

Safety in Steel

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Ergonomic and contemporary design—which helps to facilitate the use of personal protective equipment (PPE) and motivate employees to wear it consistently—is a primary focus of the latest PPE innovations. New product-design concepts also recently have solved significant technical, cost and administrative problems. As a result, more workers are taking advantage of easily installed, low-cost products to stay safe on the job. Combined with comprehensive training programs, products for improving safety in steel construction will help reduce accidents in the construction industry—the industry that continues to report the largest number of fatal work injuries.

FALL PROTECTION

Falls are the leading cause of construction industry deaths. Construction industry falls accounted for over half of all fatal falls in all industries in 2001, according to a September 2002 U.S. Bureau of Labor Statistics report. To help reduce fall fatality and injury numbers, PPE manufacturers are focusing on anchorage and fall-arrest systems that are easy to install and to use. These systems include lightweight stanchions that can be installed or removed with no special tools. Some have built-in shock absorbers that simplify horizontal lifeline systems for structural steel.

Combination equipment, such as traffic vests with built-in harnesses, and harnesses with permanently attached lanyards, reduces total weight, making it easier for workers to wear all required personal protective equipment.

HARD HATS

The second most common cause of death and injury during construction occurs when a worker is struck by an object—often in the head. Studies have shown that a high proportion of head injuries are due to the lateral impact of flying objects—not just the vertical impact of falling material. It is essential to assess whether workers require

ANSI Type I vertical-impact protection or Type II head protection against lateral and vertical impact, electrical shock, heat and sparks. Frequently, Type II protection is needed.

Secure fit, comfort and quality also influence the effectiveness of head protection—particularly during rapid or forceful work movements and windy conditions. New suspensions, level adjustments and chin-strap designs provide more secure and comfortable fits for adverse environments. Accessory slots in hats for hearing muffs and face shields make it easy to enhance head protection for different conditions.

HEARING PROTECTION

Active hearing protection, which is noise-responsive, is a new solution for workers who use equipment that makes intermittent impact noise, such as pile drivers. Noise deleting headsets cancel unwanted background sound and enhance the quality of audio delivered through the equipment. For those using jackhammers or other constantly loud equipment, brightly colored, disposable earplugs reduce noise and help safety supervisors spot wearers vs. non-wearers.

EYE PROTECTION

Risks to eyesight occur when workers remove protective eyewear. Often safety goggles become fogged or scratched. Workers might develop a headache from an overly tight fit or remove unflattering glasses. Some workers use a faceshield or welding helmet without safety glasses or goggles, which are required to be worn underneath faceshields or helmets.

Given these challenges, new designs for safety glasses and goggles focus on functional and attractive styles. Many feature side shields that are part of a wrap-around sport-like design. Anti-fog, scratch-resistant, static-resistant, anti-UV-coated and tinted lenses greatly improve functionality for the steel construction worker. Many manufacturers provide options such as adjustable, straight or curved

temples with flexible or soft-touch ends to improve fit and comfort.

HIGH-VISIBILITY CLOTHING

Many accidents occur due to poor visibility in construction zones with moving vehicles. This has led to the recently revised ANSI standard for high-visibility clothing. The standard states that in areas where greater visibility is necessary because of inclement weather, complex background or traffic diversions, or where vehicles and equipment do not exceed 50 mph, an ANSI Class 2 vest is required.

HAND PROTECTION

New hand protection products focus on providing greater dexterity and durability as well as cost effectiveness. Welder's gloves, driver's gloves, and leather-palm gloves with abrasion resistance are some of the options for hand protection that are customized to specific steel construction jobs. Other specialized products include Kevlar®-coated cloth gloves for insulation, comfort and cut/slash protection, and bright orange PVC gloves that are highly visible when signaling crane operators. It pays to look for a comfortable, flexible fit and high-quality materials, with weight and durability appropriate to each particular job.

RESPIRATORY PROTECTION

New respiratory protective products provide greater comfort and protection with softer, lighter and more flexible facepieces to better accommodate workers' protection needs.

As safety becomes increasingly important on steel-construction sites, look for personal protective equipment that is more comfortable, more cost-effective and easier to use than ever before.

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