than level 14, to protect by-standers.

Shade Numbers for Selected Arc Processes (from CSA W117.2)

Process	Electrode Diameter (mm)	Current (Amperes)	Minimum Shade	Suggested Shade
SMAW	< 2.5	< 60	7	-
	2.5 - 4	60 - 160	8	10
	4 - 6.4	160 - 250	10	12
	> 6.4	250 - 550	11	14
GMAW FCAW MCAW		< 60	7	-
		60 - 160	10	11
		160 - 250	10	12
		250 - 500	10	14
Air Carbon Arc Cutting				
	light	< 500	10	12
	heavy	500 - 1000	11	14

**In the United States use ANSI/AWS Standard F2.2 for selecting filter lens shades.*

4.5 Combustible materials

4.5.1 Wherever there are floor openings or cracks in the flooring that cannot be closed, precautions shall be taken so that no readily combustible materials on the floor below will be exposed to sparks that might drop through the floor.

- 4.5.2 The same precautions shall be observed regarding cracks or holes in walls, open doorways and open or broken windows.
- 4.6 **Fire extinguishers**
 - 4.6.1 Suitable fire extinguishing equipment shall be maintained in a state of readiness for instant use.
 - 4.6.2 Selection of equipment depends upon the nature and quantity of the combustible material exposed.
 - 4.6.3 Such equipment may consist of, but it not limited to:
 - 4.6.3.1 Portable fire extinguisher(s) of the appropriate type and size
 - 4.6.3.2 Pail of water
 - 4.6.3.3 Bucket of sand
 - 4.6.3.4 Water hose
- 4.7 **Personal Protective Equipment**
 - 4.7.1 All employees must wear required personal protective clothing and equipment as prescribed by codes and standards while performing any hot work operations, including welding helmets, goggles, filter lenses, and properly fitting protective clothing.
- 4.8 **Ventilation**
 - 4.8.1 Two thousand cubic feet/per welder of mechanical ventilation is provided when in a space less than 10,000 cubic feet per minute per welder or in a room with a ceiling less than 16 feet or in a confined space.
- 4.9 **Compressed Gas Cylinders**
 - 4.9.1 Cylinders must be secured to prevent tipping; valves are closed with protection caps in place.
 - 4.9.2 Oxygen and fuel cylinders must be separated and away from combustible fuel, flammable fuels and heat sources.
- 4.10 **Fire Watch**
 - 4.10.1 A fire watch will be maintained for at least 30 minutes following hot work activity.
- 4.11 **Emergencies**
 - 4.11.1 In the event that a fire, or other emergency situation occurred during hot work or that may affect the hot work

area, the hot work will immediately cease, the hot work permit will immediately expire, and emergency procedures will be followed as outlined in **EHS-006 Emergency Action Plan / Emergency Response Program**.

5.0 Training

5.1 Employees will be trained to perform hot work activities as outlined in this program and according to requirements contained in 29 CFR. 1910 Sec Q, 251-255.

6.0 Appendixes

6.1 FOB-EHS-029-A Hot Work Permit Example

7.0 Document Review and Approval

7.1 **Date Devised:** 12-21

7.2 **Reviewed Date:**12-21

7.3 **Date Approved:** 12-21

7.4 **Approved By:** Ed Nolter, Director, EHS