



eSafetyLine

Electrical Case Study #2

On 23 May 1991, a 62-year old male maintenance worker was electrocuted while at work. The employer was a health and fitness club that employees about 50 workers and had been in business since 1989. The victim worked as the maintenance and custodial man since the health club opened. Before this job he had owned a repair shop and had experience with small motor repair.

On the day of the incident the victim was completing repairs on a $\frac{3}{4}$ horsepower air conditioner motor. He was working on a wooden bench in his workroom at the back of the building. He was last seen alive at about 10 pm by a coworker that left the building at about 11:45 pm. When the victim didn't return home after work, his wife and son became worried and went to the health club to find him.

After entering the rear of the building, which tripped the alarm alerting the police, the family found the victim on his back on the floor of the workroom. The son began CPR, stopping to guide the police into the building. The police resumed CPR and called for the EMS. EMS continued CPR and transported the victim to the local hospital where he was declared dead.

The victim's workbench was moved while the police performed CPR. This movement caused wires hanging from the bench to spark and smoke. The police immediately unplugged an extension cord that had been plugged into a homemade 4-outlet electrical gangbox. The extension cord was an unpolarized 2 wire "zip" cord that had been cut to about 4 foot. The cut end had about $\frac{3}{4}$ inch of the insulation stripped from the wires, with one wire twisted onto one of the motor wires. A small burn mark was found on the palm of the victim's left hand. After the investigation, the OSHA compliance officer made the following recommendations:

- Proper work practices and equipment must be used when making electrical repairs. It appears that the victim was trying to rig a system for supplying power to the motor to see if it would run. Proper work practices would have the victim testing the motor by first de-energizing any live wires; connecting the motor to a switched power source using insulated connectors and energizing the power source to test the motor. By using a cut-off extension cord to test the motor, he apparently created the hazardous condition that caused his death. Employers should insure that employees are given the necessary equipment to do the job safely and that employees are properly trained in its use.
- Employees should receive periodic safety training to familiarize workers to unsafe electrical hazards and work practices. Although the employee had experience with repairing electric motors, he apparently became careless in following safety practices. It is the employer's responsibility to ensure employees get periodic safety training in recognizing various electrical hazards.

Had these simple recommendations been followed, this tragedy could have been avoided.

Discussion Questions

Did the employee's occupation play a role in his death?

Is it common to find such "homemade" materials on a jobsite?

MEETING / TRAINING ATTENDANCE ROSTER

COMPANY: _____

_____ SAFETY MEETING

JOB/DEPT: _____

_____ SAFETY TRAINING

DATE: ___/___/___

TIME: _____

TOPICS ADDRESSED: _____

EMPLOYEE'S SIGNATURES

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

EMPLOYEE SUGGESTIONS AND RECOMMENDATIONS: _____

ACTION TAKEN: _____

Supervisor's Signature

_____/_____/_____
Date

Safety Coordinator's Signature

_____/_____/_____
Date