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KAYLO IMPROVEMENT MEETING

SALES - RESEARCH - PLANT - PRODUCT DEVELOPMENT

BERLIN, NEW JERSEY

JANUARY 19, 1962

P.? mineral wool
30% less in cost;
easier to apply;
insulation values
comparable

Minutes:

Attendance

R. C. Amos - Berlin
M. C. Armstrong - Granville
W. B. Ball - New York
J. H. Boynton - New York
W. F. Justice - Berlin
R. M. Moyer - Berlin
J. A. Pershing - Toledo
O. W. Pfeifer - Toledo
R. F. Shannon - Granville
W. C. Taylor - Toledo

Coated Fiber Reinforcement:

1. a) General Research tests at Granville revealed that they could make a phenolic base coating that would withstand 600 degrees in autoclaving.

   b) The coating would give a firm and strong bond with Kaylo material by beading the coated glass fiber.

   c) They secured 8 and 9 drops, pouring with cores out, before complete severance and breakage of pipe insulation.

2. General Research was to have such coatings placed on several hundred pounds of glass fiber, at Anderson, using different formulas of coatings and different grades of glass fibers.

3. Former plant tests compared with General Research lab tests revealed that plant could not duplicate lab results. Plant tests were always lower than lab obtained.

4. Tests of the recently coated Anderson fibers were to be run at Berlin and were run at Berlin, during week of January 15, 1962.

5. Tests were made with Sprout-Waldron attrition mill opened W3 asbestos. This was found to increase the drop test results by several drops, over present wet milled W3 by Bauer Brothers Attrition Mill, in present production method.

6. Bauer Brothers have been contacted at Springfield and necessary parts are to be ordered immediately, to improve on Sprout-Waldron opened W3 amosite. Delivery to be made in three weeks.

7. A combination of Bauer Attrition Milled W3 amosite and phenolic coated glass fibers are to be tried as soon as Bauer Mill changeover is completed. This in about three weeks or after February 15, 1962. This is expected to yield highest number of drops when tested. This opened amosite is expected to increase the bond still further.

8. Samples of 4 x 1 with glass fibers are to be sent to General Research at Granville, for evaluation, from runs during week of January 15th.

9. Sample shipments are to be made to Houston, New Orleans and Detroit, for evaluation of resistance to impact and improvement in breakage. Decision as to whether to wait until combined glass fiber and opened asbestos specimens are available, will be made by January 31.

10. Costs of each formulation of coated fiber, finalized as to type of coating and grade of fiber, are to be secured from Anderson Plant. This would include labor charge, as well as material. Freight would be F.O.B. Anderson.

11. Marsh Armstrong was to give Anderson personnel such assistance as necessary, by furnishing formulations, etc., which would determine phenolic costs on coated fibers.

12. It is necessary to secure good dispersion of coated fiber in Kaylo batch. The coated fiber is placed in hydropulper, prior to additions of solids, other than asbestos and lime. The first fiber from Anderson will be chopped. Later, it may be possible to secure, a flexible coated phenolic fiber, that can be in roving style and these roving ends run through choppers at Berlin. John Pershing is to give cost estimate, of equipment necessary and length of time to fabricate and install same, for each coated fiber method, for introduction into slurry.

13. A cost estimate of $131,000.00 was furnished by John Pershing, for the initial installation of equipment for "cores out" method of pouring coated fiber. Because of this cost, as well as a time delay of 4 or 5 months in program, it was the committees judgement to begin production on a "cores in" basis, even if fewer drops were secured. There has been evidence appear from time to time which lends question to whether the drop test is a true criterion of impact and abuse improvement, over the present Kaylo end products.

14. The committee felt there was another source of improvement to be secured in the 36" pouring device. This was indicated:

a) The orientation of fiber improvement, in a right angle dispersion [illegible], to the 36" length.

b) Elimination of end oil slip planes and pouring folds.

c) Reduction of other pouring defects attributable to personal skill and technique of pourers. It was recommended that any help needed be procured from Engineering or Mechanical Research, for an early development of an efficient 36" pouring device.

d) Basic personnel problem of not being so dependent on the pourers as individuals, as training is less difficult and replacement not so hard, on a semi-mechanized 36" pouring device.

15. It was felt that perhaps a combination of:

a) Coated glass fibers.
b) Opened up amosite asbestos,
c) 36" pouring device,

would produce the highest quality end product, in the area of shipping [illegible], impact and handling abuse before and during application.

16. [illegible] was to have a plan for warehouse distribution of present stocks by February 1, 1962. The disposition of such stocks would precede the publicity and advertising program for improved Kaylo products.

17. When type of fiber is determined for best results, another 1000 lbs. is to be ordered from Anderson for another trial run at the plant. Anderson personnel are to run the coating operation, with a General Research individual acting as a quality supervisor, for fiber acceptance and to give any technical help requested. O. W. Pfeifer is to process order on Anderson Plant by January 30, 1962.

18. Week of February 12 was designated for evaluation of shipment to New Orleans, if Bauer Mill parts can be procured by then. This was to be a straight LTL shipment, without any package improvements designed to reduce breakage, such as specific palletization, etc.

19. Evaluation of product for improved shipping performance at destination to be in area of March 1, 1962, depending on shipping and arrival dates.

20. Reshipment back to Berlin evaluation program to be completed by March 15, 1962, if possible or sooner.

21. Shipments of samples for evaluation to be sent to Testing Laboratory at Granville. Mr. Ball to follow for crash evaluation program.

Stress Corrosion:

1. R. C. Amos stated he had made arrangements with Barrington Plant, for chloride tests to be conducted there - five samples per week, in their laboratory. These samples to be random selection on five day basis. This is end product chloride determination. Tests to be instituted sometime in February.

2. The sampling method is to be determined by General Research, in conjunction with General Testing Lab, and write-up conveyed to Barrington Lab and all interested parties. Accurate results must be obtained and the sampling test must be of such a nature to provide such, otherwise there is no need to conduct. It was generally agreed that the testing of the whole piece or half section was to be the basis for start of this program.

3. The group agreed, from test results and batch performance results, that 7D4 Lake asbestos could and should be substituted for J-M 7D1 chrysotile, because of the lower chloride content of the former.

4. 4T3 Lake asbestos has been tried in several batches of heavy density core material. Further tests are needed and will be made, to establish the feasibility of its exclusive use, as a chrysotile asbestos. This again because of its lower chloride content than J-M's similar grade.

5. J-M Asbestos Division has been notified by OCF General Purchasing Department, that their asbestos contains a higher chloride content than is desirable and process changes make it imperative to discontinue the use of J-M's higher chloride chrysotile.

...rial:

... Research has been advised to conduct experiments to develop a ... detection device, which would enable the plant to detect and ... any heavy density or light density block, containing a "blow ... any delamination or separation, not discernible to visual inspection.

2. Mr. Ames declared that Roddis, the largest Kaylo core customer, had instituted a very critical and severe selection program, prior to their processing K-20 or K-17 core material, for mineral core fire door manufacture. This was to reduce "blow ups" in completed doors, attributable to Kaylo core defects. In spite of a large percentage of visually inspected Kaylo core slab rejects, Roddis had not appreciably reduced the amount of "blows" in their door manufacturing process. Therefore, he felt the sonic device was needed to eliminate non visual lamination defects at the plant before shipping to Roddis.

3. Mr. Ball replied that the Research Program and Docket is so extended, both for dollars and available man hours, that any new projects must be most necessary and important. He asked if the plant could not live with the present visual operation and inspection until a future date.

4. Mr. Ball asked, to which the committee agreed, that this work of development of a sonic detection device for non visual "blow ups" in Kaylo core material, be tabled until June 1, for further analysis of intervening results, as well as any improvements plant may have been able to make.

Kaylo Pipe Jackets:

a. Stainless Steel

1. John Boynton was to have available, week of 1/22, the data of volume in sizes, of stainless steel jackets probably to be sold during 1962.

2. This information was to be passed on to Bill Deardurff, for advising Bill Harmon, of United Sheet Metal at Columbus, so as the latter could set standard forming costs, for stainless steel jacket fabrication.

3. Harmon has tentatively stated, United Sheet Metal could not economically set up, for runs of less than 100 jackets, at a time, except for sampling runs.

4. Sales stated they may be competitive, because of a full insulation coverage, on job heading, even if the small amount of stainless steel jackets were sold at a loss.

5. February 5th was the target date for establishing the price range to sizes, by Sales, from cost of jacket manufacture, received from Mr. Deardurff.

B. Aluminum

1. Mr. Harmon, of United Sheet Metal, has been sent aluminum jacket material to have their shop fabricate aluminum jackets, as a second source of supply to Insul-Coustics. These samples have not been received at Berlin for evaluation, after examination and inspection. Bill Justice is to follow to procure the samples as soon as possible.

2. a) The plant personnel had a discussion and meeting with a Mr. Arnett, of Insul-Coustics, to cover non adherence to P.A.C. and delays in shipping dates. These inefficiencies were promised to be eliminated, but shipping date was missed the latter part of the same week, by Insul-Coustics.

b) Mr. Arnett stated that full hard H18 aluminum was being embossed by Alcoa for Insul-Coustics. He further stated that Insul-Coustics inventory of lower hardness would be depleted in February and new H18 hard material used exclusively.

c) The supposedly H18 embossed aluminum jacket as supplied by Insul-Coustics does not appear to be as hard, as non-embossed, plain aluminum as used by J-M and others. A sample is to be sent by Bill Justice, for Bill Deardurff to have verified back through Alcoa.

d) Mr. Arnett stated that Insul-Coustics had available, an improved adhesive, for sealing purposes on the butt straps, at the jacket joints. This adhesive is covered with a glassine paper, to prevent sticking, as well as drying out. This replaces the present asbestos paper, which is too absorptive. None has yet been received at Berlin.

e) Mr. Arnett was notified that a second source of supply is being considered, because of poor service performance of Insul-Coustics, as well as below par workmanship and non compliance to Purchase Acceptance Standards. This has had a detrimental effect on OUR customers' appraisal of Kaylo-Klad.

f) West Coast is said to have available a sealer for use on butt straps. Samples are to be secured by plant from them and sent to Clayton Smucker for evaluation, as well as cost. Pecora's adhesive is also a candidate for aluminum and stainless steel.

g) John Boynton stated that the actual competitive market price received for Kaylo-Klad was 10 to 20% below published price sheet. Kaylo had to remain competitive. It was suggested that Methods Engineering's help be secured to air plant in reducing manufacturing and assembly costs.

h) Further work was to be done on overlap, rather than modified Pittsburgh joints, with provise that waterproofing must be maintained. Since jackets and forming are available at Berlin, it was recommended that work be done there, for Sales inspection of samples developed.

i) The P.A.C. was to be rewritten and the rolled Pittsburgh joint made more specific. The tightness of roll also was to be stressed. This would provide the spring back needed to give ease of fit into modified Pittsburgh joint. Pie Pfeifer was to work with Bill Deardurff on revision.

Traced Kaylo Pipe Insulation

2. Plant has mold costs for conversion and manufacture of new molds.

[illegible] has not recommended the number of molds needed, on sizes contemplated, being based on a standard cycle, of 12 to 15 days.

3. An estimate of $43,000.00 for such traced mold procurement has been advanced. This is perhaps too low for sizes needed, on cycle wanted by Sales. However, Sales asked Plant to determine what cycle would result, using number of molds procurable for the $43,000.00 estimated

[illegible] said he would have an accurate estimation of volume for [illegible] as soon as possible, by February 5th.

[illegible] a request for more general information on this subject, [illegible] Laboratory. So far this has not been received. Mr. Ball [illegible] Bill Lotz for this information.

[illegible]

[illegible] and Boynton are to check further with Bob Estep, as to [illegible]'s program for use of tank leg insulation. There is [illegible] of a firm commitment for an installation at Charleston, [illegible] already having been made. Depending upon results of this [illegible] program will be placed on a "go" or "no go" basis.

[illegible]

[illegible] any tape available for sizes and volume involved over [illegible] top of the sectional size. Until such a time as this [illegible] to overall, as well as potential increase, in available, [illegible] of laminated and fabricated large sectional pipe insulation [illegible] continued. There would have to be a thorough study made [illegible] demands, reduction of overall potential production

capacity, mold procurement, which costs to be compared and correlated to present fabrication costs and product trim waste, as to the economics of such a changeover, unless demanded by a large percentage of customers, which does not appear to be the present status.

6" Block

1. Manufacture of 6" block originally instituted by Bill Turner of Carbide Chemicals. Originally bought from K and M. OCF entered as a second source of supply and to round out line. Was used in Carbide's shop for own fabrication of fittings, shapes, etc.

   It is now reported that Carbide's shop fabrication supervisor has stated that the 6" block is too unwieldly to use as such, or to cut into segments for lamination and fabrication work. He further stated the volume will be much less than anticipated. The plant has removed all 6" molds from production. There is about one half of a car in inventory at Berlin, which Mr. Ball recommended be trimmed and slit to standard block thickness and recartoned and sold.

   Mr. Justice stated that there was a full car of 6" block in Asbestos Insulators warehouse stock at Charleston for Carbide's use, which they (Carbide) would draw on first.

   Mr. Boynton is to check with Branch to ascertain why and how this program deteriorated rather than progressed.

K-20 Light Density Block Insulation for Furnace Application

1. Another Fiberglass furnace at Kansas City is to be insulated with K-20 light density block in those areas where application is practical.

2. Mineral wool cost is 20% less. This price differential makes market penetration outside of company more difficult, even with other glass companies. Application of mineral wool is easier. However, reuse after rebuild is greater with Kaylo 20 light density material. Insulation values are comparable, which does the same for resultant fuel savings.

3. Sales wants more time for study of results to evaluate the possibilities and potentials of marketing.

Insulating Cement - Kaylo

1. This program was evaluated and explored by Sales and was turned down, as a not desirable product for marketing at present time, with possibilities of not having sufficient volume of dust being eventually available and a profit margin of sufficient size not being present to warrant its introduction.

Molded Fittings

1. There has not been any work done on this project.

Ceramic Ware Pallet

1. Reinforced gypsum cast slabs are now used by Borg-Warner-Ingersoll for support through ovens, of ceramic ware. A competitive item can be made by using a heavy density material, of a non cracking tendency, with mechanical strength. The firing temperature is in the 150 degree range.

2. These shapes can be pan molded on flatware line, with some type of reinforcement placed in mold.

3. A specialty item can be also made on #3 line for adoptation toward a specific end use and purpose.

4. The Research Group will be ready for some plant tests in or near March 15, 1962.

5. This item was suggested by United Clay Mines people as being adaptable for Owens-Corning manufacture.

6. The thickness is approximately 2". The overall size 17-1/2" x 32".

Carbide Chemicals Fire Tests

1. Carbide Chemicals have installed a gasolene burning test tank to secure high temperature fires, in seeking fire resistant insulation products.

2. Owens-Corning Sales Group have signified their willingness to cooperate in these test programs.

3. Refrasil as well as Fiberglas insulation and products can be used in these tests.

4. As program develops and participation is had, more coverage as to plans, needs, etc., will be forth coming, for providing test materials for specific fire retardant purposes.

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