

**LOG OF MEETING**  
**DIRECTORATE FOR ENGINEERING SCIENCES**

CPSC/OFFICE OF  
THE SECRETARY

1999 JUL 12 A

**SUBJECT:** Meetings of ASTM Subcommittee F08.53 - Headgear

**DATE OF MEETING:** May 20-21, 1999

**PLACE:** Sheraton, Seattle, WA

**LOG ENTRY SOURCE:** Scott Heh, ESME *AK*

**COMMISSION ATTENDEES:** Scott Heh, ESME

**NON-COMMISSION ATTENDEES:** Available upon receipt of meeting minutes.

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**SUMMARY OF MEETINGS**

Summaries of subcommittee discussions, action items, and ballot items are shown below.

**Discussions**

**Helmet Strangulation Hazard**

Donna Thompson, a member of the ASTM F15.29 Subcommittee on Public Playground Equipment, and the Director of the National Program on Playground Safety, spoke to the Headgear Subcommittee about a fatal incident that occurred in York, PA. A 3-year old boy died when his helmet became wedged as he apparently tried to slide through a small opening on the playground equipment near his home. It was discussed that it was unclear whether the boy died from strangulation on the strap or if he died of suffocation because his head and chest were pinned tight to the platform. Ms. Thompson said that after discussing this issue within the public playground subcommittee, it was decided to recommend that headgear standards should require labels on helmets that warn the user to remove the helmet before playing on playground equipment because of the possibility of strangulation.

Copies of the CPSC press release on this fatal incident and the warning to not wear helmets on the playground were distributed.

It was discussed that some helmet manufacturers place a similar warning label in their helmets but that it has not yet been proposed as a requirement in ASTM headgear standards. Some subcommittee members expressed that in many circumstances, a helmet could prevent a child from sustaining serious head injuries while on a playground.

The Headgear Subcommittee agreed to give more consideration to the idea of adding a strangulation warning label. The Headgear Subcommittee also suggested that Ms. Thompson discuss with the Public Playground Committee the idea of increasing the spacing requirements for playground equipment from 9 inches to 12 inches so that a helmet would pass through an opening.

### Task Group on Rodeo Helmets

A maker of rodeo helmets gave a presentation on his helmet and urged the subcommittee to help him in developing an ASTM standard for helmets used in rodeo. The rodeo helmet is a hybrid of a hockey helmet with a face guard that is specifically designed for rodeo. A champion bull rider gave a testimonial, saying that the helmet saved him from a serious head injury. The helmet manufacturer claimed that a standard for these helmets would help to legitimize the use of these helmets. This, in turn, could prompt high schools and youth rodeo events to consider rules that require the use of helmets.

The group discussed that more detailed information is needed regarding the types of injuries in rodeo and the characteristics of head impacts in rodeo before performance requirements can be more fully developed.

New members were added to this task group and efforts will continue in developing a draft standard.

### Face Protection and Visors

A face protection and visors task group is still working on developing test methods for chin bars and other types of helmet face protectors. In addition, the task group is exploring the need for more comprehensive test requirements specifically related to helmet visors. U.S. and foreign standards that include tests for visors are currently under review.

### Other Testing Issues

A task group is continuing work on performing comparison testing to examine the effect that variations in impact anvil surface finish has on test results. The task group is also working on possible revisions to (1) better define the center of impact on the helmet, and (2) better define how to attach the helmet to the headform when impact testing.

### Soccer Helmets

A representative from the U.S. Youth Soccer Association made a plea for the ASTM Headgear Subcommittee to explore the development of a performance standard for protective headgear used in soccer. CPSC statistics show 8000 head injuries/year associated with soccer. The presenter claimed that many parents who have children participating in soccer are very interested in a lightweight, protective helmet. The need for helmets is heightened because of the increasing popularity of indoor soccer that is played near many hard surfaces. The U.S. Youth Soccer Association representative will join with other members of the headgear subcommittee to form a task group to further explore the need for a soccer helmet standard.

### **Ballot Items for New Standards and Revisions to Standards**

#### Proposed New standard for Headgear Used for In-line Roller Hockey Played in a Controlled Environment (on Subcommittee Ballot)

A negative vote related to the need for a greater impact velocity was found persuasive. The task group will reconsider the proposed impact velocity specifications and the standard will be reballotted.

#### Status of Development of a Recreational Ski Helmet Standard

The task group reported that they are close to having a new draft standard for subcommittee ballot. The ballot should be sent prior to the next meetings in Dec 99. The new standard will include a 2-meter flat anvil impact, a 1.2 meter hemispherical anvil impact, and a 1 meter edge anvil impact. They are still working on the details of a "durability" test that may include several "low-level" impacts prior to the higher velocity impact tests.

#### Equestrian Helmet Standard

A revision that clarifies the roll-off provision in this standard was approved on the main committee ballot without negatives.

#### "Harmonization" of ASTM bike helmet standard with CPSC standard

Revisions were proposed to the ASTM bike helmet standard (F1447) that are intended to make ASTM requirements at least as severe as CPSC requirements. These revisions covered (1) the test line specification, (2) helmet sample conditioning environments, (3) impact schedule, and (4) internal projections.

The subcommittee discussed the proposed revision to the requirement that limits projections on the inside of a helmet. The subcommittee ballot proposed to adopt the CPSC language that there shall be fixture on the helmet's inner surface projecting more than 2 mm into the helmet interior. Some subcommittee members felt that this language could be design restrictive. I handed out a copy of a CPSC Compliance letter that offers guidance for determining compliance with this provision in the CPSC standard. The letter states that "soft" fixtures like foam fit pads will not be considered as non-complying projections. In addition, flexible components of the retention system (not more than 2 mm thick) that may extend more than 2-mm into the interior but are designed to follow the contours of the head will also not be considered non-complying projections. The subcommittee agreed to work further on developing agreeable language for this provision in the ASTM standard.

#### New Final Standards Recently Published

The Subcommittee reported that the following new standards are approved and published by ASTM:

1. F 1849-98 Standard Specification for Helmets Used in Short Track Speed ice Skating (Not to Include Hockey), Approved July 10, 1998. Published by ASTM February 1999.
2. F 1952-99 Standard Specification for Helmets Used for Down Hill Mountain Bicycle Racing. Approved Feb 10, 1999. Published May 1999.
3. F 1898-98 Standard Specification for Bicycle Helmets Used by Infants and Toddlers. Approved July 10, 1998. Published Feb. 1999.

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Colin Church, EXHR  
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