

Handwritten initials: EAP, HRP, K

PLAINTIFF'S
EXHIBIT
CSR-570

GRQ

September 19, 1952

A. B. Fisher
C. F. Bassweiler
K. W. Huffine
Alvin Brown
J. A. O'Brien
C. B. Burnett
J. D. Lowry - Toronto Plant

(To be noted by:)

A. E. Alpine
W. E. Boyd
R. S. Gardner
G. D. Poole

Task Force Report No. 27

Special Fiber Run

27-1/2% M-387-0 (30% Australian
Blue, 70% 6D20) 6" - 150 Pipe

Attached hereto are copies of the above Task Force Report.

As a result of the work based on Task Force Report No. 27, an extended production run is being made using a fiber blend consisting of MS Blue 42 and 6D fibers, so that sufficient data will be obtained to make final recommendations pertaining to the possibilities of utilization of 6D fiber.

SC:cm

Handwritten signature: S. Collier
S. Collier

cc: E. R. Williams-Research
G. B. Brown-Research
A. DelRocco-Manville
R. H. Neisel-Research
R. Jacobs-Manville
J. R. Robeson-Manville
A. J. Schilling-Manville
J. Q. Trice-Research
H. J. O'Brien-Manville

K. J. Whalen-Manville
D. Nowlin-Research
P. B. Proctor
R. Nebel
E. C. Lindstrom
W. L. Vanderbeek
G. Smolak-Research
H. E. Richards-Manville
P. D. Cannon

P. S. Mr. Lowry - We are not attaching a copy of this report since I left one with you yesterday when in Toronto.

Research Center
September 15, 1952

File: 425-R7a-1

S. Collier - G.H. (16)
P. D. Cannon - G.H.
H. E. Richards - Manville
G. Smolak

Special Fiber Run
27-1/2% M-387-0 (30% Australian Blue, 70% 6D20)
6" - 150 Pipe
Task Force Report No. 27

The attached report covers the preliminary plant run of July 1, 1952 using 30 per cent Australian Blue, 70 per cent 6D20 fiber (Blend M-387-0) in the manufacture of 6"-150 pipe.

The results showed no significant difference between the use of 27-1/2 per cent M-387-0 and the use of 25 per cent M-360-2 in forming characteristics or ultimate strength level. The pipe made with the special blend did appear to be more brittle than the standard blend pipe.

The Task Force

by: D. Nowlin

fz

cc: E. R. Williams
G. H. Brown

Task Force:

P. B. Procter - G.H.
A. R. Girardi - G.H. (4)
H. J. O'Brien - Manville
A. Del Rocco - Manville
A. H. Schilling - Manville
K. J. Whalen
R. Nebel
J. Q. Trice

SPECIAL FIBER RUN
27-1/2% M-387-0 (30% AUSTRALIAN BLUE, 70% 6D20)
6" - 150 PIPE
Task Force Report No. 27

SUMMARY:

A preliminary plant run on the Manville No. 2 machined showed that the use of 27-1/2 per cent of a blend composed of 30 per cent Australian Blue, 70 per cent 6D20 in 6-in. 150 pipe results in forming characteristics and ultimate strength levels in hydro, flexure and crush, comparable to the use of 25 per cent of standard blend M-360-2.

PROCEDURE:

The special blend was made up of the following virgin fibers:

Australian Blue	30%
6D20	70%

The blend was willowed without scrap addition and was designated as Blend M-387-0. This blend was used on the machine at 27-1/2 per cent furnish in approximately 100 sections of 6-in. 150 pipe on July 1, 1952 on the Manville No. 2 machine. The 6-in. 150 pipe manufactured before and after the special run with 25 per cent of M-360-2 were followed for comparison purposes. Test pipe for destruction tests in hydro and flexure were selected at the machine. Samples of the dry stock feed to the machine were taken and used in making sag cakes.

RESULTS:

Use of the special blend, M-387-0, did not noticeably change the forming characteristics. The pipe formed well and had the same forming times as when using the standard blend M-360-2.

At the Hawthorne lathes, a difference in the machining characteristics of the pipe was noted. The pipe made with 27-1/2 per cent M-387-0 tended to chip while being machined and had the appearance of being considerably more brittle than the pipe manufactured with 25 per cent M-360-2.

Neither the destruction test pipe nor the sag cake tests showed a significant difference in the hydro, flexure or crush strength level of the pipe between use of 27-1/2 per cent M-387-0 and 25 per cent M-360-2.

The results are summarized in the following tables.

RESULTS: (Cont'd)

Table I

Summary of Production and Inspection Results
 Special Fiber Run -- 27-1/2 per cent M-387-0
 6" -- 150 Pipe

	<u>"Before" Run</u> <u>25% M-360-2</u>	<u>Special Run</u> <u>27-1/2% M-387-0</u>	<u>"After" Run</u> <u>25% M-360-2</u>
No. of Sections Manufactured	136	136	128
Scrap at Machine	2 = 1.5%	0	0
Rejects at Machine	0	4 = 2.9%	1 = 0.8%
Average Forming Time = Min.	1.15	1.15	1.09
No. of Sections Machined and Inspected	134	132	127
Inspection Rejects	3 = 2.2%	4 = 2.9%	2 = 1.6%
Flexure Failures	0	0	0
Hydro Failures	4 = 2.9%	4 = 2.9%	0
Net Recovery Based on No. of Sections Manufactured	127 = 93.4%	124 = 91.2%	125 = 97.7%
Net Recovery Based on No. of Sections Machined and Inspected	94.8%	93.9%	98.4%

Table II

Summary of Ultimate Strengths
 Special Fiber Run -- 27-1/2% M-387-0
 6" -- 150 Pipe

	<u>"Before" Run</u> <u>25% M-360-2</u>	<u>Special Run</u> <u>27-1/2% M-387-0</u>	<u>"After" Run</u> <u>25% M-360-2</u>
No. of Hydro Test Pipe	12	27	11
Average Breaking Load - psi	844	831	800
Standard Deviation	70	78	65
Average MR - lbs/sq in.	5155	4802	4758
Standard Deviation	606	427	380
No. of Flexure Test Pipe	4	5	4
Average Breaking Load - lbs	4460	3900	4410
Average MR - lbs/sq in.	5015	4466	4882
No. of Crush Test Samples	22	44	22
Average Breaking Load - lbs	6846	6922	7364
Standard Deviation	357	632	595
Average MR - lbs/sq in.	6930	6869	6956
Standard Deviation	393	605	585

RESULTS: (Cont'd)

Table III

Summary of Sag Cake Data
Using Dry Stock Feed to the Machine

	<u>25% M-360-2</u>	<u>27-1/2% M-387-0</u>
No. of Sag Cakes	15	15
Average Filter Time - Sec.	61.6	62.1
Standard Deviation	3.6	3.0
Average MR - psi	4210	4021
Standard Deviation	171	199
Average Density - lbs/cu ft	93.03	92.74
Standard Deviation	0.48	0.34

CONCLUSIONS:

Use of 27-1/2 per cent of blend M-387-0 (30 per cent Australian Blue, 70 per cent 6D20) resulted in an operable furnish and an ultimate strength level for 6-in. 150 pipe which compares with the strength level of 6-in. 150 pipe manufactured with 25 per cent M-360-2.

An extended run of the special blend would be necessary for verification of these preliminary results.