November 27, 1968

SUBJECT: SMITH & KANZLER

re: Formula #6222 Made During
Period 11/18-11/21/68

John Toman and the writer visited Smith & Kanzler Monday, November 18, through Thursday, November 21, 1968. We were to observe an ASBESTOPRENE run (P. S. #222) that was scheduled.

The tank car of latex was not spotted until Tuesday afternoon and arrangements were made to run .058"/.066" #6222 material Wednesday morning.

Monday and Tuesday

Monday and Tuesday were spent in observing operations and in discussing the technical matters with Van Sebastian. One of the topics discussed was a program for developing VICTOLEX 258 and other cellulose products for our use. In view of the large capital investment in equipment, additional beaters, etc., it was our opinion that the volume we would require would not justify the expenditures at this time.

Wednesday

Wednesday morning we started with a 6222 formulation using a 70/30 blend of 6D04/6D02 fiber for which a verbal approval had been given by C. I. Hayden on March 8, 1968. Machine settings - speed, roll pressures, etc., were set as per the previous successful run (October 25, 1968).

Considerable trouble was encountered:

1. Contamination - They had decided not to pump through the screen from the second chest to the third chest. Evidently lines had not been cleaned and all stock was contaminated with rubber, wood, and other things.

2. The stock was crushing at front and back of wet web. Machine adjustments did not correct.

3. Couldn't control basis weight - over the high limit.

Because of the above, the gauge was changed to the .040"/.046" gauge (after cleaning up system) which ran very well. The formula was changed to 100% 6D02 fiber as soon as possible.

DANA-251

In analyzing the results of the 1/16" run, it was concluded that the following were factors:

1. For some undetermined reason, the stock drainage was poor - about 100-140 seconds. Previous trials indicated a drainage rate of 60 seconds (1 gallon sample diluted to 15 liters).

   P. S. There is no accurate check on stock consistency. A couple of check s were made and it varied from 4.2% to 4.7%. This can affect drainage.

2. This run was preceded by a two-day run of 5-pound starch paper using scrap. The scrap is badly contaminated, furthermore, it contains silica which is strongly alkaline and could affect the controlled precipitation of the latex. As a matter of fact, samples of the white water taken from the No. 6 vat appeared cloudy, indicating traces of latex. This in turn could plug up the screens and the felt sufficiently to slow down the drainage.

3. A new and different felt was in use.

Thursday

On Thursday morning we started using 100% 6D34 fiber - hoping for better drainage, and machine settings similar to Wednesday's runs.

Drainage appeared to be satisfactory, but again problems were encountered in maintaining basis weight. In addition, blistering was encountered initially which was eventually eliminated.

The formula was changed back to the 70/30 blend of 6D34/6D32 fibers on Thursday afternoon to see if this would account for previous day's poor drainage. No difference was encountered.

It is apparent that there are manufacturing problems in running 1/16" #6222 material. We would recommend that the following action be taken:

1. Investigate the use of alum (4-5# per batch) in order to get complete coagulation of the latex. This should not affect the formation which appears to be good. Van Sebastian should initiate this.

2. The water should be heated (140°F. if possible) for better precipitation and agglomeration and therefore better drainage. Manufacturing to initiate.

3. Reasons for the wide variations in drainage rates encountered should be determined.
   Van Sebastian should initiate.

4. The condition of felt.

5. Feel that lot can be done by machine adjustments. A more experienced machine tender would probably make a noticeable difference.

6. Evaluate the possibilities of lamination for the 1/16" gauge from a cost and processing standpoint. Manufacturing should initiate.

7. Determine if the use of alum, hot water, ideal felt, etc., will allow the use of all 6D02 fiber as was originally used. Van Sebastian to initiate.

VL:pt