



Weekly Safety Meeting

Your Safety Is Our Business®

Volume 3 – Issue 8

February 21st, 2016

Arc Flash Safety

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.

Each day in the United States, an estimated five to 10 arc flash incidents occur with electrical equipment, according to NIOSH.

Arc flash can be caused by many things including:

- Dust;
- Dropping tools;
- Accidental touching;
- Condensation;
- Material failure;
- Corrosion; or
- Faulty Installation.

Three factors determine the severity of an arc flash injury:

- Proximity of the worker to the hazard;
- Temperature; and
- Time for circuit to break.

Because of the violent nature of an arc flash exposure when an employee is injured, the injury is serious – even resulting in death. It's not uncommon for an injured employee to never regain his or her past quality of life.

Results from an Arc Flash:

- Burns (Non FR clothing can burn onto skin);
- Fire (could spread rapidly through building);
- Flying objects (often molten metal);
- Blast pressure (upwards of 2,000 lbs. / sq.ft);
- Sound Blast (noise can reach 140 dB – loud as a gun); and
- Heat (upwards of 35,000 degrees F).



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Ways to protect workers:

There are a number of ways to protect workers from the threat of electrical hazards. Some of the methods are for the protection of qualified employees doing work on an electrical circuit and other methods are geared towards non-qualified employees who work nearby energized equipment.

Here are a few of the protective methods:

- De-energize the circuit;
- Work Practices;
- Insulation;
- Guarding;
- Barricades;
- Ground Fault Circuit Interrupters (GFCI); and
- Grounding (secondary protection).

Working on energized equipment:

If it has been determined that deenergizing a circuit is not feasible and the employee must work “hot,” the employer shall develop and enforce safety-related work practices to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts.

The specific safety-related work practices shall be consistent with the nature and extent of the associated electrical hazards.

These safety related work practices could include:

- Energized Electrical Work Permit;
- Personal Protective Equipment;
- Insulated Tools;
- Written Safety Program; and
- Job Briefing

Understanding the Arc Flash Warning Labels:

Each piece of equipment operating at 50 volts or more and not put into a de-energized state must be evaluated for arc flash and shock protection. This evaluation will determine the actual boundaries (i.e. prohibited, limited, restricted, etc.) and will inform the employee of what PPE must be worn. Once the evaluation is complete, an Arc Flash Hazard warning label must be affixed to the equipment and readily accessible to employees who may work on the energized equipment.

Disconnect first...or be next for the hearse!!



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Safety Meeting Sign-In Sheet

<i>Supervisor:</i>	<i>Subject:</i>
<i>Location:</i>	<i>Date:</i>
<i>Conducted By:</i>	<i>Trainer Signature:</i>

Name (print clearly)	Signature	Comments / Safety Concerns / Training Requests

