Check Roof Openings for OSHA Compliance

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Roof openings are present in virtually all non-residential buildings. Several types of products can be used to cover them, which serve a variety of purposes. These include providing ventilation or additional light, smoke venting, and/or allowing maintenance workers roof access.

Regardless of the openings' function, however, failure to protect workers from the hazards these openings present can have far-reaching consequences. No one wants to be responsible for a serious worker injury or death because proper precautions were not taken.

The Occupational Health and Safety Administration (OSHA) has established safety regulations for protecting roof openings. This article will discuss types of roof openings, relevant OSHA standards, and how to comply with regulations.

The basics

Roof hatches (or scuttles) are designed to provide roof access for workers and equipment. They can range in size from small, single-leaf (one-cover) models which accommodate a single person at a time to extra-large, double-leaf (two-cover) models designed to handle large pieces of equipment. Although the former are more frequently used, all roof hatches share a common characteristic. When a hatch is left in the open position, personnel working on a roof can be exposed to a potential fall hazard. Workers can fall into the opened hatch and sustain severe or deadly injuries by losing their footing, tripping or stepping backward without looking.

Skylights are also classified as roof openings, and also present a potential fall hazard. Unless the glazing of the skylight is strong enough to withstand the impact of a falling person, any misstep around a skylight could result in a worker falling through it.

Automatic smoke vents are another product commonly installed over roof openings. These are designed to maximize fire containment and safety, while minimizing damage to building contents. Like skylights, smoke vents can pose a fall hazard unless they incorporate some type of barrier.

The standard

The OSHA standard on roof openings (26 CFR 1910.23) is called "Guarding Floor and Wall Openings and Holes." It states that "every ladderway, floor opening or platform shall be guarded by a standard railing with standard toe-board on all exposed sides (except at the entrance to an opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into an opening."

The standard applies to every opening, whether roof hatch, smoke vent or skylight. It is designed to protect workers on a roof from the fall hazards presented by unprotected roof openings, and there are several ways to bring a roof into compliance.

The primary source of confusion regarding the protection of roof openings relates to roof hatches. There are several options for roof hatches that a building owner/manager must consider. The easiest way to maintain compliance is to have workers close the hatch immediately after stepping onto the roof. If the hatch is properly secured in the closed position, workers can complete their tasks without risk of falling through the opening.

But many building owners and managers do not consider this sufficient protection, even if it is OSHA-compliant. First, no manager can realistically monitor the activities of every worker to ensure that the hatch is always closed after each use. Second, if the hatch is closed, the chance then exists that maintenance personnel could be locked onto the roof.

A hatch railing system can provide a viable alternative to the above. There are two types of OSHA-compliant railing systems to consider:

• The simplest and most effective hatch railing system is one with a self-closing gate. This is the most effective because the self-closing gate ensures a continuous barrier around the roof opening.

• OSHA also allows hatch railing systems that utilize a safety-chain closure. Much like closing the hatch, however, this approach requires personnel to make a conscious effort to re-latch the chain to maintain the safety barrier.

As referenced earlier, OSHA 29 CFR 1910.23 is also applicable to other products installed over roof openings even though they may be fixed (skylights) or opened infrequently (smoke vents). Skylights are required to be "secured by a standard skylight screen or a fixed standard railing on all exposed sides." It should be noted that an approved screen must satisfy certain impact requirements. As an alternative to a screen, a skylight can be fabricated from a material (such as polycarbonate) that satisfies these impact requirements. This would also be true of fire vents.

Though it may not be on your checklist, your facility's roof hatch or other roof opening could cause an accident. Take a look at any you have to ensure you have code-compliant equipment around them and a safe working environment for your employees.

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