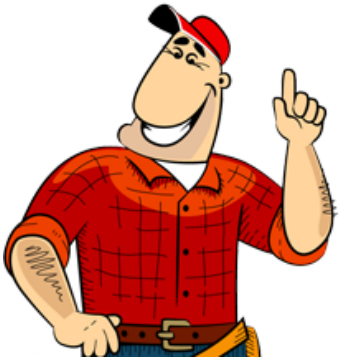

Express Eddie's Toolbox

Protect Workers From The Hazards Of Electricity

According to the Occupational Safety and Health Administration (OSHA), electrocution is the third leading cause of workplace fatalities in the construction industry, surpassed only by falls and being struck by an object or equipment on the job. In 2011, 67 construction workers died from being electrocuted at work.

While construction workers, electricians, engineers, and utilities linemen work directly with electricity, many employees may work indirectly with electricity and can be exposed to electrical hazards. To prevent electrical accidents, all workers need to understand how to recognize electrical hazards and protect themselves.

Workers can use the "BE SAFE" acronym to remember the risks involved in working with electricity. An electrical hazard is any workplace situation that exposes workers to one or more of these dangers:

- Burns
- Electrocution
- Shock
- Arc Flash/ Arc Blast
- Fire
- Explosions

Electrocution occurs when a worker comes in contact with a lethal amount of electricity. The three major types of electrocution hazards are:

- Contact with overhead and buried power lines
- Contact with energized sources such as damaged or bare wires, defective equipment or tools, or live parts
- Inappropriate use of extension and flexible cords

Overhead and buried power lines are extremely dangerous because they carry very high voltage and pose the risk of electrocution. It is important for workers to know that the covering on these lines exists mainly for weatherproofing purposes — not to protect them from shocks and electrocution.

Whether covered or bare, touching a power line can be fatal. A good guideline is to always stay at least 10 feet away from power lines and to assume they are energized. When working near power lines, it is also best if employees use nonconductive ladders made out of fiberglass or wood.

Electrical shock and burns are the major hazards present when an employee comes in contact with energized sources. Electrical shock happens when the body becomes part of the circuit. The severity of the shock depends on

the length of contact, the strength of the current, the pathway the electricity takes through the body, and whether the skin was wet when the shock occurred. Water is an excellent conductor that allows electricity to flow more easily through the skin, so always avoid water when working with electricity

Everyday use of electrical equipment and power tools can cause insulation breaks in cords, exposed wires, and short circuits. If ground fault protection is not used, this wear and tear could cause ground faults that can send a current through a worker's body. To prevent this, use ground fault circuit interrupters (GFCIs), double insulated tools and equipment, and other electrical safety supplies. Make sure to inspect all cords and tools before work begins. Retire any equipment with missing prongs, cracked casings, frayed wires, or other potentially dangerous damage.

Improper use of electrical cords is another major electrical hazard. To protect workers, only use 3-wire grounded power cords that meet OSHA standards and are equipped with strain relief. Electrical cord wear and tear is normal but are hazardous when wires are exposed or loosened. Keep extra power cords on hand, so damaged cords are not used on the worksite.

Reduce workplace risk by regularly training workers to recognize electrical hazards and take the proper precautions to protect themselves. Employers can review electrical safety with their teams. It is important to hold in-depth discussions after showing safety videos to ensure workers understand the dangers and procedures.

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