Stairways Can Lead to Tragedy

Slips, trips and falls rank only behind motor vehicles as the leading cause of industrial deaths in North America. Many of these fatalities involve stairways.

Here’s an example from the oil and gas industry:

Several years ago, a storage tank was taken out of service for repair work, which was to include the tank’s stairs. The method employed was to work from the ground to the top, removing every second step and the vertical supports so access to the tank could be maintained while the stairs were repaired.

The supports were in a condition that required modifying the job method so two steps in succession were removed. The hazard was recognized and the area clearly identified with hazard tape. Workers passed up and down safely several times past the gap in the steps. However, on the way down at the end of the second day, an employee stepped into the gap and fell to the ground. He died later in hospital.

In this instance, a quick fix was used that remained in place longer than anticipated. It raised serious questions about the adequacy of temporary measures and whether risks are communicated properly to all employees, including shift changes and mid-shift personnel transfers and replacements.

It’s just one example of what can happen.

Serious stairway accidents occur most often when people are going down the stairs. Every year, new incidents result for the same old reasons:

- slippery surfaces
- being off-balance due to vision blocked by items carried
- handrail not used
- poor lighting
- defective or uneven steps
- unexpected items stored on stairs
- untied or defective footwear
- not paying attention
- running

Stairway accidents can be prevented through awareness, engineering, construction and housekeeping. Any of us can get involved with at least one of these factors.

Knowing the potential hazards of a stairway and how to deal with them are key elements of awareness.

Too often, stairways don’t get the attention they need to ensure the safety of everyone who uses them. This can be due to the fact the stairways are temporary or it could be because workers are on them just briefly as they go from one elevation to another and take little notice of a problem. Do not assume someone else will fix or report it.

Most of the construction on rig sites is temporary, including stairways. Often, the handrails are not installed, stairs are constructed with substandard materials, makeshift steps are constructed with scraps, etc. Also, rigs are often in isolated locations where mud and debris make their way to the stairs. This combination often results in stairway slips and falls.

Most jurisdictions have specific standards and requirements for the provision of safe stairways. On drill rigs, all-metal construction is preferred.

Whether on a rig or elsewhere, experience long ago showed that riser heights and tread widths should be uniform throughout a flight of stairs. Riser heights greater than seven inches (18 centimeters) or less than four inches (10 cm) have been found to be dangerous, as have tread widths less than 9.5 inches (24 cm).

Stairways with four or more risers, or rising more than 30 inches (76 cm) in height require railings along each unprotected side or edge. When the top edge of a stair rail system also serves as a handrail, it should be no more than 37 inches (94 cm) and no less than 36 inches.

Handrails shouldn’t be more than 37 inches (94 cm) high. Their upper surfaces should be no less than 30 inches (76 cm) from the surface of the tread.

The surfaces of stair rail systems and handrails should not have gouges that puncture skin or snag.

If you must carry objects while using a stairway, the load should be small enough to allow one hand to be free to hold the railing.

It’s essential that stairways be kept clear of trash, cords and other tripping hazards. These aren’t storage areas. Any obstructions should be reported or cleared immediately.

DO YOU KNOW…

- Six common causes of stairway accidents?
- When handrails should be installed on stairways?
- Who is responsible for reporting an unsafe stairway?