Safety Newsletter

July 2003

IEC PRIDE NATIONAL

Fall Protection Equipment: Personal Fall Arrest Systems

Personal Fall Arrest Systems include the use of an anchorage, connectors, and a body belt or harness. A deceleration device, lifeline, or suitable combinations of the above may also be used. A personal fall arrest system must do the following in order to protect workers from falls:

- Must be strong enough to hold twice the potential impact energy of an employee falling from a distance of 6 feet (1.8 meters), or the free fall distance permitted by the system, whichever is the lesser amount.
- Must be rigged such that a worker can neither fall more than 6 feet (1.8 meters), nor come in contact with any lower levels or obstructions.
- Must bring a worker to a complete stop and allow no more than 3.5 feet of deceleration distance.
- Must limit the arresting force on a worker to 900 pounds or the equivalent amount of 4 kiloNewtons, when used with a body belt.
- Must limit the arresting force on a worker to 1,800 pounds or the equivalent amount of 8 kiloNewtons, when used with a body harness.

In addition, personal fall arrest systems must be inspected for damage, wear and deterioration prior to each use. Defective parts must be removed and disallowed for use. Snaphooks and dee-rings must have a tensile strength of no less than 5,000 pounds (22.2 kiloNewtons), and both must be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking or having permanent damage and/or deformations.

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2003 IEC National Safety Committee Members

Harvey Hammock	Jack Martin
Dominic Caminiti	Robert Leonhart
Kent Davis	Marc Ramirez
Murray J. Haas	Deb Swier
Carter Hicks	Kim Tunze

Important Dates

Executive Committee Meeting: July 17-19; Chesapeake, Maryland

2003 46th Annual Expo/Convention: September 10-13; Anaheim, California

For more information, click on "Events" on the IEC home page: www.ieci.org.

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Personal Fall Protection...

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Snaphooks should be compatibly sized to their connecting member, or should be of a locking configuration. If the snaphook is *not* a locking type and/or *is not* designed for the following connections, they must not be attached: to a horizontal lifeline, to a dee-ring that is already attached by another connector or snaphook, directly to webbing, rope or wire rope, or to any incompatible object.

OSHA supports that a hook is *compatible* when the dee-ring to which the snaphook is attached *is greater in diameter than the inside length of the snaphook.* However, the snaphook must be measure from the hinged end of the snaphook keeper to the inside curve at the top of the snaphook. Regardless of dee-ring's positioning, the dee-ring must not touch the outside of the keeper, or depress it open.

While operating on suspended scaffolds or other similar work platforms that might require horizontal lifelines to become vertical lifelines, connecting devices must have the ability to lock in both directions of the lifeline.

A qualified person must design, install and supervise the use of anchorages. The anchorage must be part of a personal fall arrest system with a consistent safety factor of no less than 2, and therefore capable of supporting at least twice the weight expected while in use. When the anchorages are used as part of a personal fall arrest sytem, they must be independent of any anchorage being used to either support or suspend platforms and must be capable of holding at least 5,000 pounds (22.2 kiloNewtons) per person attached.

Safety Question.....

Question: Is there a significant difference between a webbed lanyard and a shock-absorbing lanyard used in fall protection?

Answer:

The manufacturers of shock-absorbing lanyards claim their lanyards can reduce forces from falling by as much as 50-80 percent. For example, if a 220-pound weight were attached to a webbing lanyard and allowed to fall 6 feet, the force on the lanyard at the end of the fall would be approximately 2700 pounds. If the same 220-pound weight were attached to a shock-absorbing lanyard, the maximum force on the shock-absorbing lanyard would be approximately 800 pounds.

Because the shock-absorbing lanyard gradually slows the object, the force exerted is not as great. Keep in mind that the shock-absorbing lanyard needs an additional 3.5 feet to slow the fall; this must be calculated into the fall distance.

Additionally, using a body harness can further reduce the maximum force applied to the body in the event of a fall. The body harness distributes the maximum force more evenly.

Please submit your Safety Questions to: mabercrombie@ieci.org.

Recent OSHA Fines

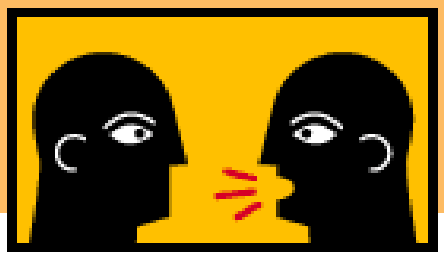
06/16/03 Two Employers Fined for Violations Totaling $427,500: Three companies allegedly failed to train workers and give them adequate gear for working in confined spaces with unsafe air. Penalties proposed by OSHA totaled $427,500. A local city office began an investigation on one particular company, following complaints that workers were entering and performing work inside railcars without adequate respiratory equipment. This comapny filed for Chapter 11 and was taken over by a second company. A third company, who provided on-site safety and health audits, as well as personnel services shared the fine of $142,500 for three alleged *willful* and nine alleged *serious* violations. Several workers have suffered long-term illnesses due to their exposure to the working conditions.

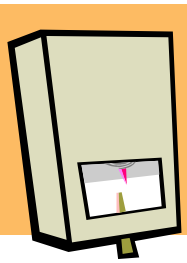
06/16/03 OSHA Cites Contractor for Exposing Workers to Electrical Hazards at Worksite: OSHA cited a contractor proposed penalties totaling $46,800 for safety hazards at a powerline project, where one worker was seriously injured. Employees were working on a powerline distribution system when one crew member suffered an electrical shock and severe electrical burns. The worker remains paralyzed from his injuries.

The contractor was issued 12 citations for alleged *serious* violations of safety standards, including charges that the company failed to provide safety training for employees working with high-voltage electrical lines and operating aerial lift equipment; failed to maintain the required distance between workers, equipment and energized powerlines; did not provide tools certified for use on powelines; did not inspect and discard damaged tools or insulatomg equipment; and failed to provide adequate traffic barriers and high visbility clothing for ground employees working adjacent to traffic areas.

05/22/03 Failure to Develop Procedures for Confined Space Entry Leads to $146,000 in Fines: A company is facing $146,000 in fines follwing an accident in which an employee died while servicing a grain storage silo. The company, which builds and services silos, did not create and implement a confined space entry program and did not have practices and procedures in place for safe entry into confined spaces. OSHA also charged the company with failing to provide adequate training for workers and allowing them to enter confined spaces without appropriate equipment, including respirators, body harnesses and retrieval lines; and testing equipment to evaluate the atmosphereic safety inside the silo.

05/12/03 Failure to Protect Workers Against Traffic Hazards Leads to $49,000 in OSHA Penalties for Contractor: Contractor has been cited for one alleged *repeat* and two alleged *serious* violations of the Occupational Safety and Health Act following an accident at a worksite. Four employees were injured while removing traffic cones and road closure signs when passing traffic struck their vehicle. OSHA's inspection determined that the contractor failed to follow its own workzone safety plan that spelled out how to safely remove the cones and signs, and did not train the workers in highway work zone safety. The company also failed to equip the truck platform from which the employees were working with seats and seatbelts. They were fined for two alleged *serious* violations, with $14,000 in proposed fines and $35,000 for an alleged *repeat* violation for failing to train employees.





Language Barriers on the Jobsite

Making sure that employees are operating in a safe and efficient manner is a tough job in and of itself. But when supervisor and employee, or even employee and employee are having difficulties understanding one another because of a difference in their native languages, the problems become even more complicated. Though workers of many native tongues are employed in the construction industry, the fastest growing segment of workers is Hispanic.

Compared to both Anglo and African American workers, deaths among Hispanic workers from 2000-2001 have risen significantly. According to the results of an OSHA study investigating language and the occurence of workplace fatalities, the great majority of fatalities are resulting in situations where workers have a limited understanding of English.

A number of companies find themselves in difficult situations because the nature of the construction industry can be so technical, which is compounded when workers experience language difficulties as well. At the same time, no company necessarily wants to deny itself the opportunity to bring on dedicated, hard-working employees- regardless of their native tongue. However, an employer must take responsibility for keeping workers safe AND for having them work safely with others.

A number of employers and workers support the idea of bilingual instruction or training- even if the training only covers the bare essentials for safety, or industry-related catch phrases, like "high voltage" or "danger."

Essentially, communication is important in any industry- that fact cannot be escaped. Employee safety is also a key issue, just as employer liability is. These factors and the increasing number of non-native English speakers make the complicated job of worksite safety ever more complicated, but even more necessary as well.

Photo Ionization Detectors (PIDS)

When responding to the scene of an accident or another type of emergency, appropriate personnel need to know what they will be facing on the site. Whether it's a leak or a spill, these responders must to prepared to gather as much information as they can- as quickly as they can. Before containment or cleanup can be addressed, hazards must be assessed.

The level of airborne contaminants plays a huge role in determining what type of personal protective equipment (PPE) staff onsite should use. A PID, or *photo ionization detector*, can help to do just that. A PID is a versatile tool that assesses the chemical dangers present in the atmosphere. It actually monitors the ambient air for concentrations of hydrocarbons and other volatile organic compounds. This detector, which calculates by parts per million (ppm) or sub-ppm, then allows appropriate staff and other professionals to determine a safe perimeter, or where their efforts should be concentrated.

PIDs are compact and can be used either in or outdoors. Many of these detectors can provide accurate readings and measurements from a distance of up to 100 feet away. Other helpful features include the capacity for the user to program certain functions in, as well as digital passwords for security, and the ability to interface with computers.