A 53-Year-Old Male Iron Foreman Dies After Fall From Steel Decking

Incident Number: 07KY071

Location where foreman fell.

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Kentucky Fatality Assessment and Control Evaluation (FACE) Program
Incident Number: 07KY071
Release Date: September 5, 2008
Subject: A 53-Year-Old Male Iron Foreman Dies After Fall From Steel Decking

Summary

During the fall of 2007, a 53-year-old male iron foreman died when he fell approximately 18 feet from roofing being installed on a retail building under new construction. Two work crews were installing metal decking for a roof by laying corrugated metal sheets to the joists of a retail building being constructed. All workers wore personal fall arrest systems complete with lanyards on the roof; none of the workers were tied off to the building. The foreman had accessed the work site via a 32-foot extension ladder to check on the progress of the work. After speaking to the first crew, the foreman walked along the steel metal decking and joists to talk to the second crew. When he was approximately 71 feet away from the ladder at his origination access point, he fell 18 feet to the concrete floor below. Emergency medical services were contacted. They transported the foreman to the local hospital where the local coroner pronounced him dead due to a brain injury.

To prevent future occurrences of similar incidents, the following recommendations have been made:

Recommendation No. 1: Employers should ensure all employees use personal fall arrest systems appropriately.

Recommendation No. 2: Employers should implement and enforce a written safety policy which states the consequences of not following company policy.

Recommendation No. 3: General contractors should ensure subcontractors have a viable and applicable safety program that is implemented and enforced by both subcontractor and general contractor management.

Background

The decedent was employed by a steel erection company with approximately 150 employees and had been in business since 1993. He was a journeyman and had been employed by the company since 2007 as an experienced iron worker.

Iron workers within the company were union members and received safety training through the iron workers union. To be employed by the steel erection company, union members were required to be trained and certified in the Occupational Safety and Health Administration 10 Hour, Part R, Fall, Rigging, Cleanup standard. Toolbox talks were conducted at the job site every morning by the general foreman.

Temperatures on the day of the incident ranged from 37 degrees Fahrenheit to 58 degrees Fahrenheit, with an average of 48 degrees Fahrenheit.

Investigation

On a fall day in 2007, the Kentucky Fatality Assessment and Control Evaluation program was notified via a construction safety professional that an occupational fatality involving an iron worker had just occurred. A FACE field evaluator traveled to the scene and took photographs of the work site where the fatal incident occurred. Interviews were conducted with a company employee, an employee of the general contractor, a local police officer, and a Kentucky Occupational Safety and Health compliance officer.

A general construction contractor had subcontracted a steel erection company to set all structural steel and decking for a retail building being newly constructed. The job was scheduled to take two and a half weeks to complete and was near completion at the time of the incident. One general foreman (decedent), one job foreman, seven iron workers and two laborers were on site at the time of the fatal incident. Their job was to set the metal joists and metal corrugated decking for the roof.

On the day before the incident, the crew had prepared the site to install corrugated metal decking (3 feet wide by 22 feet long) to steel joists by setting stacks of the metal sheets offset from each other on the steel joists. That same day, the iron workers attached some decking to the steel joists by screwing it to the joists. At approximately 9 AM on the day of the incident, two work crews continued laying the decking. The general foreman, via a 32-foot extension ladder, accessed the work area to check on the progress of the work and consult with the two work crews. All workers, including the general foreman were wearing harnesses with lanyards on the roof; however, none of the men were tied off to the building. It is unknown if temporary anchors had been installed to support the lifelines. The general foreman walked away from one crew to check on another area where work was also being performed. He was approximately 71 feet from the access ladder, walked off the unsecured decking and fell approximately 18 feet to the concrete floor below. The iron workers heard but did not see the general foreman fall. A supervisor for the general contracting company saw the general foreman fall to the concrete floor. Emergency services were contacted immediately at 10:28 AM and dispatched to the scene at 10:31, arriving at 10:34 AM. Upon arrival, emergency management service personnel found the general foreman unconscious. An air ambulance service was contacted. It was cancelled when the general foreman died as he was loaded into the ambulance that was to transport him to the air ambulance location**.** The ambulance then transported the decedent to the local hospital where they arrived at 10:48 AM. At 10:50 AM the general foreman was pronounced dead by the local coroner.

Cause of Death

The death certificate states the cause of death was due to brain injury due to blunt impacts of the head with a skull fracture.

Recommendations and Discussions

Recommendation No. 1: Employers should ensure all employees use personal fall arrest systems appropriately.

The workers involved in this incident were wearing personal fall arrest systems which included harnesses with attached lanyards, but were not tied off**.** Typically iron workers use a cable system to tie off to. According to an employee for the general contractor, all iron workers on the jobsite were trained and certified in OSHA 10 Hour – Subpart R and knew how to use the personal fall arrest systems they were wearing.

The subcontractor involved with this incident was not a Kentucky based company. The Federal Code of Regulations for steel erection, 29 CFR 1926.760(a)(1) states that steel workers working at 15 feet and above are required to wear and use a personal fall arrest system. Kentucky law, 803 KAR: 2:417 Section 1(1)(b), states that steel workers working at 10 feet or higher have to use personal fall arrest systems. Companies need to be knowledgeable and follow the applicable regulations for the state they are performing work in. In this particular incident, both Federal and KY State regulations were applicable. Standards 29 CFR 1926.760(a)(1) and 803 KAR: 2:417 Section 1(1)(b), state that steel workers working above 10 feet, with an unprotected edge or side are to be protected from fall hazards by use of guardrails, safety nets, personal fall arrest systems, positioning devices, or fall restraint systems.

Recommendation No. 2: Employers should implement and enforce a written safety policy which states the consequences of not following company policy.

Occupational Safety Health Standard CFR 1926.503(a)(1) states that the employer is responsible for providing a training program for each employee that might be exposed to fall hazards. The company involved in this fatality had written safety procedures and employees were trained and certified on how to use personal fall arrest systems. All training should be documented and employees should be required to sign that they understand the safety and training program. Enforcement and consequences for failure to follow safety systems should be part of the standard operating procedures.

A section of the safety policy should include the development of a site specific safety plan. Occupational Safety and Health Standard CFR 1926(502)(k)(1) states that a fall protection plan shall be prepared by a qualified person and developed specifically for the site where the work is being performed. Employees should conduct a hazard analysis and wear personal protective equipment to prevent injury while working.

Recommendation No. 3: General contractors should ensure subcontractors have a viable and applicable safety program that is implemented and enforced by both subcontractor and general contractor management.

General contractors should require subcontractors to submit a copy of an applicable safety program when bidding for jobs. The safety program should include consequences if employees fail to follow company safety policies and procedures. General contractors should have written

subcontracts including recourse language applicable to employees who do not follow safety procedures. The general contractor should perform daily inspections of the job site to ensure that subcontractors are following safety procedures. If safety procedures are not being followed, then the subcontractor should be warned and/or fined.

Keywords

Corrugated metal decking
Iron worker
Personal fall arrest system
Steel erection

References

29 Code of Federal Regulation 1926.761(b)(1) Steel Erection, Training
29 Code of Federal Regulation 1926.761(a)(1) Steel Erection, General
803 KAR: 2:417 Section 1(1)(b) Steel Erection, Fall Protection
29 Code of Federal Regulation 1926.502(k)(1) Fall Protection Plan
29 Code of Federal Regulation 1926.503(a)(1) Fall Protection, Training

United States Department of Labor Occupational Safety and Health Administration, Steel Erection eTool http://www.osha.gov/SLTC/etools/steelerection/training.html#General

29 Code of Federal Regulations, Fall Protection, General Requirements
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=12751

Acknowledgements

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Safety representative of local company
Union representative

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