

July 16, 2007

Docket Office  
Occupational Safety and Health Administration  
U.S. Department of Labor  
200 Constitution Ave., NW  
Washington, DC 20210

**Comments of the International Safety Equipment Association  
Notice of Proposed Rulemaking - Updating OSHA Standards Based on National  
Consensus Standards; Personal Protective Equipment  
Docket No. OSHA-2007-0044  
RIN No. 1218-AC08**

The International Safety Equipment Association (ISEA) is the trade association for personal protective equipment (PPE), including head, eye and face, hearing, respiratory and fall protection; protective clothing and gloves; high visibility safety apparel; emergency eyewash and showers; first aid kits and gas detection instruments. Its member companies are world leaders in the design and manufacture of PPE for workers. ISEA is accredited by the American National Standards Institute (ANSI) as a standards developing organization, and is responsible for development and publication of numerous American National Standards for personal protective and safety equipment. ISEA is the secretariat for two of the standards that have been incorporated by reference in §1910.133 and §1910.135 and the corresponding standards for shipyards, marine terminals and longshoring: ANSI/ISEA Z87.1 *American National Standard for Occupational and Educational Personal Eye and Face Protection Devices* and ANSI/ISEA Z89.1 *American National Standard for Industrial Head Protection*. While our comments will address all aspects of the proposed rule, our primary focus will be on the criteria for eye and face protective devices and protective helmets.

ISEA has consistently supported the Occupational Safety and Health Administration's efforts to update references to consensus standards that are incorporated into OSHA regulatory standards. ISEA appreciates OSHA's difficulty in keeping up with current revisions to consensus standards, which are updated more frequently than OSHA can issue rules for their use. We have provided recommendations to OSHA on several occasions since the last revision to the PPE rule was published in 1994, suggesting ways that the agency might be able to modify its regulations to include new editions of referenced national consensus standards.

However, ISEA disagrees with OSHA's approach in its May 17, 2007 Notice of Proposed Rulemaking. ISEA objects to OSHA's proposal to remove references to national consensus standards from the regulatory text of its PPE standards, and the replacement of those references with a requirement that PPE meet "good design standards." Removing these references from the mandatory regulatory text would eliminate any requirement that PPE meet a specified level of protective performance, potentially reducing the level of protection given workers, and making compliance with the rule more difficult for employers.

*1. The “good design standard” concept eliminates baseline performance requirements for protective equipment, and compromises worker safety.*

In its proposed rule of May 17, OSHA has eliminated references to consensus product standards from the text of the PPE regulations, replacing them with a requirement that employers ensure that PPE is constructed in accordance with good design standards. The proposal’s definition of “good design standard” requires that the standard specify safety requirements, be recognized in the United States as adequate, and be developed by a standards development organization in an open process. Employers will have to ensure that PPE is constructed in accordance with such a standard. To assist the employer, OSHA proposes to include a non-mandatory appendix that will list examples of national consensus standards that meet its criteria for good design, and are therefore presumed to be acceptable. PPE will not have to comply with one of the standards listed in appendix C, but will have to be at least as protective as PPE that meets one of the standards.

National consensus standards for PPE are developed by standards developing organizations (SDOs) in the U.S. and around the world. In the U.S., SDOs that are accredited by ANSI must follow due process requirements that are characterized by transparency, openness, technical relevance, consensus and responsiveness to the needs of stakeholders. They are widely recognized and accepted in the marketplace, and provide a common language for producers, regulators, specifiers and users. National consensus standards are kept current through a process that mandates that they be reviewed on a regular schedule. For example, ANSI standards must be revised, reaffirmed or rescinded every five years.

Congress recognized the benefit of national consensus standards when it provided for their incorporation into OSHA standards in the Occupational Safety and Health Act of 1970, and OSHA regulations currently incorporate over 200 such national consensus standards. The definition of “national consensus standard” in 29 CFR §1910.2(g) acknowledges their consensus development, and acceptance by the Secretary or Assistant Secretary of Labor.

In contrast, OSHA has taken the good design standard criteria from the definition of “test standards” in its rule establishing requirements for a nationally recognized test laboratory (NRTL). See 29 CFR §1910.7(c). This rule governs those organizations that are recognized to do conformity assessment testing for products that OSHA standards require to be approved. The criteria are for test standards that will be used by an accredited test laboratory. Once the laboratory is recognized by OSHA as an NRTL, it can adopt revisions to the test standard without notifying OSHA, if those revisions have been developed by the standards developing organization (see §1910.7, appendix A, II(A)). This approval gives the employer assurance that the product meets the requirements of the OSHA standard for use in the workplace. OSHA specifically rejected third-party certification for PPE when it published the revised PPE rule in 1994 (see 59 FR 16348), so the NRTL requirements do not apply. The NRTL criteria for recognition of a standard were intended to be used under the supervision of an accredited conformity assessment body. Without such a regulatory program, they are too vague to be the basis for regulation and selection of performance standards for PPE.

National consensus standards provide performance specifications for PPE. For example, the ANSI standard for eye and face protection, ANSI/ISEA Z87.1-2003, covers prescription and plano spectacles, goggles, faceshields, welding helmets and respirator facepieces. It includes specifications and test procedures for impact resistance, lens retention, optical performance, flammability and corrosion resistance, as well as marking requirements and guidelines for selection, use and maintenance. The ANSI standard for head protection, ANSI/ISEA Z89.1-

2003, includes minimum performance requirements for impact attenuation, penetration resistance, flammability and dielectric strength. There are test procedures in the standard for each of these criteria, including pre-conditioning to ensure that the helmets being tested will perform in the range of working environments likely to be encountered in the United States.

These specifications are widely accepted by users as providing a high level of protection, and are recognized by OSHA as suitable for use in its regulation. The proposed "good design standard" process, on the other hand, does not address the levels of performance expected of PPE, only that it "specify the safety requirements for the particular equipment." It does not provide any definition of how the standard is "recognized in the United States," or establish what OSHA considers an "adequate level of safety."

The purpose of incorporating a national consensus standard for PPE into an OSHA regulation is to establish a baseline of performance. Replacing a specific standard with the requirement that PPE comply with a vaguely defined good design standard removes that baseline level of protective performance.

*2. All national consensus standards do not offer the same levels of performance.*

There are many ways a standard could meet the good design criteria and yet specify performance that is inferior to the safety levels provided in the most recent versions of ANSI standards. In the long term, U.S. workplaces could potentially be inundated with products that are assumed to be "safe" according to the good design standard criteria, yet provide less protection than what users are currently required to use. To illustrate this we have attached a table (Attachment A) showing a summary of performance requirements in five recognized standards for safety spectacles: ANSI, EN (European), CSA (Canada), AS/NZS (Australia/New Zealand) and JIS (Japan). The differences in performance, based on numerous requirements, are significant and affect the device's overall quality and level of protection. These other standards may not be easily evaluated if different metrics are used to make the claim of equivalency. Yet any of these standards could meet the requirements for good design standard, so long as someone asserts that it is "recognized in the United States as providing specifications that result in an adequate level of safety."

*3. OSHA's proposal does not require that standards be equivalent.*

OSHA maintains that its proposal would not lower the performance requirement for PPE:

Finally, in switching from a specification provision to a performance oriented provision, OSHA is not intending to decrease employee protection. The references to the specific ANSI standards in OSHA's existing rules are the minimum design specifications for PPE used in the workplace and, as stated above, OSHA is listing them in the non-mandatory appendices. PPE meeting good design standards must at a minimum be constructed to provide protection equivalent to, or greater than, this minimum level of protection. OSHA is adding language in the regulatory text of the proposed rule that makes this clear. 72 FR 2775

OSHA offers language in 1910.133(b)(2) in support of this statement. Yet that paragraph, applicable to eye and face protection, states that only the device, and not the standard to which the device was manufactured, must be equivalent to another device of the same type made to one of the standards listed in the proposed non-mandatory appendix. There is nothing in this

paragraph, or the proposed regulatory text, that specifies that standards listed in the non-mandatory appendix after the first publication of the revised rule must be equivalent. Minimum levels of performance therefore become a moving target. Protective devices must provide protection at least as great as devices of the same type constructed in accordance with a list of standards that may be changed in the future. While this may be a good approach to ease the burden of constantly updating the regulation, it falls short of providing assurance that future standards will be as good as those listed today.

The latest edition of the ISEA *Safety Products Standards Database* (ISEA, July 2007) lists over 160 national or international standards for eye and face protection, and over 80 standards for head protection. Many of these would satisfy the good design standard criteria in OSHA's proposal, yet offer far different levels of protection. The scope of many of these standards is also far different from the scope of the ANSI standards incorporated into the OSHA PPE regulation. For example, there are 13 Australia/New Zealand (AS/NZS) standards that apply to head protection, as opposed to one ANSI standard. ISEA does not believe that OSHA intends to list all these standards in its non-mandatory appendix as examples of good design standards presumed to satisfy the requirements of the PPE rule, but there is nothing in the regulatory text that would prevent such an action in the future.

Moreover, the proposed text allows employers to use products manufactured to "good design standards" even if the standard is not listed in the proposed non-mandatory appendix C. The employer would have to show that a device is made to a good design standard, with no objective criteria for what constitutes adequate safety. While we are certain that OSHA does not intend that U.S. workers become a test subjects for unproven standards for PPE, this could be the result of the OSHA proposal. This is inconsistent with OSHA's mission of protecting the nation's workforce.

#### *4. The proposal does not simplify compliance for employers*

In the absence of a requirement for product approval, employers need the certainty that comes from using a standard they know. Employers are not in a position to evaluate whether a product standard is adequate, or meets the good design standard criteria.

OSHA cites its proposal for good design standards as a way to ease employers' compliance burdens. In the Discussion of Changes section of the May 17 *Federal Register* notice, OSHA suggests that the current PPE standard is a burden to employers because of a requirement that they demonstrate that PPE constructed to updated versions of standards is as protective as equipment that meets the standards referenced in the regulation (72 FR 2775). Yet the solution proposed by OSHA is to have employers evaluate whether a device meets a good design standard. For example, in proposed §1910.133(b)(2), protective devices would not necessarily have to meet a standard listed in non-mandatory appendix C, but "must be constructed in accordance with good design standards," and "provide protection equivalent to or greater than a protective ...device of the same type that is constructed in accordance with one of the listed national consensus standards."

ISEA believes that a majority of employers will be neither capable of nor have time for determining whether their PPE is constructed to a good design standard. Even if the device does meet a good design standard we doubt most employers would be able to study test results to determine if the device provides "protection equivalent to or greater than a protective...device of the same type that is constructed in accordance with one of the listed national consensus standards." Employers would need to know the specifications of each good design standard, to

be certain protective equipment manufactured to those good design standards mitigate the hazards present at the employer's workplace.

Users, including certified safety professionals and certified industrial hygienists, look for PPE that meets a specified standard. They have not been trained to compare and contrast PPE design standards, nor do we believe that most are interested in doing so. Simply put, they look for the mark placed on the PPE, for example, "Z87" or a label listing the standard to which the device is made.

Proper use and selection would also become an issue. Unless a user or employer was thoroughly familiar with the technical provisions of all standards, such user may not be able to correctly select a product that provides adequate protection. It is foreseeable that an employer would misinterpret requirements of the different approved standards and inadvertently equip workers with less safe or even inappropriate devices.

We are not aware of employers who are currently choosing to evaluate and use non-ANSI compliance PPE. Individuals who are involved in U.S. standards development have a unique competency and skill in developing performance criteria and test methods that have some relationship and correlation to workplace hazards found in the U.S. For the most part, employers do not have the expertise and skill in evaluating performance criteria and test methods outlined in standards; therefore they will find it extremely difficult to evaluate the appropriateness of future designs.

ISEA urges OSHA not to disrupt the long-standing effective approach whereby U.S. manufacturers and U.S. standards developing organizations (SDOs) develop consensus standards that are trusted by U.S. employers, and accepted by a U.S. government agency that is charged with protecting the U.S. workforce. The complementary nature of ANSI standards and OSHA references to those standards results in superior protection for American workforce. This balance and alignment of goals should not be interrupted.

*5. ISEA proposes a simplified alternative regulatory approach, maintaining references to national consensus standards and providing flexibility for OSHA and employers.*

ISEA believes that the core of OSHA's proposal, listing applicable consensus standards in a non-mandatory appendix that can be updated through direct final rulemaking, is a sound and effective approach. Within that framework, ISEA respectfully offers the following alternative, which we believe retains the important minimum performance requirements for PPE while providing needed flexibility for both OSHA and the regulated community. ISEA has drafted sample regulatory text for eye and face protection and head protection (Attachment B).

#### **1. Retain references to consensus standards in the regulatory text**

OSHA should retain references to national consensus standards for eye and face protective devices and protective helmets incorporated by reference in applicable sections of 29 CFR Parts 1910, 1915, 1917 and 1918, updated to reflect the current revision of the standard. This establishes the baseline of protective performance expected of these devices in the workplace.

#### **2. Allow for equivalent national consensus standards**

OSHA should include language in the regulatory text that allows the use of PPE that meets alternative consensus standards, as long as the performance specifications in those standards are at least as protective as the standard incorporated by reference. This would provide employers the ability to select PPE to meet their specific needs, especially as additional

standards may be developed in the future, without compromising worker protection or violating the OSHA regulation.

### **3. OSHA will evaluate the adequacy of additional consensus standards for PPE**

Current regulations allow the use of PPE that does not meet the specified standard if it can be “demonstrated by the employer to be equally effective.” ISEA believes that OSHA is better able to evaluate additional national consensus standards where they exist, and provide guidance to employers on what is acceptable. ISEA’s proposal is that non-mandatory appendix C should be used to list those standards that OSHA has determined provide equivalent protection to the consensus standard incorporated by reference.

ISEA believes this approach has several benefits over the proposed good design standard regulation. First, it maintains the level of performance of PPE that meets the consensus standard in the current regulation, so that worker protection is not compromised. Second, it gives employers the flexibility to select PPE that best meets their needs based on hazard assessment. Third, it frees employers from having to do an analysis of whether a PPE standard meets the good design criteria, transferring to the OSHA staff the responsibility to evaluate alternative consensus standards for safety equipment. Fourth, it gives OSHA the flexibility to update the reference to consensus standards when they are revised, or when a new standard is issued, using technical amendments or the direct final rule method OSHA proposes for updating non-mandatory appendix C.

Under this procedure, OSHA can work hand-in-hand with standards developing organizations as they update consensus standards. ISEA recommends that OSHA establish a policy by which standards developers provide official notification to OSHA when they begin the revision process for a consensus standard included in the appendix, and at specified milestones during the process. That way OSHA can evaluate the standard as it is being revised, and align its updates to references in the appendix to the consensus process.

### *6. Recommended technical amendment to Appendix B to Subpart I*

This section includes guidelines for selecting helmets to protect against electrical hazards, and makes reference to Class A and Class B helmets. These are designations from outdated editions of the ANSI standard for head protection. In the 1997 revision of ANSI Z89.1, these classifications were renamed Class G (General - tested to 2200 V) and Class E (Electrical - tested to 20,000 V). The Class C designation is unchanged. ISEA recommends that OSHA update Appendix B to conform to the current edition of the standard (see ANSI/ISEA Z89.1-2003, para 4.2).

ISEA appreciates the opportunity to comment on this proposed rulemaking, and looks forward to continuing to work with OSHA to protect the lives and health of workers.

Sincerely,



Daniel K. Shipp  
President

# Attachment A to ISEA Comments

## Docket No. OSHA-2007-0044

### SAFETY SPECTACLE STANDARDS COMPARISON

	ANSI Z87.1-2003	EN 166: 2001			CSA Z94.3-2002	AS/NZS 1337:1992	JIS T8174-1994	
		Optical Class 1	Optical Class 2	Optical Class 3				
OPTICS	Refractive Power	± 0.06D	± 0.06D	± 0.12D	+0.12 / -0.25 D	± 0.12D	± 0.125D	
	Astigmatism	0.06D	0.06D	0.12D	0.25 D	0.12D	0.125D	
	Horizontal Base OUT	0.50 PD	0.75 PD	1.00 PD	1.00 PD	0.75 PD	1.00 PD	
	Horizontal Base IN	0.25 PD	0.25 PD	0.25 PD	0.25 PD	0.25 PD	1.00 PD	
	Vertical	0.25PD	0.25PD	0.25PD	0.25PD	0.25PD	0.25PD	
							0.167PD Umounted oculars	
HAZE	< 3%	< 0.75 Cd/Lx/m <sup>2</sup> = ~ 5%			< 2%	"Fluorescence" < 3%	No requirement	
Definition	NBS 20	No requirement			CSA 60's rings	No requirement	No requirement	
HIGH IMPACT	High Mass	Required	No requirement			No requirement	No requirement	No requirement
	Penetration	Required	No requirement			No requirement	Required	No requirement
	High Velocity Impact	EYEGLASS to Meet Side Coverage ANSI side-coverage is the smallest	EYEGLASS to Meet Side Coverage			EYEGLASS to Meet Side Coverage	EYEGLASS to Meet Side Coverage	No HVI
		20 hits	4 hits			16 hits	2 x 6 hits	Drop Ball ø22.2 mm From 1.3 m
Room Temperature	Test at Room Temperature = F Test @ Extremes of Temperature = FT			Room Temperature	Tested at room Temp and 60°C			
OTHER	Flammability	Horizontal Burn <75mm/ minute	No requirement			Horizontal Burn <75mm/ minute	Horizontal Burn <100mm/ minute	No requirement
	Ignition	No Requirement	Rod 650°C for 5 seconds			Rod @650°C for 5 seconds	No requirement	Heated rod for 5 seconds
	Corrosion	Required	Required			No requirement	Required	Required
	Scratch Resistance	No Requirement	OPTIONAL REQUIREMENT Damage by Fine Particles = K marking			No requirement	No requirement	Required

Chart prepared by Aearo Technologies, May 2007

# Attachment B to ISEA Comments

## Docket No. OSHA-2007-0044

### Sample Regulatory Text for ISEA Recommendations

#### §1910.133 Eye and Face Protection

(b) *Criteria for protective eye and face devices.* (1) Protective eye and face devices shall comply with ANSI/ISEA Z87.1-2003, "American National Standard for Occupational and Educational Personal Eye and Face Protection Devices," or with another national consensus standard that provides equivalent protection.

(2) Non-mandatory appendix C to this subpart contains examples of national consensus standards that OSHA has determined meet the criteria of paragraph (b)(1) of this section.

#### §1910.135 Head Protection

(b) *Criteria for protective helmets.* (1) Protective helmets shall comply with ANSI/ISEA Z89.1-2003, "American National Standard for Industrial Head Protection," or with another national consensus standard that provides equivalent protection.

(2) Non-mandatory appendix C to this subpart contains examples of national consensus standards that OSHA has determined meet the criteria of paragraph (b)(1) of this section.

#### Appendix C to Subpart I (non-mandatory)

*In this appendix, OSHA would list national consensus standards that it has determined are equivalent to the national consensus standards listed in §1910.133(b), §1910.135(b), and §1910.136(b). This could include previous editions of the standards listed in the regulatory text, if OSHA has determined that they offer equivalent protection and that products meeting these standards are still in use in the workplace.*