

Company Name: \_\_\_\_\_ Dept: \_\_\_\_\_ Location: \_\_\_\_\_ Date: \_\_\_\_\_

#52

## ELECTRICAL GROUNDING

The number of serious violations reported by OSHA in this category is alarmingly high considering the inherent danger of working around high voltage electricity. Branch circuits, ground fault protection/ assured equipment grounding conductor problems, are on the top of list followed by a lack of a grounding path, either permanent or continuous, the lack of ground fault circuit interrupts (GFCI's), inadequate guarding of live parts and equipment not used properly or in accordance with instructions.

A large majority of electrocutions are caused by voltages of less than 600V. At voltages as low as 115 volts, heart fibrillation can start in 3 or 4 seconds of current flow. The effects of AC current at cycles per second on the body can soon be fatal. At more than 10mA there is muscle contraction and "no-let-go" danger. More than 30Ma can result in lung paralysis, usually temporary, over 50mA causes usually fatal heart malfunction and from 100mA to 4A ventricular fibrillation is certain and most often fatal. The commonly encountered electrical problems on a building site include;

- Frayed extension cords, usually the result of companies not using cords rated hard or extra hard for construction use.
- Ungrounded equipment which is very dangerous when a tool or equipment shorts or has a fault and the current will seek any path to earth, often through the employee
- Most receptacles have wiring secured to the box by terminal screws, having them unsecured provides the opportunity for them to become loose and shocking an employee.
- Uncovered panel boxes can lead an employee to believing that the power is not energized and make accidental contact.

Be especially careful in wet conditions and remember that regular testing and visual inspections of all electrical equipment is required by a designated competent person.

Meeting Conducted By:

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Print Name

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Signature

Meeting Attended By:

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Document Filing Reference

Notes & Suggestions