

New Products Can Help Reduce Falls in Residential Construction

Fall Prevention on Residential Construction Sites

Vicki Kaskutas, Bradley Evanoff and Harry Miller. Professional Safety, July 2013.

Overview

Falls from height remain the most common cause of workplace fatalities among residential construction workers. The research team identified 43 commercially available fall protection technologies appropriate for residential building; 45 construction professionals identified their preferred devices. Two of these devices were pilot tested with residential builders to explore feasibility of device use while framing homes. Workers believed that both devices could prevent falls, but reduced productivity was a concern for one of the devices tested. The researchers concluded that there are feasible fall protection technologies for residential construction and most contractors are willing to explore these options. They recommended continued collaboration between researchers, device manufacturers, the building components industry, and residential contractors to generate definitive evidence about the safety of personal fall arrest systems in various residential applications.

Key Findings

- A plastic housing for temporary guard rail construction around floor openings and stair was well-received at the worksites that tested it. Workers felt that the device would prevent falls without reducing productivity.
- Safety audits were performed at construction sites using a hanging scaffold to provide a temporary walking surface when setting roof trusses and installing roof sheathing. Audits indicated that workers at sites with hanging scaffolds were far less likely to engage in unsafe behaviors such as standing on the top of the wall. Crew members identified excessive time to install and use, accommodating different worker heights and maneuvering around building components as barriers to using interior-mounted hanging scaffold systems. Use of shorter walk boards, externally mounting the scaffolding, and obtaining more experience using the device may help to overcome these barriers.
- While personal fall arrest components are widely available, during some stages of home construction the structures these systems are anchored to often lack the stability needed to arrest the forces generated in a fall. Fall protection device manufacturers and the building components industry should partner to test anchorages for personal fall arrest in order to generate definitive evidence about the safety of personal fall arrest systems in various applications.

For more information, contact:

Vicki Kaskutas: kaskutasv@wustl.edu

See journal article:

http://www.asse.org/professionalsafety/pastissues/058/07/F2Kask_0713.pdf

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