



DOW CHEMICAL U.S.A.

Rec'd 3/1/82

February 23, 1982

P. O. BOX:

MIDLAND, MICHIGAN 48640

Kenneth Sutton
Bird & Sons, Inc.
Technical Center
East Walpole, MA 02032

cc: J. Kent Colvin
Bird & Sons, Inc.
620 Aero Drive
Shreveport, LA 71161

PLAINTIFF'S EXHIBIT

BIR-947

Dear Ken:

Below you will find preliminary plans for a composite roofing trial at the Shreveport mill.

✓ The production goal of the trial is approximately 26₂ tons of unsaturated felt with a basis weight of 55 lbs/480 ft.² and approximately 10 tons of unsaturated felt with a basis weight of 42 lbs/480 ft.².

✓ Regarding batch make-up, Ken Meath indicated your desire to size each pulper batch to one drum of latex. Based on the working capacity of the pulper, 6,375 gallons (53,000 lbs.), utilization of one full drum of latex (212 lbs. active) would result in a consistency of 10%. We feel this is too high. A better target would be 8%. Dow will supply a pump to transfer the latex.

✓ From the pulper the stock will be transferred through the primary and secondary centrifflers, the Jonsson screen, by-bass the thickener to the stock chest. From the stock chest, the stock will be transferred through the stuff box, the Jordan refiners to the machine chest. From the machine chest through the fan pump, machine centrifflers, machine screen to the cylinder. Briefly, the stock will follow the normal flow with the exception of by-passing the thickener.

✓ The flocculant, Betz® 1260, will be added in-line at the sample port located between the machine chest pump and the fan pump. Dow will supply a calibrated variable speed positive displacement pump for the flocculant addition. Betz Paper Chem, Inc. will supply a portable flocculant make-up unit, which includes two, one thousand (1,000) gallon tanks. What will be required by Bird are clean water and required plumbing. Clean water is necessary for flocculant make-up and for dilution in the pumping unit. Associated piping is required for connection of the flocculant tanks, clean water supply, flocculant pump and dilution unit, to the in-line addition point (sample port).

AN OPERATING UNIT OF THE DOW CHEMICAL COMPANY

BIRD 013995

Mr. Kenneth Sutton
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Regarding consistency regulators. The duration of the trial is probably insufficient to calibrate them. However, it is desirable to have the regulators engaged and reading on scale. If the readings are on scale (although incorrect) they will maintain uniform consistency of the stock; therefore, uniform basis weight on the machine and small adjustments of basis weight are easier.

On the machine. At start-up the vacuum and press pressures are best set at your normal pressures for the all organic production. Once start-up is completed, adjustments can be made if necessary. One problem that can occur at the presses is sticking. Placing a lightly soaked kerosene rag on the press roll will eliminate the sticking if it occurs. The use of a water jet to cut a tail is necessary to facilitate the threading through the dryers. Based on production of 42 and 55 lbs/480 ft. at a machine speed of approximately 150 feet per minute, our expectation is that the dryer cans should be maintained at your normal steam pressure. One of the production goals is to demonstrate increased production capability of the heavier basis weight felt rather than reduced energy consumption.

Higher speed?

(?)

Dow will assist your Quality Control Personnel with testing during the trial. On the spot testing affords immediate adjustment of production conditions if necessary.

Attached you will find raw material specifications for the Shreveport trial. After you have reviewed the enclosed trial information, please contact me for further discussion of details and execution of the trial.

Sincerely,

Don Clarey

D. H. Clarey
Designed Products
2040 Dow Center
517,636-3280

Attachments

slk

BIRD & SONS, INC.
SHREVEPORT, LA MILL TRIAL

PULPER BATCH INFORMATION

A working volume of 6,375 gallons equates to approximately 53,170 pounds. At 8.0% consistency, the total solids per batch is 4,250 pounds.

Total solids per batch:	4,250 pounds
Filler @ 60%:	2,550 pounds; 51;50 lb. bags
Fiber @ 36%:	1,530 pounds
Latex @ 4%:	170 pounds; 42.5 gallons

FLOCCULANT BATCH INFORMATION

Total Stock: 71,200 lbs.
Total Flocculant @5 lbs/ton: 175 lbs.

Two 1,000 gallon tanks; assume 90% utilization for each tank, total volume is 1,800 gallons. A working volume of 1,800 gallons equates to approximately 15,000 pounds. At 1.0% active, the total dry flocculant required is 150 lbs. (75 pounds per tank). The flocculant usage will actually probably be about 2.5 lb. per ton. Making up the two 1000 gallon tanks of 1% material will most likely be sufficient for the entire trial.

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SHREVEPORT, LA MILL TRIAL

MACHINE SPECIFICATIONS

Width: 150 Inches
Trim: 144 Inches
Speed: 150 Feet Per Minute

TANKAGE

Pulper: 6,375 Gallons
Stock Chest: 18,000 Gallons
Machine Chest: 18,000 Gallons
Flocculant: Two 1,000 Gallons

PRODUCTION DESCRIPTION

4 Hours at 55 lbs/480 ft.², approximately 51,550 lbs. ✓
2 Hours at 42 lbs/480 ft.², approximately 19,650 lbs. ✓

RAW MATERIAL REQUIREMENTS

Total Stock: 71,200 lbs.

Filler @ 60%: 42,720 lbs.
Fiber @ 36%: 25,630 lbs.
Latex @ 4%: 2,850 lbs.
Flocculant @ 5 lbs/ton: 178 lbs.

Latex @ 212 lbs. active per drum: 14 drums

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