Employee Safety

3 Tips for Preventing Falls From Height at Work

Julie Sullivan | Jan 25, 2018

In a recent webinar, expert Tom Dillon, of Honeywell Miller, walks us through the best practices in fall protection, and includes tips on the right protective gear and the training needed to educate workers.

No accident in a manufacturing setting would necessarily be considered "good" or "acceptable"—though there are varying degrees of severity. But of all the things to go awry from equipment malfunction or human error, falls from height may be the deadliest.

In 2016, there were 384 deaths from falls in construction out of a total 991 on-the-job fatalities, ***according to OSHA***. In 2017, there were over ***6,000 fall protection violations*** cited by OSHA—with another 1,500 violations given for inadequate fall protection training.

"Falls at height are the No. 1 cause of fatalities in construction," explains Tom Dillon, an application and training sales manager for ***Honeywell Miller*** in a recent ***MSC webinar***. "Why do we keep seeing these terrible statistics and near misses? How does the construction industry still have the highest statistics for injuries associated with heights from falls?"

The most common reasons for these types of falls include mishaps with agents, including scaffolds and ladders, poor weather conditions and poor site conditions, emphasizes the ***International Journal of Environmental Research and Public Health***. Dillon echoes that sentiment.

"Part of the problem lies in a lack of fall protection equipment, but inadequate training is also a factor," he explains. "Many workers are using their equipment improperly and for the wrong application. People get complacent."

Falls at height in the workplace are ultimately preventable. Here's what to keep in mind when mapping an effective safety strategy for your team.

Learn About the Leading Edge and How to Safeguard Against Fall Dangers

"I've been training and teaching for 22 years now, and it amazes me how little some people will understand about fall protection," ***says Dillon***. He cites a solid understanding of leading edges––a fairly new application found in recent years regarding fall protection––as one of the most dangerous types of safety ignorance.

A leading edge is defined as an unprotected side or edge during periods when the space is actively or continuously under construction (***ANSI A10.32-2012***). It's also defined as an application where the lifeline of the user's connecting device has the potential to come in contact with an edge, explains Dillon.

"From construction to maintenance to scaffolding to steel mills to warehouses to automotive and oil and gas, leading edges are *everywhere*," emphasizes Dillon. "Anytime you have a connecting device that could potentially hit the edge of something, that's a problem to be noted. Traditional lanyards and self-retracting lifelines weren't designed to fall over the edge of something in use."

Dillon says Honeywell estimates that 80 percent of all scenarios where workers are at height involve an edge or require a foot-level tie-off––making it a particularly overlooked application.

In protecting your team from dangers associated with leading edges, Dillon suggests keeping an open eye. "Where are all your edges? It may not be an extremely sharp edge, but it's still an edge. Connecting devices are not designed to be able to do that. Look around and carefully analyze the situation."

Dillon also notes the need for a shock absorber within the leading edge connecting devices to help reduce the force of a lifeline as it hits the edge in a fall. It also helps keep the lifeline intact and ultimately saves the user's life.

"Use a leading edge-rated connecting device anytime the lifeline has the potential to come into contact with an edge," he says. "It will save someone's life."

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> Tom Dillon
> Application and Training Sales Manager, Miller Fall Protection, North America

How to Select the Proper Fall Protection Equipment for Falls From Height

When choosing the proper fall protection equipment, to guard against falls at height, Dillon stresses the need to understand standards and how those guidelines apply to your work.

For example, self-retracting devices tested under the ***ANSI/ASSE Z359.14-2014 standard*** take into account extremely sharp steel edges with a radius less than .0005 inches. The test was conducted perpendicularly and offset laterally along the edge to ensure the lifeline could withstand sliding along the edge during a fall.

Alternatively, a standard like ***CSA Z259.2.2-98*** for retracting devices only pertains to self-retracting devices that can be connected overhead and doesn't include any leading edge testing requirements. Across the pond, EN 360 (European) is tested over a steel bar with a radius under .02 inches.

The gist: Learn what standards are associated with your application long before work begins.

Did you know that OSHA is now enforcing the law that requires manufacturers to implement fall protection training programs? Get help here: *5 Must-Know Tips for Fall Protection Training*.

Understanding How to Calculate Fall Clearance

Aside from understanding which standards apply to your job, Dillon also emphasizes the need to calculate fall clearance. "When working at heights, you're going to have to increase your fall clearance

calculations. In addition, those working with the lifeline must also be able to calculate clearance fall distance."

He says that all safety managers should consult the product instruction or user manual, and always refer back to the product label for the minimum fall clearance that's required.

"Different products work differently themselves, so always be sure to check the manufacturer's directions," he explains. "If you change products or manufacturers, don't go by what you did before––check with the manual."

In addition, safety managers should map out ways to minimize the swing fall. "If you have a 50-foot self-retracting lifeline, instead of walking horizontally 50 feet, it'd be best to take that unit down, walk across the ground 50 feet, then walk back up horizontally. It reduces the guesswork," says Dillon.

Webinar Replay

If you'd like to view the informative fall protection ***webinar*** in its entirety, be sure to check out ***"The Chilling Truth Behind Leading Edge Fall Threats"*** right here at Better MRO.

For more information on Honeywell Miller Fall Protection products, please visit ***MSCDirect.com.***

Finally, he advises understanding the setback distance (or the distance perpendicular to the edge that the self-retracting lifeline is anchored to) and the lateral edge distance (or the maximum distance parallel to the edge that the user can work away from the point at which the self-retracting lifeline is anchored). Product maximum weight capacity and the user's weight should also factor into the calculation.

Above all, Dillon says that the true danger associated with falls at height in construction and manufacturing lies in ignorance and negligence.

"You have to make sure you're using the right product in the right application," he says. "There should be no confusion. Many leading edge products look similar to products that aren't optimized for leading edge, and workers will sometimes see a person using a product a certain way and will want to mimic it. Education is extremely important."

What protective measures does your shop take when it comes to falls from height? Let us know in the comment section below.