

OHBA Safety Pages

Arc Flash

Every day in the United States 5 to 10 arc flash explosions occur in electrical equipment. Anyone exposed to such explosions is at significant risk for death or serious injury.

The US Navy Safety Center describes an Arc Flash as: “Simply put, an arc flash is a phenomenon where a flashover of electric current leaves its intended path and travels through the air from one conductor to another, or to ground. The results are often violent and when a human is in close proximity to the arc flash, serious injury and even death can occur.”

For example, a tool that is inserted or accidentally dropped into an open breaker panel or service area, or other objects that are left behind, may compromise the distance between energized components.

Incidents may occur when a worker fails to ensure that equipment has been properly de-energized (Locked & Tagged Out) prior to servicing or inspection. Arc flash incidents typically occur in applications exceeding 120 volts.

Serious damage to equipment is a likely outcome in an arc flash incident. Sometimes affected equipment is so badly damaged that replacement is the only option. And, of course, the human body is equally capable of being destroyed or irreversibly damaged, with no replacement option.

The following arc flash safety reminders from Square D Products, a well-known producer of electrical equipment, can help a company better protect their employees:

- Establish a written electrical safety program with clearly defined responsibilities covering all of your company’s electrical safety policies, including lockout/tagout, internal safety policies and responsibilities for electrical safety.
- Have an engineering firm conduct an electrical system analysis to determine the degree of arc flash hazard present at your workplace. The analysis will define the type of personal protective equipment (PPE) that your workers must use while performing any work when energized parts are exposed.
- Conduct arc flash safety training for all employees. It should be specific to the hazards of arc flash, arc blast, shock and electrocution. Ensure adequate personal protective clothing and equipment is on hand.
- Ensure the proper tools are on hand for safe electrical work. This includes insulated voltage-rated hand tools and insulated voltage sensing devices that are properly rated for the voltage application of the equipment to be tested.
- Any electrical equipment that is likely to require examination, adjustment, servicing, or maintenance while energized must have arc flash warning labels posted in plain view. Such equipment includes switchboards, panel boards, industrial control panels, meter socket enclosures and motor control centers.
- Maintain all electrical distribution system components. Modern, properly adjusted over-current protective devices that are properly maintained can detect an arcing condition almost instantly and clear the fault quickly. This capability significantly reduces the amount of incident energy that is released.
- Finally, maintain and update all electrical distribution documentation. This is especially critical when expanding or revising facilities.



The information we provide is not intended to include all possible safety measures and controls. In addition, the safety information we provide does not relieve the Members of its own duties and obligations with regard to safety concerns, nor does Oregon Home Builders Association guarantee to the Members or others that the Member’s property, job sites and/or operations are safe, healthful, or in compliance with applicable laws, regulations or standards. The Members remain responsible for their own operations, safety practices and procedures and should consult with legal counsel as they deem appropriate.

SAFETY PAGE MEETING GUIDE

Topic: Arc Flash

Employer: _____ Project: _____

Date: _____ Time: _____ Shift: _____

Number in crew: _____ Number attending: _____

Safety or Health issues discussed. Include recent accident investigations and hazards involving tools, equipment, the work environment, work practices and any Safety or Health recommendations:

Follow up on recommendations from last safety meeting:

Record of those attending:

Name: (please print)	Signature:	Company:
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		

Supervisor's remarks: _____

Supervisor: _____ (Print) _____ (Signature)