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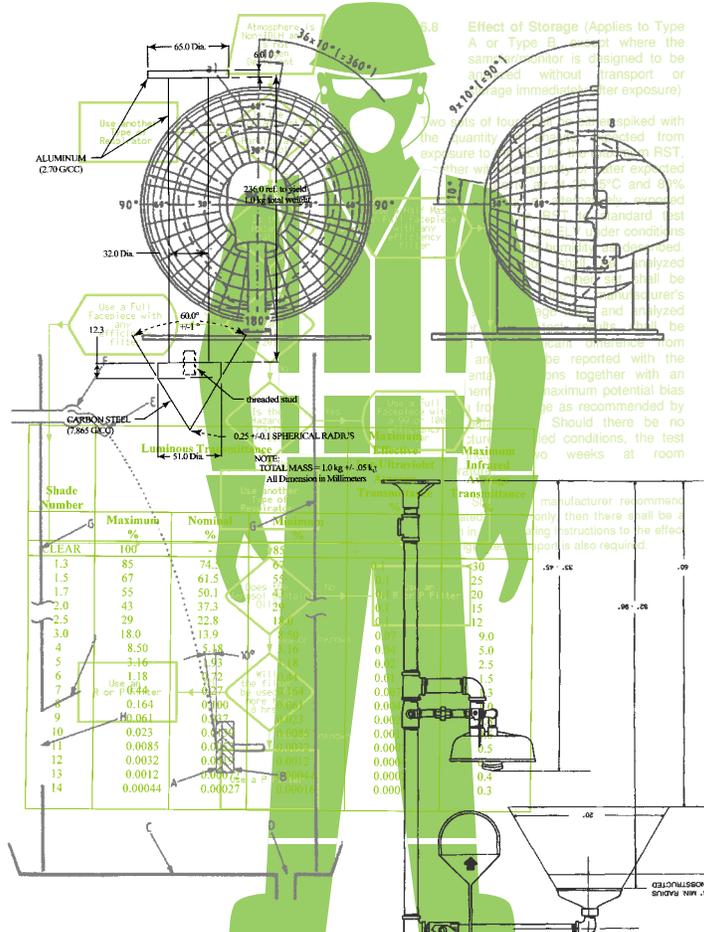
Protection Update

is the newsletter for the ISEA Partnership for Worker Protection program. It is intended for anyone who specifies, purchases or uses personal protective equipment, and those who regulate it. *Protection Update* is distributed without charge, and also is available on ISEA's website www.safeteequipment.org.

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Safety Equipment Performance: What to Look For; What to Ask For

By Janice Comer Bradley, CSP
International Safety Equipment Association

You rely on safety equipment to protect your eyes, face, head, lungs, hearing, hands and body from injury or illness. But do you always know that you're getting the correct protective equipment for the hazard?

The best way to tell is to look for evidence that the product complies with a recognized standard. Safety product standards exist for virtually every product that you may need. Products that meet the specifications of that standard are usually required to bear some marking, usually the standard number, to signal to the user that the product has been tested and evaluated to meet all of the requirements of the standard.

What does the marking of a standard on a safety product indicate?

It shows that the product has been designed, manufactured and tested to meet certain performance criteria. For example, hard hats tested to meet the criteria in the ANSI Z89.1-2003 *Standard for Industrial Head Protection* are marked Z89.1-2003. Tests include impact, penetration, flammability and electrical resistance. Safety eyewear should meet standards for impact resistance, lens retention and optical characteristics found in ANSI Z87.1-2003, and marked accordingly.

It used to be enough to tell users to look for the mark on the product to

ensure that it meets the level of performance. This may no longer be enough. There are safety products available that are marked with the citation of the standard, but may never have been tested or evaluated to all the criteria in the standard, and may not offer the same level of protection as products that do meet the standard.

NEW PROTECTION FOR WORKERS



**AW Direct
High-Visibility
Products Catalog**

FOR THE WHOLE PERSON...

From **AW Direct** is a new *High-Visibility Products* catalog. The full-color, 68-page catalog covers hundreds of products, including ANSI-compliant vests, outerwear, gloves, traffic cones, conspicuity tapes, work lights and warning lights. The catalog is effective through Jan. 14, 2005. 800-243-3194 or awdirect.com.

From **DuPont Personal Protection** (800-931-3456 or usadupont.com) are

- **NOMEX® AP** (arc protection) workwear, which meets the arc rating required for Hazard/Risk Category 2, as defined by the 2000 edition of National Fire Protection Association 70E standard, the company reported. This new protective fabric provides electricians flame-resistant protection from the intense heat of electric arc hazards in a durable, single layer garment, DuPont said. The product is specifically engineered to minimize burn injuries associated with electric arcs.



NOMEX® AP Workwear

- **Tychem® ThermoPro** single-layer suit, which provides protection from both flash fire and chemicals, the company said, adding that its patented

Tychem barrier technology has been integrated with its Nomex® fabric, which is inherently flame-resistant and helps flash fire escape; the suit does not melt or drip.

From **FSI North America** is the DAT15T 19-foot, self-contained mobile decontamination shower system, which is fully capable of providing hot-water showers and electricity in emergency situations where permanent facilities are not available, the company said. The unit offers a two-line, two-person, pressure-regulated shower system with dirty entry, clean exit doors, clean and brown water holding tanks, detergent injection, on-demand hot water, generator, lights, and storage capabilities, using a patented

panel design system. 440-891-1523 or fsinorth.com.

From **Magid Glove and Safety Manufacturing Co. LLC** is three-piece, unlined rainwear, style 4521. This economical suit is made out of five-mil-thick,



**Unlined Rainwear
from Magid Glove
and Safety
Manufacturing Co. LLC**

yet light-weight vinyl material, according to the company, which added that the 4521 style features waist pants, zipper jacket with side pockets, and detachable hood. Providing superior liquid resistance, the garment is suitable for all-purpose work in various industries including health care, utilities and

outdoors, and is U.S. Department of Agriculture accepted. 800-444-8010 or magidglove.com.

AGAINST FALLS (Look for fall protection from ISEA members that meets ANSI Z359.1-1992 (R-1999) *Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components*)...

From the Miller Division of **Bacou-Dalloz** — 800-873-5242 or bacoudalloz.com — are:

- **Titan T-Flex™** stretchable harness, with webbing that provides added comfort and increased mobility, encouraging users to wear their harnesses correctly, resulting in greater safety, the company said. Standard features, including the sub-pelvic strap and back strap, add sup-

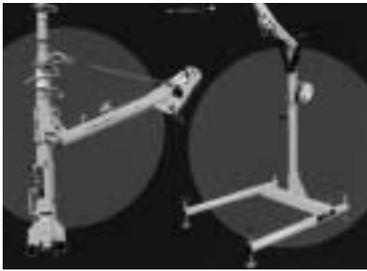


**Miller Titan T-Flex™
Stretchable Harness**

port and provide increased safety in the event of a fall; a non-slip, adjustable chest strap adapts to the user's size to ensure proper fit.

• DuraHoist™ confined space systems that provide safe, light-weight and portable solutions for a variety of confined space applications, including confined-space

DuraHoist™ Confined Space Systems

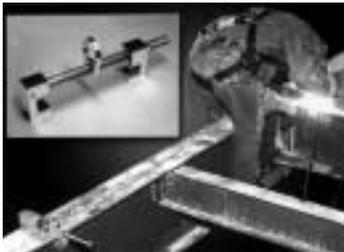


entry, rescue, positioning and personnel/material handling, the company said. Two primary systems currently are available:

(1) Four-piece with 50-foot winch, and (2) Portable fall-arrest anchor post with an optional davit arm.

• ShadowLite™ beam anchor that features a light-weight (three-pound) construction, innovative design and unique positive-locking engagement system for I-beam fall protection safety, the company said. The ShadowLite anchor connects to flanged beams

ShadowLite™ Beam Anchorage Connector



from three to 14 inches wide and up to 1-1/4 inches thick, and can be installed easily and quickly on the bottom flange of an overhead horizontal I-beam, or when an overhead anchorage does not exist, attached to the top flange of a horizontal I-beam at the worker's feet.

From **DBI/Sala** and **Protecta** (800-328-1837 or dbisala.com) are:

• Suspension Trauma Safety Strap, which is designed to relieve the negative effects of suspension trauma, which can occur when a person remains suspended in a

harness at height for a period of time and blood pools in the veins of the legs. The Suspension Trauma Safety Strap allows the worker to stand up in the harness to relieve the pressure being applied to the arteries and veins around the top of the legs, the company said.

• Aerospace SRL, which is designed specifically to protect personnel when working on or near flight hardware or in clean-room-type environments. The Aerospace SRL will not contaminate the flight hardware or surroundings with dangerous particles of zinc, cadmium or iron, the company said. Stainless steel, plastic, anodized aluminum and electroless nickel-coated components are used in place of typical zinc-plated, galvanized or cadmium-coated components.

• Protecta Cab Mount Bracket, which is designed for use when performing

Aerospace SRL



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- Brow pad is removable, washable and replaceable
- Comfortable, impact-absorbing, 6-point woven nylon suspension
- "Easy Quick-Slide" sizing adjusts suspension from head sizes 6 1/2 - 8
- New softer band material conforms to wearer's head for a more comfortable fit and allows for easier size adjust-

NEW PROTECTION

continued



Protecta Cab Mount Bracket

warehousing, order picking and related work activities. The device attaches to the overhead guard of order pickers and provides an ideal mounting location for the Protecta Rebel Self-Retracting Lifeline, the company said. The cab mount bracket allows the 11-foot self-retracting lifeline to be mounted within the overhead cab guard, saving head room and providing improved picking efficiency, added mobility and overall improved safety for the operator.

- Delta Comfort Back Pad, which can be added to a harness to provide ultimate comfort and no-tangle donning, enhancing worker satisfaction, productivity and compliance, the company said. It can be attached to Delta No-Tangle[®] harnesses and most other harness brands using built-in Velcro fasteners.

- SecuraSpan horizontal lifeline system, which the company said is the most economical temporary horizontal lifeline for steel erection. The OSHA-compliant anchor point for the connection of a cable horizontal lifeline system is lightweight and easy to adjust and clamp to beams. Depending on fall clearances, the new system is capable of spanning 60 feet between stanchions. For longer systems, a kit is available that turns the standard stanchion into one with bypass capabilities. The standard stanchion fits "I" beams that are 2-1/4 inches thick and 12 inches wide; other clamps are available accommodating beams up to 36 inches wide.

From **Mine Safety Appliances Co.** (800-MSA-2222 or msanet.com) are:

- Aptura[™] LT30 self-retracting lanyard, with features including a field-replaceable lifeline option in the event the webbing should become damaged, a light-weight design starting at 7.5 pounds, a standard lifeline length of 30 feet, a 400-pound working capacity as a standard feature, no annual factory recertification required, integral load indicator, and a durable, engineered, high-impact thermoplastic housing, the company said.

Aptura[™] LT30 Self-Retracting Lanyard

- FP Pro construction harness, which provides comfortable protection, even after long hours of use in extreme conditions, due to its super light-weight features and durable webbing, according to the company. Additional features include six-inch integral back pad that provides additional comfort and support for work-positioning applications, 1-3/4-inch removable belt that allows for easy attachment of tool pouches, and covered label pack to protect labels from the work environment.

- FP Stryder beam grip, which features single-hand, push-button adjustment, teflon-coated glide pads for effortless movement along the beam,



FP Stryder Beam Grip

- and an integral load indicator to alert the user of a fall. The FP Stryder can be attached overhead or at the user's feet, and is available in two models to fit beam flange widths to 24 inches.

- SkyLink stanchion, which MSA says is the lightest horizontal lifeline stanchion on the market, with weights starting at 17 pounds. It can be attached to the concrete using a pour-in-place anchor or standard Hilti anchors, and can be used as a single-person anchor point while installing the horizontal lifeline, and can support two workers per lifeline system.

FOR THE HEAD, FACE AND EYES (Look for products from ISEA members that are marked and certified to the following applicable standards: ANSI Z358.1-2004 Standard for Emergency Eyewash and Shower Equipment, or ANSI Z87.1-2003 Practice for Occupational and Educational Eye and Face Protection)...

From **Bradley Corporation** (800-BRADLEY or bradleycorp.com) are:

- The OneStep[™] bottle eyewash, which provides immediate first-aid relief with the bottle ready to use in one motion,



K-Gear Specs

the company reported. The patented OneStep design allows the user to pull the bottle from the wall-mounted station and quickly rinse the affected area. The bottle top is suspended from the holder and there is no turning, twisting or unscrewing required to open it. Bottle eyewash is intended as a quick flush before users reach an ANSI-compliant eyewash station, according to Bradley.

- Through-wall, combination emergency fixture suited for applications in extremely hot or cold climates that do not have an underground water supply. The Bradley S19-310 TW features a drench shower and an eyewash unit on the exterior of the wall, while the ball valves are on the inside to prevent the flushing fluid from being exposed to outside temperatures, the company said.

- A new web tool to help users specify the appropriate thermostatic mixing valve (TMV) for any Bradley emergency fixture application – anytime, the company said. In addition, the basic Emergency TMV line has been added to the BradEx™ two-day ship program to provide a complete safety system installation.



OneStep™ Bottle Eyewash

From **Direct Safety** is K-Gear Eyewear, featuring a polycarbonate lens with wrap-around design to fit close to the face. The eyewear offers full brow protection, an unobstructed field of vision, and meets the *ANSI Z87.1-2003* standard for high impact, the company said. This new eyewear heralds launch of the company's line of K-Gear Safety Products, designed to bring quality at a reasonable price. 800-528-7405 or directsafety.com.

FOR HEARING (Look for hearing protection devices from ISEA members that are labeled according to the U.S. EPA Noise Reduction Rating (NRR), 40 CFR, Part 211)...

From **Bacou-Dalloz'** Howard Leight Division (800-327-1110 or howardleight.com) are:

- Improved MAX® earplugs, which have a modified design and new, softer material formulation making the plugs easier to insert and more comfortable to wear, the company said. The MAX earplugs retain their high noise reduction rating of 33 decibels, as verified in independent tests. They are slightly longer than the original MAX plugs and the flange of the bell-shaped curve more closely follows the contour of the ear canal entrance.
- Matrix™ earplugs available in a corded model, making them ideal for applications in a wide range of process industries.

The new earplugs combine the added security and convenience of a corded product with the protection, comfort and attenuation features of the original Matrix design, the company said. These features include Matrix's uniform attenuation profile, which filters harmful noises out while allowing voices and warning signals to pass through.

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QuickFit™ Air-Purifying Full Facepiece Respirator

FOR BREATHING (Look for respirators from ISEA members that are marked with the NIOSH logo, 42 CFR, Part 84)...

From **AOSafety** (Aearo Co.) is the new QuickFit™ air-purifying full facepiece respirator. QuickFit offers a revolutionary design with its exclusive twist and seal harness system; twist the QuickDial and the mask seals to the wearer's face, with no clumsy straps or buckles, and no hair snagging, the company says. QuickFit utilizes the full line of AOSafety 8000 Series bayonet-style cartridges and filters and

is available in sizes small/medium and large. 800-225-9038 or aearo.com.

From **Bacou-Dalloz'** Biosystems is a new microphone sound detection system (SDS) as an option on new PosiChek3™ computerized performance testers for air-supplied breathing apparatus. Designed to increase test precision by automating the primary audible alarm test, the SDS feature eliminates human error and makes the PosiChek easier to use, the company said. The SDS also is available as an upgrade for PosiChek users who currently own manual test gauges. 800-711-6776 or biosystems.com.

From **Draeger Safety, Inc.** (412-788-5671 or draeger-safety.com) are:

- Panorama series masks for domestic preparedness and other industrial situations. A triple-sealing edge provides an excellent fit for small, medium and large faces, while providing comfort, and offers clear person-to-person communication and a wide field of vision, the company said. The centrally located cartridge connection allows the user to freely move and to bring the equipment needed close to the face. A five-point head harness strap is infinitely adjustable.

X-am 7000 Portable Multi-Gas Warning Instrument



- X-am 7000 portable multi-gas warning instrument, which can be fitted with three electrochemical and two infrared optical or catalytic sensors, and can simultaneously measure up to five gases, the company said. The device is dust and splash-proof and water-resistant. It was developed for monitoring tasks in the water and wastewater, oil and gas, chemical and offshore industries, and for use by fire departments.

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CDS Kit



- CDS Kit, which uses specially developed Draeger-Tubes in a quick and easy-to-use kit. Two simultaneous test sets measure a wide range of chemical substances, including nerve, blood, lung and blister agents, the company said. The CDS Kit requires no calibration, no battery charges or changes, and is simple to use. It can be combined with the Draeger Haz-Mat Simultest Kit for comprehensive detection of chemical warfare agents and toxic industrial chemicals.

- CMS Emergency Response Kit, which automatically measures hazardous gases that may be present in any emergency. The CMS unit uses detector tube technology inside a small credit-card-sized chip and takes a precise air sample of the chemical being measured, the company said. The color change is calculated with a photo-optical system, eliminating human interpretation. Gas levels typically are analyzed in one to two minutes, with the concentration indicated on the LDC display. CMS does not require gas calibration.

- Draeger Voice hazardous substances database, which offers information on more than 1,600 hazardous substances and their physicochemical characteristics, and recommendations regarding products offered by Draeger to measure these substances and protect against them, as well as references on handling and usage of the recommended products.



Draeger Voice Hazardous Substances Database

From **Mine Safety Appliances Company** is the Ultima X Gas Monitor series available for duct-mounted moni-

toring applications. The new duct-mount kit enables gas sampling even when the flow rate within the duct is at a high velocity. Users can calibrate the sensor via a calibration port without disassembling or removing the sensor from the duct. Applications include HVAC monitoring of carbon monoxide and carbon dioxide for efficient building ventilation, area and process monitoring in chemical and adhesives/coating industries, and carbon dioxide monitoring in blanketing applications. 800-MSA-2222 or msanet.com. ●

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Hearing Protection For Constructors Requires More Than Sound Blocking

By Bill Sokol
Bacou-Dalloz Hearing Safety Group

If recent OSHA Stakeholder meetings are any indication, developing effective and enforceable hearing-protection standards for the construction industry will not be an easy task. The construction industry is different from others in many respects. Employee turnover is high, employment terms are generally shorter, the industry contains a large number of small contractor and subcontractor businesses, and noise levels on a typical construction site are often unpredictable and constantly changing. As OSHA officials heard during March meetings in Chicago, all of these things impact the issue of hearing protection in one way or another.

Culture, too, plays an important role. Construction traditionally is a 'non-corporate' industry. Workers tend to be more individualistic and are more likely to resist any new regulations. Many feel that wearing hearing protection devices (HPDs) will limit their ability to hear other things on the job, like communication from fellow workers, warning signals, and even such things as the change in sound of a cement mixer when the mix is ready. Workers do not understand how hearing loss occurs, and there also exists a *machismo* among construction workers that tends to accept hearing loss as part of the job. All these things add up to one of the highest rates of noise-induced hearing loss (NIHL) in the country.

Clearly, OSHA has its work cut out for it in bringing workable regulation to this industry. So do safety professionals and HPD manufacturers if they are to help solve this problem. But the news is not all bad. While construction and construction

workers are different from other industries, they are also similar in many respects. And if there are elements of the culture that work against hearing protection, there are also elements that work for it.

For example, construction workers are tool users by nature. They are not comfortable on the job without their tool belts and various other gear, including their gloves, hard hats, steel-toed boots and other personal protective equipment. If HPDs can be accepted as part of this mix, the battle will be more than half won. Several stakeholders in the OSHA meetings also stressed that once workers saw their hearing data in an audiogram and understood the nature of the risk, they became very willing participants in protection programs.

The key, then, is to understand the human dimension of this problem and bring tools to bear on it — in terms of policy, programs, and protection products — that take into consideration how workers view noise, how they need to function, and how they can actually use hearing safety tools on the job. We call these factors the four "C's" of hearing protection — Caring, Comfort, Convenience and Communication — and recommend safety professionals use these as benchmarks both for developing hearing protection programs and in providing HPDs to implement them. Indeed, many of the concerns expressed in the OSHA meetings already are being addressed by new HPD technology coming to market.

Caring is largely a job for education. We live in a culture that seems to increasingly accept noise as a fact of life, and making people understand when and how noise can be dangerous requires much effort and iteration. But there are also other ways to make workers care about

hearing protection. As 'tool guys,' construction workers not only want to have and wear tools, they think tools are cool. They appreciate style and, as has been demonstrated with safety glasses, are much more likely to use HPDs they feel are stylish.

As form follows function, design style also factors into the next two "Cs," Comfort and Convenience. Studies have shown workers will not wear hearing protection if it is uncomfortable or inconvenient to do so. This is especially true on construction sites, where workers are likely to be in a range of locales, and also are likely to be encumbered or otherwise occupied when a noise event occurs.

Several new earmuff brands are designed to make hearing protection more comfortable and convenient. New products are available (see **About the Author**) in a variety of styles that clip onto

hard hats, for example, or incorporate neckbands, rather than headbands, to facilitate wear with welding shields, hard hats and other equipment. Workers are much more likely to use earmuffs that can easily fold down and snap around their ears when needed and fold up onto the back of their hard hats when not. Earplugs can provide a comfortable alternative on construction sites, especially where work in confined spaces is involved.

The most common complaint workers everywhere have about HPDs is that they obstruct their hearing. This may seem ironic, but it is also a major impediment to use. Workers need to Communicate on the job and they need to hear things like warning signals. Providing HPDs that can be donned and doffed easily is one solution, but new design and materials technology is providing another. ▶

About the Author

Bill Sokol is vice president strategic marketing for the Hearing Safety Group of Bacou-Dalloz. The ISEA member company, based in Smithfield, R.I., makes a variety of hearing-protection devices, including the Clarity™, Lightning® and Thunder® lines from Bilsom. Sokol is the author of the training article "The Human Factor in Hearing Protection" for *The Grey House Safety & Security Directory 2004* edition, and has written numerous articles on hearing protection for leading trade publications. Reach him at 401-233-0333 or bsokol@bacou-dalloz.com

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For high-end applications, earmuffs are available with electronic communications capability, and even with the ability to block excessively loud sounds while electronically amplifying voice sounds. And for normal, more everyday applications, there are new products designed to block out more low-frequency sounds (the preponderance of hazardous noises) while allowing higher frequency sounds, like human voices, to more easily pass through.

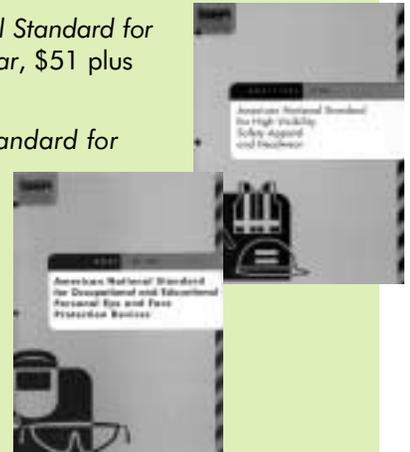
The clearest message from the OSHA Stakeholder meetings was that the problem of developing effective regulations for the construction industry is a knotty one and it will likely to be some time before they are enacted. In the meantime, safety professionals can do no harm by developing human-factors-based hearing programs now. ●

Discounts on Standards for Protection Update Readers

Protection Update readers can save 15% off the cover price of the high-visibility safety apparel and eye and face protection standards through a limited-time offer from ISEA. Discount prices are:

- ANSI/ISEA 107-2004 American National Standard for High-Visibility Safety Apparel and Headwear, \$51 plus shipping and handling, and
- ANSI Z87.1-2003 American National Standard for Occupational and Educational Personal Eye and Face Protection Devices, \$45 plus shipping and handling.

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ISEA Updates Standard for High-Visibility Safety Apparel

An updated American National Standard for high-visibility safety apparel now is available from ISEA. The *American National Standard for High Visibility Safety Products and Headwear (ANSI/ISEA 107-2004)* is the authoritative guide for the design, performance specifications, and use of high-visibility and reflective apparel including vests, jackets, bib/jumpsuit coveralls, trousers and fall-protection harnesses.

Garments that meet this standard give users a high level of conspicuity round the clock, through the combined use of fluorescent and retroreflective materials, said ISEA Technical Director Janice Comer Bradley. The standard establishes three Performance Classes for high-visibility safety apparel based on the wearer's activities, and determined by the total area

of background and reflective materials used, with Class 1 representing the lowest level of visibility and Class 3 the highest.

"The revision doesn't change the basic requirements such as garment dimensions, color or retroreflective performance, with the exception of clearly prohibiting any type of sleeveless garment to be labeled Class 3 when worn alone," Bradley explained. "The standard has been expanded to keep up with the state of the art in fabric technology and design, and now provides users with documentation that a garment meets all the requirements of the standard."

All references to classes of garments and their use in specific environments based on vehicle speeds have been removed. Rather, this version of the standard emphasizes garment selection on the basis of color and complexity of the work environment, the task load of the worker, separation of the worker from moving equipment and vehicles, and other work environment variables. ●

Eye and Face Standard Now Available from ISEA

The recently updated *American National Standard for Occupational and Educational Personal Eye and Face Protection Devices, ANSI Z87.1-2003*, is now available from the International Safety Equipment Association (ISEA).

In May 2004, ISEA assumed Secretariat responsibilities for the eye and face protection standard after a transfer from the American Society of Safety Engineers. The Z87 standard gives minimum performance requirements for spectacles, goggles, faceshields, welding helmets/handshields, and respirators. It also includes selection, use and maintenance guidance for these devices.

"All eye and face protectors bearing the Z87 mark or represented in any way as being in compliance with this standard

have to meet the standard's exacting requirements," said ISEA Technical Director Janice Comer Bradley. "Moreover, all of their components have to comply with the requirements as well. The Z87 designation indicates that the product should have been tested and evaluated for performance to all of the applicable requirements of the standard. Purchasers should ask their safety equipment suppliers for documentation that confirms product testing to the standard."

The 67-page standard features numerous illustrations, and includes a pull-out "Selection Chart" that can be posted in the workplace to provide guidance for various hazard exposures that require eye and face protection. A reproducible "Eye Injury Report Form" also is included.

Bradley added that it is incumbent upon eye and face protection users to select a product tested to the hazard to which he or she is being exposed. ●

Purchasers, Users Benefit From Key Changes to High-Viz Standard

The revised American National Standard for High-Visibility Safety Apparel and Headwear will benefit purchasers and users because it:

- Gives minimum performance requirements and area of materials for headwear such as knit caps, ball caps and other hats that enhance the visibility of the head; the standard does not exclude hard hats.
- Prohibits any type of sleeveless garment to be considered Class 3 (highest visibility class) when worn alone.
- Emphasizes that garment selection should be based on the color and complexity of the work environment, task load of the worker, separation of the worker and moving equipment and vehicles, and other work environment variables.
- Requires manufacturers to provide documentation that a garment meets all requirements of the standard.
- Gives expanded definitions that relate to properties of high-visibility garments.

MAKING WORKERS SAFER AROUND THE NATION

From the **U.S. Occupational Safety and Health Administration (OSHA)** — osha.gov — are new safety and health information bulletins concerning (1) anchorage connectors for fall protec-

tion, (2) de-watering pipelines, (3) hazards of improper elevator controller wiring, and (4) hazards of unintended release of buckets from quick couplers on hydraulic elevators.

The bulletin on **anchorage connectors for fall protection** details specifications and limitations of the devices, lists recommendations for the safe use of the devices, and discusses the agency's standards for fall-protection system criteria.

The bulletin **to prevent fatal accidents and injuries for workers involved in de-watering of pipelines** was designed to highlight potential hazards associated with the operations and to focus on work practices that will reduce the unexpected separation of temporary de-watering pipes.

Hazards of Improper Elevator Controller Wiring outlines recommendations regarding proper maintenance and wiring procedures, and identifies potential hazards associated with elevators. **Hazards of Unintended Release of Buckets from Quick Couplers on Hydraulic Elevators** alerts workers and employers about these hazards, describes a recent accident investigated by OSHA's Madison, Wis., Area Office, and offers detailed actions and safety measures to prevent such accidents.

Also new from OSHA are:

- **A revision to its Respiratory Protection Standard** that adds a new fit-testing procedure to help workers and employers select proper-fitting respirators. The new fit-testing protocol, known as Controlled Negative Pressure (CNP) REDON, requires three different test exercises followed by donning the respirator two times in succession.
- **Draft guidance to help hospitals prepare for emergencies**, especially chemical or biological incidents. In short, OSHA recommends hospitals perform hazard analysis, and includes information about emergency management planning, including victim decontamination, the personal protective equipment ensemble, and employee training.



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• Safety and Health Topics page highlighting industry-specific **safety and health information to thousands of workers engaged in residential construction**. The page provides information and links to OSHA enforcement policies, including directives and interpretation letters, various electronic assistance tools, and training courses.

Publication to assist employers, safety and health professionals, training directors, and others in ensuring they are aware of the agency's requirements for emergency action plans. **Principal Emergency Response and Preparedness** gives an overview of OSHA standards for emergencies, and includes requirements under both the Hazardous Waste Operations and Emergency Response, and the Process Safety Management standards.

• **Fire Protection in Shipyard Employment Rule**, which provides shipyard workers the same level of pro-

tection against fire hazards as employees in other industries. The final rule incorporates 19 consensus standards from the National Fire Protection Association and includes relevant information from other sources.

• **Ergonomic guidelines for the poultry processing industry**, which offer practical recommendations for employers to reduce the number and severity of musculoskeletal disorders throughout the industry.

• **E-Tool for Ammonia Refrigeration Systems**, which helps identify and control hazards associated with the operation and maintenance of ammonia refrigeration systems, and includes two tutorials – ammonia receiving and storage, and emergency response.

From the U.S. Centers for Disease Control and Prevention's **National Institute for Occupational Safety and Health (NIOSH)** — cdc.gov/niosh — are:

▶ 14

PROTECTION FOR OUTDOOR WORKERS FROM FIBRE-METAL - OUTDOORS PPE SPECIALISTS

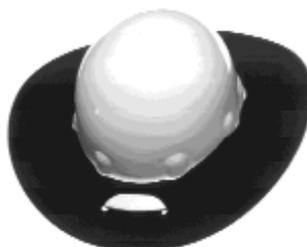
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MAKING WORKERS SAFER *continued*

Tell Us Your Story

Protection Update Seeks Stories About Life- and Cost-saving Programs

Protection Update seeks stories from safety specialists giving examples about how their safety equipment programs have prevented injuries, saved lives and saved their organizations' money. If you have a story to tell, contact Editor Joe Walker at 703-525-1695 or jwalker@safetysystem.com. If you send an email, please provide your telephone number. Protection Update will write the stories for future issues based upon your experiences.

- **Hearing Conservation Program Checklist** that organizations can use to assess engineering controls, organizational protocols, training and education, to accompany the Hearing Protector Device Compendium.

- **The Sky is Falling video** for surface miners and road construction workers exposed to the hazards of highwalls. Contact Elaine Cullen at cullen@cdc.gov.

- New website topics pages on **Occupational Respiratory Disease Surveillance and Hexavalent Chromium.**

- **Communications products available in Spanish as well as English**, including (1) the *Aggregate Training for the Safety Impaired* video (contact Candice Pickett, cpickett@cdc.gov); (2) *Injuries to Youth on Hispanic Farm Operations* publication [DHHS (NIOSH) Pub. No. 2004-157], and (3) its alert, *Preventing Deaths, Injuries and Illnesses of Young Workers.*

- Three publications to address the **prevention of serious potential hazards in mining**, including (1) *An Oral History Analysis of Mine Emergency Response* [DHHS (NIOSH) No. 2004-145], (2) *Evaluation of Instrumental Cable bolts in Cement Group to Determine Physical and Numerical Modeling Properties* [DHHS (NIOSH) No. 2004-140], and (3) *Safety and Health Training for an Evolving Workforce: An Overview of the Mining Industry* [DHHS (NIOSH) No. 2004-155].

- An alert, **Preventing Falls of Workers through Skylights and Roof and Floor Openings** [DHHS (NIOSH) Publication No. 2004-156].

- **Conference Proceedings: Prevention of Musculoskeletal Disorders for Children and Adolescents Working in Agriculture** [DHHS (NIOSH) Publication no. 2004-119].

From the **American Industrial Hygiene Association** – aiha.org:

- A continuing **education course focused on "Building Science: Understanding and Controlling**

Moisture in Buildings," Feb. 14-16, 2005, in San Francisco.

- A new guideline, **"Assessment, Remediation, and Post-Remediation Verification of Mold in Buildings,"** which describes the range of exposure assessment, hazard assessment and re-occupancy post-remediation verification methodologies and techniques currently accepted and available to conduct assessments of mold growth in residential and commercial buildings."

From the **American Society of Safety Engineers (ASSE)** – "Newsroom" at asse.org – are:

- **Guidance to prevent injuries and reduce accidents on farms.**

Following the mining industry, agriculture is the second most dangerous occupation in the United States with a death rate of 22.7 people per 100,000 workers, according to the U.S. Bureau of Labor Statistics (BLS).

- **Four construction standards** covering requirements for safety and health programs, work platforms suspended from cranes and derricks, portable heating devices, and concrete and masonry work.

From the **Associated Builders and Contractors (ABC)** – 703-812-2000 or abc.org – is a book, **Construction Safety Management: Fundamental Components of Successful Safety Programs**, that details the means, methods, policies and procedures used by the safest companies in ABC's Safety Training and Evaluation Process (STEP).

From **J. J. Keller & Associates** is *Workplace Safety Pro; Your A to Z Guide to a Complete Safety Program*, a 500-page-plus manual that provides quick access to critical operational information that safety managers need to develop and maintain an efficient, compliant workplace safety program. 800-327-6868 or jjkeller.com ●

OSHA \$100,000 Club of Safety Citations

The U.S. Occupational Safety and Health Administration (OSHA) has proposed penalties of \$100,000 or more for the following recent alleged failures to protect workers from potential hazards, including many that could have been avoided or mitigated by safety equipment:

- Fru-Con Construction Co., St. Louis, \$280,000 following a crane collapse during the construction of a bridge in Toledo, Ohio, that resulted in four deaths. OSHA's investigation found that Fru-Con failed to follow the manufacturers' specifications by failing to sufficiently anchor the crane.
- AKJ, Inc. (doing business as Martin Enterprises, Inc., Cleveland) and Marous Brothers, Willoughby, Ohio, \$217,000 for hazards involving asbestos removal and other alleged safety and health violations identified at a construction site in Pittsburgh.
- Roberto's Steel Erectors Inc., Fitchburg, Mass., \$194,700 for failure to follow proper procedures and ensure fall protection for its workers at a Merrimack, N.H., construction site.
- Allen County Recyclers, Inc., (doing business as Allen County Pallet Co.), \$179,700 for willful failures to lock out equipment before performing maintenance activities and failure to provide adequate machine guarding at its facility in Lima, Ohio.
- MC&O Construction Inc., Maspeth, N.Y.; Joy Construction Corp., New York City, and New York Partition and Drywall Corp., Happaage, N.Y., \$160,000 for failure to provide employees with protection from falls and other hazards at a Bronx, N.Y., construction site; lack of fall protection led to the death of a worker last February.
- Elberta Crate & Box Co., \$159,000 for exposing workers to serious injuries from unguarded "points of operation" on box-making machinery and uncovered, energized electrical connections at its plant in Bainbridge, Ga.
- Stucco America, Lebanon, N.J., \$147,000 for failure to provide: fall protection to employees working on scaffolds, protective helmets, and safe scaffold access, and for failure to properly brace the scaffolding at an Avenel, N.J., construction site.
- Associated Contractor Group, Schaumburg, Ill., \$141,000 for willful, serious and repeated violations relating to fall hazards, accident prevention and head protection at a warehouse project in Melrose Park, Ill.
- Angelica Textile Service, Inc., \$140,850 for willful and serious failings to protect workers against exposure to bloodborne pathogens from soiled laundry, discarded sharp objects and contaminated working services at its laundry facility in Batavia, N.Y.
- Mattress Giant Corp., Addison, Texas, \$140,000 for repeated failure to ensure quick emergency exit access to workers at its warehouse facilities in New Hampshire, Massachusetts and Florida, and other violations that included lack of personal protective equipment.
- Field Container Co., L.P., Elk Grove Village, Ill., \$137,500 for serious and willful violations including deficiencies related to the storage of flammable liquids and an inadequate flammable liquid storage room, and failing to train workers in hazard communication at the company's Marseilles, Ill., plant.
- Quarra Stone Co., LLC, Madison, Wis., \$135,600 for serious and willful violations involving failure to protect workers from hazards associated with silica dust and failure to protect their hearing.
- Krehling Industries Inc., \$135,000 for failing to protect workers from "caught and crush" hazards at the company's Naples, Fla., plant.
- Plastics Components Inc., \$123,450 for a variety of workplace safety violations, including absent machine guarding, operation of defective forklift trucks, and failure to require and enforce the use of eye, face and hand protection at its plant in North Ridgeville, Ohio.
- Lee Brass Co., Anniston, Ala., \$122,000 for serious violations of safety and health standards, including failure to implement controls to reduce employee exposure to silica and lead and failure to implement an adequate respiratory protection program.
- Norse Dairy Systems, a division of Interbake Foods Inc., \$122,000 following an investigation that revealed lack of machine guarding, failure to control all energy sources during maintenance operations, failure to monitor lead exposure, and failure to provide training on various workplace safety and health issues at the company's Columbus, Ohio, facility.
- Colt Utilities Inc., \$117,000 for failure to provide proper protection for employees working in a trench, and for a variety of other violations including lack of personal protective equipment and fire protection at a site in Pearland, Texas.
- MFC Construction Co. Inc., Dallas, following an inspection of an accident in which a carpenter was killed; OSHA identified violations including permitting employees to work at elevations without fall protection.
- Irby Steel, a division of Struthers Industries, Inc., \$113,750 for exposing workers to serious safety and health violations at the company's Gulfport, Miss., facility; OSHA cited 30 serious safety violations and nine serious health violations.
- Maine Contract Farming, PFS Loading Services, Maine Ag, and Turner Maintenance and Services, Inc., which together run the former Decoster Egg Farm, Turner, Maine, \$108,500 for recurrence of fall hazards, unsafe electrical equipment, and defective manure trucks at the facility.
- Wadsworth-Phillips Contractors Inc., Montgomery, Ala., \$103,000 for exposing workers to willful and serious trench safety violations at a Montgomery worksite. ●

Safety Equipment Use Trends Upward in Heavy Construction

A new survey of construction safety leaders shows that safety equipment use and awareness in heavy construction continue to rise, even though many workers in dangerous jobs remain under-protected.

The findings come from the third study commissioned by ISEA to track safety equipment use and awareness levels. ISEA sponsored this research as part of its initiative to prevent worker injuries through increased safety equipment usage.

Strategic Marketing Associates (SMA), a Stow, Ohio-based research firm that specializes in the construction industry, conducted all three studies through a combination of questionnaires and telephone interviews. The 2004 survey covered 204 safety leaders in the private sector (construction companies, labor, insurance underwriters, trade associations, safety equipment manufacturers) and public sector (federal, state, county and local officials). Respondents represented 42 states, Washington, D.C., and Puerto Rico.

Responses indicated that between 2001 and 2004, nine of 10 personal protective equipment (PPE) types (hard hats, safety shoes/boots, protective eyewear, gloves, fall protection, hearing protection, respirators, protective coveralls and face shields) showed increases in the percentages of workers in heavy construction who are wearing them when needed. According to the study, the safety vest was the only type of PPE that declined in use over that three-year period.

"Hard hats, safety vests and safety shoes or boots continue to be the most commonly used types of PPE, with more than two-thirds of construction workers wearing them when needed," said SMA President Jim McKeen. "Face shields, protective coveralls, and respirators are

worn regularly when needed by the smallest percentages – about 45 percent each. However, those three PPE types all showed significant increases from the earlier studies." ▶ 18

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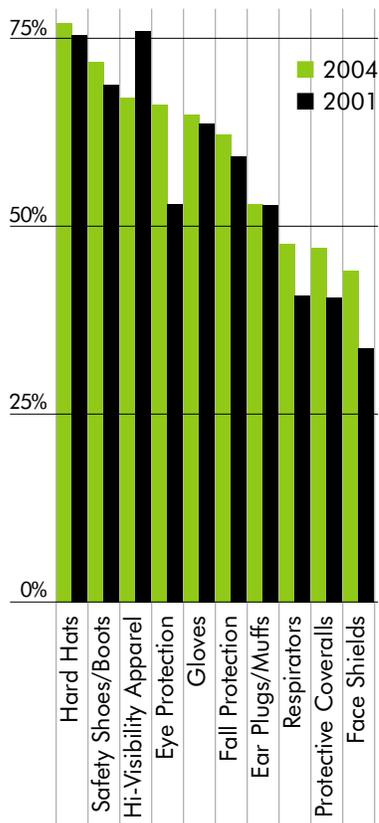
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Percentage of Construction Workers Who Regularly Use PPE When Needed



All three surveys also asked the safety leaders to rate the value of PPE in minimizing the risk of accident or injury in comparison with five other protective measures – (1) training and education, (2) OSHA compliance, (3) barriers & cones, (4) signs & lights, and (5) flagger. All six measures were considered highly important, but only two – PPE and OSHA compliance – climbed in perceived importance relative to the 2001 and 2002 investigations, and only one — PPE — showed an increase from 2001 to 2002 and again from 2002 to 2004, McKeen noted.

As in previous years, the 2004 survey asked respondents to indicate the primary reasons why construction workers do not use PPE more regularly. For the third time, the main reason cited by the safety leaders is because “employers do not require or enforce use.” In 2004 it was the number one or two reason given for eight of the 10 PPE types.

“‘Equipment not available or not provided’ also was shown to be a significant factor for why PPE is not used more regularly, emerging as the number one reason for three of the PPE types studied,” McKeen said. “‘Expense of equipment to

employees’ continues to be seen as an insignificant reason for non-use relative to the three other factors under study – ‘laborers aren’t informed on its importance,’ ‘lacks style/comfort,’ and ‘hampers job performance.’ ”

Commenting on the findings, ISEA President Dan Shipp said: “We are encouraged by the upward trend in PPE use in heavy construction, but we are concerned that the level of use is still below what it should be.”

With well over six million Americans employed in dangerous construction jobs and a workforce that grows continually, the numbers indicate that there still are hundreds of thousands of under-protected workers, Shipp noted. “And the ‘employers don’t require or enforce use’ alarm now has sounded three surveys in a row. We will redouble our efforts to increase safety equipment use and awareness in construction and the many other industries where hazards warrant worker protection,” he said.

More information on the survey findings is available by contacting Joe Walker, *Protection Update* editor, 703-525-1695 or jwalker@safetysaftequipment.org. ●

Hispanic Safety Summit

Representatives from the International Union of Operating Engineers (IUOE) discuss ways to enhance safety among Hispanic workers at the first-ever Hispanic Safety and Health Summit. IUOE was among 14 exhibitors, including ISEA member 3M Co., at the Orlando, Fla., event. The Summit brought together some 500 representatives from government, community and faith-based organizations, non-profits, industry, academia and organized labor to share practical safety and health information and success stories and discuss gaps in communication, training and outreach for Hispanic workers in the United States. OSHA and the Hispanic Alliance hosted the July event in partnership with the U.S. Hispanic Chamber of Commerce. Visit osha.gov.



PHOTO BY JOE WALKER/ISEA

PPE Not 'Tool of the Trade,' ISEA Tells OSHA

Personal protective equipment (PPE) should not be considered a "tool of the trade," ISEA told the U.S. Occupational Safety and Health Administration (OSHA) in comments submitted on the proposed Employer Payment for PPE Rule. In July, OSHA solicited comments on the rule, asking if employers should have to pay for PPE considered to be a tool of the trade.

"ISEA believes that OSHA must differentiate between (PPE) and tools used by workers on the job," ISEA commented. "A tool enables a worker to perform a task. PPE protects the worker while using the tools... The Occupational Safety and Health Act, and numerous OSHA standards, make it clear that employers are responsible for identifying and assessing recognized hazards in their workplaces and protecting employees from such hazards."

ISEA noted that employers who provide and pay for PPE demonstrate their commitment to worker safety because such a systematic PPE program, driven by management through the organization, is an important factor in creating a positive safety culture.

"These employers recognize that they are not simply incurring a cost for equipment, but rather making an investment by valuing their employees and avoiding the high direct and indirect costs of injury, illness and death," ISEA said. A brochure that makes the business case for PPE is available from ISEA; find *PPE: An Investment in Your Workers' and Company's Future* in the "Partnership for Worker Protection" section of safetysystem.org, or request a copy by emailing your ground-mail address to sflaherty@safetysystem.org.

OSHA is expected to issue a new rule concerning employer responsibilities and

PPE within the next year. ISEA's full comments on the Employer Payment for PPE Rule may be found on safetysystem.org. ●



ISEA's PPE: An Investment in Your Workers' and Company's Future brochure



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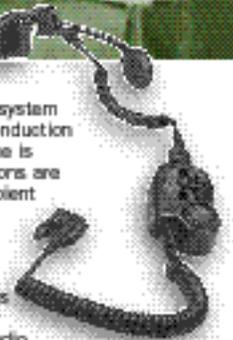
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Editor's Note: *Protection Update* welcomes contributions from readers for our regular "Safety Equipment Works for You" feature. Email examples of where PPE has saved workers' lives or prevented injuries to Editor Joe Walker, jwalker@safetysiteequipment.org, or mail them to the Editor, *Protection Update*, International Safety Equipment Association, 1901 N. Moore Street, Suite 808, Arlington, VA 22209. Photos are welcome.



Helmets Save Lives of Firefighter, Construction Worker

The young firefighter lay in his hospital bed, recovering from a concussion that he suffered while on the job. His doctor looked at his damaged fire helmet, which was hanging on his intravenous stand, and said, "You're here because of your helmet." The full-time firefighter and his partner were pulling down ceilings in a building when a large piece of the ceiling came down on him. He had the helmet's chinstrap on, and the helmet stayed on his head. Cairns® fire helmet by Mine Safety Appliances Co., msanet.com

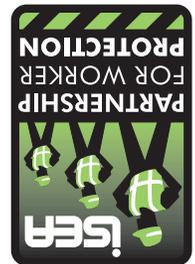


Richard was helping position a prefabricated wall panel when the crane carrying the panel hit a steel beam that had not been tacked into place, *Compliance Magazine* reported. Knocked loose, the beam swung and struck Richard's head and shoulder, injuring both his shoulder and arm. Spared head injuries, Richard was told that he would have been killed had he not been wearing his hard hat. The next day, he was back at work.



Ironworker's Clear Vision on Fall Protection

The day was hot as ironworker Todd laid and set metal decking about 14 feet off the ground for the ceiling of a church in Winona, Minn.; perspiration kept building up on his safety glasses. He tied his fall protection off to a cable attached to the building columns. With his vision blurred, Todd accidentally stepped off the edge of the structure, descending "like a dart" before the lanyard caught him several feet above the floor, *Contractor Tools & Supplies* magazine reported. Another worker positioned a stepladder so that Todd could climb down – shaky and with a bloody nose, but alive.



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