CPSA 6 (b)(1) Cleared
No Mfrs/Prvtlblrs or Products Identified
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LOG OF MEETING

DIRECTORATE FOR ENGINEERING SCIENCES

...RETARY
'98 FEB 18 A 9:18

SUBJECT: Meeting of ASTM F15.18 Subcommittee for Cribs.

DATE OF MEETING: January 29, 1998 **PLACE:** Sheraton National Airport Hotel, Arlington, VA.

LOG ENTRY SOURCE: John Preston, ES

DATE OF ENTRY: February 9, 1998

COMMISSION ATTENDEES:

Sue Ahmed, EH
Robert Hundemer, LSE
John Preston, ES
Andrew Ulsamer, LSE

NON-COMMISSION ATTENDEES:

William Suvak, Child Craft
Michael Krygier, Detroit Testing Lab.
Keith Moehring, Simmons
Jerry Drobinski, Simplicity, Inc.
Richard Glover, Cosco
David Campbell, Century Products
Rick Locker, JPMA Counsel
Gaetan Philippon, Gerry Wood Products
Mike Pennington, Bassett Furniture
Christine Eames, Product Safety Letter
Roger Amorosi, Detroit Testing Lab.
Robert Waller, JPMA
Jack Walsh, The Danny Foundation
Monica Keeler, Underwriters Laboratories
Terry Emerson, Cosco
Yves Fortin, PSB, Health Canada
Ray Ralli, Evenflo
Mary Pante, Generation II Worldwide
Ron Hoffman, Graco

SUMMARY OF MEETING:

The chairman opened the meeting by giving a brief history of the activities of the subcommittee in its endeavor to determine a) the repeatability of the crib side test procedure in the ASTM F1169 standard and b) whether the test should be revised. The chairman noted that a CPSC staff member had visited his company's laboratory and Detroit Testing Laboratory and measured the velocity of the crib side test impactor at contact when a 35 lb weight was dropped from a height of 3 inches. A table of the results of these tests that included data from similar tests at the CPSC laboratory was distributed (see Attachment A).
The tests demonstrated that the velocity of the impactor upon impact at each of the three labs was very close to the theoretical velocity.

The chairman reported that his company's lab, DTL and CPSC had each conducted additional cyclic load tests on 60 identical crib sides, 20 sides tested at each lab. The tests used a 35 lb weight dropped from 3 inches for a total of 250 drops. No failures were recorded by any of the labs.

A table summarizing cyclic load tests conducted by the CPSC laboratory on crib sides from eight manufacturers was handed out (see Attachment B). The tests were conducted using both a 25 lb and

35 lb weight dropped from 3 inches a total of 250 times. All tests of both drop and stationary sides had been conducted with the sides mounted in the test fixture shown in Fig. 3 of the ASTM F1169 standard. CPSC staff noted that a crib from manufacturer M had been the subject of a recent recall by CPSC because of slat disengagement. Therefore, it was expected that slat disengagements would occur during the tests. CPSC staff noted that only one of nine drop sides tested failed in the 25 lb weight tests but four of eight tested failed in the 35 lb weight tests. It was also noted that a crib from manufacturer KK was recently the subject of a Canadian news release because of reports of the slats in the sides becoming loose and falling out during use. Five sides were tested using the 25 lb weight and no failures occurred. However, the 35 lb weight resulted in three failures and two passes. A CPSC staff proposal for changes to the crib side test in the ASTM F1169 standard was distributed (see Attachment C). The proposal would require that the crib side cyclic test be conducted with a 35 lb weight dropped a total of 250 times. Cyclic load tests of both the drop and stationary sides would be conducted in the test fixture. The cyclic load test would be followed by the current static load test and a torque test of each slat or spindle. In the latter test a failure would be defined by non-compliance with the CPSC spacing of components requirement at 16 CFR Section 1508.4.

After discussion of what would constitute failure during the cyclic and static load tests it was agreed that this would be complete separation of a slat or slats from its adjacent rail. Complete separation would be determined by placing the right triangular prism shaped wedge shown in Fig. 1 of 16 CFR Part 1508 between two spindles or slats adjacent to the rail from which these have separated and applying a 20-lbf (90-N) pull force to the wedge. If a spindle or slat moved away from the hole in the rail in which it was formerly secured, complete separation would have occurred.

Manufacturers were not in favor of conducting the cyclic load test on stationary sides in the test fixture. During discussion it was stated that by testing the stationary side assembled in the crib examines the integrity of the hardware used to secure the side to the crib end panels. CPSC staff agreed to this change to the test procedure and offered to redraft the proposal and forward it to JPMA for distribution to the entire subcommittee prior to the next meeting on March 31.

In a discussion of the rubber pad used to cushion the impact of the falling weight in the cyclic load test, it was agreed that this should be specified in more detail and may be purchased by JPMA for distribution to crib manufacturers or others seeking to perform crib side tests. CPSC staff offered to research a source for the rubber pad.

A final topic of discussion was quality control tests to assure manufacturers that their crib sides would meet the requirements of the revised cyclic test. Sue Ahmed, a CPSC statistician, distributed a graph showing curves to show different sample sizes required to predict the probability that there would be a certain percentage of defectives in a lot. She suggested that if 14 crib sides were tested from each lot produced and no failures resulted, manufacturers could be 95% assured that no more than 20% of the crib sides in the lot would be defective. It was agreed that the JPMA certification committee would discuss quality assurance tests and whether such tests should be a part of the crib certification program.

There being no further business, the meeting was adjourned.

Attachments

COMPARATIVE DATA OF 35 LB. DROPS AT 3 LABORATORIES

	D@MAX (inches)	D@CONTACT (inches)	DROP (inches)	VELOCITY@ CONTACT (ft/sec)	VELOCITY (ft/sec) (theoretical)	ERROR (percent)
CPSC6	4.0531	1.0326	3.0205	4.0255	4.0255	0
CPSC7	4.0531	0.8744	3.1787	4.1201	4.1202	0.0025
CPSC8	4.0531	0.9858	3.0673	3.9999	4.0572	-1.4
CC1	4.8358	1.7839	3.0519	4.1876	4.1394	1.16
CC2*	7.5742	4.4755	3.0987	4.0526	4.0779	-0.6
CC3*	7.5434	4.3505	3.1929	4.1877	4.1394	1.16
DTL1	3.6621	0.8609	2.8012	3.9044	3.8727	0.7
DTL2	3.6621	0.8922	2.7698	3.8097	3.8538	-1.18
DTL3	3.7403	0.9545	2.7858	3.8772	3.9668	0.28

* Cable length changed from position in CC1

ATTACHMENT 'B'

CPSC CRIB SIDE TESTS, January 1998

ALL CRIB SIDE TESTS CONDUCTED USING A DROP HEIGHT OF 3 INCHES.		25 lb WEIGHT		35 lb WEIGHT		TOTAL TESTS
		DROP SIDE	STATIONARY SIDE	DROP SIDE	STATIONARY	
Manufacturer code:M** Pinned and glued? Pins are thin. 9 cribs tested Note: Only 1 drop side failed at 25 lbs.	PASS	8	2	4*		14
	FAIL	1 (8)***	7 (12,31,74,1,136, 33,26)***	4* (28,210,98,200)***		12
Manufacturer code:S Pinned and glued? Pins are medium. 5 cribs tested	PASS	3	2	2	2	9
	FAIL				1 (180)***	1
Manufacturer code:L Pinned and glued? 5 cribs tested	PASS	1	3	2	3	9
	FAIL	1 (60)***				1
Manufacturer code:JJ Pinned and glued? Pins are thin. 5 cribs tested	PASS	2	3	1	2	8
	FAIL			1 (243)***	1 (196)***	2
Manufacturer code:B Pinned and glued? 3 cribs tested	PASS	3*	3*	3*	3*	12
	FAIL					
Manufacturer code:T Glued only. 5 cribs tested	PASS	2	3	3	2	10
	FAIL					
Manufacturer code:KK**** Pinned and glued? Pins are thin. 5 cribs tested	PASS	2	3	1	1	7
	FAIL			2 (11, 168)***	1 (28)***	3
Manufacturer code:C Glued only 20 test sides	PASS			20		20
	FAIL					

* Sides were tested at both test weights.
** Cribs were the subject of a consumer level recall.
*** Order and number of impacts until failure.
**** Several other models from this manufacturer have been the subject consumer complaints because of slat disengagement.
Note: Six sides from manufacturer code T were tested using a 45 lb weight. All experienced separation of end spindles from slight to complete separation.

ATTACHMENT 'C'

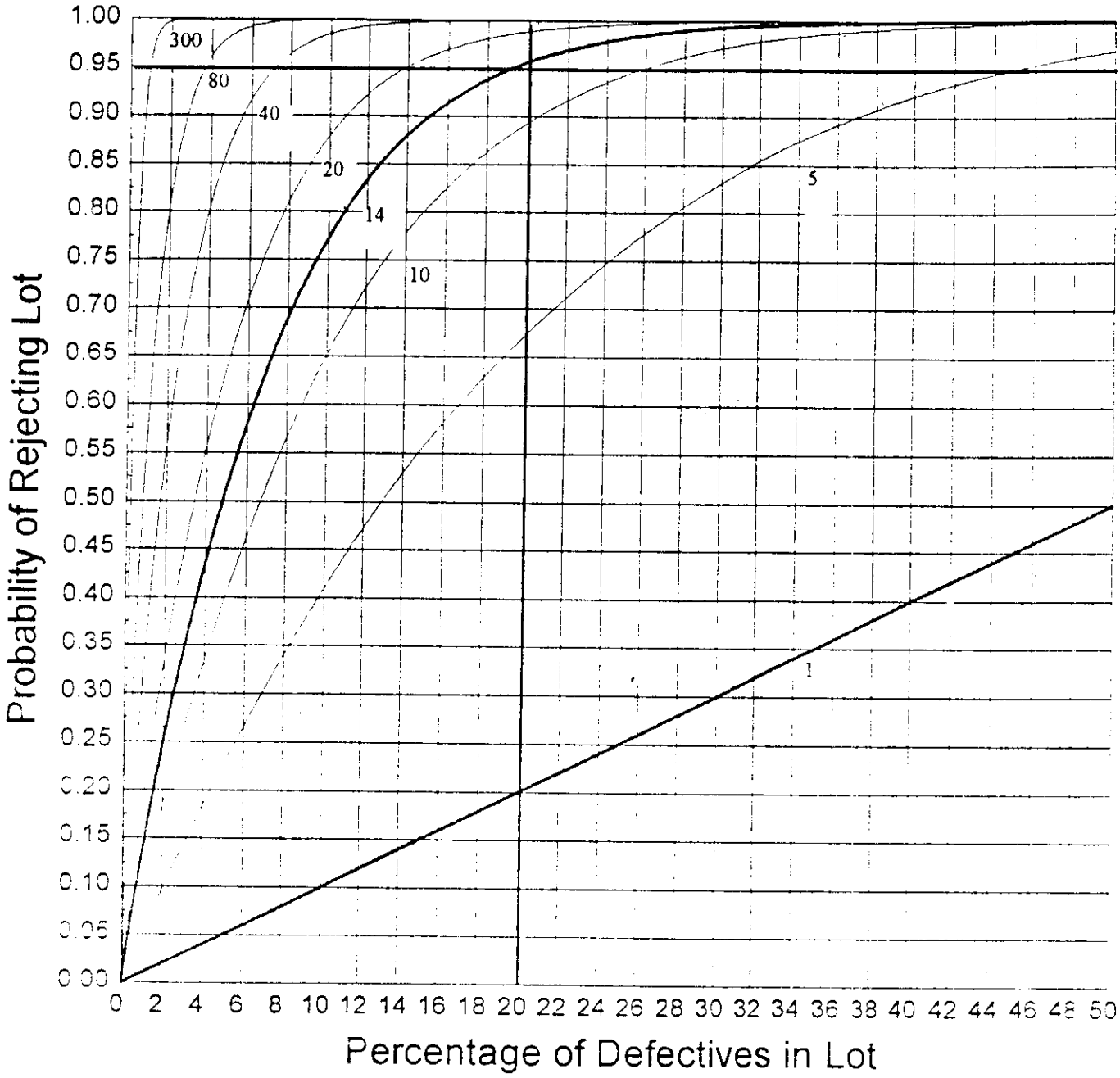

Figure 1. Probability of rejecting the lot as a function of the percentage of defectives in the lot. Curves are for sample sizes of 1, 5, 10, 14, 20, 40, 80, and 300, respectively.