Safety Talk: Electrical Safety

Environmental Health & Safety

Electrocutions are the fifth leading cause of occupational injuries.
The three leading causes of these fatalities are:

- contact with overhead power lines
- contact with wiring and other electrical components
- contact with electrical current from machines/power tools/fixtures

Remember: You don't have to be an electrician to be exposed to electrical hazards!

Electrical accidents can result in:

- Minor shocks;
- Electrical burns;
- Arc flash explosions;
- Falls from heights;
- Fires; and
- Electrocutions – death!

RESPECT ELECTRICITY !

- Current as little as 60 miliamps at 60 Hz is enough to be fatal.
- 50 V at 60 Hz can provide enough current to be fatal.
- Never work on live electrical parts!
- Perform lockout/tagout for machines or equipment and unplug power tools prior to servicing.
- Never use conductive ladders or conductive tools around live electricity and power lines.

When using electrically powered machines, equipment, or tools, the following can ensure your safety:

- Guards – cover live electrical parts to prevent contact;
- Double insulation or grounding – protect the user against shock in case of internal electrical system failure;
- Fuses – shuts off power if too much current is flowing through a circuit; and
- Ground Fault Circuit Interrupters (GFCI) – shuts off power if it senses an imbalance between current to the energized and return conductor.

KEEP IN MIND:

FUSES: Protect against fires and property damage.

GFCI's: Protect against electrical shocks.

Always test the GFCI prior to using it!

Here are some basic practices to follow when using electrical tools or machines:

1. **Ensure the tool, safety devices, and wiring are in good repair prior to using.**
2. **Beware of overloading and interconnecting multiple extension cords and power strips.**
3. **Always use a GFCI when working outside, in wet environments, or around sources of water.**
4. **Never handle a tool by its cord.**
5. **Always use power tools that are grounded (three-pronged) or double-insulated.**
6. **Tag and remove from service any damaged equipment.**

ADDITIONAL INFORMATION:

Review the following policies on the Environmental Health and Safety website:

Hand and Portable Power Tools, Lockout/Tagout, and Machine Guarding