Preventing Electrical Accidents

Obviously not everyone on a jobsite is an electrician but we all work around and need electricity every day. Accidents involving electricity are common-place and can be somewhat easily prevented.

These accidents usually have one of three common causes:

- Unsafe installation and/or equipment
- Environmental factors making the jobsite unsafe
- Unsafe work practices

There is one way to prevent accidents from any of these three causes and that’s protection from the electrical hazard. Protection can be found in four different methods:

1. Eliminate ground fault electric shock hazards. This is usually done by either Ground Fault Circuit Interrupters (GFCIs) or an assured equipment grounding conductor program. Devices that protect circuits are fuses, circuit breakers or GFCIs. They function by limiting or cutting off the flow of electricity when a short circuit, overload or ground fault occurs in a wiring system. They also help to prevent accidents by protecting conductors and equipment by preventing overheating of equipment and wiring.

2. Proper Insulation. Insulation that can prevent electrical accidents can come in several forms and employees should check each day that it’s in good working
order. This is as simple as checking for exposed wires or scuffed or cut insulation on the cords or equipment and extension cords. Employees can be further protected by wearing nonconductive, insulated shoes and gloves, as well as using hand tools that have handles with nonconductive coatings.

3. Guarding. To help prevent accidental shocks, any live electrical components operating at 50 or more volts must be guarded with covers or other permanent barriers. These are in place to prevent contact by workers and their tools. Signs forbidding entry of unqualified employees must be place at the entrance of any area with live electrical parts.

4. Grounding. It’s required to ensure your employees are protected from electric shock, minimize the likelihood of fire and protect against damage to electrical equipment. Grounding can be done in two ways:

   a. System or Service Ground- this is used to protect machines, tools and insulation. There’s one wire, the neutral ground, which is grounded.

   b. Equipment Ground- this is used to protect the operator. This type provides a path for current from a piece of equipment (tool or machine) to the ground.

By being aware of and following these safety practices the possibility of an electricity-related accident can be greatly reduced.

Discussion Questions

What are 3 ways to help eliminate ground fault electric shock hazards?

When should the insulation on power tools and extension cords be checked?
MEETING / TRAINING
ATTENDANCE ROSTER

COMPANY: _________________________  ____ SAFETY MEETING
JOB/DEPT: _________________________  ____ SAFETY TRAINING

DATE: ___/___/_______  TIME: _______

TOPICS ADDRESSED: _______________________________________________________
_____________________________________________________________________________________________

EMPLOYEE'S SIGNATURES

_________________________________________  _______________________________  _______________________________

_____________________________________________________________________________________________

EMPLOYEE SUGGESTIONS AND RECOMMENDATIONS: _____________________________________________
_____________________________________________________________________________________________

ACTION TAKEN: ______________________________________________________________________________
_____________________________________________________________________________________________

Supervisor's Signature  __________/______/_____

Safety Coordinator's Signature  __________/______/_____