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**CONTINUOUS BASELINE STUDY**

Project 1108-10

Progress Report 93

**FOURDRINIER KRAFT BOARD INSTITUTE, INC.**

April 1, 1955

THE INSTITUTE OF PAPER CHEMISTRY  
Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

Project 1108-13

Progress Report 93

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

April 1, 1955

## THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

In conjunction with the F.K.I. Continuous Baseline Study, one hundred and eighteen different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by sixteen different F.K.I. mills to The Institute of Paper Chemistry for testing during the period March 1 through March 31. In addition to the 42-lb. kraft linerboard, two samples of special drum stock were submitted for evaluation by one of the participating mills. The results on the special stock are tabulated separately in this report. A tabulation of the number of samples classified according to mill may be seen in Table I.

TABLE I  
DISTRIBUTION OF 42-LB. LINERBOARD SAMPLES

Mill Code	Samples Submitted
A	8
B	12
C	8
D	9
E	5
F	5
G	6
H	0
I	5
J	8
K	5
L	8
M	8
N	4
O	2
P	19
Q	6

These sample lots were tested for basis weight, caliper, bursting strength, G. E. puncture, and Elmendorf tear. The average strength results for each mill may be seen in Table II and are graphically presented in Figures 1 to 6. In addition to a comparison of the mill averages for the various tests, Table II also shows the current F.K.I. averages, the cumulative F.K.I. averages, and the F.K.I. indexes. The cumulative F.K.I. average includes all the results up to but not including the current period, which in the case of this report is March 1 through March 31. The F.K.I. indexes are obtained as follows:

$$\frac{\text{current F.K.I. average}}{\text{cumulative F.K.I. average}} \times 100 = \text{F.K.I. index (\%)}$$

The F.K.I. index provides a ready means of comparing the current quality with previous results. For example, the current F.K.I. average basis weight is 43.3 lb., and the cumulative F.K.I. average basis weight is 43.1 lb. Hence, the index for basis weight determined in per cent as indicated above is 100.5. This signifies that the current average basis weight is higher than the cumulative average, which in this covered the period from July 25, 1947, through February 28, 1955.

A comparison of the results in Table II and Figure 1 shows that the average basis weight results for all mills conform to the 42-lb. specification set forth in Rule 41. Mill C has the highest average basis weight, it being 44.7 lb. or approximately 6.4% higher than the 42-lb. specification.

On the other hand, Mill N has the lowest average basis weight, it being 42.2 lb., 0.5% higher than the 42-lb. specification.

The amount by which the mills vary from the 42-lb. specification is as follows:

Mill Code	Per Cent
A	+4.3
B	+2.9
C	+6.4
D	+1.9
E	+4.8
F	+2.4
G	+4.3
H	---
I	+2.9
J	+3.3
K	+3.1
L	+2.4
M	+3.8
N	+0.5
O	+1.0
P	+5.0
Q	+2.6

A comparison of the average basis weight data for the previous period with the current F.K.I. average indicates that the basis weight results have increased slightly.

A comparison of the average caliper values for the various mills (see Figure 2) shows that the mill averages vary from a low of 11.8 for Mill N to a high of 14.0 for Mill C, the average being 13.0 which is considerably lower than the cumulative current F.K.I. average of 13.7.

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed in Table II that the average bursting strength values for the various mills range from a low of 107 for Mills F and G to a high of 116 for Mills I, O, and Q. The current F.K.I. average bursting strength is 112, which is higher than the cumulative F.K.I. average of 107.

The data of Table II and Figure 4 show that the current F.K.I. average G.E. puncture for all mills is 37 units. Mill P has the highest G.E. puncture average, 42 units, and Mills B, G, and I share the lowest average, 34 units. The current F.K.I. G.E. puncture average of 37 units is slightly higher than the cumulative F.K.I. average of 36 units.

A graphic comparison of the Elmendorf tear results for the various mills is given in Figures 5 and 6. The data of Table II show that Mill P has the highest average machine direction tear value whereas Mill B has the lowest. Mill F has the highest cross-machine tear value and Mill B has the lowest value. It may be noted that the current F.K.I. average machine and cross-machine direction tear results are lower than the cumulative averages.

A comparison of the F.K.I. indexes indicate that, for the current period, the current F.K.I. averages for caliper and Elmendorf tear are lower than the respective cumulative F.K.I. averages, whereas the current F.K.I. averages for basis weight, bursting strength, and G. E. puncture are higher than the cumulative F.K.I. averages.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XIX for Mills A to Q, respectively. In addition to the current and cumulative averages, the mill factor and mill index are given for each mill. The cumulative mill average is the average test result obtained on the samples submitted by the particular mill up to, but not including, the current average. The mill factor and the mill index are obtained as follows:

$$\frac{\text{current mill average}}{\text{cumulative mill average}} \times 100 = \text{mill factor (\%)}$$

$$\frac{\text{current mill average}}{\text{cumulative F.K.I. average}} \times 100 = \text{mill index (\%)}$$

The mill factor and the mill index serve as a ready means for comparing the current mill results either with the previous results for that particular mill or with the cumulative F.K.I. results. As the test data accumulate, the factors and indexes acquire added significance. The reports also contain a comparison of the test data obtained at the mills with test data obtained at The Institute of Paper Chemistry.

The results obtained on the special drum stock may be seen in Table XX.

It may be noted in Tables III through XX that the test data include information about the sheet finish. The summarized results for the mills which submitted sample lots during the current period are as follows:

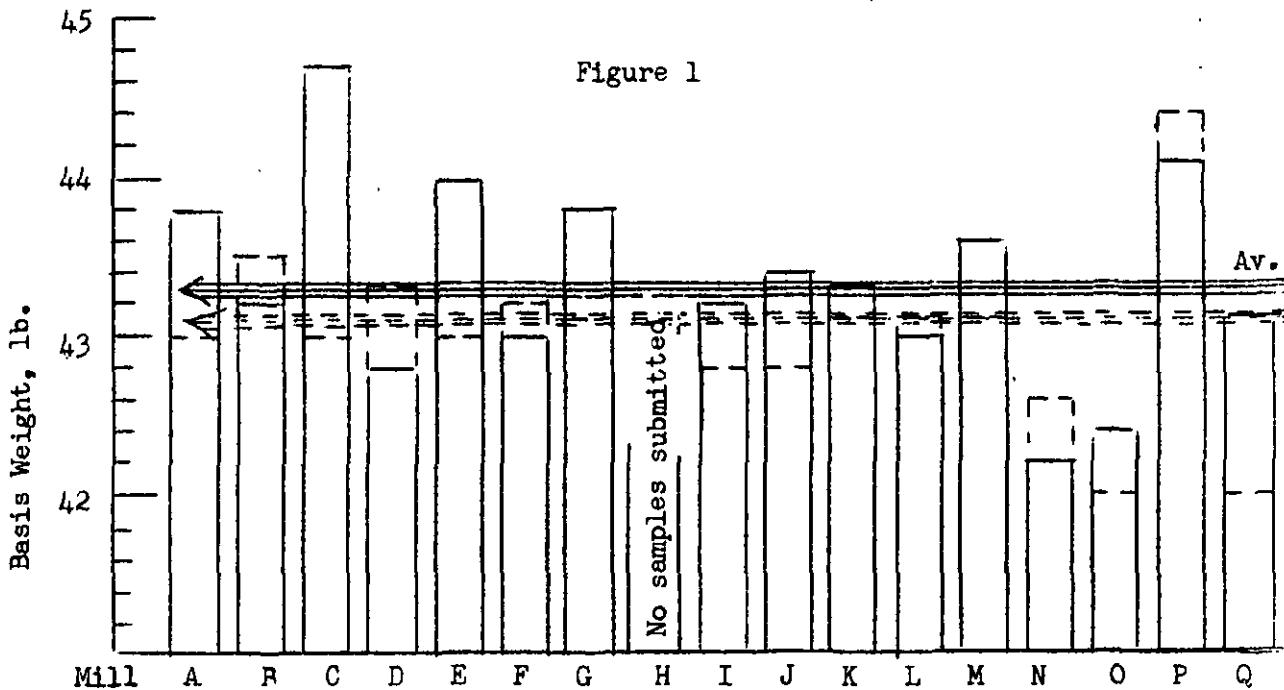
Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
A	8a		
B	12a		
C	8		
D	9		
E	5a		2 <sup>a,b</sup>
F	5		
G	6		
I	5 <sup>a</sup>		
J			8 <sup>d</sup>
K	5		
L			8 <sup>c</sup>
M	8		
N	3 <sup>a</sup>		1 <sup>c</sup>
O	2		
P	19		
Q			6 <sup>c</sup>

- <sup>a</sup> One side only
- <sup>b</sup> Drum linerboard
- <sup>c</sup> Sheet finish not reported
- <sup>d</sup> Semi-water finish

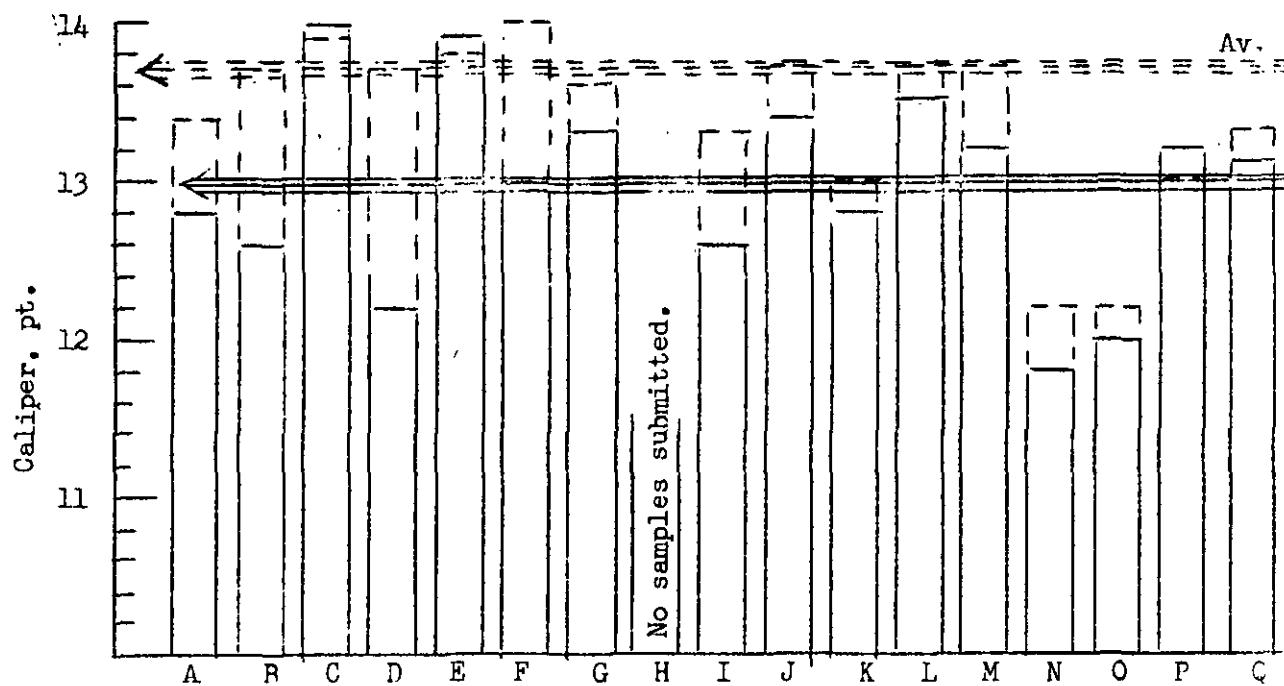
The results indicate that a majority of the mills are using a water finish on their 42-lb. linerboard.

TABLE II  
SUMMARY OF COMPOSITE MILL AVERAGES--MARCH 1 THROUGH MARCH 31, 1955

Code No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet	
					In Direction Across	Direction
A	43.8	12.8	114	39	366	4.00
B	43.2	12.6	111	34	303	3.52
C	44.7	14.0	109	38	352	3.84
D	42.8	12.2	112	38	368	3.96
E	44.0	13.9	113	38	375	3.84
F	43.0	13.0	107	40	386	4.23
G	43.8	13.3	107	34	316	3.57
H	No samples submitted.					
I	43.2	12.6	116	34	322	3.77
J	43.4	13.4	115	36	373	3.83
K	43.3	12.8	108	40	399	3.94
L	43.0	13.5	108	36	332	3.80
M	43.6	13.2	108	36	359	3.85
N	42.2	11.8	114	40	350	3.96
O	42.4	12.0	116	37	363	3.91
P	44.1	13.2	114	42	400	4.13
Q	43.1	13.1	116	36	359	3.82
Current FKI Average:	43.3	13.0	112	37	358	3.87
Cumulative FKI Average:	43.1	13.7	107	36	367	4.00
FKI, Index:	100.5	94.9	104.7	102.8	97.5	96.8

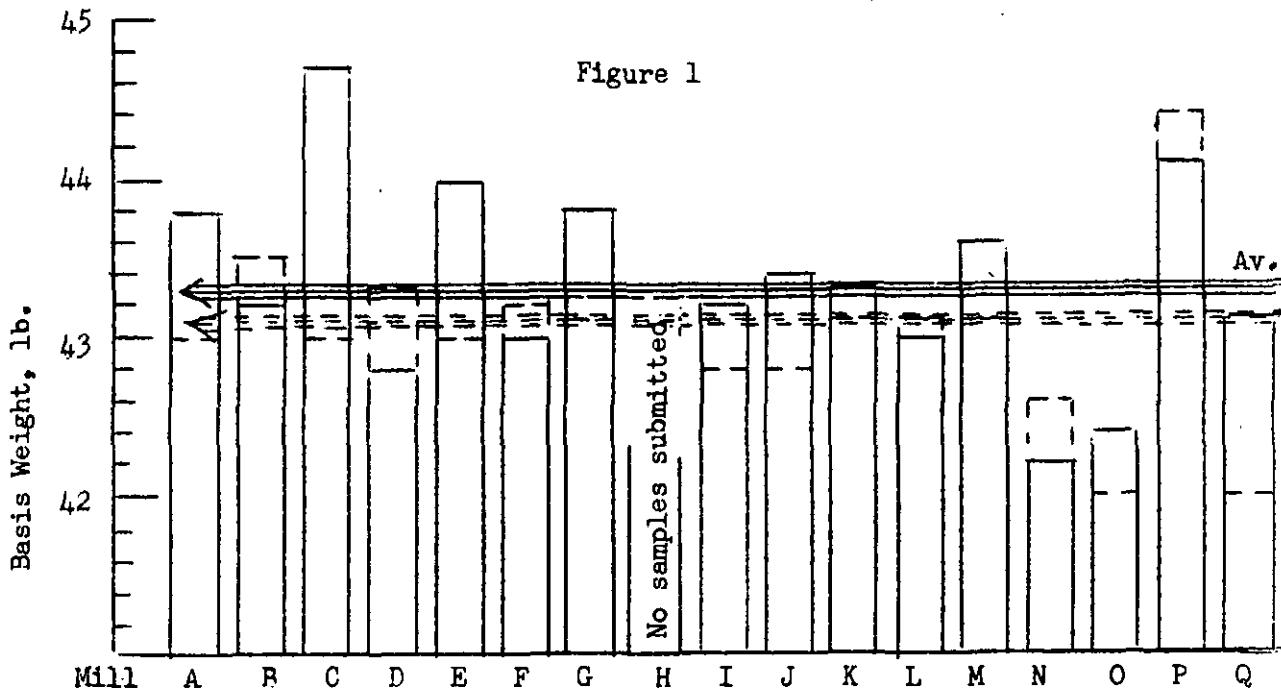


COMPARISON OF BASIS WEIGHT RESULTS  
(Period March 1--March 31, 1955)

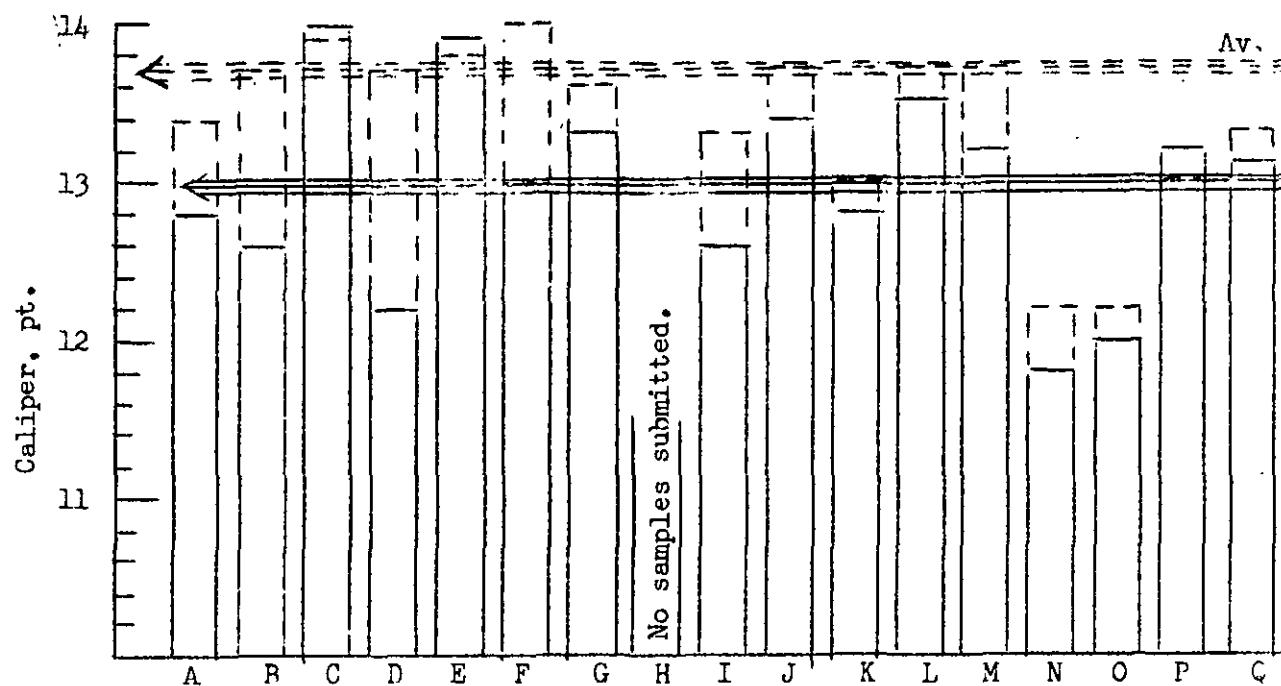


COMPARISON OF CALIPER RESULTS  
(Period March 1--March 31, 1955)

— Current mill average  
- - - - Cumulative mill average

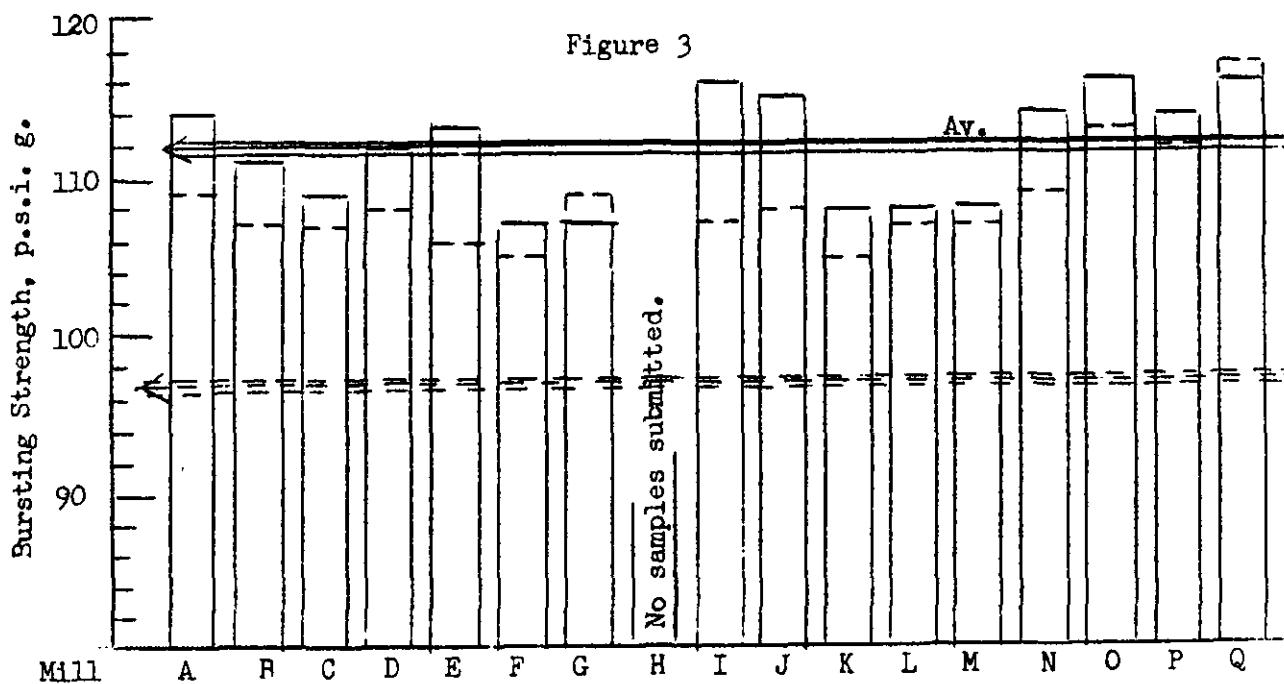


COMPARISON OF BASIS WEIGHT RESULTS  
(Period March 1--March 31, 1955)

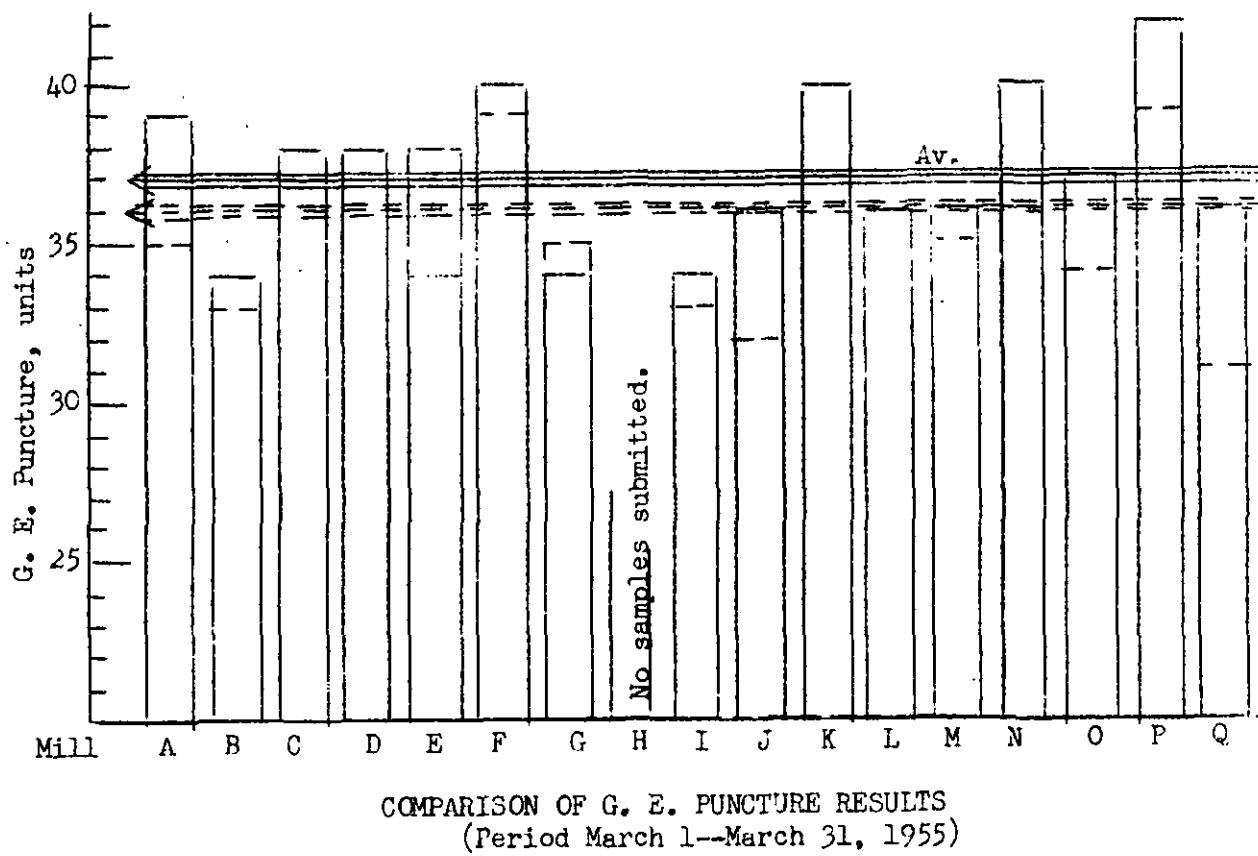


COMPARISON OF CALIPER RESULTS  
(Period March 1--March 31, 1955)

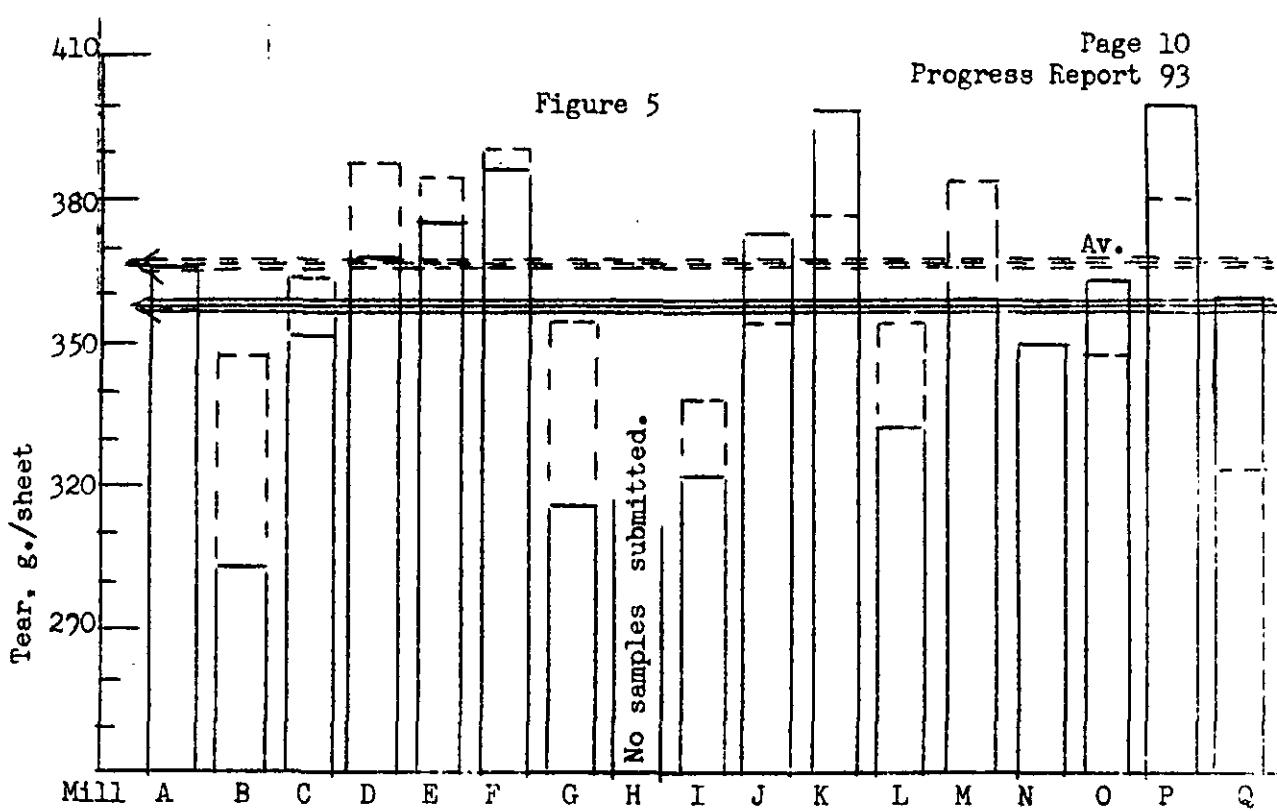
— Current mill average  
- - - Cumulative mill average



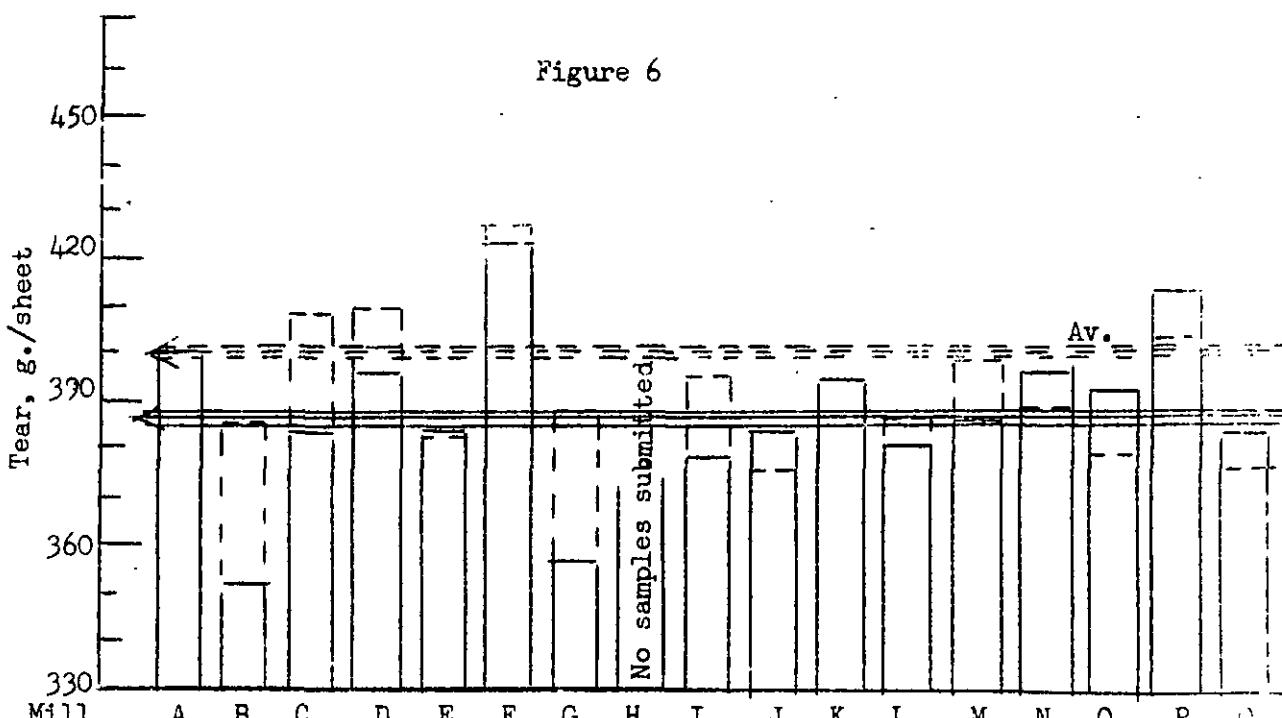
COMPARISON OF BURSTING STRENGTH RESULTS  
(Period March 1--March 31, 1955)



COMPARISON OF G. E. PUNCTURE RESULTS  
(Period March 1--March 31, 1955)



COMPARISON OF TEAR RESULTS, Machine Direction  
(Period March 1--March 31, 1955)



COMPARISON OF TEAR RESULTS, Cross-Machine Direction  
(Period March 31, 1955)

TABLE III  
IAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955

Caliper, points Max. Min.	Av.	Bursting Strength, P.s.i. gage			G. E. Puncture, units			Elmendorf Tear, g./sheet				
		Max.	Min.	Av.	Max.	Min.	Av.	In Max.	Min.	Av.	Across Max.	Min.
<u>Mill A--42-lb. Linerboard</u>												
3	13.3	12.6	13.0	127	90	112	44	35	40	304	352	391a
5	12.9	12.2	12.5	136	79	112	45	38	40	432	432	401a
4	13.4	12.8	13.1	140	90	118	41	34	38	392	312	344
1	13.2	12.8	13.0	132	98	114	42	35	38	376	320	384a
4	13.8	12.4	12.9	146	100	114	40	35	37	432	288	360
5	13.3	12.1	12.9	130	100	110	41	36	39	424	336	397a
0	13.4	12.6	13.1	139	102	116	45	36	40	464	336	416a
4	12.3	11.5	12.0	133	99	112	41	33	38	416	288	368
8		12.8			114			39		366		399a
0	13.4			109			35		357		400	
9		95.5			104.6			111.4		102.5		100.0
6		93.4			106.5			108.3		99.7		100.0

ens which tore beyond the 3/8-inch limit.

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TABLE III  
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units
						Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.
<u>Mill A---42-lb. Linerboard</u>									
162600	A-630	WFIS	3/3/55	2/27/55	2	44.4	42.0	43.8	13.3
162601	A-631	WFIS	3/3/55	2/23/55	1	44.0	42.0	43.5	12.2
162746	A-632	WFIS	3/16/55	3/8/55	2	45.2	43.8	44.4	13.4
162747	A-633	WFIS	3/16/55	3/9/55	2	45.0	43.6	44.1	13.2
162974	A-634	WFIS	3/19/55	3/13/55	2	44.0	42.6	43.4	13.8
162975	A-635	WFIS	3/19/55	3/14/55	1	44.0	42.6	43.6	13.3
163185	A-636	WFIS	3/28/55	3/20/55	2	45.6	44.6	45.0	13.4
163186	A-637	WFIS	3/22/55	3/21/55	1	43.0	42.2	42.4	12.3
Current Mill Average:						43.8	42.8	43.8	12.8
Cumulative Mill Average:						43.0	41.4	43.0	11.4
Mill Factor, %:						101.9	95.5	104.6	111.4
Mill Index, %:						101.6	93.4	106.5	108.3

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE IV  
TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

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which tore beyond the 3/8-inch limit.

108 F-7 sheet. One of the F-6 sheets was arbitrarily changed to F-7.

TABLE IV

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1b.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units							
										Max.	Min.	Av.	Max.	Min.	Av.	M <sub>c</sub>
<u>Mill B-42-1b. Linerboard</u>																
162620	B-1159	WF1S	3/ 8/55	2/16/55	1	44.6	42.4	43.5	13.0	12.0	12.5	124	100	110	31	34
162621	B-1160	WF1S	3/ 8/55	2/16/55	1	44.4	42.6	43.6	13.1	11.9	12.4	131	101	115	37	35
162622	B-1161	WF1S	3/ 8/55	2/16/55	1	45.6	43.0	44.0	13.1	12.1	12.7	133	103	116	38	32
162623	B-1162	WF1S	3/ 8/55	2/16/55	1	44.6	42.6	43.7	13.0	12.2	12.7	129	101	113	38	31
162690	B-1163 <sup>b</sup>	WF1S	3/14/55	2/28/55	1	42.6	41.8	42.1	13.0	11.9	12.4	123	100	108	36	30
162691	B-1164	WF1S	3/14/55	2/28/55	1	43.2	42.0	42.6	12.9	12.0	12.4	126	93	109	35	31
162692	B-1165	WF1S	3/14/55	2/28/55	1	44.0	42.4	43.4	13.2	11.9	12.6	128	101	111	37	32
162693	B-1166	WF1S	3/14/55	2/28/55	1	42.8	41.6	42.2	12.9	11.8	12.4	126	94	112	36	31
162694	B-1167	WF1S	3/14/55	2/28/55	1	44.4	41.8	42.6	13.0	12.0	12.4	123	100	110	37	31
162695	B-1168	WF1S	3/14/55	2/28/55	1	44.4	42.0	43.2	13.2	12.0	12.6	125	91	111	36	31
162696	B-1169	WF1S	3/14/55	2/28/55	1	44.0	42.0	43.5	13.2	12.2	12.8	126	86	108	38	32
162697	B-1170	WF1S	3/14/55	2/28/55	1	44.8	42.2	43.8	13.3	12.2	12.8	136	100	112	38	31
Current Mill Average																
							43.2			12.6		111		34		
Cumulative Mill Average:																
							43.5			13.7		107		33		
Mill Factor, %:																
							99.3			92.0		103.7		103.0		
Mill Index, %:																
							100.2			92.0		103.7		94.4		

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.<sup>b</sup> The sample received by the Institute had two F-6 sheets but no F-7 sheet. One of the F-6 sheets was arbitrarily ch-

TABLE 7

TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, points	Bursting Strength, p.s.i. gage			G. E. Puncture, units			Elmendorf Tear, g./sheet		
	Max.	Min.	Av.	Max.	Min.	Av.	In	Across	Av.
<u>Mill C--42-lb. Linerboard</u>									
15.1	13.9	14.4	133	82	109	40	37	384	272
15.2	14.0	14.5	126	90	110	40	35	440	272
14.9	13.4	14.2	127	77	106	38	30	368	288
14.9	14.0	14.3	128	85	104	39	32	360	288
14.8	13.2	14.0	135	87	112	45	38	448	352
14.8	13.8	14.2	140	90	113	45	40	42	440
13.9	12.9	13.4	131	85	110	41	34	37	464
13.9	12.4	13.3	138	85	108	40	35	408	312
14.0				109			38	352	384
13.9				107			37	364	408
100.7				101.9			102.7	96.7	94.1
102.2				101.9			105.6	95.9	96.0

which tore beyond the 3/8-inch limit.

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TABLE 7

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points	Bursting Strength, p.s.i. gage			G. E. Puncture, units						
						Max.	Min.	Avg.		Max.	Min.	Avg.	Max.	Min.	Avg.				
<u>Mill C--42-lb. Linerboard</u>																			
162612	C-641	W.F.	3/ 7/55	2/19/55	1	46.0	44.2	45.0	15.1	13.9	14.4	133	82	109	40	34	384	27	
162613	C-642	W.F.	3/ 7/55	2/19/55	1	46.0	44.0	44.8	15.2	14.0	14.5	126	90	110	40	35	38	440	27
162614	C-643	W.F.	3/ 7/55	2/22/55	1	44.4	42.8	43.8	14.9	13.4	14.2	127	77	106	38	30	35	368	28
162615	C-644	W.F.	3/ 7/55	2/22/55	1	45.4	42.6	43.9	14.9	14.0	14.3	128	85	104	39	32	36	360	28
162616	C-645	W.F.	3/ 7/55	3/ 1/55	1	46.4	44.6	45.7	14.8	13.2	14.0	135	87	112	45	38	42	448	35
162617	C-646	W.F.	3/ 7/55	3/ 1/55	1	47.2	45.0	46.2	14.8	13.8	14.2	140	90	113	45	40	42	440	32
162678	C-647	W.F.	3/12/55	3/ 4/55	1	44.4	43.6	43.8	13.9	12.9	13.4	131	85	110	41	34	37	464	31
162679	C-648	W.F.	3/12/55	3/ 4/55	1	45.4	43.2	44.0	13.9	12.4	13.3	138	85	108	40	35	38	408	31
Current Mill Average:						44.7				14.0			109			38			
Cumulative Mill Average:						43.0				13.9			107			37			
Mill Factor, %:						104.0				100.7			101.9			102.7			
Mill Index, %:						103.7				102.2			101.9			105.6			

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE VI

L TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, Points Max. Min.	Av.	Bursting Strength, p.s.i. gage	G. E. units	Puncture, Max. Min.	Av.	Max. Min.	Av.	Max. Min.	Av.	Max. Min.	Av.	Elmendorf Tear, g./sheet	
<u>Mill D--42-1b. Linerboard</u>													
12.6	12.0	12.3	128	92	111	42	36	39	464	386	365 <sup>a</sup>	448	338
12.4	11.7	12.1	128	96	110	42	34	38	464	392 <sup>a</sup>	424	448	393 <sup>a</sup>
12.3	11.8	12.0	123	100	110	43	36	39	464	336	375 <sup>a</sup>	416	344
12.4	11.8	12.1	127	87	110	42	36	39	384	312	360 <sup>a</sup>	432	344
12.7	11.8	12.3	128	90	109	40	34	37	448	328	381 <sup>a</sup>	448	344
13.0	11.9	12.3	137	95	114	41	35	38	384	312	342 <sup>a</sup>	448	352
13.0	11.9	12.4	135	97	113	42	36	38	440	320	382 <sup>a</sup>	416	344
12.9	11.5	12.1	120	88	110	40	32	37	440	296	347 <sup>a</sup>	504	344
13.0	11.8	12.3	146	91	123	40	34	38	416	304	367 <sup>a</sup>	464	368
			12.2		112		38		368		396		
			13.7		108		38		387		409		
			89.1		103.7		100.0		95.1		96.3		
			89.1		104.7		105.6		100.3		100.0		

which tore beyond the 3/8-inch limit.

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TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb. Max. Min. Av.	Caliper, points Max. Min. Av.	Bursting Strength, P.s.i. gage Max. Min. Av.	G. E. Puncture, units Max. Min. Av.		
									Mill D--42-lb. Linerboard		
162564	D-841	W.F.	3/16/55	2/23/55	4	44.2	43.6	12.0	12.5	92	111
162738	D-842	W.F.	3/16/55	3/1/55	4	43.2	42.0	12.4	11.7	90	110
162739	D-843	W.F.	3/16/55	3/2/55	4	43.6	42.0	12.3	11.8	12.0	123
162740	D-844	W.F.	3/16/55	3/3/55	4	43.2	42.0	12.4	11.8	12.1	127
163031	D-845	W.F.	3/23/55	3/15/55	4	43.2	42.0	12.7	11.8	12.3	128
163032	D-846	W.F.	3/23/55	3/16/55	4	42.2	41.2	11.8	13.0	11.9	137
163033	D-847	W.F.	3/23/55	3/17/55	4	43.2	41.6	13.0	11.9	12.4	135
163096	D-848	W.F.	3/24/55	3/18/55	4	44.4	42.4	13.3	11.5	12.1	120
163097	D-849	W.F.	3/24/55	3/19/55	4	44.0	43.0	13.0	11.8	12.3	146
Current Mill Average:						42.8		12.2		112	38
Cumulative Mill Average:						43.3		13.7		108	38
Mill Factor, %:						98.8		89.1		103.7	100.0
Mill Index, %:						99.3		89.1		104.7	105.6

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE VII

WALT TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955--continued

માર્ગદર્શિકા

<u>Mill</u>	<u>F-42-1b.</u>	<u>Linerboard</u>
13.3	12.2	12.8
13.3	12.1	12.9
14.2	12.3	13.3
13.5	12.2	12.8
13.9	12.7	13.2
		13.0
		14.0
		92.9
		94.9

which tore beyond the 3/8-inch limit.

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TABLE VII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955--continued

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1lb.			Caliper, points			Bursting Strength, p.s.i. gage			G. E. Puncture, units		
						Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.
<u>Mill E--42-1b. Linerboard</u>																	
162567	E-132	WFIS	3/ 1/55	2/22/55	2	46.0	44.0	44.8	15.0	14.0	14.3	126	90	112	38	34	36
162680	E-134	WFIS	3/12/55	3/ 9/55	2	44.8	42.4	43.9	14.2	13.3	13.9	119	70	104	39	35	37
163044	E-136	WFIS	3/23/55	3/17/55	2	44.0	42.4	43.0	13.8	12.7	13.2	137	101	115	39	34	36
163122	E-137	WFIS	3/25/55	3/22/55	2	45.0	42.4	44.0	14.7	13.8	14.2	133	100	116	43	34	36
163175	E-138	WFIS	3/26/55	3/23/55	2	44.8	43.6	44.2	14.2	13.3	13.9	134	96	120	41	36	39
Current Mill Average:						44.0			13.9			113			38		
Cumulative Mill Average:						43.0			13.8			106			34		
Mill Factor, %:						102.3			100.7			106.6			111.8		
Mill Index, %:						102.1			101.5			105.6			105.6		

TABLE VIII

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1lb.			Caliper, points			Bursting Strength, p.s.i. gage			G. E. Puncture, units		
						Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.
<u>Mill F--42-1b. Linerboard</u>																	
162624	F-10	W.B.	3/ 8/55	2/11/55	-	44.0	41.6	42.4	13.3	12.2	12.8	120	87	102	42	34	38
162625	F-11	W.B.	3/ 8/55	2/14/55	-	43.6	41.0	42.5	13.3	12.1	12.8	122	100	111	45	36	40
162626	F-12	W.B.	3/ 8/55	2/21/55	-	44.0	42.0	43.5	14.2	12.3	13.3	127	86	105	51	39	43
162627	F-13	W.B.	3/ 8/55	2/22/55	-	44.0	42.0	43.0	13.5	12.2	12.8	129	83	111	43	35	39
163180	F-14	W.B.	3/28/55	3/ 1/55	-	44.2	42.0	43.4	13.9	12.7	13.2	130	90	106	41	34	38
Current Mill Average:						43.0			13.0			107			40		
Cumulative Mill Average:						43.2			14.0			105			39		
Mill Factor, %:						99.5			92.9			101.9			102.6		
Mill Index, %:						99.8			94.9			100.0			111.1		

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

UAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

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X

Misti H-42-1b's innerboard

No samples submitted.

which tore beyond the 3/8-inch limit.

## TABLE

## SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Rec'd.	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, P.s.i. gage			G. E. Puncture, Units			I Max. Min. Av.	I Max. Min.				
								Max.	Min.	Av.	Max.	Min.	Av.						
<u>Mill G--42-1b. Linerboard</u>																			
162602	G-634	W.F.	3/3/55	2/18/55	2	44.8	43.2	43.9	14.3	13.0	13.7	130	77	101	44	34	37	362	248
162603	G-635	W.F.	3/3/55	2/21/55	2	45.0	43.6	44.3	14.2	13.0	13.5	131	88	108	38	33	35	352	256
162748	G-636	W.F.	3/16/55	3/4/55	2	46.0	43.0	44.4	14.0	12.4	13.1	125	92	108	39	31	35	384	288
162749	G-637	W.F.	3/16/55	3/4/55	2	44.6	43.2	43.9	13.6	12.2	12.9	132	95	106	36	31	33	400	296
163183	G-638 <sup>b</sup>	W.F.	3/28/55	3/11/55 <sup>c</sup>	2	44.2	42.2	43.4	13.7	12.9	13.3	124	92	111	36	31	33	352	224
163184	G-639 <sup>f</sup>	W.F.	3/28/55	3/11/55 <sup>c</sup>	2	43.6	42.2	42.9	13.8	12.4	13.2	131	84	103	35	29	32	328	224
Current Mill Average:						43.8			13.3			107			34				
Cumulative Mill Average:						43.1			13.6			109			35				
Mill Factor, %:						101.6			97.8			98.2			97.1				
Mill Index, %:						101.6			97.1			100.4							
<u>Mill H--42-1b. Linerboard</u>																			

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

No samples submitted.

TABLE XI

J TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, points	Max. Min.	Av.	Bursting Strength, P.s.i. gage	G. E. Puncture, units	In Across	Elmendorf Tear, g./sheet			
			Max. Min.	Av.		Max. Min.	Av.	Max. Min.	
<u>Mill I--L2-1b. Linerboard</u>									
13.6	12.2	12.8	120	83	36	32	33	384	224
13.2	12.0	12.5	127	100	114	37	31	392	280
12.8	12.0	12.4	142	93	121	39	33	392	272
13.1	12.0	12.6	140	87	119	37	29	368	288
13.1	12.2	12.5	137	101	120	37	30	376	288
		12.6		116			34		322
		13.3		107			33		339
		94.7		108.4			103.0		95.0
		92.0		108.4			94.4		87.7
									94.2

which tore beyond the 3/8-inch limit.

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TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1lb.	Caliper, points	Bursting Strength, P.s.i. gage	G. E. Puncture, units			
									Max.	Min.	Av.	
<u>Mill I-42-1b. Linerboard</u>												
162609	I-454	WFIS	3/ 5/55	3/ 1/55	1	43.8	42.0	12.2	120	83	105	36
162681	I-455	WFIS	3/12/55	3/ 7/55	1	43.8	42.4	13.3	120	12.5	127	114
152682	I-457	WFIS	3/12/55	3/ 8/55	1	44.4	42.6	13.5	12.0	12.4	142	93
163047	I-457	WFIS	3/23/55	3/16/55	1	43.8	42.6	13.2	12.0	12.6	140	87
163182	I-458	WFIS	3/28/55	3/18/55	1	44.2	42.0	12.9	13.1	12.2	137	119
Current Mill Average:						43.2		12.6		116		34
Cumulative Mill Average:						42.8		13.3		107		33
Mill Factor, %:						100.9		94.7		108.4		103.0
Mill Index, %:						100.2		92.0		108.4		94.4

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XII

## DUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, points	Max. Min.	Av.	Bursting Strength,	G. E.	Elementor Tear, g./sheet
			P.s.i. gage	Puncture, units	
<u>M-11 J-42-lb. Liverboard</u>					
14.0	12.5	13.4	125	92	38
14.7	13.0	13.6	124	103	38
14.1	13.0	13.6	140	93	42
14.0	12.8	13.4	130	102	41
13.6	12.5	13.1	142	101	39
13.8	12.4	13.0	136	104	38
14.3	12.7	13.5	136	103	39
14.5	12.8	13.5	125	101	37
					34
13.4					30
13.7					32
97.8					37
97.8					39
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TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish Recd.	Date Made	Date	Mch. No.	Basis Weight,			Caliper, points	Bursting Strength, P.s.i. gage			G. E. Puncture, units		
						Max.	Min.	Avg.		Max.	Min.	Avg.	Max.	Min.	Avg.
<u>Mill J-42-1b. Linerboard</u>															
162562	J-519	B.F.	3/ 1/55	2/16/55	--	44.6	42.0	43.4	14.0	12.5	13.4	92	113	38	30
162563	J-520	B.F.	3/ 1/55	2/21/55	--	45.5	42.0	44.2	14.7	13.0	13.6	124	103	112	38
162597	J-521	B.F.	3/ 3/55	2/22/55	--	44.2	42.2	43.3	14.1	13.0	13.6	140	93	116	42
162598	J-522	B.F.	3/ 3/55	2/22/55	--	44.4	42.2	43.4	14.0	12.8	13.4	130	102	115	41
162735	J-523	B.F.	3/15/55	3/ 4/55	--	44.6	41.8	42.9	13.6	12.5	13.1	142	101	119	38
162736	J-524	B.F.	3/15/55	3/ 4/55	--	44.2	41.8	43.0	13.8	12.4	13.0	136	104	118	39
163042	J-525	B.F.	3/23/55	3/12/55	--	44.2	42.2	43.2	14.3	12.7	13.5	136	103	117	39
163043	J-526	B.F.	3/23/55	3/12/55	--	44.2	42.0	43.2	14.5	12.8	13.5	125	101	112	37
Current Mill Average:						43.4		13.4				115		36	
Cumulative Mill Average:						42.8		13.7				108		32	
Mill Factor, %:						101.4		97.8				106.5		112.5	
Mill Index, %:						100.7		97.8				107.5		100.0	

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XIII

IAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

which tore beyond the 3/8-inch limit.

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TABLE XIII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Late Recd.	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Punctuation, units
						Max. Min. Av.	Max. Min. Av.	Max. Min. Av.	Max. Min. Av.
<u>Mill K-42-1b. Linerboard</u>									
162568	K-5	S.F.	3/ 1/55	2/15/55	7	44.8	42.0	12.1	12.7
162599	K-6	S.F.	3/ 3/55	2/22/55	7	44.2	42.0	13.7	12.3
162672	K-7	S.F.	3/ 11/55	3/ 3/55	7	44.8	40.2	42.3	13.0
162967	K-8	S.F.	3/ 18/55	3/ 7/55	7	44.8	43.2	13.8	13.0
163078	K-9	S.F.	3/24/55	3/14/55	7	44.2	42.2	13.4	12.1
Current Mill Average:									
						43.3	42.8	12.8	108
Cumulative Mill Average:									
						43.1	13.0	105	37
Mill Factor, %:									
						100.5	98.5	102.9	108.1
Mill Index, %:									
						100.5	93.4	100.9	111.1

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE LIV

UAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, points Max. Min.	Av.	P.s.i. gage Max. Min. Av.	Bursting Strength, P.s.i. gage Max. Min. Av.	G. E. Puncture, units Max. Min. Av.	Elmendorf Tear, g./sheet			In Across Max. Min. Av.	G. E. Puncture, units Max. Min. Av.	Elmendorf Tear, g./sheet		
					Max.	Min.	Avg.			Max.	Min.	Avg.
<u>Hill L-42-1b. Linerboard</u>												
14.4	12.0	13.4	14.1	81	108	41	33	36	384	280	328a	416
14.6	12.8	14.0	127	91	112	41	33	36	360	272	325a	408
13.1	11.2	12.4	14.4	101	114	37	31	34	400	272	315a	448
16.7	14.9	15.7	126	85	102	41	34	38	376	312	341a	464
14.4	11.9	13.1	152	88	116	38	32	36	384	288	335a	408
14.3	12.2	13.5	137	88	108	42	36	38	368	304	328a	432
13.5	12.0	12.7	127	72	102	39	36	38	424	288	343a	424
14.3	12.0	13.3	123	88	105	39	34	36	400	312	340a	424
			13.5	108			36			332		380
			13.7	107			36			354		386
98.5					100.0				100.0	93.8		98.4
98.5					100.9				100.9	90.5		95.0

which tore beyond the 3/8-inch limit.

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TABLE XIV.

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Finnish Recd.	Date Recd.	Date Made	Mch. No.	Basis Weight, 1b.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units
<u>Mill L-42-1b. Innerboard</u>									
162666	L-335	3/11/55	2/ 3/55	1	45.0	41.0	43.2	14.4	81
162667	L-336	3/11/55	2/ 5/55	1	44.0	41.8	42.8	14.6	91
162668	L-337	3/11/55	2/ 8/55	1	43.8	41.6	42.4	13.1	101
162669	L-338	3/11/55	2/11/55	1	44.6	40.0	43.2	16.7	144
162670	L-339	3/11/55	2/14/55	1	44.4	42.0	43.5	14.4	11.2
162671	L-340	3/11/55	2/19/55	1	44.2	41.6	43.0	11.9	11.2
163079	L-341	3/24/55	2/21/55	1	44.0	41.6	42.8	12.0	12.7
163080	L-342	3/24/55	2/24/55	1	44.4	41.6	43.0	14.3	12.0
Current Mill Average:									
Cumulative Mill Average: <sup>a</sup>									
Mill Factor, %:									
Mill Index, %:									

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XV

EST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, points	Max.	Min.	Av.	Bursting Strength,	G. E. Puncture, units	Elmendorf Tear, g./sheet	
				P.s.i. gage Max. Min. Av.	Max. Min. Av.	In Across	
<u>Mill M-42-lb. Linerboard</u>							
13.4	12.8	13.1	12.6	84	109	34	384
13.3	12.3	12.9	12.0	89	106	38	304
13.8	12.8	13.2	11.9	87	102	39	296
13.7	12.7	13.2	12.9	88	108	32	338a
14.0	13.0	13.5	12.0	93	109	36	400
14.1	13.0	13.4	11.9	92	104	35	424
13.6	12.8	13.1	14.1	104	120	37	340a
13.9	12.9	13.3	11.7	94	105	34	328
							328
							374a
							377a
							395a
							352
							364a
							440
							378a
							432
							360
							395a
							360
							383a
							352
							391a
							352
							377a
							385
							385
							398
							383
							93.7
							96.7
							96.2
							96.2

which tore beyond the 3/8-inch limit.

D-8, and F-8 sheets. The B-7, D-7, and F-7 sheets were missing. One of each 7, D-7, and F-7, respectively.

The mill data sheet gives the date of manufacture as March 10, 1955.

TABLE XV

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish Recd.	Date Made	Date Recd.	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage			G. E. Puncture, units		
								Max.	Min.	Avg.	Max.	Min.	Avg.
<u>Mill M--42-lb. Linerboard</u>													
162565	M-296	W.	3/ 1/55	2/21/55	2	45.0	42.0	43.5	13.4	12.8	13.1	126	84
162566	M-297	W.	3/ 1/55	2/23/55	2	45.2	40.2	43.1	13.3	12.3	12.9	120	89
162610	M-298	W.	3/ 7/55	2/27/55	2	45.6	42.0	43.3	13.8	12.8	13.2	119	87
162611	M-299	W.	3/ 7/55	2/28/55	2	45.0	42.0	43.4	13.7	12.7	13.2	129	88
162698	M-300 <sup>b</sup>	W.	3/14/55	3/ 9/55	4	44.8	43.2	44.0	14.0	13.0	13.5	120	93
162699	M-301	W.	3/14/55	3/ 9/55 <sup>c</sup>	4	44.6	42.8	43.7	14.1	13.0	13.4	119	92
163048	M-302	W.	3/23/55	3/15/55	2	45.2	42.4	43.7	13.6	12.8	13.1	141	104
163049	M-303	W.	3/23/55	3/18/55	4	45.8	43.6	44.4	13.9	12.9	13.3	117	94
Current Mill Average						43.6		43.6	13.2		108		36
Cumulative Mill Average:						43.1		43.1	13.7		107		35
Mill Factor, %:						101.2		96.4			100.9		102.9
Mill Index, %:						101.2		96.4			100.9		100.0

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.<sup>b</sup> The sample received by the Institute had two each of the B-8, D-8, and F-8 sheets. The B-7, D-7, and F-7 sheets were of the B-8, D-8, and F-8 sheets were arbitrarily changed to B-7, D-7, and F-7, respectively.<sup>c</sup> This date appeared on the sample received by the Institute. The mill data sheet gives the date of manufacture as March.

TABLE XVI

TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, Points	Max.	Min.	Av.	Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet				
				Max.	Min.	Av.	In Av.	Across In Av.	Max. Min.	Min. Av.
<u>Mill N--42-lb. Linerboard</u>										
12.2	11.4	11.8	12.9	95	110	44	37	40	416	304
12.5	11.4	11.8	133	94	115	44	35	40	400	280
12.1	11.3	11.8	130	103	116	44	36	40	384	296
12.5	11.4	11.9	131	101	114	42	36	40	400	304
	11.8			114			40		350	396
	12.2			109			36		350	388
	96.7			104.6			111.1		100.0	102.1
	86.1			106.5			111.1		95.4	99.0

which tore beyond the 3/8-inch limit.

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TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage			G. E. Puncture, units		
								Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill N-42-1b. Linerboard</u>													
162607	N-136	WFIS	3/ 5/55	2/26/55	1	42.6	41.6	42.0	12.2	11.4	11.8	95	110
162608	N-137	—	3/ 5/55	2/27/55	1	43.6	41.6	42.4	12.5	11.4	11.8	94	115
162999	N-137	WFIS	3/21/55	3/15/55	1	42.6	41.0	42.0	12.1	11.3	11.8	130	103
163000	N-138	WFIS	3/21/55	2/16/55	1	43.6	42.0	42.6	12.5	11.4	11.9	131	101
Current Mill Average:						42.2	41.8	42.2	11.8	11.4	11.8	114	114
Cumulative Mill Average:						42.6	42.6	42.6	12.2	12.2	12.2	109	109
Mill Factor, %:						99.1	99.1	96.7	96.7	96.7	96.7	104.6	104.6
Mill Index, %:						97.9	97.9	86.1	86.1	86.1	86.1	106.5	106.5
												111.1	111.1

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

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TABLE XVII  
INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

cimens which tore beyond the 3/8-inch limit.

TABLE XVII

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fih ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1b.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units			
									Max.	Min.	Av.	N
<u>Mill 0-42-1b. Linerboard</u>												
162606	0-77	W.F.	3/ 5/55	2/26/55	4	43.2	41.6	42.5	12.7	11.6	12.1	116
162639	0-78	W.F.	3/ 9/55	3/ 5/55	4	43.8	41.6	42.2	12.3	11.5	11.9	115
Current Mill Average:						42.4			12.0	11.6		37
Cumulative Mill Average:						42.0			12.2	11.3		34
Mill Factor, %:						101.0			98.4	102.7		103.8
Mill Index, %:						98.4			87.6	108.4		102.8

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XVIII

FINAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, points Max. Min. Av.	Bursting Strength, p.s.i. gage Max. Min. Av.	G. E. Puncture, units Max. Min. Av.	In Av. Max. Min. Av.	Across Max. Min. Av.	Elmendorf Tear, g./sheet		
					In	Max.	Min.
<u>MILL P-42-1b. Linerboard</u>							
14.0	12.6	13.1	140	81	35	39	328
13.8	12.5	13.2	136	71	37	42	344
14.0	12.4	13.4	129	96	113	47	38
14.0	12.9	13.5	143	87	112	48	40
14.0	12.8	13.5	134	79	107	48	38
13.8	12.8	13.3	136	83	112	44	38
14.0	13.0	13.5	130	93	109	45	40
14.2	13.1	13.5	136	86	108	48	40
13.9	12.6	13.1	151	88	123	47	39
14.0	12.1	13.1	148	75	114	47	38
14.2	12.4	13.0	148	95	118	47	37
13.9	12.9	13.2	157	95	126	49	41
13.2	12.4	12.8	142	96	116	44	35
13.3	12.4	12.9	140	78	114	45	39
13.6	12.5	13.0	146	84	118	45	37
14.4	13.0	13.7	141	85	114	48	42
13.7	12.4	13.1	143	87	111	46	37
14.0	12.9	13.4	137	74	114	47	38
14.0	12.7	13.4	146	90	117	44	36
13.2							
				114		42	400
							413
13.0				112		39	380
101.5						107.7	105.3
96.4						106.5	116.7
							109.0
							103.2

which tore beyond the 3/8-inch limit.

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TABLE XVIII

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

TABLE XIX

TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Caliper, points	Bursting Strength,			G. E. Puncture, units			Elmendorf Tear, g./sheet		
	p.s.i.	gage	Av.	Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill Q-42-1b. Linerboard.</u>									
13.9	12.9	13.3	143	90	116	40	33	392	304
13.7	12.6	13.0	140	84	112	39	35	432	353a
13.7	12.8	13.2	146	90	115	39	32	280	432
13.1	12.0	12.7	131	89	111	36	30	416	363a
14.1	13.0	13.5	154	93	122	42	35	384	377a
13.3	12.5	12.9	142	87	118	37	30	296	377a
								343a	424
								358a	424
								360a	424
								364	424
								368	424
								372	424
								376	424
								380	424
								384	424
								388	424
								392	424
								396	424
								400	424
								404	424
								408	424
								412	424
								416	424
								420	424
								424	424
								428	424
								432	424
								436	424
								440	424
								444	424
								448	424
								452	424
								456	424
								460	424
								464	424
								468	424
								472	424
								476	424
								480	424
								484	424
								488	424
								492	424
								496	424
								500	424
								504	424
								508	424
								512	424
								516	424
								520	424
								524	424
								528	424
								532	424
								536	424
								540	424
								544	424
								548	424
								552	424
								556	424
								560	424
								564	424
								568	424
								572	424
								576	424
								580	424
								584	424
								588	424
								592	424
								596	424
								600	424
								604	424
								608	424
								612	424
								616	424
								620	424
								624	424
								628	424
								632	424
								636	424
								640	424
								644	424
								648	424
								652	424
								656	424
								660	424
								664	424
								668	424
								672	424
								676	424
								680	424
								684	424
								688	424
								692	424
								696	424
								700	424
								704	424
								708	424
								712	424
								716	424
								720	424
								724	424
								728	424
								732	424
								736	424
								740	424
								744	424
								748	424
								752	424
								756	424
								760	424
								764	424
								768	424
								772	424
								776	424
								780	424
								784	424
								788	424
								792	424
								796	424
								800	424
								804	424
								808	424
								812	424
								816	424
								820	424
								824	424
								828	424
								832	424
								836	424
								840	424
								844	424
								848	424
								852	424
								856	424
								860	424
								864	424
								868	424
								872	424
								876	424
								880	424
								884	424
								888	424
								892	424
								896	424
								900	424
								904	424
								908	424
								912	424
								916	424
								920	424
								924	424
								928	424
								932	424
								936	424
								940	424
								944	424
								948	424
								952	424
								956	424
								960	424
								964	424
								968	424
								972	424
								976	424
								980	424
								984	424
								988	424
								992	424
								996	424
								1000	424
								1004	424
								1008	424
								1012	424
								1016	424
								1020	424
								1024	424
								1028	424
								1032	424
								1036	424
								1040	424
								1044	424
								1048	424
								1052	424
								1056	424
								1060	424
								1064	424
								1068	424
								1072	424
								1076	424
								1080	424
								1084	424
								1088	424
								1092	424
								1096	424
								1100	424
								1104	424
								1108	424
			</						

TABLE XII

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, 1lb.			Caliper, points			Bursting Strength, P.s.i. gauge			G. E. Puncture, units		
						Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.	Max.	Min.	Avg.
<u>Mill Q--42-1b. Linerboard.</u>																	
162683	Q-5		3/12/55	3/ 4/55	3	45.2	42.2	43.8	13.9	12.9	13.3	14.3	90	116	40	33	37
162684	Q-6		3/12/55	3/ 4/55	3	44.4	42.0	43.4	13.7	12.6	13.0	14.0	84	112	39	32	35
162737	Q-7		3/15/55	3/10/55	3	43.8	42.0	42.4	13.7	12.8	13.2	14.6	90	115	39	32	35
162998	Q-8		3/21/55	3/ 4/55	3	42.2	41.0	41.6	13.1	12.0	12.7	13.1	89	111	36	30	34
163176	Q-9		3/26/55	3/18/55	3	45.0	42.2	43.8	14.1	13.0	13.5	15.4	93	122	42	35	38
163181	Q-10		3/28/55	3/20/55	3	45.2	41.6	43.0	13.3	12.5	12.9	14.2	87	118	37	30	34
Current Mill Average:						43.1			13.1			116			36		
Cumulative Mill Average:						42.0			13.3			117			31		
Mill Factor, %:						102.6			98.5			99.1			116.1		
Mill Index, %:						100.0			95.6			108.4			100.0		

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

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TABLE IX  
TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

lens which tore beyond the 3/8-inch limit.

TABLE XX

SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Basis Weight, lb.	Caliper, points	Bursting Strength,			G. E. Puncture, units		
							Max.	Min.	Av.	Max.	Min.	Av.
<u>Mill E—44/46-lb. Drum Linerboard</u>												
162579	E-133	WFIS	3/ 2/55	2/28/55	2	49.6	47.8	48.2	15.0	14.3	14.7	119
162976	E-135b	WFIS	3/19/55	3/16/55	2	47.8	45.8	46.3	14.2	13.3	13.7	84
Current Mill Average:						47.3		14.2			102	42
Cumulative Mill Average:						47.2		14.4			101	39
Mill Factor, %:						100.2		98.6			101.0	107.7
a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.												

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

As a supplementary part of the Continuous Baseline Study, comparison of the mill test results with those obtained at The Institute of Paper Chemistry on corresponding samples have been included in this report. As may be noted in Table XXI, the atmospheric conditions used prior to and during the testing period varied considerably.

TABLE XXI

Code	Preconditioning			Conditioning		
	R.H., %	Temp., °F.	Time, hr.	R.H., %	Temp., °F.	Time, hr.
A		None		36-64	75-82	
B	45-53	82-85	0.5	50	70	192-216
C	50	72-73	48	50	72-73	48
D	36-37	77-78	8	50-52	71-72	16
E		None		46-84	43-84	--
F		None		48-50	72-73	48
G		None		50	73	48-72
H		No samples submitted.				
I		None		50-53	66-85	--
J		None		50	72-73	0.5
K	50	70-72	24	50	70-72	--
L		None		36-60	74-82	--
M		None		42-57	71-75	--
N	50	73	24--48	48-50	72-73	24-48
O		None		50	73	2
P		None		50	73	72-144
Q				42-55	71-75	1.5-2.5
E*	39-53	72-76	4.5-70	65-68	72-80	--

\* Drum Linerboard

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XXII and XXIII, respectively. The comparison for the various mills is given in Tables XXIV to XL, for the 42-lb. liner samples. A comparison of the

special drum stock is given in Table XLI. In all the comparisons given in Tables XXII to XLI, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XXII and XXIII indicates that in the majority of cases there is good agreement between the mill and Institute data. Table XXII shows the average difference encountered in the comparison of Institute and mill results for the sample lots submitted by each mill for the current period, as well as the maximum difference encountered in comparing the Institute and mill test results for a given sample lot. In Table XXIII, the average differences shown for each test in Table XXII have been calculated on a percentage basis for each mill. In addition, for purposes of comparison, the average percentage differences for the preceding two periods are shown.

It may be noted in Table XXIII that the maximum variation between the average basis weight results of the Institute and those of a given mill on corresponding samples is two per cent for the current period. This maximum percentage variation agrees favorably with the corresponding variations for the previous periods. Further, it may be noted that the average basis weight results for Mills B and N are the same as those for the Institute, whereas the results for the other mills are lower. In general, the agreement between Institute and mill basis weight results is very good.

The maximum variation in caliper for the current period is nine per cent. Compared with the values for the Institute, the average

results for all mills are lower. The accord between Institute and mill caliper values is good with the exception of the variations noted for Mills E, F, J, and M.

It may be noted in Table XXIII that the bursting strength results exhibit a maximum variation of five per cent for the current period. The average results for Mills C, F, G, M, and P are higher than those for the Institute, the results for Mills D and K are the same, and the results for the other mills are lower. The agreement in bursting strength results is good for all mills except E and J.

The G. E. puncture results exhibit a maximum variation of seventeen per cent for the current period. Compared with the values for the Institute, the results for all mills for which comparisons are given are lower. The agreement between the Institute and mill results is good for all mills except E, G, J, and M.

It may be seen in Tables XXII and XXIII that the average machine direction tear results for Mills A, G, I, N, O, and Q are higher than those for the Institute, the average result for Mill P is the same, and the results for the other mills are lower. The maximum variation for the current period is twenty per cent. The difference encountered for Mill E appears to be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills A, B, F, I, J, K, N, O, and Q are higher than those for the Institute whereas the average results

for the other mills are lower. The maximum variation for the current period is nineteen per cent. Only the differences for Mills I and N appear to be excessive.

for the other mills are lower. The maximum variation for the current period is nineteen per cent. Only the differences for Mills I and N appear to be excessive.

TABLE XII  
SUMMARY OF TEST RESULT COMPARISONS  
(Average Mill and Institute Results)

No. of Samples Compared	A	B	C	D	E	F	G	I	J	K	L	M	N	O	P	Q	Mills*	
																	<u>Basis Weight</u>	
Institute	43.8	43.2	44.7	42.8	44.0	43.0	43.8	43.2	43.4	43.3	43.0	43.6	42.2	42.4	44.1	43.1		
Mill	42.9	43.2	44.2	42.2	43.1	42.7	43.6	42.6	42.7	42.8	42.3	42.6	42.2	42.0	43.8	42.5		
Av. Diff.**	-0.9	0.0	-0.5	-0.6	-0.9	-0.3	-0.2	-0.6	-0.7	-0.5	-0.7	-1.0	0.0	-0.4	-0.3	-0.6		
Max. Diff.***	-1.7	+1.6	-0.7	-1.2	-1.5	-0.4	-0.4	-0.9	-1.2	-0.7	-1.0	-1.7	+0.4	-0.5	-1.3	-1.0		
<u>Caliper</u>																		
Institute	12.8	12.6	14.0	12.2	13.9	13.0	13.3	12.6	13.4	12.8	13.5	13.2	11.8	12.0	13.2	13.1		
Mill	12.6	12.4	13.6	11.9	12.6	12.3	13.0	12.4	12.7	12.5	13.0	12.6	11.5	11.6	12.7	12.7		
Av. Diff.**	-0.2	-0.2	-0.4	-0.3	-1.3	-0.7	-0.3	-0.2	-0.7	-0.3	-0.5	-0.6	-0.3	-0.4	-0.5	-0.4		
Max. Diff.***	-0.6	-0.3	-0.3	-0.7	-1.6	-0.4	-0.9	-0.4	-0.3	-0.9	-0.7	-0.8	-1.0	-0.4	-0.5	-0.9	-0.5	
<u>Bursting Strength</u>																		
Institute	114	111	109	112	113	107	107	116	115	108	108	108	110	111	114	116	114	116
Mill	112	109	110	112	107	110	110	111	109	108	107	107	110	111	116	116	112	112
Av. Diff.**	-2	-2	+1	0	-6	+3	+7	+6	-5	-6	0	-1	+2	-3	-5	+2	-4	--
Max. Diff.***	-7	-5	+5	-9	-16	-10	-10	-8	-5	-8	+5	-8	+6	-8	-7	-14	-10	--
<u>G. E. Puncture</u>																		
Institute	39	34	38	38	40	34	34	36	40	36	36	40	37	42	36			
Mill	38	32	35	--	33	38	30	31	32	--	--	30	--	--	--	--	--	
Av. Diff.**	-1	-2	-3	--	-5	-2	-4	-3	-4	--	--	-6	--	--	--	--	--	
Max. Diff.***	-5	-3	-6	--	-7	-4	-7	-4	-5	--	--	-8	--	--	--	--	--	

(Continued on the following page)

TABLE XXII (Continued)  
SUMMARY OF TEST RESULTS COMPARISONS  
(Average Mill and Institute Results)

No. of Samples Compared	A	B	C	D	E	F	G	I	J	K	L	M	N	O	P	Q
	Mills*															
Tearing Strength, in																
Institute	266	303	352	368	375	386	316	322	373	399	332	359	350	363	400	359
Mill	381	293	323	335	299	382	346	331	340	373	303	342	381	373	400	362
Av. Diff. **	+15	-10	-29	-33	-76	-4	+30	+9	-33	-26	-29	-17	+31	+10	0	+3
Max. Diff. ***	+37	-23	-40	-50	-108	-22	+52	+24	-49	-56	-49	-52	+53	+29	-44	+19
Tearing Strength, across																
Institute	400	352	384	396	384	423	357	377	383	394	380	385	396	391	413	382
Mill	423	366	380	373	353	433	355	415	403	410	371	363	472	407	404	413
Av. Diff. **	+23	+14	-4	-23	-31	+10	-2	+38	+20	+16	-9	-22	+76	+16	-9	+31
Max. Diff. ***	+52	+47	+24	-42	-49	+31	+47	+50	+1,2	+33	-30	-70	+84	+31	-51	+45

\* Comparison based on averages involves only those samples on which mill test data were submitted.

\*\* Average difference is the difference between the Institute mill average and the mill average based on mill test data.

\*\*\* Maximum difference encountered in comparing the Institute average and the mill average for any sample submitted by that particular mill.

TABLE XXIII  
COMPARISON OF INSTITUTE-MILL DIFFERENCES BY PERIODS

Mills	Period	Basis Weight	Caliper	Bursting Strength	G. E. Puncture	Tearing In	Strength, across
A	Current	-2	-2	-2	-3	+4	+6
	92nd	-3	-2	-3	-3	-7	-4
	91st	-0.7	-0.8	0	0	+0.6	-1
B	Current	0	-2	-2	-6	-3	+4
	92nd	-0.7	-2	+0.9	-3	-6	+0.8
	91st	0	0	0	-6	-4	+3
C	Current	-1	-3	+0.9	-8	-8	-1
	92nd	-0.7	-4	+2	+3	-3	+4
	91st	-0.7	-4	-2	-8	-8	+1
D	Current	-1	-2	0	--	-9	-6
	92nd	+0.2	-3	+0.9	--	0	+1
	91st	+0.5	-4	-0.9	--	-4	-3
E	Current	-2	-9	-5	-13	-20	-8
	92nd	-1	-9	-2	-6	-22	-12
	91st	0	-10	-7	-14	-26	-13
F	Current	-0.7	-5	+3	-5	-1	+2
	92nd	-0.9	-5	+2	-3	-3	-0.5
	91st	-0.7	-5	+7	-10	-8	-9
G	Current	-0.5	-2	+3	-12	+9	-0.6
	92nd	-0.2	-2	0	-12	+7	-3
	91st	+0.5	-3	+1	-12	-0.3	+10
H	Current	--	--	--	--	--	--
	92nd	--	--	--	--	--	--
	91st	+0.5	-3	+2	-3	+4	+9
I	Current	-1	-2	-4	-9	+3	+10
	92nd	-0.7	-4	+0.9	-9	+4	+7
	91st	-0.9	-2	-2	-6	+8	+9
J	Current	-2	-5	-5	-11	-9	+5
	92nd	-1	-6	-8	-6	-14	-3
	91st	+1	-2	-5	-6	-8	-1
K	Current	-1	-2	0	--	-7	+4
	92nd	-1	-3	+4	--	-10	-2

C	Current	-1	-3	+0.9	-8	-8	-1
	92nd	-0.7	-4	+2	+3	-3	+4
	91st	-0.7	-4	-2	-8	-8	+1
D	Current	-1	-2	0	--	-9	-6
	92nd	+0.2	-3	+0.9	--	0	+1
	91st	+0.5	-4	-0.9	--	-4	-3
E	Current	-2	-9	-5	-13	-20	-8
	92nd	-1	-9	-2	-6	-22	-12
	91st	0	-10	-7	-14	-26	-13
F	Current	-0.7	-5	+3	-5	-1	+2
	92nd	-0.9	-5	+2	-3	-3	-0.5
	91st	-0.7	-5	+7	-10	-8	-9
G	Current	-0.5	-2	+3	-12	+9	-0.6
	92nd	-0.2	-2	0	-12	+7	-3
	91st	+0.5	-3	+1	-12	-0.3	+10
H	Current	--	--	--	--	--	--
	92nd	--	--	--	--	--	--
	91st	+0.5	-3	+2	-3	+4	+9
I	Current	-1	-2	-4	-9	+3	+10
	92nd	-0.7	-4	+0.9	-9	+4	+7
	91st	-0.9	-2	-2	-6	+8	+9
J	Current	-2	-5	-5	-11	-9	+5
	92nd	-1	-6	-8	-6	-14	-3
	91st	+1	-2	-5	-6	-8	-1
K	Current	-1	-2	0	--	-7	+4
	92nd	-1	-3	+4	--	-10	-2
	91st	+0.2	-3	+2	--	+3	+6
L	Current	-2	-4	-0.9	--	-9	-2
	92nd	-1	-4	-2	--	-4	+1
	91st	-0.2	-4	-3	--	+0.3	+5
M	Current	-2	-5	+2	-17	-5	-6
	92nd	-2	-6	0	-18	-13	-12
	91st	-2	-4	-5	-20	-11	-11
N	Current	0	-3	-3	--	+9	-19
	92nd	+0.2	-2	-3	--	+6	-17
	91st	+0.2	-2	-0.9	--	+5	-11
O	Current	-0.9	-3	-4	--	+3	-1
	92nd	-0.2	-2	-5	--	-8	-1
	91st	+0.7	-2	-4	--	-11	-1
P	Current	-0.7	-4	+2	--	0	-2
	92nd	-0.5	-4	0	--	+5	-3
	91st	--	--	--	--	--	--
Q	Current	-1	-3	-3	--	+0.8	-2
	92nd	-2	-4	-6	--	+1	-1
	91st	+1	-4	-12	--	+8	-1

TABLE XXIV  
DUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute Data versus Mill Data				Bursting Strength, P.s.i. gage IPC Mill Diff.	G. E. Puncture, units IPC Mill Diff.	Elmendorf Tear, g./sheet	In Across IPC Mill Diff. IPC Mill Diff.						
				<u>Mill A-42-1b. Linerboard</u>									
Caliper, points IPC Mill Diff.	-0.3 -0.1 -0.6 -0.6 -0.4 0.0 -0.2 0.0 0.1 +0.1	12.7 12.4 12.5 12.6 12.9 12.7 12.7 13.1 12.0 12.0	112 112 118 111 114 113 110 111 116 110	114 114 111 113 113 111 111 110 110 112	+2 +2 -7 -1 -1 -1 +1 +1 -6 -6	40 40 38 38 37 39 39 40 40 38	39 0 -5 35 -3 +2 +1 +3 -3	352a 369a 345a 334 346a 362 376a 400 408a 367a	360 373 334 -11 369 388 400 422 404	+ 8 + 4 -11 +23 +26 +26 +24 +14 +37	391a 401a 384a 385 397a 416a 401a 399a 407a	4.08 4.27 3.85 + 1 4.00 4.34 4.36 4.51 4.44	+17 +26 + 1 + 3 + 18 +18 +35 +52 +37
2.8	12.6	-0.2	114	112	-2	39	-1	366	381	+15	4.00	4.23	+23

specimens which tore beyond the 3/8-inch limit.

from the totals of the individual readings.

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TABLE XXIV  
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	IPC	Basis Weight, lb.	Mill Diff.	IPC	Caliper, points	Bursting Strength, p.s.i. gage	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Institute Data versus Mill Data		
														G. E. Puncture, units		
<u>Mill 4-42-1b. Linerboard</u>																
162600	A-630	WF1S	2/27/55	2	43.8	43.3	-0.5	13.0	12.7	-0.3	112	114	+2	40	39	-1
162601	A-631	WF1S	2/28/55	1	43.5	42.8	-0.7	12.5	12.4	-0.1	112	114	+2	40	40	0
162746	A-632	WF1S	3/ 8/55	2	44.4	42.7	-1.7	13.1	12.5	-0.6	118	111	-7	38	33	-5
162747	A-633	WF1S	3/ 9/55	2	44.1	42.9	-1.2	13.0	12.6	-0.4	114	113	-1	38	35	-3
162974	A-634	WF1S	3/13/55	2	43.4	42.9	-0.5	12.9	12.9	0.0	114	113	-1	37	39	+2
162975	A-635	WF1S	3/14/55	1	43.6	42.5	-1.1	12.9	12.7	-0.2	110	111	+1	39	40	+1
163185	A-636	WF1S	3/20/55	2	45.0	43.7	-1.3	13.1	13.1	0.0	116	110	-6	40	43	+3
163186	A-637	WF1S	3/21/55	1	42.4	42.3	-0.1	12.0	12.1	+0.1	112	111	-1	38	35	-3
Current Mill Average:					43.8	42.9	-0.9	12.8	12.6	-0.2	114	112	-2	39	38	-1
366 38																

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

## JUL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

TABLE XXV

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Institute Data <u>versus</u> Mill Data		Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet	In Across	
liper, ints	Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	Mill Diff.
<u>Mill B--42-lb. Linerboard</u>						
12.5	0.0	110	110	0	34	-2
12.4	0.0	115	111	-4	35	-3
12.4	-0.3	116	111	-5	35	-3
12.5	-0.4	113	111	-2	35	-3
12.5	-0.1	108	106	-2	33	-2
12.3	-0.1	109	106	-3	33	-2
12.3	-0.2	111	109	-2	34	-3
12.4	-0.2	112	109	-3	34	-2
12.6	+0.2	110	108	-2	34	-2
12.3	-0.1	110	108	-2	34	-2
12.3	-0.3	111	108	-3	34	-2
12.5	-0.3	108	110	+2	33	-1
12.6	-0.2	112	111	-1	35	-3
12.4	-0.2	111	109	-2	34	-2
					303	-10
					293	-10
					352	-14

ens which tore beyond the 3/8-inch limit,

the totals of the individual readings.

TABLE XV

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

## Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	McG. No.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gege			G. E. Puncture, units			IPC Mill Diff.	IPC Mill Diff.	In Mill D.	
							IPC	Mill	Diff.	IPC	Mill	Diff.				
<u>Mill B-42-lb. Linerboard</u>																
162620	B-1159	WF1S	2/16/55	1	43.5	43.1	-0.4	12.5	12.5	0.0	110	110	0	34	32	-2
162621	B-1160	WF1S	2/16/55	1	43.6	43.1	-0.5	12.4	12.4	0.0	115	111	-4	35	32	-3
162622	B-1161	WF1S	2/16/55	1	44.0	43.7	-0.3	12.7	12.4	-0.3	116	111	-5	35	32	-3
162623	B-1162	WF1S	2/16/55	1	43.7	43.6	-0.1	12.7	12.5	-0.2	113	111	-2	35	32	-3
162690	B-116	WF1S	2/28/55	1	42.1	42.8	+0.7	12.4	12.3	-0.1	108	106	-2	33	31	-2
162691	B-1164	WF1S	2/28/55	1	42.6	42.7	+0.1	12.4	12.3	-0.1	109	106	-3	33	31	-2
162692	B-1165	WF1S	2/28/55	1	43.4	43.2	-0.2	12.6	12.4	-0.2	111	109	-2	34	31	-3
162693	B-1166	WF1S	2/28/55	1	42.2	43.8	+1.6	12.4	12.6	+0.2	112	109	-3	34	32	-2
162694	B-1167	WF1S	2/28/55	1	42.6	42.5	-0.1	12.4	12.3	-0.1	110	108	-2	34	32	-2
162695	B-1168	WF1S	2/28/55	1	43.2	42.9	-0.3	12.6	12.3	-0.3	111	108	-3	34	32	-2
162696	B-1169	WF1S	2/28/55	1	43.5	43.4	-0.1	12.8	12.5	-0.3	108	110	+2	33	32	-1
162697	B-1170	WF1S	2/28/55	1	43.8	43.5	-0.3	12.8	12.6	-0.2	112	111	-1	35	32	-3
Current Mill Average:					43.2	43.2	0.0	12.6	12.4	-0.2	111	109	-2	34	32	-2
Institute Data versus Mill Data																

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXVI  
AL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute Data versus Mill Data	Mill C--42-lb. Linerboard					
	Bursting Strength, P.s.i. gage	G. E. Puncture, units	Almendorf Tear, g./sheet	In IPC Mill Diff.	Across IPC Mill Diff.	
Caliper, points	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	
4.4	13.8	-0.6	109	110 + 1	37	34 - 3
4.5	13.8	-0.7	110	110 0	38 33 - 5	336a 344a 325 - 19
4.2	13.7	-0.5	106	106 0	35 35 0	327a 305 - 22
4.3	13.7	-0.6	104	109 + 5	36 36 0	326a 294 - 32
4.0	13.8	-0.2	112	112 0	42 39 - 3	392a 352 - 40
4.2	13.8	-0.4	113	112 - 1	42 39 - 3	377a 348 - 29
3.4	13.0	-0.4	110	111 + 1	37 32 - 5	355a 334 - 21
3.3	13.1	-0.2	108	110 + 2	38 32 - 6	355a 325 - 30
4.0	13.6	-0.4	109	110 + 1	38 35 - 3	352 323 - 29
						384 380 - 4

imens which tore beyond the 3/8-inch limit.

m the totals of the individual readings.

TABLE XXVI  
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.	Caliper, points	Bursting Strength,			G. E. Puncture, units	In IPC Mill Diff.	Element g./s
							IPC	Mill	Diff.			
<u>Mill C--42-1b. Linerboard</u>												
162612	C-641	W.F.	2/19/55	1	45.0	44.7	-0.3	14.4	13.8	-0.6	109	110 + 1
162613	C-642	W.F.	2/19/55	1	44.8	44.4	-0.4	14.5	13.8	-0.7	110	110 0
162614	C-643	W.F.	2/22/55	1	43.8	43.1	-0.7	14.2	13.7	-0.5	106	106 0
162615	C-644	W.F.	2/22/55	1	43.9	43.3	-0.6	14.3	13.7	-0.6	104	109 + 5
162616	C-645	W.F.	3/ 1/55	1	45.7	45.6	-0.1	14.0	13.8	-0.2	112	112 0
162617	C-646	W.F.	3/ 1/55	1	46.2	45.5	-0.7	14.2	13.8	-0.4	113	112 - 1
162678	C-647	W.F.	3/ 4/55	1	43.8	43.4	-0.4	13.4	13.0	-0.4	110	111 + 1
162679	C-648	W.F.	3/ 4/55	1	44.0	43.4	-0.6	13.3	13.1	-0.2	108	110 + 2
Current Mill Average:					44.7	44.2	-0.5	14.0	13.6	-0.4	109	110 + 1
											38	35 - 3
											352	323 - 29

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXVII

LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

## Institute versus Mill Data

Institute versus Mill	Bursting Strength, P.s.i. Diff.	E. age IPC Mill Diff.	G. E. Puncture, units IPC Mill Diff.	Elmendorf Tear, In g./sheet Across IPC Mill Diff.		IPC Mill Diff.
				Mill D-42-1b. Linerboard	Elmendorf Tear, In g./sheet Across IPC Mill Diff.	
.1 -0.2	111	107	-4	39	365a	321
.8 -0.3	110	110	0	38	392a	349
.8 -0.2	110	109	-1	39	375a	347
.7 -0.4	110	115	+5	39	360a	347
.0 -0.3	109	108	-1	37	381a	331
.0 -0.3	114	108	-6	38	342a	316
.0 -0.4	113	121	+8	38	382a	341
.0 -0.1	110	113	+3	37	347a	323
.0 -0.3	123	114	-9	38	367a	343
.9 -0.3	112	112	0	38	368	335

which tore beyond the 3/8-inch limit.

Details of the individual readings.

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TABLE XXVII  
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight,			Culiper, points			G. E. P.s.i. gage units			Puncture, units			In Mill Diff.			Elmendorf Tea g./sheet		
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.
<u>Mill D—42-lb. Linerboard</u>																						
162564	D-841	W.F.	2/23/55	4	44.0	42.8	-1.2	12.3	12.1	-0.2	11.1	10.7	-4	39	36.5a	32.1	-44	402a				
162738	D-842	W.F.	3/1/55	4	42.4	41.8	-0.6	12.1	11.8	-0.3	11.0	11.0	0	38	39.2a	34.9	-43	393a				
162739	D-843	W.F.	3/2/55	4	42.8	41.7	-1.1	12.0	11.8	-0.2	11.0	10.9	-1	39	37.5a	34.7	-28	387a				
162740	D-844	W.F.	3/3/55	4	42.8	42.0	-0.8	12.1	11.7	-0.4	11.0	11.5	+ 5	39	36.0a	34.7	-13	390a				
163031	D-845	W.F.	3/15/55	4	42.3	41.9	-0.4	12.3	12.0	-0.3	10.9	10.8	-1	37	38.1a	33.1	-50	383a				
163032	D-846	W.F.	3/16/55	4	41.8	41.4	-0.4	12.3	12.0	-0.3	11.4	10.8	-6	38	34.2a	31.6	-26	394a				
163033	D-847	W.F.	3/17/55	4	42.2	43.1	+0.9	12.4	12.0	-0.4	11.3	12.1	+ 8	38	38.2a	34.1	-41	389a				
63096	D-848	W.F.	3/18/55	4	43.3	42.4	-0.9	12.1	12.0	-0.1	11.0	11.3	+ 3	37	34.7a	32.3	-24	413a				
63097	D-849	W.F.	3/19/55	4	43.6	42.9	-0.7	12.3	12.0	-0.3	12.3	11.4	-9	38	36.7a	34.3	-24	411a				
<u>Current Mill Average:</u>					42.8	42.2	-0.6	12.2	11.9	-0.3	11.2	11.2	0	38	36.8	33.5	-33	396				

This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

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TABLE XXVIII  
DUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)  
Institute versus Mill Data

is which tore beyond the 3/8-inch limit.

the totals of the individual readings.

TABLE XXVIII  
SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, 1b.			IPC Diff.	Caliper, points	Bursting Strength, p.s.i. gage			G. E. Puncture, units			Elme			
					IPC	Mill	Diff.			IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	
<u>Mill E-42-1b. Linerboard</u>																			
162567	E-132	WFIS	2/22/55	2	44.8	43.8	-1.0	14.3	12.9	-1.4	11.2	11.2	0	36	34	-2	363	290	-7
162680	E-134	WFIS	3/ 9/55	2	43.9	42.4	-1.5	13.9	12.3	-1.6	10.4	9.1	-1.3	37 <sup>e</sup>	32	-5	402	294	-10 <sup>c</sup>
163044	E-136	WFIS	3/17/55	2	43.0	42.6	-0.4	13.2	12.2	-1.0	11.5	12.0	+ 5	36	35	-1	378 <sup>a</sup>	321	-57
163122	E-137	WFIS	3/22/55	2	44.0	43.7	-0.3	14.2	13.3	-0.9	11.6	10.6	-1.0	39	34	-5	356 <sup>a</sup>	304	-52
163175	E-138	WFIS	3/23/55	2	44.2	43.1	-1.1	13.9	12.5	-1.4	12.0	10.4	-1.6	39	32	-7	373 <sup>a</sup>	284	-89
Current Mill Average:					44.0	43.1	-0.9	13.9	12.6	-1.3	11.3	10.7	-6	38	33	-5	375.	299	-76

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill averages" data are calculated from the totals of the individual readings.

TABLE XXXIX

TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute Well Date

Mill	F--42-lb. Linerboard	Bursting Strength, p.s.i. gage			G. E. Puncture, units			Elmendorf Tear, g./sheet			Across		
		IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
2.2	-0.6	102	104	+ 2	38	36	- 2	359a	355	- 4	392a	380	-12
2.2	-0.6	111	111	0	40	36	- 4	385a	363	-22	428a	428	0
2.5	-0.8	105	110	+ 5	43	41	- 2	425a	420	- 5	455a	476	+21
2.1	-0.7	111	118	+ 7	39	37	- 2	368a	369	+ 1	415a	423	+8
2.3	-0.9	106	108	+ 2	38	38	0	393a	404	+11	426a	457	+31
2.3	-0.7	107	110	+ 3	40	38	- 2	386	382	- 4	423	433	+10

TABLE XXX

<u>Mill G-42-1b. Linerboard</u>					
-3.0	-0.4	101	105	+ 4	
-3.3	-0.2	108	110	+ 2	
-2.8	-0.3	108	113	+ 5	
-2.8	-0.1	108	109	+ 1	
-3.0	-0.3	111	117	+ 6	
-12.9	-0.3	103	109	+ 6	
-13.0	-0.3	107	110	+ 3	

which tore beyond the 3/8-inch limit.

totals of the individual readings.

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**SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)**

**TABLE XXIX**

**Institute versus Mill Data**

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I. gage			G. E., Puncture, units			IPC Mill Diff.	IPC Mill Diff.	IPC Mill I	E.I.M.
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.				
<u>MILL F--42-1b. Linerboard</u>																				
162624	F-10	W.B.	2/11/55	—	42.4	42.0	-0.4	12.8	12.2	-0.6	102	104	+ 2	38	- 2	359a	355	—		
162625	F-11	W.B.	2/14/55	—	42.5	42.3	-0.2	12.8	12.2	-0.6	111	111	+ 0	40	36	385a	363	—		
162626	F-12	W.B.	2/21/55	—	43.5	43.3	-0.2	13.3	12.5	-0.8	105	110	+ 5	43	- 4	425a	420	—		
162627	F-13	W.B.	2/22/55	—	43.0	42.6	-0.4	12.8	12.1	-0.7	111	118	+ 7	39	- 2	368a	369	+		
163180	F-14	W.B.	3/ 1/55	—	43.4	43.4	0.0	13.2	12.3	-0.9	106	108	+ 2	38	0	393a	404	+		
Current Mill Average:					43.0	42.7	-0.3	13.0	12.3	-0.7	107	110	+ 3	40	38	- 2	386	382	—	

**TABLE XXX**

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points			Bursting Strength, P.S.I. gage			G. E., Puncture, units			IPC Mill Diff.	IPC Mill Diff.	IPC Mill I	E.I.M.
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.				
<u>MILL G--42-1b. Linerboard</u>																				
162602	G-634	W.F.	2/18/55	2	43.9	43.5	-0.4	13.7	13.3	-0.4	101	105	+ 4	37	30	- 7	314a	365	+5	
162603	G-635	W.F.	2/21/55	2	44.3	44.2	-0.1	13.5	13.3	-0.2	108	110	+ 2	35	29	- 6	301a	325	+2	
162748	G-636	W.F.	3/ 4/55	2	44.4	44.3	-0.1	13.1	12.8	-0.3	108	113	+ 5	35	30	- 5	343a	371	+2	
162749	G-637	W.F.	3/ 4/55	2	43.9	43.8	-0.1	12.9	12.8	-0.1	108	109	+ 1	33	30	- 3	351a	361	+1	
163183	G-638	W.F.	3/11/55	2	43.4	43.1	-0.3	13.3	13.0	-0.3	111	117	+ 6	33	29	- 4	293	345	+5	
163184	G-639	W.F.	3/11/55	2	42.9	42.9	0.0	13.2	12.9	-0.3	103	109	+ 6	32	—	—	295	310	+1	
Current Mill Average:					43.8	43.6	-0.2	13.3	13.0	-0.3	107	110	+ 3	34	30	- 4	316	346	+3	

a. This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXXI

VIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute versus Mill Data

iper, its	Bursting Strength, P.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet
Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In Across
<u>Mill H--42-lb. Linerboard</u>			

No samples submitted.

TABLE XXXII

Mill I--42-lb. Linerboard

12.9 + 0.1	105	106 + 1	32 - 1	312a	311 - 1	359a	409 +50
12.3 - 0.2	114	111 - 3	33 - 4	323a	335 +12	379a	423 +44
12.1 - 0.3	121	115 - 6	36 - 4	325a	349 +24	386a	429 +43
12.4 - 0.2	119	112 - 7	33 - 1	326a	331 + 5	385a	405 +20
12.3 - 0.2	120	110 -10	33 - 1	325a	331 + 6	377a	409 +32
12.4 - 0.2	116	111 - 5	31 - 3	322	331 + 9	377	415 +38

s which tore beyond the 3/8-inch limit.

e totals of the individual readings.

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SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

TABLE XXXI

Institute <u>versus</u> Mill Data														
File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		G. E. Puncture, units					
					IPC	Mill Diff.	IPC	Mill Diff.						
<u>Mill H--42-lb. Linerboard</u>														
No samples submitted.														

TABLE XXXII

Mill I--42-lb. Linerboard									
File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		G. E. Puncture, units
					IPC	Mill Diff.	IPC	Mill Diff.	
<u>Mill I--42-lb. Linerboard</u>									
162609	I-454	WFIS	3/ 1/55	1	42.9	42.5	-0.4	12.8	12.9
162681	I-455	WFIS	3/ 7/55	1	43.3	42.4	-0.9	12.5	12.3
162682	I-457	WFIS	3/ 8/55	1	43.5	42.6	-0.9	12.4	12.1
163047	I-457	WFIS	3/16/55	1	43.2	42.8	-0.4	12.6	12.4
163182	I-458	WFIS	3/18/55	1	42.9	42.9	0.0	12.5	12.3
Current Mill Average:					43.2	42.6	-0.6	12.6	12.4
							-0.2	116	111
							-5	34	31
							-	3	322
							-	3	331
							+ 9		

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXXIII

LCTS—MARCH 1 THROUGH MARCH 31, 1955 (Continued)

## Institute versus Mill Data

	Bursting Strength, P.s.i. Diff.	G. E. Puncture, units IPC Mill Diff.	Elmendorf Tear, g./sheet In IPC Mill Diff.	Across IPC Mill Diff.
<u>Mill J--42-lb. Linerboard</u>				
- 0.8	113	110 - 3	34 - 3	323 -28
- 0.7	112	107 - 5	34 - 4	337 323 -14
- 0.6	116	108 - 8	39 - 5	389a 367 -22
- 0.5	115	108 - 7	39 - 3	390a 362 -28
- 0.9	119	112 - 7	36 - 4	378a 329 -49
- 0.7	118	111 - 7	36 - 4	373a 337 -36
- 0.5	117	110 - 7	36 - 4	386a 339 -47
- 0.6	112	109 - 3	35 - 3	379a 337 -42
- 0.7	115	109 - 6	36 - 4	373 340 -33
				383 403 +20

: tore beyond the 3/8-inch limit.

: of the individual readings.

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TABLE XXXIII  
SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (Continued)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, 1b.	Caliper, points	Institute versus Mill Data			G. E. Puncture, units			IPC Mill Diff.	IPC Mill Diff.	In Mill D.
							IPC	Mill Diff.	P.s.i. gage	IPC	Mill Diff.	IPC			
<u>Mill J--42-1b. Linerboard</u>															
162562	J-519	B.F.	2/16/55	—	43.4	43.0	-0.4	13.4	12.6	-0.8	11.3	11.0	-3	31	-3
162563	J-520	B.F.	2/16/55	—	44.2	43.0	-1.2	13.6	12.9	-0.7	11.2	10.7	-5	34	-4
162597	J-521	B.F.	2/22/55	—	43.3	42.7	-0.6	13.6	13.0	-0.6	11.6	10.8	-8	30	-4
162598	J-522	B.F.	2/22/55	—	43.4	43.0	-0.4	13.4	12.9	-0.5	11.5	10.8	-7	39	-5
162735	J-523	B.F.	3/ 4/55	—	42.9	42.2	-0.7	13.1	12.2	-0.9	11.9	11.2	-7	39	-3
162736	J-524	B.F.	3/ 4/55	—	43.0	42.0	-1.0	13.0	12.3	-0.7	11.8	11.1	-7	36	-4
163042	J-525	B.F.	3/12/55	—	43.2	43.1	-0.1	13.5	13.0	-0.5	11.7	11.0	-7	36	-4
163043	J-526	B.F.	3/12/55	—	43.2	42.7	-0.5	13.5	12.9	-0.6	11.2	10.9	-3	35	-3
Current Mill Average:					43.4	42.7	-0.7	13.4	12.7	-0.7	11.5	10.9	-6	36	-4
														373	340

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXXIV

L TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

## Institute versus Mill Data

liper, ints Mill	Diff.	Bursting Strength, P.s.i. Gage		G. E. Puncture, units		Elmendorf Tear, g./sheet	
		IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
<u>Mill K-42-lb. Linerboard</u>							
12.4	-0.3	109	107	-2	40	398a	362
12.2	-0.7	102	107	+5	40	410a	-56
12.2	-0.1	113	109	-4	39	396a	-36
12.8	-0.5	103	105	+2	41	397a	388
12.8	0.0	112	109	-3	41	392a	400
12.5	-0.3	108	108	0	40	399	373

; which tore beyond the 3/8-inch limit.

; totals of the individual readings.

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TABLE XXXIV  
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Line No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, 1b.	IPC	Mill Diff.	Institute <u>versus</u> Mill Data				G. E. Puncture, units	IPC Mill Diff.	Mill Diff. I
								Caliper, points	IPC	Mill Diff.	IPC Mill Diff.			
<u>Mill K--42-1b. Linerboard</u>														
2568	K-5	S.F.	2/15/55	7	43.4	42.9	-0.5	12.7	12.4	-0.3	109	107	-2	40
2599	K-6	S.F.	2/22/55	7	43.4	43.0	-0.4	12.9	12.2	-0.7	102	107	+ 5	40
2672	K-7	S.F.	3/ 3/55	7	42.3	41.7	-0.6	12.3	12.2	-0.1	113	109	- 4	39
2967	K-8	S.F.	3/ 7/55	7	44.0	43.5	-0.5	13.3	12.8	-0.5	103	105	+ 2	41
3078	K-9	S.F.	3/14/55	7	43.6	42.9	-0.7	12.8	12.8	0.0	112	109	- 3	41
Current Mill Average:					43.3	42.8	-0.5	12.8	12.5	-0.3	108	108	0	40
											399	373	-26	394

This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

e: All "current mill average" data are calculated from the totals of the individual readings.

IAL TEST LOTS-MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute versus Mill Data

Caliper, points C	Mill Diff.	Bursting Strength, P.s.i. gege		G. E. Puncture, units		Elmendorf Tear, g./sheet	
		IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
<u>Mill L--42-lb. Linerboard</u>							
1.4	12.8	-0.6	108	107	-1	36	328a
1.0	13.3	-0.7	112	109	-3	36	325a
1.4	11.9	-0.5	114	106	-8	34	284
1.7	14.9	-0.8	102	106	+4	38	31.5a
1.1	12.9	-0.2	116	110	-6	36	337
1.5	13.0	-0.5	108	108	0	38	305
1.7	12.0	-0.7	102	104	+2	38	328a
1.3	12.9	-0.4	105	108	+3	36	304
1.5	13.0	-0.5	108	107	-1	36	34.3a
							303
							-40
							340a
							302
							-38
							340a
							389a
							384
							-5
							380a
							350
							-30
							380a
							369
							-11
							386a
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							380a
							350
							-30
				</			

TABLE XXXV  
SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.	Institute versus Mill Data						G. E. Puncture, units	El <sub>n</sub>	
						IPC	Mill Diff.	Caliper, points	p.s.i. gage	Bursting Strength,	IPC Mill Diff.	IPC Mill Diff.		
<u>MILL 1--42-lb. Linerboard</u>														
162666	L-335		2/ 3/55	1	43.2	42.3	-0.9	13.4	12.8	-0.6	108	107	-1	36
162667	L-336		2/ 5/55	1	42.8	41.9	-0.9	14.0	13.3	-0.7	112	109	-3	36
162668	L-337		2/ 8/55	1	42.4	41.7	-0.7	12.4	11.9	-0.5	114	106	-8	34
162669	L-338		2/11/55	1	43.2	42.8	-0.4	15.7	14.9	-0.8	102	106	+ 4	38
162670	L-339		2/14/55	1	43.5	42.5	-1.0	13.1	12.9	-0.2	116	110	-6	36
162671	L-340		2/19/55	1	43.0	42.3	-0.7	13.5	13.0	-0.5	108	108	0	38
163079	L-341		2/21/55	1	42.8	42.4	-0.4	12.7	12.0	-0.7	102	104	+ 2	38
163080	L-342		2/24/55	1	43.0	42.3	-0.7	13.3	12.9	-0.4	105	108	+ 3	36
Current Mill Average:					43.0	42.3	-0.7	13.5	13.0	-0.5	108	107	-1	36
														332
														303
														-2

<sup>a</sup> This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

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TABLE XXXVI  
TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)  
Institute versus Mill Data

Sliper, oints Mill Diff.	Bursting Strength, P.s.i. gage IPC Mill Diff.	G. E. Puncture, units IPC Mill Diff.	Ellendorf Tear, g./sheet		
			In Mill Diff.	IPC Mill Diff.	Across IPC Mill Diff.
<u>Mill M—42-lb. Linerboard</u>					
1 12.1 -1.0	109	109	37	29	- 8
2 12.0 -0.9	106	107	+ 1	35	- 7
3 12.7 -0.5	102	102	0	36	29
4 12.9 -0.3	108	110	+ 2	35	32
5 12.6 -0.9	109	111	+ 2	37	30
6 12.8 -0.6	104	110	+ 6	40	34
7 12.6 -0.5	120	121	+ 1	35	30
8 12.7 -0.6	105	110	+ 5	37	30
2 12.6 -0.6	108	110	+ 2	36	30
					- 6
				359	342
					-17
				385	363
					-22

Ans which tore beyond the 3/8-inch limit.

The totals of the individual readings.

TABLE XXXVI  
SUMMARY OF INDIVIDUAL TEST LOTS—MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Pin- ish	Date Made	Mch. No.	Basis Weight, lb.	IPC Mill	Diff.	Caliper, points	IPC Mill	Diff.	Bursting Strength, p.s.i. gage	IPC Mill	Diff.	G. E. Puncture, units	IPC Mill	Diff.	In Mill	
162565	M-296	W.	2/21/55	2	43.5	42.4	-1.1	13.1	12.1	-1.0	109	109	0	37	29	-8	350a	298
162566	M-297	W.	2/23/55	2	43.1	41.4	-1.7	12.9	12.0	-0.9	106	107	+1	35	28	-7	338a	289
162610	M-298	W.	2/27/55	2	43.3	42.9	-0.4	13.2	12.7	-0.5	102	102	0	36	29	-7	340a	337
162611	M-299	W.	2/28/55	2	43.4	43.0	-0.4	13.2	12.9	-0.3	108	110	+2	35	32	-3	364a	361
-62698	M-300	W.	3/9/55	4	44.0	42.7	-1.3	13.5	12.6	-0.9	109	111	+2	37	30	-7	378a	370
162699	M-301	W.	3/9/55	4	43.7	43.0	-0.7	13.4	12.8	-0.6	104	110	+6	40	34	-6	390a	399
163048	M-302	W.	3/15/55	2	43.7	42.6	-1.1	13.1	12.6	-0.5	120	121	+1	35	30	-5	342a	343
163049	M-303	W.	3/18/55	4	44.4	43.1	-1.3	13.3	12.7	-0.6	105	110	+5	37	30	-7	360a	361
Current Mill Average:					43.6	42.6	-1.0	13.2	12.6	-0.6	108	110	+2	36	30	-6	359	342

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

L TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute versus Mill Data

		Bursting Strength, P.s.i. Gage	G. E. Puncture, units	Elmendorf Tear, g./sheet
liper, nts	Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In IPC Mill Diff.
<u>Mill N-42-lb. Linerboard</u>				
11.5	-0.3	110	109	-1
11.6	-0.2	115	114	-1
11.4	-0.4	116	108	-8
11.6	-0.3	114	111	-3
11.5	-0.3	114	111	-3
			40	
			367	365 - 2
			347a	400 +53
			337a	365 +28
			349a	394 +45
			350	381 +31
				396 472 +76
				381a 461 +80
				385a 469 +84
				404a 486 +82
				413a 471 +58

TABLE XXXVIII

		<u>Mill O-42-lb. Linerboard</u>	
liper, nts	Mill Diff.		
11.6	-0.5	116	114 -2
11.6	-0.3	115	108 -7
			39
			363
			373 +10
			391 407 +16
			370a 363 -7
			355a 384 +29
			405a 407 +2

is which tore beyond the 3/8-inch limit.

ie totals of the individual readings.

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TABLE XXXVII

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.	IPC Mill Diff.	Caliper, points	Institute versus Mill Data			IPC Mill Diff.	IPC Mill Diff.	In Mill Diff.	Elmendorf g./she.
								IPC Mill	Mill Diff.	Mill Diff.				
162607	N-136	WFIS	2/26/55	1	42.0	41.9	-0.1	11.8	11.5	-0.3	110	109	-1	40
162608	N-137	---	2/27/55	1	42.4	42.1	-0.3	11.8	11.6	-0.2	115	114	-1	40
162999	N-137	WFIS	3/15/55	1	42.0	42.4	+0.4	11.8	11.4	-0.4	116	108	-8	40
163000	N-138	WFIS	3/16/55	1	42.6	42.4	-0.2	11.9	11.6	-0.3	114	111	-3	40
Current Mill Average:					42.2	42.2	0.0	11.8	11.5	-0.3	114	111	-3	40
<u>Mill N-42-lb. Linerboard</u>														

TABLE XXXVIII

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.	IPC Mill Diff.	Caliper, points	Institute versus Mill Data			IPC Mill Diff.	IPC Mill Diff.	In Mill Diff.	Elmendorf g./she.
								IPC Mill	Mill Diff.	Mill Diff.				
162606	O-77	W.F.	2/26/55	4	42.5	42.0	-0.5	12.1	11.6	-0.5	116	114	-2	36
162639	O-78	W.F.	3/5/55	4	42.2	42.0	-0.2	11.9	11.6	-0.3	115	108	-7	39
Current Mill Average:					42.4	42.0	-0.4	12.0	11.6	-0.4	116	111	-5	37
<u>Mill O-42-lb. Linerboard</u>														

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XXXIX

UAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

## Institute versus Mill Data

liper, ints	Mill Diff.	Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet
Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	IPC Mill Diff.	In Across
<u>Mill P-42-1b. Linerboard</u>				
12.4	-0.7	113	118 + 5	39
12.9	-0.3	110	120 +10	42
12.6	-0.8	113	125 +12	43
12.7	-0.5	112	112 0	43
12.9	-0.6	107	118 +11	44
12.8	-0.5	112	120 + 8	42
12.6	-0.9	109	118 + 9	43
12.9	-0.6	108	116 + 8	44
12.7	-0.4	123	130 + 7	42
12.6	-0.5	114	122 + 8	42
12.5	-0.5	118	128 +10	42
12.7	-0.5	126	112 -14	45
12.3	-0.5	116	105 -11	41
12.5	-0.4	114	117 + 3	42
12.6	-0.4	118	109 - 9	41
12.8	-0.9	114	105 - 9	45
12.6	-0.5	111	107 - 4	42
12.9	-0.5	114	109 - 5	41
12.7	-0.7	117	109 - 8	41
12.7	-0.5	114	116 + 2	42
			400	400
			0	0
			413	404
			- 9	- 9

he totals of the individual readings.

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TABLE XXXIX

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	Basis Weight, lb.	IPC Mill Diff.	Caliper, points	Institute versus Mill Data		
								Bursting Strength, P.s.i. gage	G. E. IPC Mill Diff.	Puncture, units
<u>Mill P-42-1b. Linerboard</u>										
162776	P-9	W.F.	3/ 4/55	--	43.6	42.9	-0.7	13.1	12.4	-0.7
162777	P-10	W.F.	3/ 6/55	--	44.0	44.3	+0.3	13.2	12.9	-0.3
162778	P-11	W.F.	3/ 6/55	--	44.7	43.8	-0.9	13.4	12.6	-0.8
162779	P-12	W.F.	3/ 6/55	--	44.9	44.2	-0.7	13.5	12.7	-0.6
162780	P-13	W.F.	3/ 6/55	--	45.2	45.1	-0.1	13.5	12.9	-0.6
162781	P-14	W.F.	3/ 6/55	--	43.8	43.9	+0.1	13.3	12.8	-0.5
162782	P-15	W.F.	3/ 6/55	--	44.5	43.6	-0.9	13.5	12.6	-0.9
162783	P-16	W.F.	3/ 6/55	--	44.8	44.6	-0.2	13.5	12.9	-0.6
162977	P-17	W.F.	3/11/55	--	44.4	44.1	-0.3	13.1	12.7	-0.4
162978	P-18	W.F.	3/11/55	--	43.7	43.8	+0.1	13.1	12.6	-0.5
162979	P-19	W.F.	3/11/55	--	44.1	43.3	-0.8	13.0	12.5	-0.5
162980	P-20	W.F.	3/11/55	--	45.6	45.0	-0.6	13.0	12.7	-0.5
162981	P-21	W.F.	3/11/55	--	42.6	42.2	-0.4	12.8	12.3	-0.4
162982	P-22	W.F.	3/11/55	--	43.0	43.2	+0.2	12.9	12.5	-0.4
162983	P-23	W.F.	3/11/55	--	42.9	43.7	+0.8	13.0	12.6	-0.4
162984	P-24	W.F.	3/11/55	--	45.0	43.7	-1.3	13.7	12.8	-0.9
162985	P-25	W.F.	3/11/55	--	42.8	43.1	+0.3	13.1	12.6	-0.5
163045	P-26	W.F.	3/14/55	--	44.4	44.4	0.0	13.4	12.9	-0.5
163046	P-27	W.F.	3/14/55	--	43.8	43.4	-0.4	13.4	12.7	-0.7
Current Mill Average:										
	44.1	43.8	-0.3		13.2	12.7	-0.5	114	116	+ 2
										42
										400
										400

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

Note: All "current mill average" data are calculated from the totals of the individual readings.

TABLE XI.

I TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

Institute versus Mill Data

Slipper, oints Mill Diff.	Bursting Strength, P.s.i. gage IPC Mill Diff.	G. E. Puncture, units			Eimendorf Tear, In g./sheet		
		IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.
<u>Mill Q-42-1b. Linerboard</u>							
13.0 -0.3	116	112	- 4	37	353a	349	- 4
12.5 -0.5	112	116	+ 4	35	363a	355	- 8
12.9 -0.3	115	111	- 4	35	377a	385	+ 8
12.3 -0.4	111	105	- 6	34	343a	356	+13
13.0 -0.5	122	112	-10	38	358a	377	+19
12.5 -0.4	118	118	0	34	360a	352	- 8
12.7 -0.4	116	112	- 4	36	359	362	+ 3

TABLE XII

Mill E-44/46-1b. Drum Linerboard

13.8 -0.9	101	102	+ 1	43	45	+ 2	406a	405	- 1	411a	467	+56
13.2 -0.5	103	104	+ 1	42	42	0	387a	456	+69	411a	467	+56
13.5 -0.7	102	103	+ 1	42	44	+ 2	397	430	+33	411	467	+56

which tore beyond the 3/8-inch limit.

and E series of sheets. These were treated as the B, D, and F series, respectively. totals of the individual readings.

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TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS--MARCH 1 THROUGH MARCH 31, 1955 (continued)

## Institute versus Mill Data

File No.	Mill Code	Fin-fish	Date Made	Mch. No.	Basis Weight, 1b.			Caliper, points			Bursting Strength, p.s.i. gage			G. E. Puncture, units		
					IPC	Mill Diff.	IPC	Mill	Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	M
<u>Mill Q--42-lb. Linerboard</u>																
162683	Q-5	3/ 4/55	3	43.8	43.3	-0.5	13.3	13.0	-0.3	11.6	11.2	-4	37	353a	34	
162684	Q-6	3/ 4/55	3	43.4	42.7	-0.7	13.0	12.5	-0.5	11.2	11.6	+ 4	35	363a	35	
162737	Q-7	3/10/55	3	42.4	42.8	+0.4	13.2	12.9	-0.3	11.5	11.1	-4	35	377a	38	
162998	Q-8	3/14/55	3	41.6	40.8	-0.8	12.7	12.3	-0.4	11.1	10.5	-6	34	343a	35	
163176	Q-9	3/18/55	3	43.8	42.8	-1.0	13.5	13.0	-0.5	12.2	11.2	-10	38	358a	37	
163181	Q-10	3/20/55	3	43.4	42.7	-0.7	12.9	12.5	-0.4	11.8	11.8	0	34	360a	35	
Current Mill Average:				43.1	42.5	-0.6	13.1	12.7	-0.4	11.6	11.2	-4	36	359	36	

TABLE XII

Mill E--44/46-lb. Drum Linerboard

162579	E-133	WFIS	2/28/55	2	48.2	47.9	-0.3	14.7	13.8	-0.9	101	102	+ 1	43	45	+ 2	406a	405
b,c	E-135b	WFIS	3/16/55	2	46.3	46.0	-0.3	13.7	13.2	-0.5	103	104	+ 1	42	42	0	387a	456
Current Mill Average				47.3	47.0	-0.3	14.2	13.5	-0.7	102	103	+ 1	42	44	+ 2	397	430	

a This average includes the readings for one or more specimens which tore beyond the 3/8-inch limit.

b This sample was identified as 47-lb. Drum Linerboard.

c The sample received by the Institute consisted of the A, C, and E series of sheets. These were treated as the B, D,

Note: All "current mill average" data are calculated from the totals of the individual readings.

