



The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces
through safety and health research



Roofer Dies After Fall From Ladder—North Carolina

FACE 9322

SUMMARY

A 56-year-old male roofer (the victim) died after falling approximately 15 feet from a ladder he was ascending. The victim was part of a five-man crew that was replacing a 35,000 square-foot office complex roof, which was 27 feet above ground. The workers were using a 40-foot fiberglass extension ladder tied off at roof level to access their work area. They began work at 8:30 a.m. and had only to install the flashing around the roof perimeter to complete the job. Three workers were already on the roof. The victim stopped at the tar kettle and asked the tar kettle attendant for a rag, then began to climb the ladder to the roof. The tar kettle attendant watched the victim climb the ladder approximately half-way up. The attendant turned away from the ladder, then heard something hit the ground behind him. When he turned around, he saw the victim lying face up on the ground. The emergency medical service (EMS) was summoned by phone from the office complex and one co-worker ran up the hill to the local hospital to summon help. The EMS arrived within 5 minutes, administered first aid, and transported the victim to the local hospital where he was pronounced dead by the attending physician. NIOSH investigators concluded that, to prevent similar occurrences, employers should:

- **stress to all employees the importance of exercising caution when climbing ladders to their workplace**
- **develop and implement a comprehensive written safety program.**

INTRODUCTION

On June 11, 1993, a 56-year-old male roofer (the victim) died after falling approximately 15 feet from a 40-foot extension ladder. On June 14, 1993, officials of the North Carolina Occupational Safety and Health Administration (NCOSHA) notified the Division of Safety Research (DSR) of this fatality, and requested technical assistance. On August 11, 1993, a safety specialist from DSR investigated the incident and reviewed the circumstances with a company representative, and the NCOSHA compliance officer and supervisor assigned to the case.

The employer in this incident was a roofing contractor that employed 8 workers and had been in operation for 30 years. The employer had a general safety program but no written safety procedures. All workers had received documented training in roofing and ladder safety. The victim had worked for the company as a roofer for 25 years. This was the first fatality the company had experienced.

INVESTIGATION

The company had been contracted to replace a 35,000 square-foot, 27-foot-high built-up roof on an office complex. A five-man crew was performing the work. The workers had been at the site for 1 week and work had progressed to the point that the only task remaining was the installation of the flashing around the perimeter of the roof. The day of the incident was to be the last day at the site.

At 8:30 a.m. on the morning of the incident, the foreman and two of the roofers climbed the ladder to the roof. The 40-foot fiberglass extension ladder had a 300-pound load limit rating.

On his way to the ladder, the victim passed the tar kettle where he asked for, and obtained from the attendant, a rag to use for the day. The attendant watched the victim climb the ladder to a height of approximately 15 feet, then turned away to prepare the tar kettle for transport from the site. The attendant heard something hit the ground behind him and thought the workers on the roof were throwing waste to the ground; however, when he turned, he saw the victim lying on his back on the gravel driveway.

The attendant yelled to the foreman, who, with one of the co-workers, descended the ladder to the ground. The co-worker went into the office complex to have someone summon the emergency medical service (EMS). The co-worker then ran to the hospital, which was located up the hill from the complex, to summon help.

The foreman began cardiopulmonary resuscitation but stopped when he realized the victim had broken ribs. The EMS arrived within 5 minutes and transported the victim to the hospital where he was pronounced dead by the attending physician.

Although the tar kettle attendant saw the victim ascend the ladder to approximately 15 feet above ground level, the event was unwitnessed. It is not known whether the victim slipped or tripped, then fell from the ladder. The steps of the ladder were clean and dry.

The medical examiner stated that there was no evidence of any physical condition that might have contributed to the incident. Blood alcohol and toxicology reports were negative. No citations for non-compliance with occupational safety and health standards were issued by NCOSHA for this incident.

CAUSE OF DEATH

The medical examiner listed the cause of death as pericardial tamponade and right ventricle rupture.

RECOMMENDATIONS/ DISCUSSION

Recommendation #1: Employers should stress to all employees the importance of exercising caution when climbing ladders to their workplace.

Discussion: The ladder in this incident was clean and there was no evidence of a foreign substance that might have been a factor in the incident. Additionally, the workers had received training in ladder safety. Employers should constantly stress to employees the importance of exercising caution when climbing or working from ladders.

Recommendation #2: Employers should develop and implement a comprehensive written safety program.

Discussion: The written safety program should include, but not be limited to, ladder safety, the recognition and avoidance of fall hazards, and address appropriate worker training in the proper selection and use of fall protection equipment.

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