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ANSI Z89.1-1997: Industrial Head Protection Redefined

by Richard Oleson, Market Manager, Occupational Safety E. D. Bullard

n September 5, 1997, the American National Standards Institute (ANSI) released the latest edition of the Z89.1 Standard for Industrial Head Protection. It is the first revision of the Standard in over a decade, and the most significant since the Standard was originally written in 1969. The new revision changes test methods to allow helmet designers to take better advantage of new materials and manufacturing processes; changes the electrical class designations to make them more logical and easier for users to understand and remember; and, most importantly, creates a classification for a new type of helmet which offers protection to the head in a wider variety of situations.

Not everyone is aware that the conventional hard hat is designed to provide protection from a forcible blow only in cases where the blow occurs directly to the top of the head. This design works well when the wearer is standing or walking upright and the hazard is a falling object directly above. Unfortunately, however, not all hazards are objects falling from directly above, and not all jobs permit the worker to be upright at all times. Acknowledging this reality, the new ANSI standard is written in such a way that the existing type of conventional hard hat remains available for those applications where it has proven adequate, while a new type of helmet is now available for those situations where possible blows to the sides or back of the head are a concern.

ANSI hard hats now come in two "Types", in addition to the three electrical classes with

which users are already familiar. Type I hard hats are identical to the existing, conventional products, whether in "cap" or full-brim "hat" style. With possible rare exceptions, all hard hats which have previously been compliant to the 1986 edition of ANSI Z89.1 will now be classified as Type I helmets. As in the past, they will continue to be used in a variety of applications from construction to factory work, and will generally represent the most economical and lightest weight form of head protection. Users should be aware, however, that these helmets are only designed to protect the top of the head and offer negligible impact protection to the sides, front and rear.

For those whose work involves non-upright head and body positions, or for situations in

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Working in confined spaces requires a balance of the correct equipment, knowledge of potential hazards, proper training and common sense. Anything less has potentially deadly consequences.

Confined space entry is performed in nearly every industry. Some examples of confined space operations include cleaning chemical storage vessels, applying surface coatings to the inside of a storage tank, and repairing mechanical equipment inside of a mixing vessel.

In situations where adequate engineering controls cannot be provided to con-

trol atmospheric hazards in confined spaces, workers may be exposed to serious health risks. Of the many types of safety equipment that workers are required to use when entering confined spaces, respiratory equipment is a primary means of personal protection.



E.D. Bullard Company has recently introduced two versions of

pressure demand respirators, available with or without an SCBA backup.

See page three of this newsletter and the insert for details.

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- The last two issues of this newsletter are now accessible on our website
- Planning your year? See the back page for 1998 regional show dates
- United Sales Associates is now representing Best Manufacturing Company, see page 6

KoolJacket[™] From Kappler -- the Personal Cooling Product That Works With Your Body, Not Against It

Managing heat stress is a critical issue for many workers, especially those wearing protective clothing or working in confined spaces. Now there's KoolJacket, a personal cooling product that really works to reduce body heat. This state-of-the-art cooling technology is available to the industrial safety market exclusively through Kappler.

The KoolJacket line uses patented PCMTM (phase change material) to actually absorb heat generated by the body. This is a tremendous technological advance over simply placing something cold against the skin. KoolJacket maintains proper body temperature, without the discomfort, vaso-constriction or moisture build-up common with typical ice-pack or circulation systems.

Besides providing superior cooling benefits, KoolJacket products are easy to use and comfortable to wear. Handy KoolPackTM inserts provide over an hour of cooling, and are ready to re-use after a quick 20-minute recharge in ice water. And the vests are ergonomically designed to be light and flexible. Available in two styles, they're easy to wear, fast to recharge, and better to cool than anything else you've tried.

KoolJacket, from Kappler and USA. It's the right answer when the work really heats up.



www.kappler.com

PlugStation™

The Affordable Ear Plug Dispenser from



Moldex introduces $PlugStation^{TM}$, the innovative ear plug dispenser that increases awareness for your hearing conservation program. The PlugStation is designed to be affordable, easy to install, and environmentally friendly to use.

No longer will workers have to make a special trip to a central location to get a pair of earplugs. PlugStation is affordably priced, allowing you to mount the highly visible earplug dispenser in multiple locations throughout the work-site. It is available with either 250 or 500 pair of foam earplugs. Even the smallest work-site can afford Moldex's PlugStation.

Unlike other, more expensive dispensers, there's no refilling involved, because PlugStation comes ready to use, and it's disposable. When PlugStation's empty, throw it in the recycling bin, and slide a new PlugStation on to the bracket. It's that simple.

Tired of looking at earplug packages all over the floor, parking lot and throughout your facility? PlugStation eliminates the mess and maintenance cost associated with traditional earplug packaging because individual paper/poly-bags have been eliminated.

PlugStation comes filled with either Moldex's multi-colored SPARK-PLUGSTM or with the popular PURA-FITTM earplugs. Both earplugs feature NRR31 ratings, making them suitable for most hazardous noise environments. Tapered for an easy fit, these soft foam earplugs are comfortable enough to be worn all day.

Wall mounting brackets are available separately. Put up as many as you need to accommodate the requirements of your work-site. Once you've mounted the bracket, simply slide a PlugStation on. Your workers will love PlugStation's convenience and you'll benefit from the increased awareness for your hearing conservation program.

www.moldex.com - e-mail: Sales@moldex.com

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Chem-Tech® II

Rainfair introduces the next generation of chemical splash protection - - - - -Chem-Tech® II

ncorporating all of the latest state-of-the-art features, Chem-Tech® II provides superior cost effective splash protection. Reinforcements at the crotch and underarms help reduce the likelihood of rip-outs that can occur during a long work shift. Hand-cemented and fully-vulcanized seams are stronger than the fabric for maximum durability at stress points.

Other standard features include an extra large stand up collar with Velcro closure which protects from overhead leaks, drips and spills. Most important, the specially formulated Neoprene coating is flame retardant and lightweight yet impervious to many different acids, chemicals, oils, fuels, caustics, fats and solvents. Please contact Rain-



fair for a complete set of chemical exposure test data.

Chem-Tech® II's most unique feature is the color. The blue color helps distinguish chemical protective wear from ordinary rainsuits and from other levels of chemical protection garments. With the blue color, safety directors, foremen and inspectors can determine clothing compliance at a glance.

Applications: Chemical processing plants, petrochemical plants, refineries, turnarounds, sanitation crews, food processing and any other industry where the protective clothing must have a high resistance to harmful materials such as acids, chemicals, oils, fuels, caustics, fats and solvents.

From E.D. Bullard Company



The **M45-PDE respirator** is for use in hazardous atmospheres that have the potential to become IDLH (Immediately Dangerous to Life or Health). This model is a combination airline respirator with an approved 5 or 10-minute self-contained escape cylinder. The self-contained portion of the device is used only if the airline portion fails.

The **M45-PD respirator**, which does not include an escape cylinder, is intended for use in general work applications, and is particularly useful when the air source is a breathing cylinder.

Both models feature:

- low profile, light weight regulator complete with a first breath feature to permit donning without free flow.
- comfortable body harness that keeps the air cylinder balanced with minimal restriction.
- choice of eight approved quickdisconnect coupler assemblies, providing compatibility with most workplace breathing air systems.
- silicone facepiece available in two sizes with a double flange to provide a secure fit across a wide range of facial sizes and contours.

www.bullard.com

PERSONAL GAS MONITOR

The **Neotox XL** is a pocket sized single gas monitor designed for the continuous protection of a worker. Units are available for Oxygen, Carbon Monoxide, Hydrogen Sulfide, Flammable, Nitrogen Dioxide, Chlorine and Ammonia. The **Neotox XL** combines many of the features of our multi-gas unit into a



single gas rugged design. The top mounted display allows for easy access to gas readings, while audible and visual alarms alert the worker that a gas hazard exists. Additional features include: instantaneous, STEL, TWA and Low Battery Alarms, Peak Readings, Single button operation, Auto-zero, optional data logging.

www.neotronics.com

Scholarships Awarded

The Mark E. Maag Memorial Scholarship was awarded to Cindy Farmer of Hazel, KY and Corey Joe Smith of Mayfield, KY, both undergraduate students at Murray State University. The two \$2,000 scholarships are underwritten by United Sales Associates and our manufacturers. *

This scholarship is named in memory of United Sales' first salesperson who was killed in an automobile accident. Five candidates were selected by the National Safety Council by the following criteria: industrial safety related college curriculum from a university in USA's territory (IN, KY, MI, NY, OH, PA, TN, WV), a basis of need, well-rounded activities, and safety or hygiene career minded. Dr. Richard D. Fulwiler of Technology Leadership Associates then selected the two recipients.

* Manufacturers who contributed: Kappler, Rainfair, Services & Materials, Marigold Industrial, Western Emergency Equipment, Neotronics, Ergodyne and Justrite



Salalift® II Winch

DBI/SALA is pleased to introduce the new Salalift®II Confined Space Entry Winch. This man-rated winch is designed to raise, lower, or rescue personnel and can be used for material handling.

The winch combines a compact, lightweight (34 lbs.) design with user friendly features including a housing with carrying handle and a quick-mount bracket enabling user to attach it to DBI/SALA support structures with ease. The winch also features a free-wheel mode with built-in overspeed brake, when activated it allows the user to pay out cable freely at a normal work pace.

Many complete rescue and retrieval systems are available with Salalift®II Winch which exceeds all applicable OSHA and ANSI standards. DBI/SALA - the world leader in fall arrest, restraint, and rescue equipment!

www.dbisala.com

TRAINING

Please contact your USA representative for information on DBI/SALA's Training Institute classes (Competent Person Course and Principles of Fall Protection Course). The instructors are with **Gravitec Systems, Inc.**, a professional fall protection and industrial rescue training company committed to providing the student with fall protection education second to none!

www.gravitec.com



Powerful! Hands Free!

Pelican's powerful lightweight HeadsUP

LiteTM provides hands free light to the exact area needed. For bare hands a comfortable fit is provided by the large, firm but soft head pad and elastic cloth strap. For industrial use (helmets and hard hats) a heat resistant rubber strap is available.

The powerful Krypton beam adjusts from spot to flood. A large on/off switch ius easy to operate. Made of corrosion proof ABS polymer and includes 4 AA Energizer® Batteries, 2 Krypton lamps and is submersible to 500 feet. Made in the USA and backed by Pelican's Unconditional and Lifetime Guarantee. Color: black, weight: 5.4 oz.

Features

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- Shockproof
- Corrosion Proof Contacts
- Waterproof to 500 feet
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Supports your country

Widely available lamp

Lasts forever. Quality guaranteed

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Can be used in any wet environment

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Choose between brightness or burn-time

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www.pelican.com

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Our surveys will provide you with a checklist for identifying hazards, provide regulatory and compliance information and compliance record keeping forms, and provide a checklist for proper maintenance of equipment. Contact your representative at USA for a survey on the following manufacturers: Kappler, Rainfair, DBI/SALA, Western Emergency Equipment, Ergodyne, Justrite and Best.

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Western Emergency Equipment now offers the Model WTWBS.SH with an optional cabinet for use with most emergency drench showers & eyewashes.

Current ANSI standards recommend a temperature range of 60F-95 F for emergency drench shower and eyewash equipment. This safe, reliable blending system can help assure that accident victims take a full 15 minute drench shower as recommended by ANSI.

WTWBS.SH is a safe, prepackaged, fully engineered and tested system for mixing large volumes of hot and cold water to provide tempered water for emergency showers and eyewashes. Ideal for areas where supply water temperatures fall below 60 F (15 C). Unit contains no electrical components, thus is suitable for combustible atmospheres.

Western's tempered water blending system offers multiple levels of protection to prevent scalding, including a high temperature limit valve (set at 85 F) and a pressure relief cold water bypass that protects against constricted flow.

Model WTWBS.CAB cabinet made of corrosion resistant fiberglass with security latch to protect model WTWBS.SH, is also available.

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Save on Disposal Costs --- and --- Help Protect Our Environment

The disposal of hazardous waste is expensive, time consuming, and difficult in today's environmentally conscious world. One solution to this problem is to reduce the amount of hazardous waste which must be disposed.

Justrite's new heavy duty steel compactor reduces the amount of waste and helps save on hazardous waste disposal costs by packing more waste into a drum. More waste into each drum means fewer drums to store, label and prepare for pick-up -- and a reduction in the number of drums shipped for disposal. Compaction ratios vary depending on the waste stream involved -- companies can save up to 80% on their disposal costs! At the same time, the number of drums going to landfills is reduced -- helping to save valuable space.

Quality engineered -

Powerful 40,000 lbs. of compaction force reduces waste to a fraction of its original volume. Energy efficient two-stage pump is mounted horizontally for accessibility to tank. Oil filter is conveniently located for easy replacement. 25 micron filter reduces potential hydraulic problems - keeps maintenance to a minimum. Strong 2 H.P. motor can plug into any standard electrical outlet (115/1/60). No need to buy costly motor starter/disconnect.

Designed for safety -

NEMA I electrical prevents incidental contact with electrical components. Compaction chamber is totally enclosed for operator safety. If door is accidentally opened during operation, safety door interlock automatically shuts down unit. An emergency stop push button is easily accessible if needed. Unit is designed with forklift pockets for easy portability and could also be anchored to floor to avoid accidental tipover.



www.safetyonline.net



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ProFlex Knee Pads

Essential equipment for employees whose jobs require kneeling on hard, slippery or abrasive surfaces, Ergodyne ProFlex knee pads are ergonomically-designed to reduce contact stress and pressure points. Our complete line includes everything from light duty models, such as the ProFlex 200, to the ProFlex 300 hard cap series with advanced design features for maximum protection and comfort.

www.ergodyne.com



When N-DEX non-latex gloves were first introduced, disposable glove users discovered new levels of tactile-sensitivity, comfort, dexterity and puncture resistance!

The unique low-modulus, soft-nitrile formulation made these 4-mil-thin gloves an overnight sensation, replacing and outperforming ordinary natural rubber and vinyl disposables in a wide variety of applications.

Now there is a complete family of disposable, low-modulus, non-latex, 100% soft-nitrile N-DEX gloves. All are made in the USA; none contain any natural rubber latex proteins. N-DEX gloves are available lightly powdered (USP vegetable starch) or powder free. All meet the US Government CFR 21 specifications and are acceptable for use in both foods and pharmaceutical applications. Class 1 medical devices are manufactured in an ISO 9002 quality-certified facility and meet a 1.5 assured quality level.

The N-DEX exclusive patented, low-modulus formulation reduces hand fatigue caused by elastomeric stress, gives you a cooler drier feel and provides three times the puncture resistance of natural rubber and vinyl disposable of comparable millage thickness. N-DEX gloves also resist a broad range of chemicals in many applications where protection is needed from intermittent chemical contact or splash.

www.bestglove.com

Continued from page 1

which an object may not be coming from directly above, the new Type II helmets provide a solution. While meeting the same top-impact requirements as the conventional Type I hard hat, a Type II helmet also adds protection in the sides, front and rear. Although this extra protection requires the addition of shock absorbing materials which inevitably add to the size, weight and cost of the helmet, there are Type II helmets on the market which are surprisingly low in both weight and cost - lower, in fact, than many Type I hard hats. For

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those workers who need the added protection, the performance of these helmets is well worth a slight increase in weight or cost.

The new Type II helmets are not for everyone. The decision of which type of helmet to use is left up to the user and the employer, and should be based on careful consideration of the nature of the work and of the potential hazards involved for each specific application. It is possible that workers on the same job site may be issued helmets of different types, depending on the nature of each individual's work.

In addition to the creation of the new Type I and Type II classifications, the ANSI Z89 standard continues to define three categories on the basis of electrical insulation capability. The performance requirements for these three categories have not changed, but their letter designations have been changed to make them more logical and easier to remember. The highest electrical classifica-

tion, formerly known as Class B, is now referred to as Class E, for Electrical applications. The lower level of protection, Class A in the 1986 edition of the standard, is now Class G, for General-purpose applications. Class C, providing no electrical insulation protection, has retained its original designation (C standing for Conductive). In addition to bringing a logical meaning to the electrical class designations, this change brings the designations into line with those used in the 1992 Canadian (CSA) standard for industrial helmets. While the tests are not identical for either the electrical or the impact requirements, the new ANSI Type II and the CSA standard do result in helmets that are generally comparable on performance.

With the new standard now in place, each employer should now conduct a careful analysis of work practices and hazards to decide whether this new technology can be used to reduce the likelihood of workplace injuries.

by Richard Oleson, Market Manager, Occupational Safety, E. D. Bullard Company 1898 Safety Way, Cynthiana, KY 41031 (800) 227-0423, fax (606) 234-8987

GD EnviroDerm

illions of outdoor workers are unaware that as the seasons change a potentially serious, yet unforeseen hazard to health and productivity continues to confront them - poison ivy, poison oak and poison sumac. According to the National Safety Council, these poisonous plants are the largest cause of occupational contact dermatitis for outdoor workers in many areas of the country -- and contrary to popular opinion, they're a menace all year long. Identifying them in the fall and winter months in some parts of the country can be next to impossible.

Urushiol is the oil in the sap secreted by these plants that actually causes the allergic reaction. The oil isn't just in the leaves, but can be found in stems, roots and even dead plant remains. So as the shrubbery sheds its leaves, these poisonous plants become more concealed. As

a result, they're even more dangerous to workers.

In addition to wearing protective clothing regular use of IvyBlock® lotion helps protect against poison ivy, oak and sumac rash. IvyBlock, the before you get poison ivy lotion, is the only product with the active ingredient bentoquatam.

Bentoquatam lays down an active coating on the skin to help block skin contact with urushiol.

Available without a prescription, IvyBlock should be applied at least 15 minutes prior to possible exposure to the poisonous plants and reapplied every four hours for continued protection. The lotion coating is then removed with soap and water after the worker is no longer at risk of exposure.

Safety Professionals interested in obtaining additional information about IvyBlock may visit its website at www.ivyblock.com or call 1-800-991-DERM.



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Regional Trade Show Calendar 1998

Listed chronologically:		
MAR	IN	Hoosier Safety Council
		Mar. 9 - 11, 1998 - Indianapolis, IN
MAR	ОН	All-Ohio Safety & Health Congress & Exhibit
		Mar. 24 - 26, 1998 - Cincinnati, OH
MAR	PA	Western Pennsylvania Safety Council
		Mar. 31 - Apr. 2, 1998 - Monroeville, PA
APR	MI	Michigan Safety Conference
		Apr. 21 - 22, 1998 - Lansing, MI
MAY	ΚY	Governor's Safety & Health Conf. & Expo.
		May 6 - 8, 1998 - Louisville, KY
MAY	NY	Western New York Safety Conference
		May 13 - 14, 1998 - Grand Island, NY
JUN	ΚY	American Public Works Association
		Jun. 1998 - Lexington, KY
JUL	TN	Tennessee Safety Congress
		Jul. 12 - 15, 1998 - Nashville, TN
SEP	WV	West Virginia Safety Council
		Sep. 23, 1998 - Charleston, WV
SEP	ОН	Dayton/Miami Valley Safety Council
		Sep. 24, 1998 - Dayton, OH
NOV	ОН	Great Lakes Industrial Show
		Nov. 10 - 12, 1998 - Cleveland, OH



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Dr. Richard Fulwiler, President of Technology Leadership Associates and former director of worldwide health and safety for Procter & Gamble, is the developer and faculty leader of the course. Participants who successfully complete the course and the QSSP competency exercises will receive a certificate of recognition. United Sales Associates has five who have completed the course:

Mark Hamilton, QSSP Todd Hayward, QSSP, CPMR Tom Hayward, QSSP, CPMR Mike Pokorski, QSSP Steve Schaefer, QSSP

Next Course: March 9 - 13, 1998 Louisville, KY For more information contact SEDA/ISEA/SEMAA or United Sales Associates at 513/231-4266.

Only available to SEDA/ISEA/SEMAA members.