**OSHA Electrical Safety Standard 1926.431**

OSHA Electrical Safety Standard 1926.431 focuses on maintenance and upkeep of electrical equipment in dangerous locations, (locations may include construction sites). It instructs that all employers must see to it that all wiring components and machinery must be maintained in a way that prevents explosion. This means equipment must be kept dust-tight/explosion proof looking at the environment that they are kept/used

**Key aspects of 1926.431**

* **Explosion-Proofing-** Equipment must be maintained in such a way that it poses little to no explosion risk.
* **Dust Proofing-** Dust can gather inside machines and cause mechanical and electrical malfunctions (dust can interfere with the operation of equipment like saws, drills and sanders, equipment mostly used in electrical environments).
* **General Maintenance and Upkeep-** To avoid explosions and both electrical and mechanical malfunction in machinery, employees’ must monitor any pieces in the machine that can lead to accumulation of dust and cause explosions.
* **Reporting and Repair-** Faulty machinery must immediately be reported, to the supervisor and marked off-service until fixed.

**General Safety Tips for Working with Electrical Wires**

* **Discharge circuits before working on the wiring**: Turn off the main switch and use the voltage tester to verify if circuits no longer have energy.
* **Use Proper PPE**: Use tools (pliers and screwdrivers) with insulated handles to prevent shocks, and always wear rubber gloves, safety goggles to protect against hazards and protective clothing (flame resistant suits).
* **Use the Buddy System:** see to it that workers have knowledge of electrical safety (CPR) in a case that they are stuck and need medical assistant (the basics go a long way).
* **Be Aware of Your Surroundings:** the distance between the employee and overhead power lines should at least be 10 feet and always assume that they are charged for caution
* **Wet areas**: Avoid working with electrical equipment in wet or damp locations.

**COMMON ELECTRICAL HAZARDS AND PREVENTIVE STEPS**

* **Damaged Equipment:** Frayed cords, cracked plugs, or damaged tools can expose live wires and create shock or fire hazards.
* **Faulty Wiring:** Outdated or poorly installed wiring can be a major fire and shock hazard.
* **Wet Conditions:** Water and electricity are a dangerous combination. Using electrical equipment in damp or wet environments increases the risk of shock.