Low Voltage

Introduction:

Low voltage electricity has numerous hazards. Where high voltage electricity could literally throw a person free of contact due to muscular contraction, low voltage electricity also causes muscular contraction, but less violently therefore, preventing the victim from breaking free from contact with the circuit. The risk of shock or arching is greatly increased due to the restricted work area found in electrical and control panels.

Effects of Electrical Contact on The Human Body

A severe shock can cause considerable damage to the body. There may be internal bleeding and destruction of tissues, nerves and muscles,

Types of Injuries

1. Contraction of chest muscles, which may interfere with breathing, resulting in death from asphyxiation.

2. Temporary paralysis of the nerve centre, possibly restricting the victim's ability to breathe.

3. Interference with normal rhythm of the heart, causing ventricular fibrillation. It has been estimated that as little as 50 milliamperes is sufficient to cause ventricle fibrillation.

4. Contact with heavy current can cause the heart to step.

5. Hemorrhages and destruction of tissues, nerves and muscles.

6. Severe burns to the skin.

7. Bums to the eyes from the arc flash.

8. Falls from heights. This is the most common injury resulting from contact with low voltage electricity.