



Electrical Safety – TIGERcast Notes

Subtopics: General electrical safety, Factors involved in electrical shock, Safety electrical reminders

Standards that govern electrical safety

OSHA – www.osha.gov

National Fire Protection Association – 70 E Electrical Safety Requirements for workplaces - www.nfpa.org

National Electrical Manufacturers Association (NEMA) www.nema.org

American Society for Testing and Materials (ASTM) www.astm.org

Institute of Electrical and Electronic Engineers (IEEE) “Color Book Series”
Design of electrical power systems for industrial and commercial facilities

Factors Involved in Electrical Shock

The quantity of Current flowing thru the body – Current (amps) is the killing factor in electrical shock – not volts)

The current path through the body from entry to exit

Hand to hand, hand-or head-to-foot, and ear-to-ear are the most dangerous

The length of Time the body is in the circuit

Current in Milliamps	Effects of 60Hz passing thru body
1->5	May not be felt – maximum harmless intensity
1 – 8	Sensation of mild shock, one can let go at will
8-15	Painful shock, muscles contract, one may still be able to let go
15-20	Painful shock, one cannot let go
20-75	Intense Pain, breathing may be paralyzed
100-200	Ventricular fibrillation; holds an unconscious victim to the circuit, fatal
200 or more	Heart stops, muscles contract intensely and could break bones, severe burns, breathing stops

Tiger Training can also train your employees in –

OSHA regulatory standards

General Safety

Construction

Industrial Vehicles

Respiratory Protection

Fall protection

Electrical

Lock out Tag Out

Hazard Communication

Hearing Protection

Hazardous Waste Management Training (RCRA-EPA)

Dept. of Transportation Training (DOT)

International Air Transport Association (IATA)

International Maritime Dangerous Goods (IMDG)

Infectious Substances

Blood Borne Pathogens

First Aid & CPR