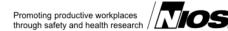




The National Institute for Occupational Safety and Health (NIOSH)



Video Store Owner Electrocuted

FACE 85-24

Introduction

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), is currently conducting the Fatal Accident Circumstances and Epidemiology (FACE) Project, which is focusing primarily upon selected electrical-related and confined space fatalities. By scientifically collecting data from a sample of fatal accidents, it will be possible to identify and rank factors that influence the risk of fatal injuries for selected employees.

On May 27, 1985, one partner of a video store was electrocuted while remodeling a storage room. There were no witnesses to the accident and his body was not found until the next morning.

Contacts/Activities

Subsequent to a request for technical assistance by the West Virginia State Medical Examiner, a research team, consisting of a supervisory safety engineer and an occupational health nurse, assisted in evaluating the incident. The team met with the remaining partner, a close friend of the victim, and the victim's son.

A small pharmacy had been remodeled to serve as a video rental store. Work in the sales area had been completed. Remodeling in the storage room and repair of the air conditioning system had not been completed, but the partners didn't feel that it was essential to have these tasks completed prior to the store's opening. The owners decided to take Memorial Day off and have the official opening on Tuesday, May 28.

On the Friday prior to the incident, an electrician had checked the air conditioning system and determined that the thermostat was faulty. He was going to replace it early the following week. While in the store, he disconnected service to the air conditioning unit and cut a wire on the same wall as the thermostat. The FACE evaluation team felt that this action on the part of the electrician may have misled the victim, so that he thought all power to this area was disconnected.

On the day of the incident the victim apparently decided to work by himself. He had framed in one wall and removed the faulty thermostat from that wall in the process. He had also taken the cover off the thermostat. It appears that at the time of the incident, he was removing the wires from the metal box when both wires made contact with the box. The victim, because he was standing on an aluminum ladder, was grounded. The city inspectors, who investigated the incident, estimated that he remained in contact with the electricity for four to five seconds until the fuse opened the circuit and the victim fell from the ladder to the floor.

Recommendations/Discussion

Recommendation #1: Electrical circuits should not be repaired, moved, or otherwise accessed unless de-energized and de-energization personally verified.

Discussion: The victim was unfamiliar with electricity and it can be concluded that he inadvertently came into contact with the electrical energy as he was constructing the wall. It is presumed the victim believed that the line to the thermostat was de-energized by the electrician and did not present a hazard as he relocated it. Personnel working around sources of electricity should personally verify that all power is disconnected. This verification should minimally consist of disconnecting the circuit at the distribution panel (i.e., circuit breaker, fuse, etc.) and testing the circuit to assure deenergization. Although not a factor in this accident, access to the distribution panel should be restricted if necessary (i.e., a lockout system).

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