

Fatality Narrative

Carpenter Struck By Falling H-beam*

Industry: Heavy and civil engineering construction.
Occupation: Carpenter.
Task: Preparing to burn hole in piling to attach braces.
Type of Incident: Struck by falling object.

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On November 13, 2006, a carpenter died after being struck by a falling steel beam. The 59-year-old victim, a Carpenters union member, had about 30 years experience in the construction industry and had been with his current employer for 2 1/2 weeks. The victim's employer was a construction company hired by the county to build underground tunnels to transport sewage as part of a wastewater treatment system. The victim was working with a crane operator, and two carpenters serving as riggers and signal persons, constructing a sound barrier wall that would encircle the construction site. The sound wall consisted of 40-foot-long, 1,400 lb. H-beams that were sunk 15 feet into the ground to serve as pilings for the support of wooden panels. The victim was preparing a welding torch for burning a hole in the piling once it was set so that braces could be attached to the piling. He was working about 10 feet from where the horizontal beam was laying prior to being lifted by a 50-ton mobile crane and placed vertically in the hole where it was to be set. The rigging for the beam/piling lift consisted of a locking lifting clamp attached to a 12-foot polyester lifting sling which was attached to the crane's hook. The rigger/signal person attached the clamp to the web of the beam and signaled the crane operator to begin the lift. As the beam was being lifted from its horizontal to vertical position it swung to the side and began to twist, causing the clamp to be side-loaded. The beam slipped out of the clamp and fell about 30 feet, striking the victim. He was transported to a hospital where he died. An investigation determined that the victim, while not directly under the load, was in its swing radius; the clamp was not centered on the beam's web; mud on the clamp's cam and pad may have contributed to side loading the clamp; and the rigger/signal person was inexperienced.



Photo: The crane, wall and site after the incident.

Requirements/Recommendations

(! Indicates items required by code)

- ! Crane operators must avoid carrying loads over people. During a lift the swing radius of a load should be considered and all ground workers moved away from the danger zone.
- ! Ensure that manufacturer's guidance on specifications and limitations are followed for below the hook devices such as beam and plate clamps.
- ! Train riggers and signal persons in proper procedures and to recognize hazards.
- ! Employers must designate a competent person to inspect all equipment and machinery before use and during use to ensure safe operating condition.
- Clean and maintain lifting clamps. Employers should establish cleaning and maintenance protocols.
- Accident prevention programs and safety meetings should address safe distances and locations for ground personnel when loads are being lifted by cranes.

State Wide Statistics: This was the 70th out of 81 work-related fatalities in Washington State during 2006, and was the 20th out of 23 construction-related fatalities.

**This bulletin was developed at the Washington State Department of Labor and Industries to alert employers and employees of a tragic loss of life of a worker in Washington State. The information in this notice is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or conclusions regarding the cause of the fatality.*

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