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KAYLO RESEARCH AND DEVELOPMENT
MONTHLY REPORT FOR JULY 1967

August 1, 1967

Mr. A. S. Kevlin, New York
Mr. R. J. McEvoy, Granville
Central Files

Product Development

1. Stress Corrosion

The only major deficiency of stress corrosion ware to show up in the recently conducted test market program was softness. Products made from the Product Testing Lab approved 10L-ST5-1 batch are not as hard as standard Kaylo. Efforts are being directed toward upgrading physical properties of the stress corrosion product via cement modifications of the batch. Batch formulations containing various percentages of cement and various C/S ratios were poured and samples submitted to Product Testing for evaluation.

Manufacturing decided to go outside the company to obtain the proprietary 2399 glass used in stress corrosion batch formulations. The Legal Department prepared and Toledo General Purchasing submitted to Philadelphia Quartz a secrecy agreement covering disclosure of the proprietary composition of 2399 glass. Philadelphia Quartz signed the secrecy agreement and a meeting was set up in Philadelphia for August 1 to discuss the technical aspects of the product. R. Shannon was assigned by Toledo Purchasing and Manufacturing to represent GCF at this meeting.

2. Replacement of Asbestos

The search for substitutes for asbestos fibers was temporarily delayed A heavy vacation schedule reduced overall activity in the Kaylo R & D Laboratory. Also, per agreement with Marketing, priority was assigned to the stress corrosion program. Samples of Kaylo reinforced with glass and submitted to Product Testing for hot pipe tests in June have not been tested to date.

3. Competitive Insulations

Recent testing of competitive insulations indicate products of several of our competitors have deteriorated in recent months in thermal conductivity and in shrinkage at maximum recommended temperature usages.

At the request of Marketing (June 14 Kaylo Team Meeting) a report summarizing physical and thermal properties of competitive high temperature core, pipe and block insulations was completed and submitted to I and C Marketing personnel.

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339



Mr. L. I. Sadosky

-2-

4. Military Specifications

At the request of I and C Marketing new proposed MIL specs for thermal block and pipe insulations were reviewed. Several changes were detected in the proposed spec, which, if allowed to remain, would eliminate K-10 as a Class 3 product. Changes detected in the spec and their effect on the marketing of Kaylo were called to the attention of I and C Marketing (Kevlin) for prompt action and follow-up.

5. Canadian Manufacture of Kaylo

The Licensee and Affiliate Services Department requested we review and comment on Fiberglas Canada's previous report of 1958 regarding possible introduction of Kaylo as a high temperature insulation for import into or manufacture in Canada. This we did and comments were written and suggestions made within the confines of the Legal Department's clarification of the scope of the agreement between OCF and FCL. A request by Fiberglas Canada, Limited for their personnel to visit Berlin was denied by the Legal Department (Overman).

Process Development

1. Process Audit

Productivity and job efficiencies have dropped drastically at Berlin during the past several months. Manufacturing requested the assistance of R. Shannon to make an in-depth audit of the plant process to determine causes for lower throughput and job efficiencies. This audit, started in July and extending into August, will require a major effort on the part of the Kaylo R & D Laboratory and may delay other planned programs and timing, including activity on stress corrosion and substitutes for asbestos.

A major cause for offware at Berlin is recent loss of whole trains of material due to softness of ware. In most cases the cause was traced back to errors in mixing or malfunctioning equipment. Another possible cause of soft ware is incorrect C/S ratio for cycle used. An extensive laboratory study was made to determine optimum C/S ratios for both K-10 and K-17 batch. The results of these studies indicated the plant was using higher than desired C/S ratios for optimum strengths. Plant evaluation of lower C/S ratio batch formulations are under way.

2. K-20

Over the years the major cause for K-17 and K-20 offware has been HEN (not enough material). This is caused by 'movement' of the batch after it is in the mold and occurs when the molds are transported from station to station within the plant.

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340