HAZTEK LLC

HAZTEK™
SAFETY MANAGEMENT

Fire and Electrical Safety

The Dangers of Fire and Electrical Safety

Working with electricity can be dangerous. Engineers, electricians, and other professionals work with electricity directly, including working on overhead lines, cable harnesses, and circuit assemblies. Others, such as office workers and sales people, work with electricity indirectly and may also be exposed to electrical hazards.

Fire and Electricity is widely recognized as a serious workplace hazard, exposing employees to electric shock, burns, fires, and explosions. According to the Bureau of Labor Statistics, 250 employees were killed by contact with electric current in 2006. Other employees have been killed or injured in fires and explosions caused by electricity.

It is well known that the human body will conduct electricity. If direct body contact is made with an electrically energized part while a similar contact is made simultaneously with another conductive surface that is maintained at a different electrical potential, a current will flow, entering the body at one contact point, traversing the body, and then exiting at the other contact point, usually the ground. Each year many employees suffer pain, injuries, and death from such electric shocks.

If the current involved is great enough, electric arcs can start a fire. Fires can also be created by overheating equipment or by conductors carrying too much current. Extremely high-energy arcs can damage equipment, causing fragmented metal to fly in all directions. In atmospheres that contain explosive gases or vapors or combustible dusts, even low-energy arcs can cause violent explosions.

Fire and electrical safety become everyone's job at a worksite. Employers should train workers about fire and electrical hazards in the workplace and about what to do in a fire emergency. This plan should outline the assignments of key personnel in the event of a fire and provide an evacuation plan for workers on the site. In the construction industry, a "fire and electrical plan" should be set up prior to beginning any demolition job.

Osha.gov

Electrical fire facts

Electrical distribution or lighting equipment, such as wiring, lighting, cords, and plugs, was involved in an estimated average of roughly 34,000 (10%) reported home structure fires per year. These incidents caused an average of 470 (18%) civilian deaths, 1,100 civilian injuries (10%), and $1.4 billion (19%) in direct property damage annually.

nfpa.org