PLAINTIFF'S EXHIBIT
FOS-693

V. TECHNICAL DEPARTMENT

Monthly Report
November, 1974

1. PROJECT PROGRESS - HEADING

a. Coarse Sand Aggregate (RM 00E), Additions in Profax formulations.

1) Project Status

No plant trials were conducted during the month of November. Evaluations will commence first quarter, 1975.

b. Paper containing Profax and Proflex

1) Project Status

EP 5672P(Asbestos free 2% paper Profax) was tested on the #134 J & L side board. The boards were of excellent quality and appearance and initial impressions are that they are the best Asbestos free Profax produced in Cleveland Plant to date. Amitec tests show that the product is within the range of Profax 31. Subsequent field trials were conducted on large BED ingots with no detrimental effects from radiated heat and Hilti nailing. On the basis of this test, all J & L Cleveland side boards will be converted to Asbestos free EP 5672P. Future trials at J & L on casting boards will be conducted in December to determine what, if any, shrinkage occurs. At the present time, all laboratory evaluations as well as field comparisons show 5672P comparable to EP 5672. Green strength as well as suspension stability favor 5672P.

2) Proposed Action

It is our intention to continue substitution of 5672 with EP 5672P Asbestos free at all accounts applicable. These will be done on a one-by-one basis and is a major step forward in our Asbestos Free Program.

c. EP 5686 Low Carbon Ferrux, Armco-Middletown

1) Project Status

All laboratory evaluations are complete and the results of same submitted to Armco-Middletown for disposition. We assume they will order a truckload for plant evaluations in December.

d. Density Determinations of Profax boards by immersion displacement principle

1) Objectives, Scope, and Potential Impact

The Manufacturing Department has continually complained of wide density variations in Profax products. It was decided that we would establish accurate volumes of selected Profax designs so that they could be converted into precise production density specifications. The #685 Copperweld design was the first chosen. It is hoped that this evaluation will confirm or deny that production variations and/or losses are caused by recipe misformulation and other manufacturing inconsistencies, and that if these losses are real, that they be absorbed by the appropriate modification of the product specification.

2) Project Status

Experimental data is now being compiled and a progress report meeting is scheduled for the first week of December. Initial results are encouraging in that the density variation between readings are varying $\pm$ 1%.

e. Starch binder position in 5672 type recipes

1) Objectives, Scope, and Potential Impact

It is our intention that starch be re-evaluated as a potential substitute for PF resin. It can be assumed that since many of the operating companies around the world are using starch that in certain applications it should be applicable at Foseco, Inc. The impact is great in that starch is approximately $\frac{1}{4}$ the cost of PF resin.

2) Project Status

With the help of the Technical Department of Staley Starch, extensive laboratory evaluations were conducted comparing many types of starch and dextrin combinations. In some cases, reproductions of work previously conducted. The results at this time, however, were overwhelming convincing that starch does have potential for major PF resin replacement.

3) Proposed Action

In the first quarter of 1975, when our Asbestos free program will allow more plant trials, starch binders will be evaluated thoroughly in production situations.

f. Evaluation of Sample 5733 as a replacement for X3579 (PVAC)

1) Objectives, Scope, and Potential Impact

Sources of X3579 are continually being researched to maintain adequate supplies of same. M5733 was tested in our laboratory as a direct replacement for X3579 in EP 5672 Profax. The results obtained were comparable in all respects. M5733 has been approved as a replacement for PVAC contingent on a successful plant trial.