

Electrical Safety

Protecting Employees from Electrical Hazards

Electrical Safety focuses on **preventing electrocution** and other **electrical hazards** by establishing standards for electrical equipment, work practices, and training, with a strong emphasis on lockout/tagout procedures and safe distances from energized lines.

Injury Free Culture



What IF I could go my entire career Injury Free?

Injury Free is a cultural attitude. It is a way of thinking that prevents injuries, making safety a high priority at both the personal and organizational levels.



Common Causes of Electrocution

- Contact with Overhead Power lines
- Contact with Live Circuits
- Not following Lock/Tag-out procedures
- Poorly Maintained Extension Cords
- Defective Power Tools



Shock Severity

Low voltages can be **extremely dangerous** because, all other factors being equal, the degree of injury increases the longer the body is in contact with the circuit.

Arc Blast/Flash

When an arc fault occurs, the result is a **massive electrical explosion**. The light and heat emitted by the explosion is known as the arc flash, and the pressure wave is known as the arc blast.

Lockout/Tagout (LOTO)

Lockout-tag-out (LOTO) is a **safety procedure** which is used in industry to ensure that dangerous machines are **properly shut off** and not able to be started up again prior to the completion of maintenance or servicing work.

- Place Lock & Tag on each disconnecting means used to de-energize circuits
- Attach a lock to prevent operating the disconnecting means
- Place a Tag with each lock
- Only the person who places the lock may remove it



List all equipment

Identify all energy sources, hazards, and control measures

Describe energy control method for each piece of equipment or task



Electrical Standards

VOSH's electrical standards are based on the National Fire Protection Association Standards NFPA 70, National Electric Code, and NFPA 70E, Standard for Electrical Safety for Employee Workplaces.

Training

Employees must receive adequate training on **electrical safety procedures** and **hazards**. Qualified employees, such as engineers, electricians, electronic technicians, and power line workers work with electricity directly. Affected employees, such as office workers and sales people work with it indirectly.

Electrical Safety PPE

- 100% Cotton long sleeve shirts
- Heavy duty leather coat
- Heavy duty cotton long pants
- Safety glasses or arc flash shield
- Hearing protection
- Leather work boots - non-steel toe
- Gloves rated for electrical work with outer leather
- DO NOT WEAR polyester clothing or clothes that are highly flammable



Your Responsibility

- Know the hazards of electricity
- Know the equipment
- Use safe work practices
- Inspect your PPE before each use
- Only employees who are properly trained and qualified should work on energized circuits



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