

GENERAL ENGINEERING

OWENS-CORNING FIBERGLAS CORPORATION

IMPROVED KAYLO
MANUFACTURING PROCESS SURVEY

COPIES TO—

TO: EFFECT LOCAL QUALITY, IN
ORDER FROM THE BOARD OF DIRECTORS

REQUESTED BY J. E. Boynton

APPROVED *H. Frank*

PREPARED BY *Carl Pfeiffer*

APPROVED _____

DATE November 20, 1964

OWENS-CORNING
FIBERGLAS

INTRA-COMPANY CORRESPONDENCE

To R. S. Grant

Date November 13, 1964

From O. W. Pfeifer

cc:

Subject IMPROVED KAYLO
MANUFACTURING PROCESS SURVEY

Mr. J. H. Boynton's letter to you on the above subject points out the need, in his opinion, which we presume reflects the I & C Marketing viewpoint, for a different manufacturing process, to produce a rigid, high temperature range of insulation, particularly of the pipe shapes and sizes. He states that the Kaylo pan-pouring method now in use is no longer adequate. The reasons he advances for such a need are "that competitive processes have been developed that allow calcium silicates to be produced that have a better field acceptance than our present Kaylo product."

He further stipulates "there are three major areas where our product needs improvement to maintain an equal:"

1. Breakage - Impact Strength
2. Wall Thickness Variation - Dimensional Stability
3. Product Uniformity and Appearance - Visual Appearance

None of us directly associated with Kaylo manufacturing disagree with Mr. Boynton's statement of needed improvement, of particularly Kaylo pipe insulation, in the three above mentioned general areas. Perhaps there are differences of opinion as to the degree of effect, these quality variances, comparative to competition's end product, have on sales or customer acceptance, when balanced against the sales price factor?

Everyone is in agreement that an improvement in product characteristics, in these and other areas, quality wise, are desirable. Most of us, we feel, believe that significant quality improvements can be made, without upsetting the present standard manufacturing cost structure. This would preserve its relationship to sales prices and protect or improve the present gross profit margins. These improvements would apply to the present pan-pouring Kaylo manufacturing process. The design and installation of a different type of manufacturing high temperature insulation process is another problem.

Kaylo pipe insulation, designated as K10 light density, has some plus quality standards, when compared to competitors ware. It is not completely outclassed in all quality categories. Kaylo 10 light density block insulation, as well as KD light light density for 1800° maximum temperature, is the acknowledged leader in the industry. K17 core, as a structural material, has only one competitor, namely, U.S. Plywood.

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We recommend that corrective attempts begin immediately on those items and in those areas where such a work program is not now active on the Phase I, Short Range Program, on the present Kaylo pan-pouring manufacturing process. There is \$24,480.00 projected in the 1965 Kaylo Process Development budget for such work. This includes formulation improvement experimental trials and such device and equipment procurement as proves necessary for process changes.

Development work on Phase II, Long Range Program, should be temporarily deferred so as not to dilute the effort, to bring to a successful conclusion the Phase I portion of the Kaylo Process Improvement Program.

Several years ago W. C. Turner, of Carbide Chemicals, of Charleston, West Virginia, one of our largest customers, issued a listing on rigid, high temperature insulation desired quality characteristics, for both thermal and physical properties. This was given to all manufacturers of not only calcium-silicate, but of all types of high temperature insulation.

We have itemized these characteristics and (1) listed beside them the values of the present K10 light density Kaylo pipe insulation. Placed beside these (2) are those desired quality benchmarks pointed out by Mr. Boynton. Finally we set down Mr. Turner's goals for high temperature insulation as he wanted them improved. These follow the Long Term Survey pages.

General Engineering

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attach.