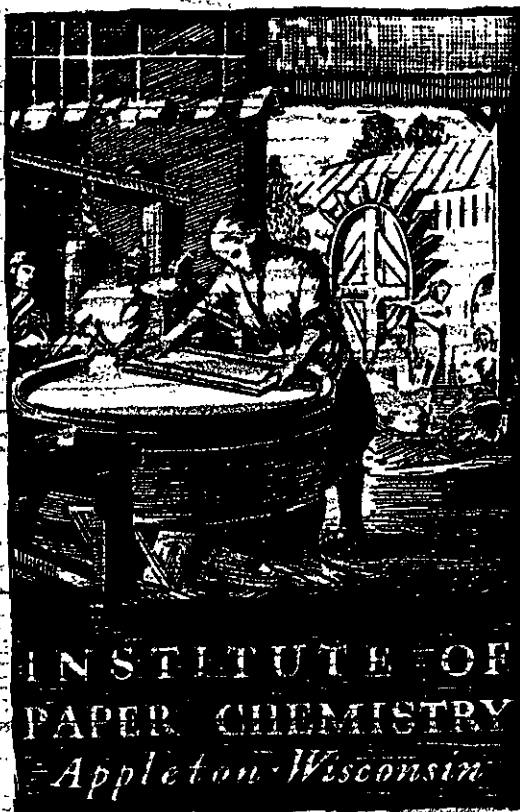


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CONTINUOUS BASELINE STUDY

Project T-102-B

Progress Report 66

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

January 1, 1953

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

CONTINUOUS BASELINE STUDY

Project 1108-3

Progress Report 66

to

FOURDRINIER KRAFT BOARD INSTITUTE, INC.

January 1, 1953

THE INSTITUTE OF PAPER CHEMISTRY

Appleton, Wisconsin

In conjunction with the F.K.I. Continuous Baseline Study, ninety-six different sample lots of 42-lb. Fourdrinier kraft linerboard were submitted by twelve different F.K.I. mills to The Institute of Paper Chemistry for testing during the period December 1 through December 31. In addition to the 42-lb. kraft linerboard, six samples of special drum stock were also 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	20
C	8
D	12
E	1
F	13
G	4
H	6
I	5
J	6
K	0
L	8
M	<u>5</u>
	96

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; the current period in the case of this report is December 1 through December 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 43.0 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 99.8. This signifies that the current average basis weight is slightly lower than the cumulative average, which in this case covered the period from July 25, 1947, through November 30, 1952.

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 F has the highest average basis weight, it being 43.6 lb. or approximately 3.8% higher than the 42-lb. specification. On the other hand, Mills C and E have the lowest average basis weight, it being 42.1 lb., approximately 0.2% 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	+3.3
B	+3.3
C	+0.2
D	+3.3
E	+0.2
F	+3.8
G	+3.6
H	+2.9
I	+0.7
J	+1.7
K	—
L	+1.2
M	+3.6

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 12.0 for Mill G to a high of 14.0 for Mill E, the average being 13.2 which is somewhat lower than the cumulative average of 14.0.

The average bursting strength values obtained for each mill are graphically presented in Figure 3. It may be observed that the

average bursting strength values for the various mills range from a low of 102 for Mill F to a high of 118 for Mill E. The current F.K.I. average bursting strength is 108, only slightly higher than the cumulative average of 106.

The data of Table II and Figure 4 show that the average G. E. puncture result for all mills is 34 units. Mill F has the highest G. E. puncture average, 39 units, and Mill B has the lowest average, 29 units. The current F.K.I. G. E. puncture average of 34 units is slightly lower than the cumulative F.K.I. average which is 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 M has the highest average machine direction tear value while Mill B has the lowest. Mill F has the highest average cross-machine direction tear value, whereas 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 indicates that, for the current period, the current F.K.I. averages for basis weight, caliper, G. E. puncture, and Elmendorf tear are lower than the respective cumulative F.K.I. averages, whereas the current F.K.I. average for bursting strength is higher.

In order to compare the variation within a given mill, the test results for each particular mill have been tabulated in Tables III to XV for Mills A to M, 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 XVI.

It may be noted in Tables III through XVI that the data have been separated on the basis of 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	8 ^a		
B	20 ^a		
C	8		
D	12		

(Continued on next page.)

Mill Code	No. of Sample Lots		
	W.F.	D.F.	Misc.
E	1, 6 ^b		
F	11		2 ^c
G	4		
H	6 ^a		
I	5 ^a		
J			6 ^d
L			8 ^c
M	4		1 ^c

^a One side only.

^b Drum linerboard.

^c Sheet finish not reported.

^d 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--DECEMBER 1 THROUGH DECEMBER 31, 1952

Code No.	Basis Weight, lb.	Calliper, points	Bursting Strength p.s.i. gage	G. E. Puncture, units	Elmendorf Tear, g./sheet	In Direction Across Direction
A	43.4	13.0	111	34	344	399
B	43.4	12.8	110	29	311	365
C	42.1	13.9	106	35	346	390
D	43.4	13.1	105	37	389	419
E	42.1	14.0	118	31	383	374
F	43.6	13.4	102	39	389	423
G	43.5	12.0	104	34	341	373
H	43.2	12.6	107	35	358	401
I	42.3	13.3	105	32	347	399
J	42.7	12.8	111	31	351	381
K	No samples submitted.					
L	42.5	13.4	109	35	362	396
M	43.5	13.9	104	35	402	406
Current FKI Average:	43.0	13.2	108	34	360	394
Cumulative FKI Average:	43.1	14.0	106	36	373	406
FKI Index, %:	99.8	94.3	101.9	94.4	96.5	97.0

Figure 1

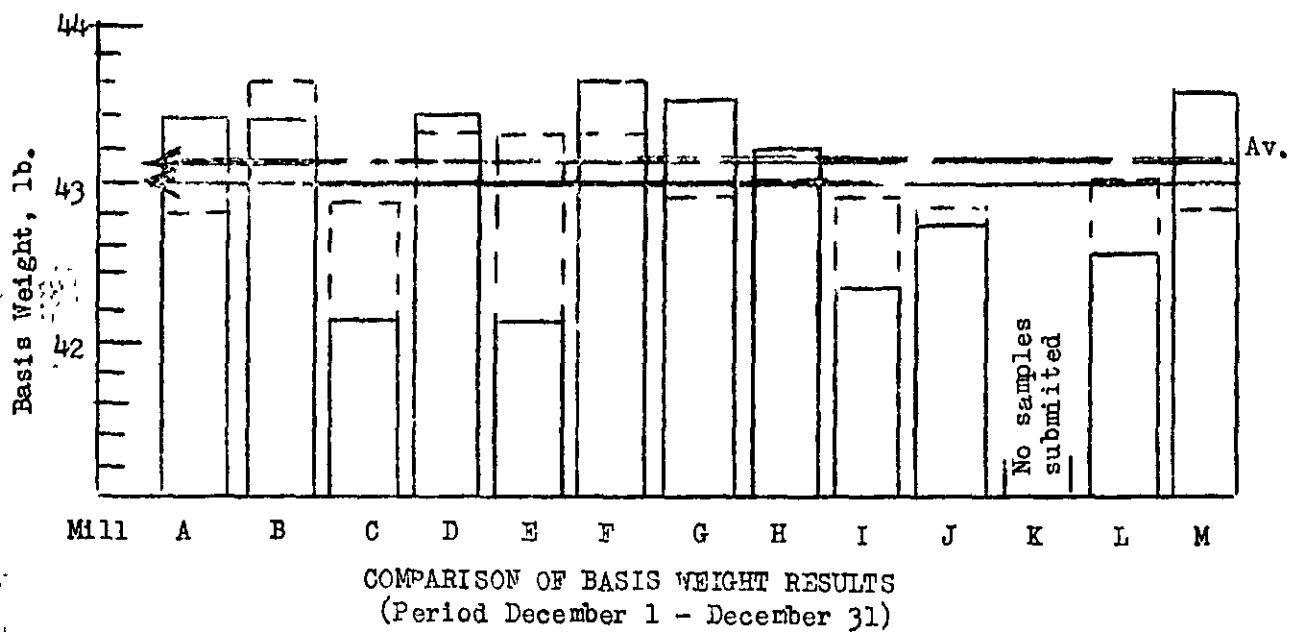
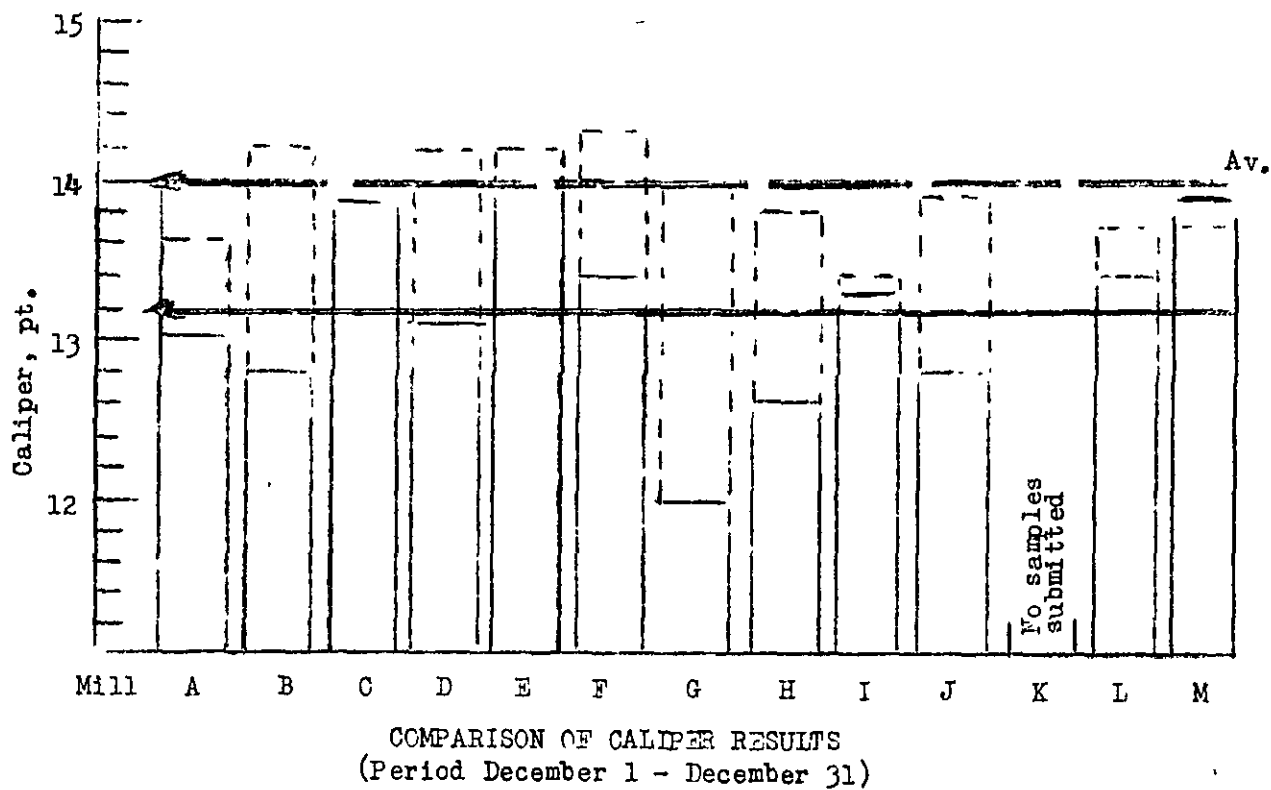


Figure 2



———— Current Mill Average
----- Cumulative Mill Average

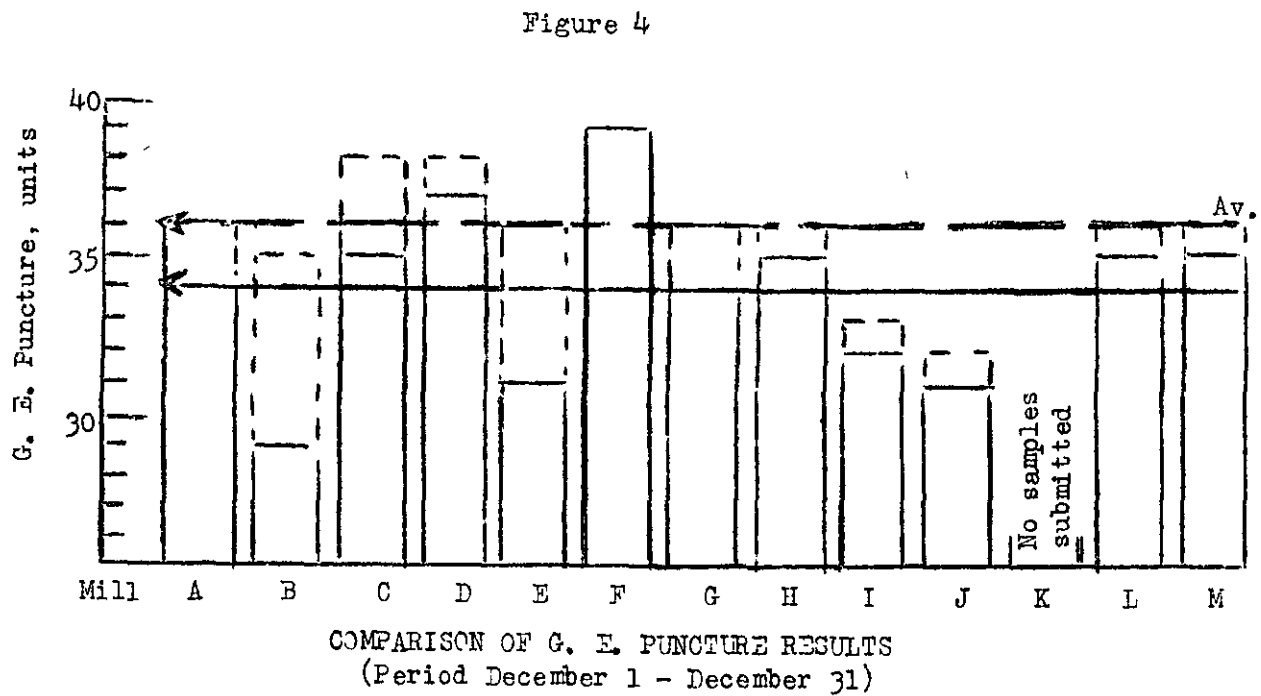
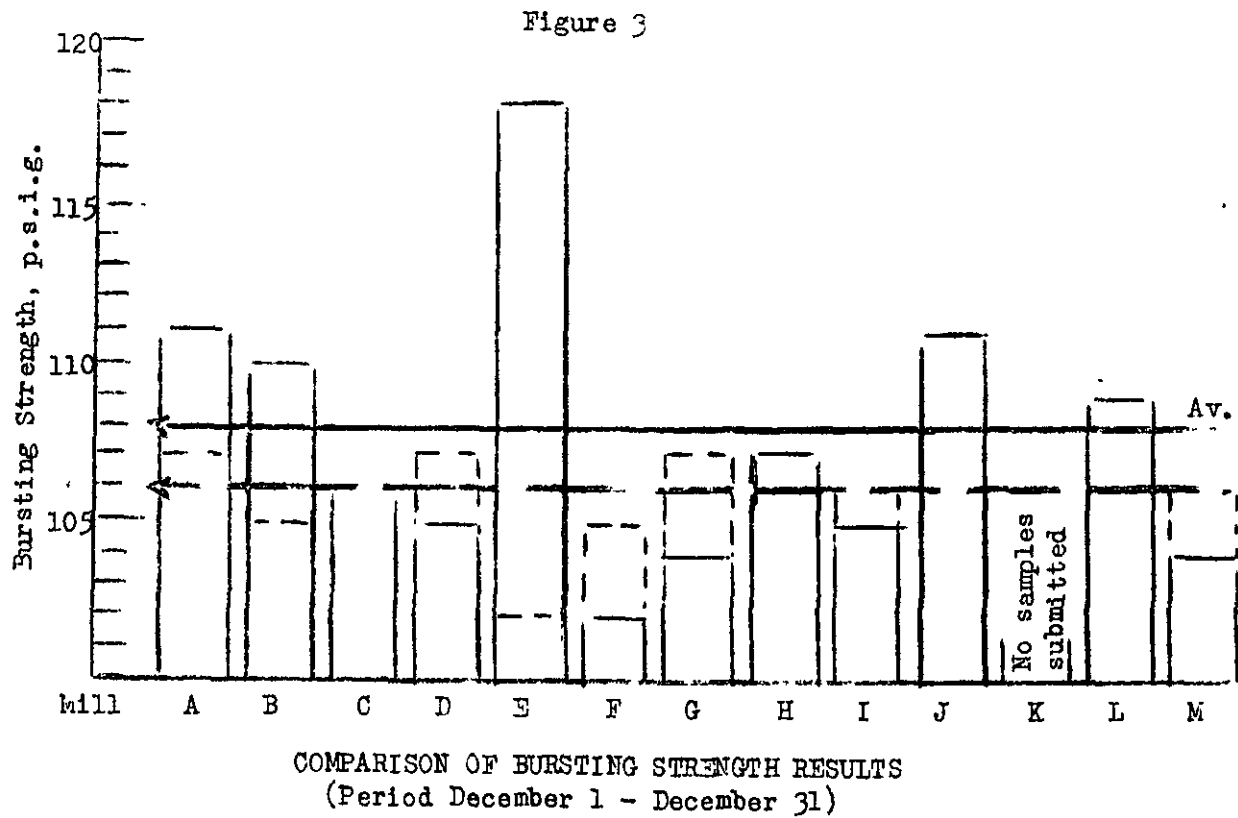


Figure 5

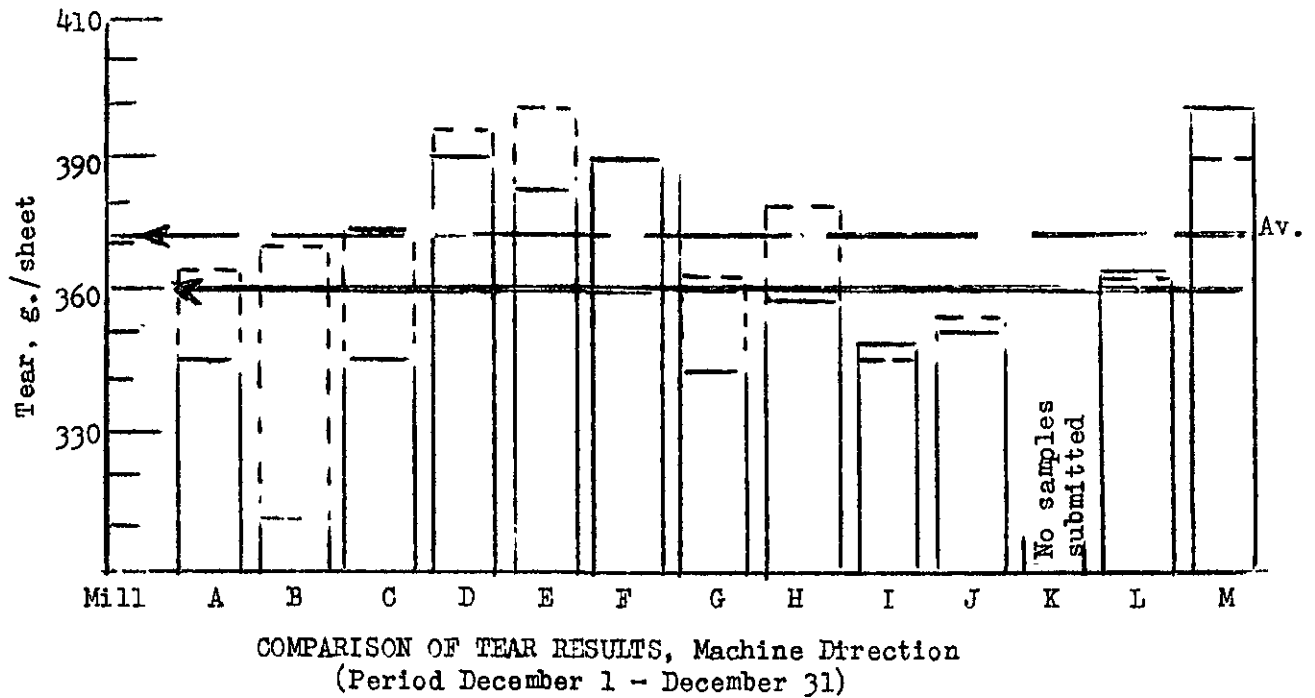
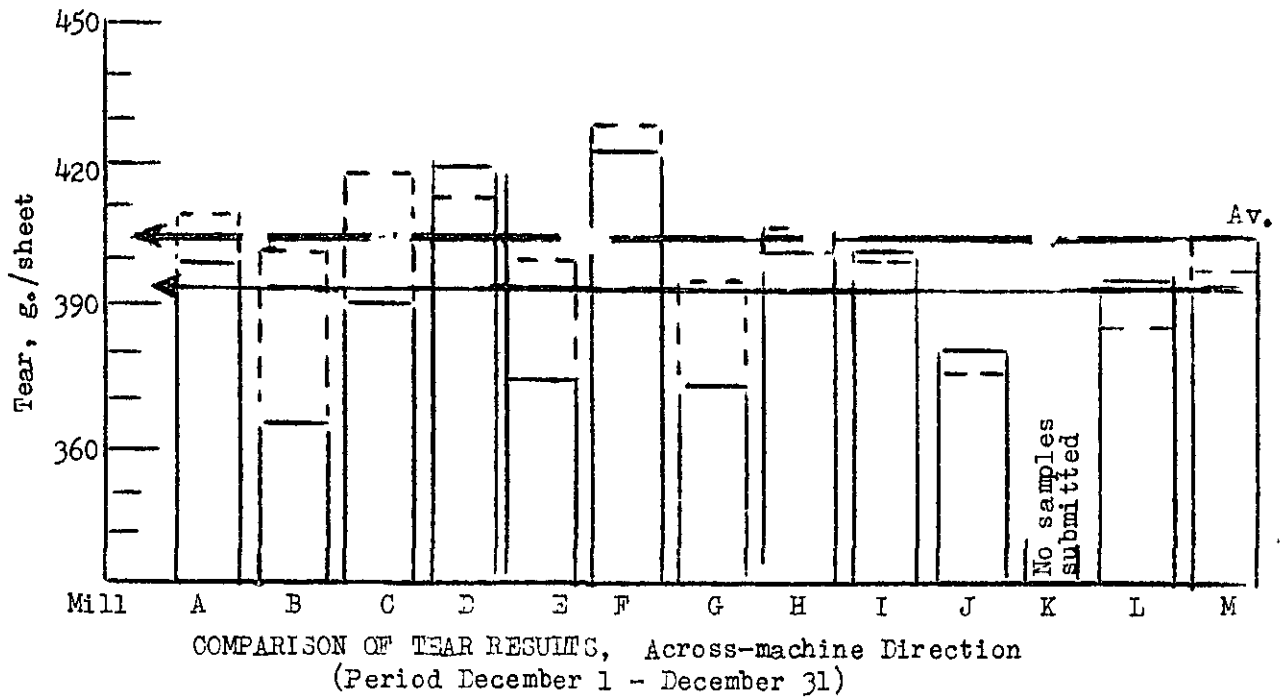


Figure 6



INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952

Weight,	Caliper,		Bursting		G.E.		Elmendorf Tear,								
	Max.	Min.	Max.	Min.	Max.	Min.	Puncture, units	G./sheet							
Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	In	Across	Av.	Max.	Min.	Av.	
<u>Mill A--42-lb. Linerboard</u>															
43.5	13.8	13.0	13.3	137	95	112	38	32	35	400	304	351	464	376	413 ^a
41.8	13.2	12.3	12.9	127	94	111	36	30	33	376	288	333 ^a	424	336	381 ^a
43.9	14.2	11.5	13.0	139	94	116	37	32	34	1,08	312	346	480	352	421 ^a
44.0	14.3	12.0	13.0	138	95	112	38	32	34	416	304	359	448	352	403 ^a
43.4	13.4	12.1	12.7	131	88	108	36	32	34	384	280	327 ^a	416	344	384 ^a
43.4	13.0	12.3	12.8	125	83	107	36	31	33	384	280	314	400	352	375 ^a
44.1	13.0	12.2	12.7	136	75	109	39	34	37	432	304	361	448	376	407 ^a
43.2	13.8	12.9	13.2	130	86	110	38	32	35	392	312	363 ^a	464	376	407 ^a
43.4			13.0			111			34			344			399
42.8			13.6			107			36			365			408
101.4															

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

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952

File No.	Mill Code	Finish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, poin ts		Bursting Strength, p.s.i. gage		G.E. Puncture, units				
						Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			
Mill A--42-lb. Linerboard																
152529	A-400	WFLS	12/ 5/52	11/25/52	2	44.0	42.2	43.5	13.8	13.0	13.3	137	95	38	32	31
152530	A-401	WFLS	12/ 5/52	11/25/52	2	42.2	40.8	41.8	13.2	12.3	12.9	127	94	36	30	31
152590	A-402	WFLS	12/10/52	12/ 1/52	2	44.4	43.6	43.9	14.2	11.5	13.0	139	94	37	32	31
152591	A-403	WFLS	12/10/52	12/ 1/52	2	45.0	43.0	44.0	14.3	12.0	13.0	138	95	38	32	31
152608	A-404	WFLS	12/13/52	12/ 7/52	2	44.2	42.4	43.4	13.4	12.1	12.7	131	88	36	32	31
152609	A-405	WFLS	12/13/52	12/ 7/52	2	44.0	42.6	43.4	13.0	12.3	12.8	125	83	26	31	31
152656	A-406	WFLS	12/20/52	12/14/52	2	44.6	43.8	44.1	13.0	12.2	12.7	136	75	39	34	31
152657	A-407	WFLS	12/20/52	12/14/52	1	43.8	42.2	43.2	13.8	12.9	13.2	130	86	38	32	31
Current Mill Average:						43.4		13.0		111		31				
Cumulative Mill Average:						42.8		13.6		107		31				
Mill Factor, %:						101.4		95.6		103.7		91				
Mill Index, %:						100.7		92.9		104.7		91				

a This average includes the readings for one or more specimens which tore beyond the 7/8-inch limit.

TABLE IV

Y OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

Fourdrinier Kraft Board Institute, Inc.
Project 1108-BPage 12
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Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Across							
Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Av.					
<u>Mill B--42-lb. Linerboard</u>																	
4.6	42.2	43.8	13.4	12.1	12.8	130	94	114	31	27	29	344	272	315 ^a	440	344	374 ^a
4.2	42.0	43.5	13.2	12.1	12.8	140	92	114	32	28	30	368	224	308 ^a	432	336	379 ^a
4.2	42.4	43.5	13.9	12.2	13.0	141	93	113	33	27	30	368	272	316 ^a	400	320	359 ^a
4.6	42.4	43.4	13.0	12.2	12.7	141	100	116	32	26	29	384	240	303	424	320	378 ^a
5.6	42.4	43.7	13.3	11.9	12.6	128	84	108	33	28	30	384	248	325	392	328	364 ^a
4.0	43.0	43.4	13.0	12.1	12.6	134	96	112	31	26	28	360	240	307 ^a	424	328	384 ^a
4.2	43.0	43.7	13.0	12.1	12.8	139	72	114	31	27	29	360	288	323	480	336	393 ^a
4.2	42.8	43.4	13.5	12.1	12.7	139	92	116	32	28	30	384	320	344 ^a	424	328	378 ^a
4.0	42.2	43.0	13.1	12.2	12.8	132	93	112	30	25	28	336	272	300	400	304	353 ^a
4.4	43.0	43.8	13.1	12.3	12.9	131	78	106	30	26	28	352	256	297	400	320	362 ^a
3.8	42.4	43.3	13.1	12.3	12.8	142	87	108	30	26	28	376	272	321	440	288	356 ^a
4.2	43.2	43.8	13.5	12.5	13.0	139	95	114	38	26	29	336	256	293	368	312	343 ^a
4.0	42.6	43.3	13.3	12.1	12.7	133	85	111	32	26	29	384	240	301 ^a	432	320	375 ^a
4.0	42.2	43.4	13.6	12.2	12.8	127	81	108	33	27	29	376	264	312 ^a	424	304	349 ^a
4.4	42.4	43.4	13.7	11.8	12.9	130	79	105	32	27	30	376	264	310	400	328	359 ^a
4.0	42.8	43.3	13.8	12.0	12.8	124	73	105	32	26	29	336	240	297 ^a	416	304	361 ^a
3.0	41.8	42.5	13.0	12.0	12.6	125	84	106	32	26	29	368	272	313 ^a	432	320	359 ^a
4.4	42.6	43.3	13.3	12.1	12.6	126	85	109	33	26	29	384	272	314	400	328	361 ^a
4.0	42.0	43.1	13.2	12.0	12.7	135	60	110	33	26	28	368	240	315	432	312	368 ^a
4.4	42.2	43.3	13.6	12.5	12.9	126	84	104	33	26	29	400	192	303 ^a	368	320	347 ^a
43.4					12.8			110			29			311			365
43.6					14.2			105			35			369			402
99.5					90.1			104.8			82.9			84.3			90.8
100.7					91.4			103.8			80.6			83.4			89.9

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

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (cont.)

TABLE IV

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.
Mill B--42-lb. Linerboard																
152508	B-699	WFLS	12/ 1/52	11/20/52	1	44.6	42.2	43.8	13.4	12.1	12.8	130	94	31	27	29
152509	B-700	WFLS	12/ 1/52	11/20/52	1	44.2	42.0	43.5	13.2	12.1	12.8	140	92	114	28	30
152510	B-701	WFLS	12/ 1/52	11/20/52	1	44.2	42.4	43.5	13.9	12.2	13.0	141	93	113	27	30
152511	B-702	WFLS	12/ 1/52	11/20/52	1	44.6	42.4	43.4	13.0	12.2	12.7	141	100	116	26	29
152512	B-703	WFLS	12/ 1/52	11/20/52	1	45.6	42.4	43.7	13.3	11.9	12.6	128	84	108	28	30
152513	B-704	WFLS	12/ 1/52	11/20/52	1	44.0	43.0	43.4	13.0	12.1	12.6	134	96	112	26	28
152514	B-705	WFLS	12/ 1/52	11/20/52	1	44.2	43.0	43.7	13.0	12.1	12.8	139	72	114	27	29
152515	B-706	WFLS	12/ 1/52	11/20/52	1	44.2	42.8	43.4	13.5	12.1	12.7	139	92	116	28	30
152524	B-707	WFLS	12/ 4/52	11/25/52	1	44.0	42.2	43.0	13.1	12.2	12.8	132	93	112	25	28
152525	B-708	WFLS	12/ 4/52	11/25/52	1	44.4	43.0	43.8	13.1	12.3	12.9	131	78	106	26	28
152526	B-709	WFLS	12/ 4/52	11/25/52	1	43.8	42.4	43.3	13.1	12.3	12.8	142	87	108	26	28
152527	B-710	WFLS	12/ 4/52	11/25/52	1	44.2	43.2	43.8	13.5	12.5	13.0	139	95	114	26	29
152670	B-711	WFLS	12/23/52	12/ 5/52	1	44.0	42.6	43.3	13.3	12.1	12.7	133	85	111	26	29
152671	B-712	WFLS	12/23/52	12/ 5/52	1	44.0	42.2	43.4	13.6	12.2	12.8	127	81	108	27	29
152672	B-713	WFLS	12/23/52	12/ 5/52	1	44.4	42.4	43.4	13.7	11.8	12.9	130	79	105	27	30
152673	B-714	WFLS	12/23/52	12/ 5/52	1	44.0	42.8	43.3	13.8	12.0	12.8	124	73	105	26	29
152674	B-715	WFLS	12/23/52	12/ 5/52	1	43.0	41.8	42.5	13.0	12.0	12.6	125	84	106	26	29
152675	B-716	WFLS	12/23/52	12/ 5/52	1	44.4	42.6	43.3	13.3	12.1	12.6	126	85	109	26	29
152676	B-717	WFLS	12/23/52	12/ 5/52	1	44.0	42.0	43.1	13.2	12.0	12.7	135	60	110	26	28
152677	B-718	WFLS	12/23/52	12/ 5/52	1	44.4	42.2	43.3	13.6	12.5	12.9	126	84	104	26	29

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

TABLE V

Y OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		In Across		Av.				
Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
Mill C--42-lb. Linerboard																
41.6	42.5	15.0	13.8	14.3	126	85	104	38	33	35	368	280	331 ^a	488	376	410 ^a
42.0	42.5	15.1	13.9	14.2	124	89	109	38	33	35	400	304	355	432	360	398 ^a
41.6	42.2	14.6	13.5	14.0	136	86	105	39	32	35	432	304	354 ^a	432	352	382 ^a
41.6	42.0	14.7	13.0	14.0	131	85	106	39	33	36	400	288	325	432	352	389 ^a
41.0	42.0	14.1	13.0	13.4	133	84	108	36	30	34	416	304	357	464	344	409 ^a
41.4	42.1	13.8	12.9	13.4	126	84	107	37	32	35	392	288	349	424	368	394 ^a
40.0	41.7	14.5	13.5	14.1	125	86	102	35	31	33	432	296	350 ^a	400	328	372 ^a
40.2	41.9	14.5	12.2	13.9	127	89	104	35	30	33	392	312	349	400	320	366 ^a
42.1				13.9			106			35			346			390
42.9				13.9			106			38			373			418
98.1				100.0			100.0			92.1			92.8			93.3
97.7				99.3			100.0			97.2			92.8			96.1

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

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (con)

TABLE V

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.			
						<u>Mill C--42-lb. Linerboard</u>												
152612	C-427	W.F.	12/13/52	12/ 4/52	1	43.2	41.6	42.5	15.0	13.8	14.3	126	85	104	38	33	35	368
152613	C-428	W.F.	12/13/52	12/ 4/52	1	43.4	42.0	42.5	15.1	13.9	14.2	124	89	109	38	33	35	400
152644	C-429	W.F.	12/17/52	12/ 5/52	1	43.0	41.6	42.2	14.6	13.5	14.0	136	86	105	39	32	35	432
152645	C-430	W.F.	12/17/52	12/ 5/52	1	43.4	41.6	42.0	14.7	13.0	14.0	131	85	106	39	33	36	400
152646	C-431	W.F.	12/17/52	12/ 6/52	1	43.8	41.0	42.0	14.1	13.0	13.4	133	84	108	36	30	34	416
152647	C-432	W.F.	12/17/52	12/ 6/52	1	43.8	41.4	42.1	13.8	12.9	13.4	126	84	107	37	32	35	392
152660	C-433	W.F.	12/20/52	12/ 9/52	1	42.2	40.0	41.7	14.5	13.5	14.1	125	86	102	35	31	33	432
152661	C-434	W.F.	12/20/52	12/ 9/52	1	42.6	40.2	41.9	14.5	12.2	13.9	127	89	104	35	30	33	392
Current Mill Average:								42.1		13.9				106			35	
Cumulative Mill Average:								42.9		13.9				106			38	
Mill Factor, %:								98.1		100.0				100.0			92.1	
Mill Index, %:								97.7		99.3				100.0			97.2	

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

OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

As Weight, lb.	Caliper, points		Bursting Strength, p.s.i. gage		Puncture, units		Elmendorf Tear, g./sheet									
	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.					
<u>Mill D--42-lb. Linerboard</u>																
41.8	43.2	14.1	12.9	13.5	118	69	99	43	34	37	456	320	393 ^a	544	368	423 ^a
42.2	43.6	14.3	12.7	13.4	125	84	107	42	34	38	480	304	378 ^a	496	352	406 ^a
43.0	44.6	13.8	12.7	13.2	130	72	108	42	36	38	432	368	401 ^a	480	392	435 ^a
42.4	43.9	13.5	12.8	13.1	133	78	107	44	37	40	488	368	419	512	384	431 ^a
42.2	43.3	13.8	12.5	13.2	128	75	103	38	32	36	472	336	396 ^a	528	352	419 ^a
42.2	43.7	13.2	12.4	12.8	131	75	105	37	32	35	440	312	397 ^a	496	328	415 ^a
41.8	42.6	13.6	12.3	12.8	125	87	105	39	33	35	432	320	363 ^a	456	352	395 ^a
43.0	43.8	14.0	11.5	12.8	130	72	106	41	34	37	472	336	397 ^a	512	416	459 ^a
42.4	43.6	14.0	12.8	13.2	132	85	107	40	34	37	464	344	405 ^a	464	384	415 ^a
43.4	44.2	13.5	11.8	12.8	132	92	108	43	34	39	496	328	405 ^a	536	368	423 ^a
40.6	41.9	13.7	12.5	13.1	123	80	103	40	33	37	464	296	361 ^a	464	336	393 ^a
40.0	42.6	13.7	12.2	12.8	127	90	107	41	33	37	416	312	352 ^a	528	360	409 ^a
43.4			13.1				105			37			389			419
43.3			14.2				107			38			396			413
100.2			92.3				98.1			97.4			98.2			101.5
100.7			93.6				99.1			102.8			104.3			103.2
TABLE VII																
<u>Mill E--42-lb. Linerboard</u>																
41.6	42.1	15.0														

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

TABLE VI

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (c

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.	lb.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.
Mill D--42-lb. Linerboard																	
152497	D-599	W.F.	12/ 1/52	11/23/52	4	44.0	41.8	43.2	14.1	12.9	13.5	118	69	99	43	34	37
152498	D-600	W.F.	12/ 1/52	11/24/52	4	45.6	42.2	43.6	14.3	12.7	13.4	125	84	107	42	34	38
152528	D-601	W.F.	12/ 5/52	12/ 2/52	4	45.8	43.0	44.6	13.8	12.7	13.2	130	72	108	42	36	38
152532	D-602	W.F.	12/ 6/52	12/ 3/52	4	44.8	42.4	43.9	13.5	12.8	13.1	133	78	107	44	37	40
152539	D-603	W.F.	12/ 8/52	12/ 4/52	4	43.8	42.2	43.3	13.8	12.5	13.2	128	75	103	38	32	36
152587	D-604	W.F.	12/10/52	12/ 5/52	4	44.6	42.2	43.7	13.2	12.4	12.8	131	75	105	37	32	35
152588	D-605	W.F.	12/10/52	12/ 6/52	4	43.8	41.8	42.6	13.6	12.3	12.8	125	87	105	39	33	35
152589	D-606	W.F.	12/10/52	12/ 7/52	4	44.6	43.0	43.8	14.0	11.5	12.8	130	72	106	41	34	37
152593	D-607	W.F.	12/11/52	12/ 8/52	4	44.4	42.4	43.6	14.0	12.8	13.2	132	85	107	40	34	37
152620	D-608	W.F.	12/15/52	12/10/52	4	45.6	43.4	44.2	13.5	11.8	12.8	132	92	108	43	34	39
152641	D-609	W.F.	12/17/52	12/13/52	--	43.4	40.6	41.9	13.7	12.5	13.1	123	80	103	40	33	37
152642	D-610	W.F.	12/17/52	12/14/52	4	44.2	40.0	42.6	13.7	12.2	12.8	127	90	107	41	33	37
Current Mill Average:							43.4				13.1		105			37	
Cumulative Mill Average:							43.3				14.2		107			38	
Mill Factor, %:							100.2				92.3		98.1			97.4	
Mill Index, %:							100.7				93.6		99.1			102.8	

TABLE VII

Mill E--42-lb. Linerboard													
152655	E-387	W.F.	12/20/52	12/16/52	1	43.0	41.6	42.1	15.0	13.0	14.0	137	86
Current Mill Average:						42.1			14.0		118		31
Cumulative Mill Average:						43.3			14.2		102		31
Mill Factor, %:						97.2			98.6		115.7		36
Mill Index, %:						97.7			100.0		111.3		86.1

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

TABLE VIII

INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

as Weight, lb. 4in.	Caliper, points Max. Min.	Bursting Strength, p.s.i. gage Max. Min.	Av.	G.E. Puncture, units Max. Min.		Av.	Elmendorf Tear, g./sheet In Max. Min.		Av.	Across Max. Min.		Av.				
<u>Mill F--42-lb. Linerboard</u>																
1.6	43.2	14.1	12.3	13.7	115	65	101	43	34	39	432	352	388 ^a	480	360	423 ^a
0.6	43.1	14.1	12.4	13.5	125	89	105	40	34	38	448	352	403 ^a	480	384	433 ^a
2.4	43.7	13.2	12.0	12.5	125	85	104	41	33	37	432	368	388 ^a	528	384	440 ^a
3.6	44.5	13.8	12.9	13.4	136	87	110	40	35	38	440	368	399 ^a	456	384	423 ^a
2.8	44.3	14.8	11.8	13.4	125	83	104	44	37	40	448	336	376 ^a	480	376	432 ^a
2.0	43.1	13.5	12.5	13.1	120	82	104	42	34	37	440	352	383 ^a	448	384	411 ^a
2.2	43.8	14.1	13.3	13.9	118	75	97	44	34	39	440	352	388 ^a	448	336	417 ^a
2.2	43.4	14.0	13.0	13.3	121	86	100	41	35	38	432	368	395 ^a	480	368	422 ^a
3.8	44.4	14.3	12.2	13.7	115	86	101	44	38	41	448	320	395 ^a	512	400	437 ^a
3.2	44.0	14.3	13.1	13.7	116	84	99	46	39	42	440	344	385 ^a	440	344	409 ^a
2.2	43.4	14.4	13.1	13.8	112	77	94	44	35	40	432	360	392 ^a	456	368	413 ^a
2.6	43.5	13.8	12.7	13.2	112	74	97	44	36	40	432	336	391 ^a	448	368	421 ^a
2.0	42.7	13.9	12.4	13.3	122	87	105	40	36	38	416	352	376 ^a	472	368	420 ^a
43.6			13.4				102			39			389			423
43.3			14.3				105			39			389			428
100.7			93.7				97.1			100.0			100.0			98.8
101.2			95.7				96.2			108.3			104.3			104.2

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

TABLE VIII

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (contin.

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.			
<u>Mill F--42-lb. Linerboard</u>																		
152507	F-80	W.F.	12/ 1/52	11/13/52	--	44.4	41.6	43.2	14.1	12.3	13.7	115	65	101	43	34	39	432
152506	F-81	W.F.	12/ 1/52	11/14/52	--	44.4	40.6	43.1	14.1	12.4	13.5	125	89	105	40	34	38	448
152536	F-82	W.F.	12/ 8/52	11/20/52	--	44.6	42.4	43.7	13.2	12.0	12.5	125	85	104	41	33	37	432
152537	F-83	W.F.	12/ 8/52	11/24/52	--	45.6	43.6	44.5	13.8	12.9	13.4	136	87	110	40	35	38	440
152538	F-84	---	12/ 8/52	11/25/52	--	46.0	42.8	44.3	14.8	11.8	13.4	125	83	104	44	37	40	448
152614	F-85	W.F.	12/13/52	11/27/52	--	44.0	42.0	43.1	13.5	12.5	13.1	120	82	104	42	34	37	440
152618	F-86	W.F.	12/15/52	11/28/52	--	45.0	42.2	43.8	14.1	13.3	13.9	118	75	97	44	34	39	440
152619	F-87	W.F.	12/15/52	12/ 2/52	--	44.6	42.2	43.4	14.0	13.0	13.3	121	86	100	41	35	38	432
152615	F-88	W.F.	12/13/52	12/ 3/52	--	45.8	43.8	44.4	14.3	12.2	13.7	115	86	101	44	38	41	448
152616	F-89	W.F.	12/13/52	12/ 4/52	--	44.6	43.2	44.0	14.3	13.1	13.7	116	84	99	46	39	42	440
152617	F-90	W.F.	12/13/52	12/ 5/52	--	45.2	42.2	43.4	14.4	13.1	13.8	112	77	94	44	35	40	432
152622	F-91	W.F.	12/16/52	12/ 8/52	+	44.0	42.6	43.5	13.8	12.7	13.2	112	74	97	44	36	40	432
152623	F-92	---	12/16/52	12/ 9/52	--	43.8	42.0	42.7	13.9	12.4	13.3	122	87	105	40	36	38	416
Current Mill Average:							43.6		13.4			102				39		
Cumulative Mill Average:							43.3		14.3			105				39		
Mill Factor, %:							100.7		93.7			97.1				100.0		
Mill Index, %:							101.2		95.7			96.2				108.3		

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

TABLE IX

OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

sis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, g./sheet		Av.	Across							
		Max.	Min.	Av.	Max.	Min.	Av.			Max.	Min.	Av.				
Mill G--42-lb. Linerboard																
43.0	43.6	13.1	12.0	12.3	125	79	104	36	30	34	400	312	336 ^a	424	320	371 ^a
42.6	43.7	13.0	12.0	12.3	128	85	101	36	32	34	400	304	364	416	328	379 ^a
42.0	43.1	12.2	11.1	11.7	132	82	106	36	30	34	368	280	314 ^a	416	296	367 ^a
42.6	43.5	12.2	11.1	11.7	135	75	106	36	31	34	400	320	350 ^a	416	352	374 ^a
	43.5			12.0			104			34			341			373
	42.9			14.0			107			36			361			395
	101.4			85.7			97.2			94.4			94.5			94.4
	100.9			85.7			98.1			94.4			91.4			91.9

TABLE X

Mill H--42-lb. Linerboard

42.6	43.0	13.2	12.2	12.8	140	88	106	38	33	36	424	312	361	496	368	405 ^a
41.8	42.9	13.3	12.2	12.5	131	80	104	37	32	34	416	312	374	480	352	415 ^a
43.2	44.0	13.2	12.3	12.7	137	85	106	40	31	35	448	272	363 ^a	464	352	398 ^a
42.0	42.7	13.0	12.0	12.6	143	78	105	38	32	35	416	304	351	464	336	407 ^a
41.8	43.0	12.7	11.0	12.1	141	90	110	37	31	34	376	232	328 ^a	408	328	377 ^a
42.6	43.4	13.0	12.3	12.7	134	83	108	36	32	35	432	304	369	512	336	406 ^a
	43.2			12.6			107			35			358			401
	43.0			13.8			106			36			379			406
	100.5			91.3			100.9			97.2			94.5			98.8
	100.2			90.0			100.9			97.2			96.0			98.8

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

TABLE IX

SUMMARY OF INDIVIDUAL TEST LOTS—DECEMBER 1 THROUGH DECEMBER 31, 1952 (c)

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.	
Mill G--42-lb. Linerboard																		
152572	G-456	WFL	12/ 9/52	12/ 3/52	1	44.2	43.0	43.6	13.1	12.0	12.3	125	79	104	36	30	34	41
152573	G-457	WFL	12/ 9/52	12/ 3/52	1	44.8	42.6	43.7	13.0	12.0	12.3	128	85	101	36	32	34	41
152690	G-458	WFL	12/24/52	12/17/52	1	44.0	42.0	43.1	12.2	11.1	11.7	132	82	106	36	30	34	31
152691	G-459	WFL	12/24/52	12/17/52	1	44.4	42.6	43.5	12.2	11.1	11.7	135	75	106	36	31	34	41
Current Mill Average:								43.5			12.0			104			34	
Cumulative Mill Average:								42.9			14.0			107			36	
Mill Factor, %:								101.4			85.7			97.2			94.4	
Mill Index, %:								100.9			85.7			98.1			94.4	

TABLE X

Mill H--42-lb. Linerboard

152555	H-361	WFLS	12/ 8/52	11/24/52	2	43.4	42.6	43.0	13.2	12.2	12.8	140	88	106	38	33	36
152556	H-362	WFLS	12/ 8/52	11/25/52	2	44.2	41.8	42.9	13.3	12.2	12.5	131	80	104	37	32	34
152624	H-363	WFLS	12/16/52	12/ 8/52	2	44.6	43.2	44.0	13.2	12.3	12.7	137	85	106	40	31	35
152625	H-364	WFLS	12/16/52	12/ 9/52	2	44.0	42.0	42.7	13.0	12.0	12.6	143	78	105	38	32	35
152678	H-365	WFLS	12/23/52	12/15/52	2	43.8	41.8	43.0	12.7	11.0	12.1	141	90	110	37	31	34
152679	H-366	WFLS	12/23/52	12/16/52	2	44.0	42.6	43.4	13.0	12.3	12.7	134	83	108	36	32	35
Current Mill Average:						43.2				12.6		107					35
Cumulative Mill Average:						43.0				13.8		106					36
Mill Factor, %:						100.5				91.3		100.9					97.2
Mill Index, %:						100.2				90.0		100.9					97.2

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

TABLE XI

OF INDIVIDUAL TEST LOTS—DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elmendorf Tear, G./sheet		In		Across				
Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.			
Mill I--42-lb. Linerboard																
41.8	42.0	14.0	13.0	13.5	124	95	109	33	30	31	360	288	335	480	352	395 ^a
41.8	42.0	13.7	13.0	13.3	123	79	106	33	28	31	384	320	339 ^a	432	360	388 ^a
42.0	42.4	14.0	13.0	13.6	118	73	103	34	30	33	400	288	356 ^a	496	368	419 ^a
42.4	42.8	13.1	12.3	12.8	122	91	105	34	30	32	464	304	361 ^a	432	368	401 ^a
41.8	42.4	13.9	12.8	13.4	119	83	101	35	30	32	400	320	345 ^a	408	352	391 ^a
42.3			13.3			105				32			347			399
42.9			13.4			106				33			345			400
98.6			99.3			99.1				97.0			100.6			99.8
98.1			95.0			99.1				88.9			93.0			98.3

TABLE XII

Mill J--42-lb. Linerboard

41.6	42.6	13.2	12.4	12.9	130	75	111	32	26	30	392	288	327	416	336	365 ^a
41.8	42.4	13.1	12.1	12.8	123	90	110	32	26	28	384	296	336 ^a	408	320	355 ^a
42.2	43.1	13.1	12.3	12.7	126	88	108	33	27	30	456	320	355 ^a	432	320	361 ^a
42.0	43.1	13.3	12.0	12.8	134	99	112	34	28	31	400	288	349 ^a	456	336	366 ^a
42.0	42.4	13.1	12.3	12.9	125	100	111	36	30	32	400	328	371 ^a	464	352	413 ^a
42.0	42.5	13.2	12.5	12.9	134	95	114	35	30	33	416	320	367 ^a	464	384	423 ^a
42.7				12.8			111			31			351			381
42.8				13.9			106			32			354			374
99.8				92.1			104.7			96.9			99.2			101.9
99.1				91.4			104.7			86.1			94.1			93.8

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

TABLE XI

SUMMARY OF INDIVIDUAL TEST LOTS - DECEMBER 1 THROUGH DECEMBER 31, 1952 (cont.)

File No.	Mill Code	Pin- 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.
Mill I--42-lb. Linerboard																	
152504	I-261	WFLS	12/ 1/52	11/20/52	1	42.4	41.8	42.0	14.0	13.0	13.5	124	95	109	33	30	31
152505	I-262	WFLS	12/ 1/52	11/21/52	--	42.4	41.8	42.0	13.7	13.0	13.3	123	79	106	33	28	31
152571	I-263	WFLS	12/ 9/52	12/ 4/52	1	43.0	42.0	42.4	14.0	13.0	13.6	118	73	103	34	30	33
152592	I-264	WFLS	12/10/52	12/ 5/52	1	43.6	42.4	42.8	13.1	12.3	12.8	122	91	105	34	30	32
152643	I-265	WFLS	12/17/52	12/ 8/52	1	43.8	41.8	42.4	13.9	12.8	13.4	119	83	101	35	30	32
Current Mill Average:							42.3			13.3		105					32
Cumulative Mill Average:							42.9			13.4		106					33
Mill Factor, %:							98.6			99.3		99.1					97.0
Mill Index, %:							98.1			95.0		99.1					88.9

TABLE XII

Mill J--42-lb. Linerboard

152558	J-393	B.F.	12/ 8/52	11/22/52	--	43.8	41.6	42.6	13.2	12.4	12.9	130	75	111	32	26	30
152559	J-394	B.F.	12/ 8/52	11/23/52	--	43.2	41.8	42.4	13.1	12.1	12.8	123	90	110	32	26	28
152658	J-395	B.F.	12/20/52	12/ 9/52	--	44.2	42.2	43.1	13.1	12.3	12.7	126	88	108	33	27	30
152659	J-396	B.F.	12/20/52	12/ 9/52	--	44.0	42.0	43.1	13.3	12.0	12.8	134	99	112	34	28	31
152662	J-397	B.F.	12/22/52	12/16/52	--	43.6	42.0	42.4	13.1	12.3	12.9	125	100	111	36	30	32
152663	J-398	B.F.	12/22/52	12/16/52	--	43.6	42.0	42.5	13.2	12.5	12.9	134	95	114	35	30	33
Current Mill Average:						42.7				12.8			111				31
Cumulative Mill Average:						42.8				13.9			106				32
Mill Factor, %:						99.8				92.1			104.7				96.9
Mill Index, %:						99.1				91.4			104.7				86.1

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

TABLE XIII

OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

sis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage	G. E. P ncture, units	Elmendorf Tear,	
				g./sheet	Across
Min.	Av.	Max.	Min.	Av.	Max.
Min.	Av.	Max.	Min.	Av.	Max.

Mill K--42-lb. Linerboard

No samples submitted.

TABLE XIV

Mill L--42-lb. Linerboard

42.2	43.1	14.1	12.2	13.4	126	84	103	38	32	35	432	328	365 ^a	448	352	401 ^a
42.0	42.4	13.9	12.1	13.0	127	94	111	38	32	35	448	344	369 ^a	424	360	392 ^a
40.2	41.3	14.5	12.3	13.9	122	92	105	37	31	33	392	328	361 ^a	448	320	388 ^a
41.0	42.1	14.0	12.2	13.0	137	92	113	38	32	35	424	336	363 ^a	464	368	394 ^a
41.8	42.7	14.1	13.2	13.7	137	89	106	38	32	34	376	320	345 ^a	424	368	395 ^a
41.8	42.0	14.1	13.5	13.8	128	86	112	38	32	35	416	320	367 ^a	448	352	398 ^a
42.0	43.2	13.4	12.0	12.8	130	96	109	38	31	34	416	296	355 ^a	464	352	404 ^a
42.6	43.4	14.1	12.5	13.2	123	97	112	37	32	35	424	312	372 ^a	448	360	399 ^a
	42.5			13.4			109		35				362		396	
	43.0			13.7			106		36				361		391	
	98.8			97.8			102.8		97.2				100.3		101.3	
	98.6			95.7			102.8		97.2				97.1		97.5	

TABLE XV

Mill M--42-lb. Linerboard

42.0	43.6	14.3	13.0	13.5	142	88	107	40	32	36	432	368	400 ^a	496	376	431 ^a
42.2	43.3	14.2	13.2	13.9	130	71	106	39	33	36	456	344	394 ^a	496	352	427 ^a
41.6	43.0	14.4	13.0	13.7	115	85	102	38	32	35	472	376	427 ^a	448	368	397 ^a
41.0	42.9	14.7	13.5	14.2	123	79	99	38	32	34	424	296	369 ^a	464	288	381 ^a
42.8	44.6	14.6	13.4	14.1	137	90	107	40	33	36	520	368	421 ^a	416	376	395 ^a
	43.5			13.9			104		35				402		406	
	42.8			13.7			106		36				389		403	
	101.6			101.5			98.1		97.2				103.3		100.7	
	100.9			99.3			98.1		97.2				107.8		100.0	

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

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (c)

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points	Bursting Strength, p.s.i.		G. E. P ncture, units
						Max.	Min.		Max.	Min.	

Mill K--42-lb. Linerboard

No samples submitted.

TABLE XIV

Mill L--42-lb. Linerboard											
152499	L-131		12/ 1/52	10/14/52	1	43.8	42.2	43.1	14.1	12.2	13.4
152500	L-132		12/ 1/52	10/17/52	1	43.2	42.0	42.4	13.9	12.1	13.0
152501	L-133		12/1/ 52	10/22/52	1	42.2	40.2	41.3	14.5	12.3	13.9
152502	L-134		12/ 1/52	10/27/52	1	42.8	41.0	42.1	14.0	12.2	13.0
152626	L-135		12/16/52	10/31/52	1	43.8	41.8	42.7	14.1	13.2	13.7
152627	L-136		12/16/52	11/ 1/52	1	42.4	41.8	42.0	14.1	13.5	13.8
152628	L-137		12/16/52	11/ 9/52	1	44.4	42.0	43.2	13.4	12.0	12.8
152629	L-138		12/16/52	11/10/52	1	44.4	42.6	43.4	14.1	12.5	13.2
Current Mill Average:						42.5				13.4	
Cumulative Mill Average:						43.0				13.7	
Mill Factor, %:						98.8				97.8	
Mill Index, %:						98.6				95.7	

TABLE XV

Mill M--42-lb. Linerboard											
152517	M-133	W.	12/ 2/52	11/23/52	2	46.0	42.0	43.6	14.3	13.0	13.5
152518	M-134	W.	12/ 2/52	11/25/52	2	44.2	42.2	43.3	14.2	13.2	13.9
152611	M-135	--	12/13/52	12/ 3/52	4	44.4	41.6	43.0	14.4	13.0	13.7
152688	M-136	W.	12/24/52	12/ 7/52	2	45.2	41.0	42.9	14.7	13.5	14.2
152689	M-137	W.	12/24/52	12/17/52	2	47.4	42.8	44.6	14.6	13.4	14.1
Current Mill Average:						43.5				13.9	
Cumulative Mill Average:						42.8				13.7	
Mill Factor, %:						101.6				101.5	
Mill Index, %:						100.9				99.3	

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

TABLE XVI

RY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

x.	Basis Weight, lb.	Caliper, points	Bursting Strength, p.s.i. gage			G. E. Puncture, units			Elmendorf Tear, g./sheet								
			Max.	Min.	Av.	Max.	Min.	Av.	Max.	Min.	Av.	In	Across				
Mill E--44/46-lb. Drum Linerboard																	
.2	46.2	47.4	15.6	14.8	15.2	131	83	109	43	38	40	456	416	433 ^a	512	352	437 ^a
.4	46.2	47.7	16.2	14.6	15.6	127	82	101	42	36	38	480	368	424 ^a	424	352	385 ^a
.0	46.2	47.8	15.8	14.5	15.3	139	85	104	40	35	38	528	392	447 ^a	464	352	407 ^a
.4	46.4	48.0	16.1	15.1	15.7	144	85	114	40	33	37	496	400	447 ^a	448	384	419 ^a
.0	41.0	42.8	14.6	13.6	14.1	137	100	116	34	28	31	472	376	403 ^a	408	320	373 ^a
.4	46.0	47.3	16.0	15.5	15.8	129	90	110	40	33	36	504	368	415 ^a	432	352	398 ^a
		46.8			15.3			109			37			428			403
		47.2			14.3			100			40			441			419
	99.2				107.0			109.0			92.5			97.1			96.2

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

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TABLE XVI

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (

File No.	Mill Code	Fin- ish	Date Recd.	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting Strength,		G. E. Puncture,					
						Max.	Min.	lb.	Av.	Max.	Min.	p.s.i. gage	Av.	Max.	Min.	Av.	
<u>Mill E--44/46-lb. Drum Linerboard</u>																	
152503	E-382	W.F.	12/ 1/52	11/26/52	1	48.2	46.2	47.4	15.6	14.8	15.2	131	83	109	43	38	40
152531	E-383	W.F.	12/ 5/52	12/ 2/52	1	48.4	46.2	47.7	16.2	14.6	15.6	127	82	101	42	36	38
152557	E-384	W.F.	12/ 8/52	12/ 5/52	1	49.0	46.2	47.8	15.8	14.5	15.3	139	85	104	40	35	38
152601	E-385	W.F.	12/12/52	12/ 9/52	1	49.4	46.4	48.0	16.1	15.1	15.7	144	85	114	40	33	37
152610	E-386	W.F.	12/13/52	12/10/52	1	44.0	41.0	42.8	14.6	13.6	14.1	137	100	116	34	28	31
152664	E-388	W.F.	12/22/52	12/18/52	1	48.4	46.0	47.3	16.0	15.5	15.8	129	90	110	40	33	36
Current Mill Average:								46.8			15.3			109			37
Cumulative Mill Average:								47.2			14.3			100			40
Mill Factor, %:								99.2			107.0			109.0			92.5

^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, comparisons 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 XVII, the atmospheric conditions used prior to and during the testing period varied considerably.

TABLE XVII

Mill Code	Preconditioning			Conditioning		
	R.H., %	Temp., ° F.	Time, hr.	R.H., %	Temp., ° F.	Time, hr.
A		None		34-61	72-86	--
B	32-60	68-73	0.5	50	70	24-144
C	50	73	72-144	50	73	4-8
D	30-31	78-79	8	49-53	70-74	16
E		None		46	78	--
F		None		33-56	70-76	48
G		None		50	73	24
H		None		50	73	24
I		None		38-59	78-85	--
J		None		50	72-73	0.5
K		No samples submitted.				
L		None		36-61	72-90	--
M		None		25-85	67-83	--
E*		None		46-71	70-78	--

* Drum linerboard.

A summary of the mill comparisons for the current period as compared with the previous period may be seen in Tables XVIII and XIX,

respectively. The comparison for the various mills is given in Tables XX to XXXII, for the 42-lb. liner samples. A comparison of the special drum stock is given in Table XXXIII. In all the comparisons given in Table XVIII to XXXIII, the Institute's test values have been used as the reference line.

A comparison of the test data in Tables XVIII and XIX indicates that in the majority of cases there is good agreement between the mill and Institute data. Table XVIII 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 XIX, the average differences shown for each test in Table XVIII 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 XIX 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 figure compares favorably with the maximum variation of two per cent for the preceding two periods. Further, it may be noted that the average basis weight results for Mills C, G, and H are higher than those for the Institute, whereas the results for Mills A, B, D, E, F, J, L, and M are lower and the result for Mill I is the same. In general, the agreement in basis weight results is very good for the current period.

The maximum variation in caliper for the current period is nine per cent. Compared with the values for the Institute, the average results for Mills A, C, D, E, F, G, H, I, and M are lower while the average result for Mill L is higher, and the average result for Mills B and J are the same. The accord between Institute and mill caliper values is good with the exception of Mills E and M.

It may be noted in Table XIX that the bursting strength results exhibit a maximum variation of six per cent for the current period. The average results for Mills A, B, C, D, H, I, L, and M are higher than those for the Institute, whereas the results for Mills E, G, and J are lower and the result for Mill F is the same. The agreement in bursting strength results is good except for Mills E, H, and J.

The G. E. puncture results exhibit a maximum variation of thirty-one per cent for the current period. Compared with the values for the Institute, the results for Mills A, F, and G are higher, whereas the results for Mills B, C, H, I, and M are lower and the results for Mills E and J are the same. The agreement between the Institute and mill results is good with the exception of the variations for Mills B, C, G, I, and M.

It may be seen in Table XIX that the average machine direction tear results for all mills are lower than those for the Institute. The maximum variation for the current period is twenty-six per cent. Only the differences encountered for Mills E, G, and L appear to be excessive.

With regard to the cross-machine direction tear results, it may be noted that the average results for Mills C, D, I, and J 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 twenty-four per cent. Only the difference encountered for Mill E appears to be excessive.

TABLE XVIII

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

	Mills*											
	A	B	C	D	E	F	G	H	I	J	L	M
No. Samples Compared	8	20	8	12	1	13	4	6	5	6	8	5
<u>Basjs Weight</u>												
Institute	43.4	43.4	42.1	43.4	42.1	43.6	43.5	43.2	42.3	42.7	42.5	43.5
Mill	43.2	43.1	42.2	43.1	41.5	43.3	43.6	43.3	42.3	42.6	42.2	42.5
Av. Diff.**	-0.2	-0.3	+0.1	-0.3	-0.6	-0.3	+0.1	+0.1	0.0	-0.1	-0.3	-1.0
Max. Diff.***	-1.0	-0.8	+0.4	-0.8	-0.6	-0.8	+0.3	+0.5	-0.4	-0.3	-0.7	-1.4
<u>Caliper</u>												
Institute	13.0	12.8	13.9	13.1	14.0	13.4	12.0	12.6	13.3	12.8	13.4	13.9
Mill	12.7	12.8	13.8	13.0	12.7	13.0	11.9	12.4	13.0	12.8	13.6	12.9
Av. Diff.**	-0.3	0.0	-0.1	-0.1	-1.3	-0.4	-0.1	-0.2	-0.3	0.0	+0.2	-1.0
Max. Diff.***	-0.5	+0.4	-0.5	-0.3	-1.3	-0.7	-0.3	-0.3	-0.4	-0.2	+0.7	-1.2
<u>Bursting Strength</u>												
Institute	111	110	106	105	118	102	104	107	105	111	109	104
Mill	112	111	107	106	111	102	100	112	108	106	111	108
Av. Diff.**	+1	+1	+1	+1	-7	0	-4	+5	+3	-5	+2	+4
Max. Diff.***	+5	+9	+4	+3	-7	-5	-7	+8	+6	-9	+8	+6
<u>G. E. Puncture</u>												
Institute	34	29	35	37	31	39	34	35	32	31	35	35
Mill	35	26	32	--	31	40	37	34	29	31	--	24
Av. Diff.**	+1	-3	-3	--	0	+1	+3	-1	-3	0	--	-11
Max. Diff.***	+8	-4	-6	--	0	+3	+4	+1	-4	+2	--	-15
<u>Tearing Strength, in</u>												
Institute	344	311	346	389	383	389	341	358	347	351	362	402
Mill	329	285	340	381	283	361	296	324	341	347	321	381
Av. Diff.**	-15	-26	-6	-8	-100	-28	-45	-34	-6	-4	-41	-21
Max. Diff.***	-32	-50	-45	-29	-100	-56	-88	-61	-27	-22	-86	-73
<u>Tearing Strength, Across</u>												
Institute	399	365	390	419	374	423	373	401	399	381	396	406
Mill	380	343	397	432	285	409	348	373	408	390	368	401
Av. Diff.**	-19	-22	+7	+13	-89	-14	-25	-28	+9	+9	-28	-5
Max. Diff.***	-57	-64	+34	+28	-89	-40	-47	-52	+33	+29	-57	+75

* 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 XIX
SUMMARY OF TEST RESULTS--COMPARISON BY PERIODS

	Basis Weight	Caliper	Average Difference, % Bursting Strength	G. E. Puncture	Tearing In	Strength Across
Mill A						
Current period	-0.5	-2	+0.9	+3	-4	-5
65th period	0	-2	0	-3	-3	-4
64th period	-0.2	-0.8	+0.9	+3	+2	+2
Mill B						
Current period	-0.7	0	+0.9	-10	-8	-6
65th period	-0.7	-0.8	-0.9	-9	-16	-9
64th period	+0.2	0	-5	-26	-6	-4
Mill C						
Current period	+0.2	-0.7	+0.9	-9	-2	+2
65th period	0	-0.7	+4	-3	-2	+1
64th period	+0.2	-2	+4	-8	-3	+3
Mill D						
Current period	-0.7	-0.8	+1	--	-2	+3
65th period	-0.5	-2	-4	--	-1	+4
64th period	-0.5	-5	+6	--	-1	+2
Mill E						
Current period	-1	-9	-6	0	-26	-24
65th period	-0.2	-9	-3	0	-18	-12
64th period	+1	-8	-4	-3	-12	-9
Mill F						
Current period	-0.7	-3	0	+3	-7	-3
65th period	-1	-3	-1	-5	-8	-3
64th period	+0.7	-4	+7	0	+0.2	+1
Mill G						
Current period	+0.2	-0.8	-4	+9	-13	-7
65th period	+0.5	-2	-5	+9	-10	-7
64th period	+0.5	-2	-2	+6	-10	-6
Mill H						
Current period	+0.2	-2	+5	-3	-9	-7
65th period	+2	-0.8	+0.9	-3	+4	+2
64th period	+2	-2	+4	0	+6	+5
Mill I						
Current period	0	-2	+3	-9	-2	+2
65th period	0	-3	+4	-13	-1	-2
64th period	+0.7	-0.8	+4	-3	+4	+8
Mill J						
Current period	-0.2	0	-5	0	-1	+2
65th period	+0.7	0	-4	+7	-7	-1
64th period	-0.9	+1	+2	0	-3	+1
Mill L						
Current period	-0.7	+1	+2	--	-11	-7
65th period	-0.9	+4	+3	--	-4	+0.8
64th period	-2	--	+4	--	+0.5	+4
Mill M						
Current period	-2	-7	+4	-31	-5	-1
65th period	-2	-7	+2	-39	-15	-12
64th period	-0.5	-5	+5	-36	-7	-6

TABLE XX

LARRY CF INDIVIDUAL TEST LOTS---DECEMBER 1 THROUGH DECEMBER 31, 1952

Institute Data versus Mill Data

Weight,	Caliper,		Bursting Strength, p.s.i. gage	G. E. Puncture, units		Elmendorf Tear,									
	Diff.	IPC Mill		Diff.	IPC Mill	Diff.	In	g./sheet	Across						
	Diff.	IPC Mill	points	Diff.	IPC Mill	Diff.	IPC Mill	Diff.	IPC Mill	Diff.					
<u>Mill A--42-lb. Linerboard</u>															
-0.1	13.3	13.2	-0.1	112	112	0	35	43	+8	351	376	+25	413 ^a	419	+6
-0.3	12.9	12.4	-0.5	111	108	-3	33	30	-3	333 ^a	322	-11	381 ^a	324	-57
-0.2	13.0	12.9	-0.1	116	115	-1	34	36	+2	346	323	-23	421 ^a	382	-39
-0.3	13.0	12.8	-0.2	112	116	+4	34	36	+2	359	328	-31	403 ^a	387	-16
+0.2	12.7	12.5	-0.2	108	112	+4	34	34	0	327 ^a </					

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

culated from the totals of the individual readings.

TABLE IX

Institute Data' versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight,		Caliper,		Bursting		G. E.							
					lb.	IPC	Diff.	IPC	Mill	points	IPC	Mill	Strength, p.s.i.	Puncture, units	Diff.	IPC	Mill	
<u>Mill A--42-lb. Linerboard</u>																		
152529	A-400	WF1S	11/25/52	2	43.5	43.4	-0.1	13.3	13.2	-0.1	112	112	0	35	43	+8	351	37
152530	A-401	WF1S	11/25/52	2	41.8	42.1	+0.3	12.9	12.4	-0.5	111	108	-3	33	30	-3	333 ^a	32
152590	A-402	WF1S	12/ 1/52	2	43.9	43.7	-0.2	13.0	12.9	-0.1	116	115	-1	34	36	+2	346	32
152591	A-403	WF1S	12/ 1/ 52	2	44.0	43.7												

^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 XXI

TABLE OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

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Institute Data versus Mill Data																
Light, 11	Diff.	Caliper, points		IPC	Diff.	Bursting Strength, p.s.i. gage		IPC	Diff.	G. E. Puncture, units		IPC	Elmendorf Tear, g./sheet		IPC	Diff.
		IPC	Mill			IPC	Mill Diff.			IPC	Mill Diff.		In	Across		
Mill B--42-lb. Linerboard																
0	-0.8	12.8	12.6	-0.2	114	115	+1	29	26	-3	315 ^a	277	-38	374 ^a	325	-49
1	-0.4	12.8	12.6	-0.2	114	114	0	30	26	-4	308 ^a	273	-35	379 ^a	327	-52
1	-0.4	13.0	12.7	-0.3	113	115	+2	30	26	-4	316 ^a	281	-35	359 ^a	330	-29
0	-0.4	12.7	12.6	-0.1	116	113	-3	29	26	-3	303	279	-24	378 ^a	328	-50
6	-0.1	12.6	12.6	0.0	108	117	+9	30	27	-3	325	275	-50	364 ^a	331	-33
5	+0.1	12.6	12.7	+0.1	112	112	0	28	26	-2	307 ^a	273	-34	384 ^a	320	-64
5	-0.2	12.8	12.6	-0.2	114	114	0	29	27	-2	323	278	-45	393 ^a	339	-54
4	0.0	12.7	12.6	-0.1	116	113	-3	30	27	-3	344 ^a	303	-41	378 ^a	352	-26
3	-0.2	12.8	12.7	-0.1	112	109	-3	28	25	-3	300	280	-20	353 ^a	366	+13
2	-0.6	12.9	12.6	-0.3	106	111	+5	28	25	-3	297	264	-33	362 ^a	324	-38
5	-0.7	12.8	12.8	0.0	108	108	0	28	26	-2	321	277	-44	356 ^a	342	-14
2	-0.6	13.0	12.6	-0.4	114	110	-4	29	25	-4	293	287	-6	343 ^a	343	0
2	-0.1	12.7	13.0	+0.3	111	113	+2	29	27	-2	301	301	0	375 ^a	359	-16
3	-0.5	12.8	13.2	+0.4	108	108	0	29	27	-2	312 ^a	304	-8	349 ^a	359	+10
3	-0.5	12.9	13.0	+0.1	105	107	+2	30	27	-3	310	287	-23	359 ^a	354	-5
3	-0.5	12.8	13.0	+0.2	105	110	+5	29	27	-2	297 ^a	289	-8	363 ^a	361	-2
3	+0.3	12.6	13.0	+0.4	106	109	+3	29	27	-2	313 ^a	275	-38	359 ^a	334	-25
3	0.0	12.6	13.0	+0.4	109	108	-1	29	27	-2	314	296	-18	361 ^a	356	-5
3	-0.2	12.7	13.0	+0.3	110	108	-2	28	27	-1	315	291	-24	368 ^a	359	-9
3	-0.4	12.9	13.0	+0.1	104	108	+4	29	27	-2	303 ^a	307	+4	347 ^a	359	+12
1	-0.3	12.8	12.8	0.0	110	111	+1	29	26	-3	311	285	-26	365	343	-22

more specimens which torw beyond the 3/8-inch limit.

culated from the totals of the individual readings.

TABLE XXI

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (cont)

Institute Data 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	Diff.				
					Mill B--42-lb. Linerboard												
152508	B-699	WFLS	11/20/52	1	43.8	43.0	-0.8	12.8	12.6	-0.2	114	115	+1	29	26	-3	315 ^a
152509	B-700	WFLS	11/20/52	1	43.5	43.1	-0.4	12.8	12.6	-0.2	114	114	0	30	26	-4	308 ^a
152510	B-701	WFLS	11/20/52	1	43.5	43.1	-0.4	13.0	12.7	-0.3	113	115	+2	30	26	-4	316 ^a
152511	B-702	WFLS	11/20/52	1	43.4	43.0	-0.4	12.7	12.6	-0.1	116	113	-3	29	26	-3	303
152512	B-703	WFLS	11/20/52	1	43.7	43.6	-0.1	12.6	12.6	0.0	108	117	+9	30	27	-3	325
152513	B-704	WFLS	11/20/52	1	43.4	43.5	+0.1	12.6	12.7	+0.1	112	112	0	28	26	-2	307 ^a
152514	B-705	WFLS	11/20/52	1	43.7	43.5	-0.2	12.8	12.6	-0.2	114	114	0	29	27	-2	323
152515	B-706	WFLS	11/20/52	1	43.4	43.4	0.0	12.7	12.6	-0.1	116	113	-3	30	27	-3	344 ^a
152524	B-707	WFLS	11/25/52	1	43.0	42.8	-0.2	12.8	12.7	-0.1	112	109	-3	28	25	-3	300
152525	B-708	WFLS	11/25/52	1	43.8	43.2	-0.6	12.9	12.6	-0.3	106	111	+5	28	25	-3	297
152526	B-709	WFLS	11/25/52	1	43.3	42.6	-0.7	12.8	12.8	0.0	108	108	0	28	26	-2	321
152527	B-710	WFLS	11/25/52	1	43.8	43.2	-0.6	13.0	12.6	-0.4	114	110	-4	29	25	-4	293
152670	B-711	WFLS	12/ 5/52	1	43.3	43.2	-0.1	12.7	13.0	+0.3	111	113	+2	29	27	-2	301
152671	B-712	WFLS	12/ 5/52	1	43.4	42.9	-0.5	12.8	13.2	+0.4	108	108	0	29	27	-2	312 ^a
152672	B-713	WFLS	12/ 5/52	1	43.4	42.9	-0.5	12.9	13.0	+0.1	105	107	+2	30	27	-3	310
152673	B-714	WFLS	12/ 5/52	1	43.3	42.8	-0.5	12.8	13.0	+0.2	105	110	+5	29	27	-2	297 ^a
152674	B-715	WFLS	12/ 5/52	1	42.5	42.8	+0.3	12.6	13.0	+0.4	106	109	+3	29	27	-2	313 ^a
152675	B-716	WFLS	12/ 5/52	1	43.3	43.3	0.0	12.6	13.0	+0.4	109	108	-1	29	27	-2	314
152676	B-717	WFLS	12/ 5/52	1	43.1	42.9	-0.2	12.7	13.0	+0.3	110	108	-2	28	27	-1	315
152677	B-718	WFLS	12/ 5/52	1	43.3	42.9	-0.4	12.9	13.0	+0.1	104	108	+4	29	27	-2	303 ^a
Current Mill Average:					43.4	43.1	-0.3	12.8	12.8	0.0	110	111	+1	29	26	-3	311

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

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

INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

Institute Data versus Mill Data

Caliper, points	IPC Mill	Diff.	Bursting Strength, p.s.i. gage		IPC Mill	Diff.	G. E. Puncture, units		IPC Mill	Diff.	Elmendorf Tear, g./sheet		IPC Mill	Diff.		
			IPC	Mill			Diff.	IPC			Mill	Diff.			In	Across
Mill C--42-lb. Linerboard																
14.3	14.2	-0.1	104	108	+4	35	34	-1	331 ^a	373	+42	410 ^a	409	-1		
14.2	14.3	+0.1	109	106	-3	35	33	-2	355	362	+7	398 ^a	411	+13		
14.0	13.9	-0.1	105	107	+2	35	34	-1	354 ^a	342	-12	382 ^a	416	+34		
14.0	13.9	-0.1	106	109	+3	36	32	-4	325	346	+21	389 ^a	397	+8		
13.4	13.3	-0.1	108	108	0	34	31	-3	357	341	-16	409 ^a	400	-9		
13.4	13.2	-0.2	107	109	+2	35	29	-6	349	321	-28	394 ^a	390	-4		
14.1	13.6	-0.5	102	105	+3	33	29	-4	350 ^a	328	-22	372 ^a	372	0		
13.9	13.7	-0.2	104	105	+1	33	31	-2	349	304	-45	366 ^a	378	+12		
13.9	13.8	-0.1	106	107	+1	35	32	-3	346	340	-6	390	397	+7		

TABLE XXIII

Mill D---42-lb. Linerboard

13.5	13.3	-0.2	99	102	+3	37	393 ^a	385	-8	423 ^a	428	+5
13.4	13.1	-0.3	107	104	-3	38	378 ^a	361	-17	406 ^a	427	+21
13.2	13.1	-0.1	108	109	+1	38	401 ^a	387	-14	435 ^a	447	+12
13.1	13.0	-0.1	107	106	-1	40	419	422	+3	431 ^a	456	+25
13.2	13.2	0.0	103	106	+3	36	396 ^a	388	-8	419 ^a	447	+28
12.8	12.9	+0.1	105	105	0	35	397 ^a	405	+8	415 ^a	432	+17
12.8	12.8	0.0	105	106	+1	35	363 ^a	365	+2	395 ^a	422	+27
12.8	12.9	+0.1	106	108	+2	37	397 ^a	383	-14	459 ^a	441	-18
13.2	13.1	-0.1	107	106	-1	37	405 ^a	376	-29	415 ^a	433	+18
12.8	12.9	+0.1	108	109	+1	39	405 ^a	385	-20	423 ^a	440	+17
13.1	12.9	-0.2	103	105	+2	37	361 ^a	354	-7	393 ^a	402	+9
12.8	12.6	-0.2	107	104	-3	37	352 ^a	365	+13	409 ^a	408	-1
13.1	13.0	-0.1	105	106	+1	37	389	381	-8	419	432	+13

...cimens which tore beyond the 3/8-inch limit.
...om the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (con)

Institute Data versus Mill Data

File No.	Mlll Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Bursting Strength, p.s.i. gage		G. E. Puncture, units		Elm				
					IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.	IPC	Mill Diff.					
Mill C--42-lb. Linerboard																	
152612	C-427	W.F.	12/ 4/52	1	42.5	42.9	+0.4	14.3	14.2	-0.1	104	108	+4	35	34	-1	331 ^a
152613	C-428	W.F.	12/ 4/52	1	42.5	42.7	+0.2	14.2	14.3	+0.1	109	106	-3	35	33	-2	355
152644	C-429	W.F.	12/ 5/52	1	42.2	42.4	+0.2	14.0	13.9	-0.1	105	107	+2	35	34	-1	354 ^a
152645	C-430	W.F.	12/ 5/52	1	42.0	42.2	+0.2	14.0	13.9	-0.1	106	109	+3	36	32	-4	325
152646	C-431	W.F.	12/ 6/52	1	42.0	41.9	-0.1	13.4	13.3	-0.1	108	108	0	34	31	-3	357
152647	C-432	W.F.	12/ 6/52	1	42.1	42.2	+0.1	13.4	13.2	-0.2	107	109	+2	35	29	-6	349
152660	C-433	W.F.	12/ 9/52	1	41.7	41.7	0.0	14.1	13.6	-0.5	102	105	+3	33	29	-4	350 ^a
152661	C-434	W.F.	12/ 9/52	1	41.9	41.7	-0.2	13.9	13.7	-0.2	104	105	+1	33	31	-2	349
Current Mill Average:					42.1	42.2	+0.1	13.9	13.8	-0.1	106	107	+1	35	32	-3	346

TABLE XXIII

Mill D---42-lb. Linerboard

152497	D-599	W.F.	11/23/52	4	43.2	43.1	-0.1	13.5	13.3	-0.2	99	102	+3	37	393 ^a
152498	D-600	W.F.	11/24/52	4	43.6	43.6	0.0	13.4	13.1	-0.3	107	104	-3	38	378 ^a
152528	D-601	W.F.	12/ 2/52	4	44.6	44.1	-0.5	13.2	13.1	-0.1	108	109	+1	38	401 ^a
152532	D-602	W.F.	12/ 3/52	4	43.9	43.8	-0.1	13.1	13.0	-0.1	107	106	-1	40	419
152539	D-603	W.F.	12/ 4/52	4	43.3	43.1	-0.2	13.2	13.2	0.0	103	106	+3	36	396 ^a
152587	D-604	W.F.	12/ 5/52	4	43.7	43.2	-0.5	12.8	12.9	+0.1	105	105	0	35	397 ^a
152588	D-605	W.F.	12/ 6/52	4	42.6	41.8	-0.8	12.8	12.8	0.0	105	106	+1	35	363 ^a
152589	D-606	W.F.	12/ 7/52	4	43.8	43.6	-0.2	12.8	12.9	+0.1	106	108	+2	37	397 ^a
152593	D-607	W.F.	12/ 8/52	4	43.6	43.2	-0.4	13.2	13.1	-0.1	107	106	-1	37	405 ^a
152620	D-608	W.F.	12/10/52	4	44.2	43.9	-0.3	12.8	12.9	+0.1	108	109	+1	39	405 ^a
152641	D-609	W.F.	12/13/52	-	41.9	41.3	-0.6	13.1	12.9	-0.2	103	105	+2	37	361 ^a
152642	D-610	W.F.	12/14/52	4	42.6	42.4	-0.2	12.8	12.6	-0.2	107	104	-3	37	352 ^a
Current Mill Average:					43.4	43.1	-0.3	13.1	13.0	-0.1	105	106	+1	37	389

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 XXIV
INDIVIDUAL TEST LOTS—DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

Institute Data versus Mill Data																							
No.	Caliper, points	IPC	Mill	Diff.	Bursting Strength, p.s.i. gage		IPC	Mill	Diff.	G. E. Puncture, units		IPC	Mill	Diff.	IPC								
					IPC	Diff.				IPC	Diff.					IPC	Diff.						
																		IPC	Diff.	IPC	Diff.	IPC	Diff.
Elmendorf Tear, g./sheet																							
						In		Across															
				IPC	Diff.	IPC	Diff.	IPC	Diff.	IPC	Diff.	IPC	Diff.	IPC	Diff.								
<u>Mill E--42-lb. Linerboard</u>																							
6	14.0	12.7	-1.3	118	111	- 7	31	31	0	383 ^a	283	-100	374 ^a	285	-89								
6	14.0	12.7	-1.3	118	111	- 7	31	31	0	383	283	-100	374	285	-89								

TABLE XXV

Mill F--42-lb. Linerboard															
7	13.7	13.1	-0.6	101	101	0	39	40	+ 1	388 ^a	351	-37	423 ^a	388	-35
6	13.5	12.9	-0.6	105	107	+ 2	38	38	0	403 ^a	347	-56	433 ^a	393	-40
0	12.5	12.5	0.0	104	101	- 3	37	40	+ 3	388 ^a	385	- 3	440 ^a	439	- 1
5	13.4	12.7	-0.7	110	108	- 2	38	41	+ 3	399 ^a	392	- 7	423 ^a	456	+33
4	13.4	13.0	-0.4	104	104	0	40	41	+ 1	376 ^a	371	- 5	432 ^a	404	-28
8	13.1	12.8	-0.3	104	99	- 5	37	38	+ 1	383 ^a	332	-51	411 ^a	389	-22
1	13.9	13.6	-0.3	97	96	- 1	39	40	+ 1	388 ^a	365	-23	417 ^a	401	-16
3	13.3	12.8	-0.5	100	104	+ 4	38	39	+ 1	395 ^a	340	-55	422 ^a	407	-15
0	13.7	13.2	-0.5	101	102	+ 1	41	42	+ 1	395 ^a	349	-46	437 ^a	407	-30
6	13.7	13.3	-0.4	99	102	+ 3	42	40	- 2	385 ^a	367	-18	409 ^a	407	- 2
7	13.8	13.3	-0.5	94	97	+ 3	40	39	- 1	392 ^a	381	-11	413 ^a	423	+10
3	13.2	12.7	-0.5	97	98	+ 1	40	40	0	391	365	-26	421 ^a	416	- 5
5	13.3	12.6	-0.7	105	102	- 3	38	37	- 1	376 ^a	341	-35	420 ^a	391	-29
3	13.4	13.0	-0.4	102	102	0	39	40	+ 1	389	361	-28	423	409	-14

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

and from the totals of the individual readings.

TABLE XXIV

SUMMARY OF INDIVIDUAL TEST LOGS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (contin

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		Diff.		IPC Mill Diff.		Bursting Strength, p.s.i. gage		G. E. Puncture, units		IPC Mill Diff.		IPC Mill
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	

Mill E--42-lb. Linerboard

152655	E-387	W.F.	12/16/52	1	42.1	41.5	-0.6	14.0	12.7	-1.3	118	111	-7	31	31	0	383 ^a	
Current Mill Average:																		
					42.1	41.5	-0.6	14.0	12.7	-1.3	118	111	-7	31	31	0	383	

TABLE XXV

Mill F--42-lb. Linerboard

152507	F-80	W.F.	11/13/52	--	43.2	42.5	-0.7	13.7	13.1	-0.6	101	101	0	39	40	+1	388 ^a	
152506	F-81	W.F.	11/14/52	--	43.1	42.5	-0.6	13.5	12.9	-0.6	105	107	+2	38	38	0	403 ^a	
152536	F-82	W.F.	11/20/52	--	43.7	43.7	0.0	12.5	12.5	0.0	104	101	-3	37	40	+3	388 ^a	
152537	F-83	W.F.	11/24/52	--	44.5	45.0	+0.5	13.4	12.7	-0.7	110	108	-2	38	41	+3	399 ^a	
152538	F-84	---	11/25/52	--	44.3	43.9	-0.4	13.4	13.0	-0.4	104	104	0	40	41	+1	376 ^a	
152614	F-85	W.F.	11/27/52	--	43.1	42.3	-0.8	13.1	12.8	-0.3	104	99	-5	37	38	+1	383 ^a	
152618	F-86	W.F.	11/28/52	--	43.8	43.7	-0.1	13.9	13.6	-0.3	97	96	-1	39	40	+1	388 ^a	
152619	F-87	W.F.	12/ 2/52	--	43.4	43.1	-0.3	13.3	12.8	-0.5	100	104	+4	38	39	+1	395 ^a	
152615	F-88	W.F.	12/ 3/52	--	44.4	44.4	0.0	13.7	13.2	-0.5	101	102	+1	41	42	+1	395 ^a	
152616	F-89	W.F.	12/ 4/52	--	44.0	43.4	-0.6	13.7	13.3	-0.4	99	102	+3	42	40	-2	365 ^a	
152617	F-90	W.F.	12/ 5/52	--	43.4	42.7	-0.7	13.8	13.3	-0.5	94	97	+3	40	39	-1	392 ^a	
152622	F-91	W.F.	12/ 8/52	--	43.5	43.2	-0.3	13.2	12.7	-0.5	97	98	+1	40	40	0	391	
152623	F-92	---	12/ 9/52	--	42.7	42.2	-0.5	13.3	12.6	-0.7	105	102	-3	38	37	-1	376 ^a	
Current Mill Average:																		
					43.6	43.3	-0.3	13.4	13.0	-0.4	102	102	0	39	40	+1	389	

^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 XXVI

INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (continued)

Institute Data versus Mill Data

Caliper, points	Bursting Strength, p.s.i. gage	G. E. Puncture, units	Elmendorf Tear,											
			IPC	Mill	Diff.	IPC	Mill	Diff.						
12.3	12.0	-0.3	104	103	-1	34	37	+3	336 ^a	281	-55	371 ^a	350	-21
12.3	12.3	0.0	101	99	-2	34	38	+4	364	276	-88	379 ^a	332	-47
11.7	11.5	-0.2	106	99	-7	34	36	+2	314 ^a	312	-2	367 ^a	357	-10
11.7	11.7	0.0	106	100	-6	34	37	+3	350 ^a	313	-37	374 ^a	354	-20
12.0	11.9	-0.1	104	100	-4	34	37	+3	341	296	-45	373	348	-25

TABLE XXVII

Mill H--42-lb. Linerboard

12.8	12.6	-0.2	106	110	+4	36	36	0	361	336	-25	405 ^a	403	-2		
12.5	12.6	+0.1	104	112	+8	34	35	+1	374 ^a	313	-61	415 ^a	364	-51		
12.7	12.4	-0.3	106	113	+7	35	35	0	363 ^a	348	-15	398 ^a	398	0		
12.6	12.4	-0.2	105	108	+3	35	34	-1	351 ^a	321	-30	407 ^a	371	-36		
12.1	11.8	-0.3	110	117	+7	34	33	-1	328 ^a	314	-14	377 ^a	351	-26		
12.7	12.4	-0.3	108	111	+3	35	34	-1	309	312	-57	406 ^a	354	-52		
12.6	12.4	-0.2	107	112	+5	35	34	-1	358	324	-34	401	373	-28		

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

from the totals of the individual readings.

TABLE XXVI

SUMMARY OF INDIVIDUAL TEST DATA—DECEMBER 1 THROUGH DECEMBER 31, 1952 (cont.)

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.		Caliper, points		IPC Mill Diff.		Bursting Strength, p.s.i. gage		G. E. Puncture, units	
					IPC	Mill	Diff.	IPC	Mill	Diff.	IPC	Mill	Diff.	IPC
152572	G-456	WFL	12/ 3/52	1	43.6	43.6	0.0	12.3	12.0	-0.3	104	103	34	37
152573	G-457	WFL	12/ 3/52	1	43.7	43.8	+0.1	12.3	12.3	0.0	101	99	34	38
152690	G-458	WFL	12/17/52	1	43.1	43.2	+0.1	11.7	11.5	-0.2	106	99	34	36
152691	G-459	WFL	12/17/52	1	43.5	43.8	+0.3	11.7	11.7	0.0	106	100	34	37
Current Mill average:					43.5	43.6	+0.1	12.0	11.9	-0.1	104	100	34	37

Mill G--42-lb. Linerboard

TABLE XXVII

Mill H--42-lb. Linerboard

152555	H-361	WFLS	11/24/52	2	43.0	43.1	+0.1	12.8	12.6	-0.2	106	110	36	36	0	361
152556	H-362	WFLS	11/25/52	2	42.9	43.1	+0.2	12.5	12.6	+0.1	104	112	34	35	+1	374
152624	H-363	WFLS	12/ 8/52	2	44.0	43.9	-0.1	12.7	12.4	-0.3	106	113	35	35	0	363 ^a
152625	H-364	WFLS	12/ 9/52	2	42.7	42.9	+0.2	12.6	12.4	-0.2	105	108	35	34	-1	351 ^a
152678	H-365	WFLS	12/15/52	2	43.0	43.5	+0.5	12.1	11.8	-0.3	110	117	34	33	-1	328
152679	H-366	WFLS	12/16/52	2	43.4	43.1	-0.3	12.7	12.4	-0.3	108	111	35	34	-1	369
Current Mill Average:					43.2	43.3	+0.1	12.6	12.4	-0.2	107	112	35	34	-1	358

^aThis 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.

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952

Institute Data versus Mill Data

File No.	Mill Code	Fin- ish	Date Made	Mch. No.	Basis Weight, lb.			Caliper, points		Diff.	Bursting Strength p.s.i. gage			G. E. Puncture, units		
					IPC	Mill	Diff.	IPC	Mill		Diff.	IPC	Mill		Diff.	
Mill I--42-lb. Linerboard																
152504	I-261	WF1S	11/20/52	1	42.0	42.2	+0.2	13.5	13.1	-0.4	109	110	+ 1	31	29	335
152505	I-262	WF1S	11/21/52	--	42.0	42.2	+0.2	13.3	13.2	-0.1	106	112	+ 6	31	29	339 ^a
152571	I-263	WF1S	12/ 4/52	1	42.4	42.2	-0.2	13.6	13.2	-0.4	103	106	+ 3	33	29	356 ^a
152592	I-264	WF1S	12/ 5/52	1	42.8	42.4	-0.4	12.8	12.5	-0.3	105	105	0	32	31	361 ^a
152643	I-265	WF1S	12/ 8/52	1	42.4	42.4	0.0	13.4	13.1	-0.3	101	106	+ 5	32	30	345 ^a
Current Mill Average:					42.3	42.3	0.0	13.3	13.0	-0.3	105	108	+ 3	32	29	347

TABLE XXIX

Mill J--42-lb. Linerboard

152558	J-393	B.F.	11/22/52	--	42.6	42.3	-0.3	12.9	12.9	0.0	111	108	- 3	30
152559	J-394	B.F.	11/23/52	--	42.4	42.1	-0.3	12.8	12.8	0.0	110	105	- 5	28
152658	J-395	B.F.	12/ 9/52	--	43.1	43.0	-0.1	12.7	12.6	-0.1	108	105	- 3	30
152659	J-396	B.F.	12/ 9/52	--	43.1	43.0	-0.1	12.8	12.6	-0.2	112	106	- 6	31
152662	J-397	B.F.	12/16/52	--	42.4	42.6	+0.2	12.9	12.9	0.0	111	105	- 6	32
152663	J-398	B.F.	12/16/52	--	42.5	42.6	+0.1	12.9	13.0	+0.1	114	105	- 9	33
Current Mill Average:					42.7	42.6	-0.1	12.8	12.8	0.0	111	106	- 5	31
														351

TABLE XXX

Mill K--42-lb. Linerboard

No samples submitted.

^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.

Y OF INDIVIDUAL TEST LOGS—DECEMBER 1 THROUGH DECEMBER 31, 1952

Institute Data versus Mill Data

ht,	Caliper, points	IPC Mill Diff.	Bursting		IPC Mill Diff.	p.s.i. gage	IPC Mill Diff.	G. E. Puncture, units	IPC Mill Diff.	Elmendorf Tear,		IPC Mill Diff.	
			Strength,	g./sheet						In	Across		
Mill L-42-lb. Linerboard													
-0.7	13.4	13.8	+0.3	103	111	+ 8	35	365 ^a	300	-65	401 ^a	344	-57
-0.5	13.0	13.4	+0.4	111	105	- 6	35	369 ^a	344	-25	392 ^a	385	- 7
+0.5	13.9	14.4	+0.5	105	109	+ 4	33	361 ^a	329	-32	388 ^a	365	-23
+0.1	13.0	13.3	+0.3	113	117	+ 4	35	363 ^a	320	-43	394 ^a	363	-31
-0.7	13.7	13.4	-0.3	106	105	- 1	34	345 ^a	326	-19	395 ^a	380	-15
-0.1	13.8	13.6	-0.2	112	108	- 4	35	367 ^a	281	-86	398 ^a	349	-49
-0.7	12.8	12.8	0.0	109	117	+ 8	34	355 ^a	336	-19	404 ^a	383	-21
-0.7	13.2	13.9	+0.7	112	112	0	35	372 ^a	333	-39	399 ^a	378	-21
-0.3	13.4	13.6	+0.2	109	111	+ 2	35	362	321	-41	396	368	-28

TABLE XXII

Mill M--42-lb. Linerboard

-1.0	13.5	12.6	-0.9	107	113	+ 6	36	400 ^a	393	- 7	431 ^a	445	+14
-1.2	13.9	12.7	-1.2	106	106	0	36	394 ^a	321	-73	427 ^a	365	-62
-1.0	13.7	12.8	-0.9	102	107	+ 5	35	427 ^a	367	-60	397 ^a	358	-39
0.1	14.2	13.3	-0.9	99	104	+ 5	34	369 ^a	410	+41	381 ^a	456	+75
-1.4	14.1	13.1	-1.0	107	109	+ 2	36	421 ^a	416	- 5	395 ^a	384	-11
-1.0	13.9	12.9	-1.0	104	108	+ 4	35	402	381	-21	406	401	- 5

new specimens which tore beyond the 3/8-inch limit.
ited from the totals of the individual readings.

SUMMARY OF INDIVIDUAL TEST LOTS—DECEMBER 1 THROUGH DECEMBER 31, 1952

Institute Data versus Mill Data

G. E.

Basis Weight, Caliper, points

File No. Mill Code Fin- ish Date Made Mch. No.

IPC Mill Diff.

IPC Mill Diff.

Bursting Strength, p.s.i. gage

IPC Mill Diff.

IPC Mill Diff.

IPC M

Mill L-42-lb. Linerboard

152499	L-131	10/14/52	1	43.1	42.4	-0.7	13.4	13.8	+0.3	103	111	+ 8	35	365 ^a
152500	L-132	10/17/52	1	42.4	41.9	-0.5	13.0	13.4	+0.4	111	105	- 6	35	369 ^a
152501	L-133	10/22/52	1	41.3	41.8	+0.5	13.9	14.4	+0.5	105	109	+ 4	33	361 ^a
152502	L-134	10/27/52	1	42.1	42.2	+0.1	13.0	13.3	+0.3	113	117	+ 4	35	363 ^a
152626	L-135	10/31/52	1	42.7	42.0	-0.7	13.7	13.4	-0.3	106	105	- 1	34	345 ^a
152627	L-136	10/ 1/52	1	42.0	41.9	-0.1	13.8	13.6	-0.2	112	108	- 4	35	367 ^a
152628	L-137	11/ 9/52	1	43.2	42.5	-0.7	12.8	12.8	0.0	109	117	+ 8	34	355 ^a
152629	L-138	11/10/52	1	43.4	42.7	-0.7	13.2	13.9	+0.7	112	112	0	35	372 ^a
Current Mill Average:														362
				42.5	42.2	-0.3	13.4	13.6	+0.2	109	111	+ 2	35	

TABLE XXXII

Mill M-42-lb. Linerboard

152517	M-133	W.	11/23/52	2	43.6	42.6	-1.0	13.5	12.6	-0.9	107	113	+ 6	36	22	-14	400 ^a
152518	M-134	W.	11/25/52	2	43.3	42.1	-1.2	13.9	12.7	-1.2	106	106	0	36	21	-15	394 ^a
152611	M-135	—	12/ 3/52	4	43.0	42.0	-1.0	13.7	12.8	-0.9	102	107	+ 5	35	21	-14	427 ^a
152688	M-136	W.	12/ 7/52	2	42.9	42.8	-0.1	14.2	13.3	-0.9	99	104	+ 5	34	23	-11	369 ^a
152689	M-137	W.	12/17/52	2	44.6	43.2	-1.4	14.1	13.1	-1.0	107	109	+ 2	36	32	- 4	421
Current Mill Average:																	
					43.5	42.5	-1.0	13.9	12.9	-1.0	104	108	+ 4	35	24	-11	402

^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.

Institute Data versus Kill Data

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

ed from the totals of the individual readings.

TABLE III

SUMMARY OF INDIVIDUAL TEST LOTS--DECEMBER 1 THROUGH DECEMBER 31, 1952 (Cont.)

Institute Data versus Mill Data

File No.	Mll 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 Diff.	IPC	Mill Diff.					
Mill E--44/46-lb. Drum Linerboard																	
152503	E-382	W.F.	11/26/52	1	47.4	47.9	+0.5	15.2	14.4	-0.8	109	102	- 7	40	37	- 3	43
152531	E-383	W.F.	12/ 2/52	1	47.7	47.2	-0.5	15.6	14	-1.6	101	94	- 7	38	39	+ 1	42
152557	E-384	W.F.	12/ 5/52	1	47.8	48.3	+0.5	15.3	13.6	-1.7	104	96	- 8	38	36	- 2	44
152601	E-385	W.F.	12/ 9/52	1	48.0	46.8	-1.2	15.7	14.3	-1.4	114	106	- 8	37	35	- 2	44
152610	E-386	W.F.	12/10/52	1	42.8	44.1	+1.3	14.1	13.4	-0.7	116	109	- 7	31	33	+ 2	40
152664	E-388	W.F.	12/18/52	1	47.3	46.5	-0.8	15.8	14.2	-1.6	110	104	- 6	36	35	- 1	41
Current Mill Average:					46.8	46.8	0.0	15.3	14.0	-1.3	109	102	- 7	37	36	- 1	42

^aThis 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.

