The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces through safety and health research NIOSH

Construction Foreman Falls to his Death from a Roof

FACE 8838

INTRODUCTION

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR), performs Fatal Accident Circumstances and Epidemiology (FACE) investigations when a participating state reports an occupational fatality and requests technical assistance. The goal of these evaluations is to prevent fatal work injuries in the future by studying: the working environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact.

On August 11, 1988, a 53-year-old male construction foreman died when he fell from the roof of a building under construction to a dirt floor 30 feet below.

CONTACTS/ACTIVITIES

State officials notified DSR of this fatality and requested technical assistance. On September 7, 1988, a research safety specialist met with a company representative, and photographed the incident site.

OVERVIEW OF EMPLOYER'S SAFETY PROGRAM

The employer is a general construction company specializing in roofing/sheetmetal erection. The company has been in operation for 13 years and employs 15 workers, including 4 job foremen. The company uses written general safety rules and procedures, but no written task-specific safety rules or procedures exist. The victim had been employed by the company for 8 years.

SYNOPSIS OF EVENTS

The construction company was sub-contracted to complete the roofing/sheetmetal work on a building 850 feet long by 180 feet wide by 30 feet high. At the time of the incident the walls of the building had been completed and approximately one-fourth of the roofing panels had been installed.

The roofing panel supports consist of 5-inch-wide bar joists (i.e., light steel joists of open web construction with a single zigzagged bar welded to upper and lower chords at the points of contact). These are positioned on 5-foot centers running the width of the building. Fiberglass insulation is placed on the bar joists and metal roofing panels cover this insulation.

The crew, consisting of 5 workers and the victim, had all been working on separate tasks prior to the incident. At approximately 11:30 a.m. the victim and a co-worker went to the roof to begin applying fiberglass insulation over the bar joists. The co-worker obtained a roll of fiberglass insulation 5 feet wide by 77 feet long. The co-worker rolled the insulation toward the victim, who was standing on the edge of the recently installed roofing panels. As the co-worker came within 10 feet of the victim, the victim stepped from the edge of the roofing panels out onto the 5-inch bar joist, lost his balance and fell to the ground.

The co-worker ran to the contractor's office (approximately 900 feet away) and summoned help. The emergency medical service arrived in 12 minutes and provided basic life support. The victim was transported to the hospital where he was later pronounced dead in the emergency room.

CAUSE OF DEATH

The cause of death was listed by the coroner as multiple traumatic injuries.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Whenever work is performed at an elevation where the potential for a serious or fatal fall exists, employers should ensure that fall-protection equipment is provided and used by employees.

Discussion: The use of a traditional safety belt/lanyard combination, as required by 29 CFR 1926.104(d), is sometimes not practical during construction operations. However, alternative forms of fall protection, such as safety nets as specified in 29 CFR 1926.105, should be used. The use of safety nets may have prevented this death.

Recommendation #2: Worker safety should be considered and addressed in the planning phase of construction projects.

Discussion: Safety concerns should be discussed and incorporated into all construction projects during planning and throughout the entire project. In this instance, poor planning of safety procedures was demonstrated by allowing employees to work on the roof of a building without providing adequate fall protection.

Recommendation #3: The employer should review the current safety program and incorporate written safety rules and procedures for specific tasks.

Discussion: A comprehensive safety program should address all aspects of safety, especially those related to specific tasks. These rules and procedures should include, but not be limited to, the recognition and elimination of fall hazards.

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