



Electrical Injuries in the Workplace

Contact with electrical current can produce serious injury. Electrical injuries consist of four main types: electrocution (fatal), electric shock, burns and falls caused as a result of contact with electrical energy. Electrical injuries can occur through direct contact with electrical energy; arcing; ground potential; flash burns from the heat; or flame burns from ignition of combustibles.

Construction trades are generally most affected by deadly and disabling contacts with electric current. Although almost 50% of electrocutions occur in the construction industry, they are specific to electrical tasks. Some high risk jobs include: electricians, both utilities and construction; electrician apprentices; electrical power installers and repairers; sign technicians; telecommunication workers; carpenters; earth drillers; farmers; and tree maintenance and trimmers.

Over the last several years, the number of fatalities from electrocutions has fallen to about 160 per year. In 2011, there were 174 fatal occupational injuries as a result of direct exposure to electricity, 69 of those among construction workers. There were another 75 fatalities that were from indirect exposure to electricity.

Overall in the US, there were a total of 1,170 nonfatal injuries from direct exposure to electricity that involved days away from work in 2011. There were an additional 590 nonfatal occupational injuries from indirect exposure to electricity.

Electrical Injuries in the Workplace in Illinois

In Illinois, there were a total of 10 occupational fatalities due to exposure to electricity and 80 nonfatal occupational injuries from exposure to electricity in 2011.

Prevention Measures

- Erecting physical barriers around high voltage units
- Use locked closets
- Portable electrical tools and equipment should be grounded or double insulated
- Fix frayed wire insulation
- Insulate power lines
- Take precautionary measures for protection after storms
- Follow required clearance distances from power lines/sources
- Ensure adequate line clearance distances, especially since trucks and equipment have potential to contact overhead power lines
- Use lookout persons when using cranes and lifts
- Maintain and replace isolating plate covering electrical conductors
- Have lockout or tagout on electrical equipment
- Maintain a continuous path to ground.