



Electrical  
Hazards

## eSafetyLine Case Study #3

On 13 July 1995, two workers were repairing a bale conveyor in the hayloft of a barn. The conveyor was used to move small hay bales within the hayloft. The conveyor was permanently suspended about 3 to 4 feet below the peak of the barn roof and was powered by an electric motor that was mounted on a metal frame at one end of the conveyor. Electric power was provided through an extension cord approximately 12-15 feet long hanging from the motor. The insulation on the cord was frayed near the motor and had apparently contacted a metal frame of the conveyor and energized the bale conveyor.

One worker told the victim that he received an electrical shock when he contacted the conveyor. The victim then touched the conveyor, completed a path to ground and received an electrical shock. The shock caused him to fall from the portable ladder that he was standing. The coworker immediately turned off the circuit breakers that controlled power to the conveyor and called emergency services from his cell phone. Emergency services arrived and began resuscitation efforts at the scene and during transport to a local hospital. He was pronounced dead from electrocution at the hospital about one hour after the incident occurred.

Three recommendations were made to try to prevent similar incidents from occurring. They were:

- All electrical equipment and circuits should be de-energized and tested before any repair or maintenance services are performed. Before work begins on electrical equipment the equipments and circuits should be de-energized to reduce the hazard of electrocution. This should be done by the removal of circuit breakers and fuses and whenever possible, the circuit should be locked out and tagged out. This simple procedure would

have prevented this incident from occurring.

- Wherever possible, electrical outlets should be installed in the vicinity of permanently installed electrical equipment. Since the conveyor was a permanent installation, a permanent electrical outlet could have been installed near the conveyor. This would have eliminated the need for long extension cords. This would also have eliminated the potential for the cord to have frayed, which is what caused the conveyor to become energized.
- Electrical equipment and components should be routinely inspected and repaired. This recommendation is in accordance with OSHA's 1910.303(b). By inspecting the electrical cord used to power the conveyor, the frayed insulation would have been discovered and potentially repaired before the incident had occurred.

### **Discussion Question**

Which would be the easiest way to have prevented this incident?

# MEETING / TRAINING ATTENDANCE ROSTER

COMPANY: \_\_\_\_\_

\_\_\_\_\_ SAFETY MEETING

JOB/DEPT: \_\_\_\_\_

\_\_\_\_\_ SAFETY TRAINING

DATE: \_\_\_/\_\_\_/\_\_\_

TIME: \_\_\_\_\_

TOPICS ADDRESSED: \_\_\_\_\_

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## EMPLOYEE'S SIGNATURES

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_____	_____	_____
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EMPLOYEE SUGGESTIONS AND RECOMMENDATIONS: \_\_\_\_\_

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ACTION TAKEN: \_\_\_\_\_

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\_\_\_\_\_  
Supervisor's Signature

\_\_\_/\_\_\_/\_\_\_  
Date

\_\_\_\_\_  
Safety Coordinator's Signature

\_\_\_/\_\_\_/\_\_\_  
Date