

LOG OF MEETING  
DIRECTORATE FOR ENGINEERING SCIENCES

**SUBJECT:** Meeting of ASTM Subcommittee F15.09 for Home Playground Equipment

**DATE OF MEETING:** June 27-29, 1995      **PLACE:** ASTM Headquarters  
Philadelphia, PA

**LOG ENTRY SOURCE:** John Preston, ES JAP

**DATE OF ENTRY:** July 10, 1995

**COMMISSION ATTENDEES:** John Preston, ES

**NON-COMMISSION ATTENDEES:**

Robert Fisher, Hedstrom	Reg Ghosh, Health Canada
Francis Pavolko, Hedstrom	Teri Hendy, Site Masters, Inc.
Paul Brogan, Hedstrom	Werner Frietag, Consumer
Robert Pepper, Child Works	Jean Schappett, Woodset, Inc.
Lindsey Harris, Fisher-Price	Frances Wallach, Total Recreation
Ron Lynn, Gym-N-I	David Dick, ACTS Testing Labs.
Larry Steingraber, BCI Burke	

**SUMMARY OF MEETING:**

The meeting began with a discussion of comments that had accompanied 17 negative votes cast in a concurrent ballot of the F15.09 Subcommittee and F15 Main Committee on revisions to the existing ASTM F1148 standard for home playground equipment that closed on June 19th. Resolution of the negative votes, together with discussion (where applicable) follows:

Item 1 - Scope, 1.1 and 1.2

Caesar - Comments on the absence of information regarding use zones were ruled non-related to this ballot.

Thompson - Comment objecting to the change in scope to cover equipment in day care facilities in private homes was ruled non-persuasive. Hart - Suggestion to add an exemption for juvenile products was deemed persuasive.

In additional discussion regarding day care facilities in private homes, it was agreed that both licensed and unlicensed facilities should be covered by the standard.

Item 2 - Definition of Platform, 3.1.6.

Stiehler - Suggestion to change "children's weight" to "children" was accepted. It was noted that this definition was poor and may be rewritten.

Item 3 - Deletion of Requirement and Test for Retention of Properties of Plastic Parts, 5.1.12 & 6.1.

Blair, Burton, Reese, Stiehler, Swiecicki - There was

CPSA 6 (b)(1) Cleared

8-2-95  
No Mfrs/Prvtlbrs or  
Products Identified

considerable discussion on whether the objections to the proposed deletion of the existing requirements for retention of properties of plastic parts and replacement by subjective requirements should be upheld. Eventually, the comments submitted by the five negative voters were ruled non-persuasive. A suggestion to change "protected" to "stabilized" in 5.1.2, submitted by Harris with his affirmative vote, was accepted. Similarly, a comment from Koziatek to change "such as rust" to "such as by rust" in 5.1.1 was accepted.

Item 4 - Change Probe Used to Determine Pinch, Crush, and Shear Points, 5.1.6.

Burton - Comment stating that the requirement should be consistent with F1487 was ruled non-persuasive.

Kazianis - Comment stating that the F1148 standard should have the same accessibility criteria as F963 was ruled to be not related to the ballot but will be discussed at a future meeting.

Item 5 - Changes to Swing Spacing Requirements, 5.1.8 & 5.1.9.

Caesar - Questions the exemption permitting ropes if they suspend swings. Ruled non-persuasive but will be considered for a future revision.

Steingraber - Suggests swing spacing be increased to 24 inches to be consistent with the F1487 standard for public playground equipment. Ruled non-persuasive.

A manufacturer who had suggested increasing the spacing of swings requiring a side dismount to 15 inches stated that it was not his intent that this was to be balloted. This was so noted and in the rebalot this change will be withdrawn.

Item 6 - Hardware, 5.1.10.

Steingraber - Suggestion to permit only two threads protruding beyond a nut was ruled non-persuasive.

Items 10 through 13 - Stability of Slides, 5.3.2 and Swings, 5.4, and Strength of Components, 5.7.

Papritz, Morrow - Objections to allowing designs to be based on the maximum age of the intended user were ruled non-persuasive.

Koch - Objection to the deletion of the requirement that the swing stability test must be performed with a swing set unanchored was ruled non-persuasive. However, this issue will be taken up as an item of new business.

Reese - A claim that the swing set stability test is design restrictive because "its wording precludes the use of anchor bolts" was ruled non-persuasive. Mr. Reese also noted that 5.7.8 did not state how to calculate the maximum number of users on a platform. This was ruled persuasive and will be addressed as an item of new business.

A comment accompanying an affirmative vote stated that the term "maximum age grade" was confusing and should be changed to "maximum intended user." The comment was accepted and the change will be made.

Item 15 - Ropes, 5.9.

Kazianis - A suggestion to define the term "securely anchored" such as by specifying a force was ruled persuasive. A test procedure will be added.

Item 16 - Illustrations of Examples of Wood and Plastic Playground Equipment, Fig. 1.

Lynn - An objection to the illustration of a "wood clubhouse or fort with climbers and slides" because it appears to be too high (at least 7 feet) was ruled non-persuasive.

This concluded the resolution of negative votes and comments received in the 6/19/95 ballot of revisions to the F1148 standard.

There was discussion on a requirement to address injuries resulting from multiple occupancy swing impact. John Preston stated that recent tests by the CPSC Engineering Lab had showed that some such swings could meet the 100 G requirement when tested in accordance with the procedure in Appendix X1 of the current standard. He said that a report of these tests would be available at such time as a staff briefing package regarding the NYC/DCA petition was cleared. Further discussion on this issue was tabled until the CPSC report becomes available.

In additional discussion on the clearance for swings requiring a side dismount, it was noted that there was no rationale for the proposed 15 inches. It was suggested that the clearance should be based on the anthropometry of users. However, nobody present was able to suggest what anthropometric dimensions should be considered.

A proposal, prepared by a manufacturer of plastic playground equipment, was distributed. This addressed slides, handgripping components, confinement walls/rails, and stability of climbing equipment. Following are significant changes contained in the proposal.

Slides - Reduce the length of a slide transition area to 6 inches for slides having an entrance height between 18 and 30 inches. Exempt from the reduced gradient requirement slides having an entrance height of 30 inches or less and an incline of 60° or less from the horizontal and slides with an entrance height of greater than 30 inches but not more than 4½ feet and an incline of 30° or less.

Hand-Gripping Components - Components intended as the sole support of body weight should not exceed 1.6 inches in the maximum cross-sectional dimension. Components intended to be held and partially support body weight should not exceed 2.5 inches in maximum cross-sectional dimension.

Confinement Walls/Rails - Would be required on elevated surfaces that are between 20 inches and 48 inches from the ground and would have a height above the elevated surface of at least 18 inches.

Stability of Climbing Equipment - Determine the orientation in which a climber is most likely to tip over. Divide the length of the wall section or span on which a load will be applied by 24 inches to determine the number of loading points. Place the calculated number of load distribution devices (a 16 inch diameter weight support that is 12 inches outboard and hanging down from the wall section or span) along the wall section/span and load each with a weight equivalent to the weight of a 95th percentile maximum age user.

In a discussion on guardrails on elevated platforms the following was suggested:

<u>Platform Height</u>	<u>Guardrail Height</u>	<u>Protective Barrier Height</u>
<30"	None	N/A
30"-48"	27"	N/A
>48"-72"	N/A	27"
>72	N/A	33"

A Consumer Information Sheet for Playground Surfacing Materials prepared by CPSC staff was also distributed. A table in the information sheet provided fall heights for four different loose-fill surfacing materials when installed at depths of 6, 9, and 12 inches. A manufacturer of metal equipment noted that his products would have to have longer legs if a consumer elected to use loose fill materials under and around the equipment. He suggested that the information sheet should also contain information regarding shock absorbing mats that would not require the supporting legs of metal equipment to be lengthened. He also stated that it was his opinion that a majority of consumers would not use a resilient surfacing material and would most likely install the equipment over grass.

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