

February 27, 1964

Lab Project E41-A

"Refractory Castable Fused Block Insulation for Detrick Panel Const."

Progress report on above project per your request of February 13th.

The following is a resume of the Lab Minutes from the time the project was started in May, 1963:

MAY 9, 1963

Preliminary problem is to produce block insulation to which a refractory facing can be "keyed" for panel construction for use in the aluminum field. Mr. Speelman will experiment in providing grooves or "keyways" in block insulation and Mr. Marden will work on a suitable refractory facing, approximately 3/4" to 1" thick which will be dustless when installed.

JUNE 6, 1963

Mr. Marden presented samples of Decrete with a glazed finish. The finish was fused to the Decrete at 1500 F. Mr. Marden will continue research.

JULY 11, 1963

Mr. Marden requested, and was granted, an additional 10 days to complete tests and "burns" on several promising materials.

AUGUST 6, 1963

Mr. Marden reported that "facing" Griptex block with a castable and, in turn, applying a glaze to the castable proved, generally, unsatisfactory. Far better results were obtained by applying the glaze directly to the Griptex block and eliminating the intermediate layer of castable. The samples containing the glaze were burned at 1500 F and some of them appear very good. However, they will have to be reburned at 1300 - 1350 F to determine whether or not any softening occurs. Continued work will be done on this project.

SEPTEMBER 5, 1963

Mr. Marden displayed samples of various coatings and glazes applied directly to Griptex block. Curing at 1500 F causes a change in the block structure on the hot face which does not provide a good "anchorage" for the coatings. New tests will be conducted on this basis of deeply scoring Griptex block and applying a substantial buffering layer of cement between the block and coating. Mr. Marden requested a check at 1000 F on some of the coatings applied to block insulation.

**PLAINTIFF'S  
EXHIBIT**

MHD- 81

OCTOBER 3, 1963

In order to obtain a strong bond and key between the buffering layer and Griptex block samples of block will be scored while wet. These scored block are to be dried in the usual manner and turned over to Mr. Marden for future tests and experiments in applying a buffering layer and glaze.

NOVEMBER 7, 1963

Refractory castable Faced Block Insulation for Detrick Panel Construction. Sample of hard faced block were displayed by Mr. Marden. These seemed to meet with the approval of those present. It was decided to apply the facing to a full sized, plant run, Griptex block and run it through the drying ovens at normal operating temperatures.

JANUARY 9, 1964

The experiment in applying castable facing to plant run Griptex block on a production basis was unsatisfactory. Additional work will be required on this subject.

FEBRUARY 6, 1964

Mr. Marden displayed samples he produced and this material appears to be a good product. Mr. Speelman said he could make it on a regular production line. Mr. John Hosbein will get in touch with Pittsburgh and sand samples. Mr. Marden will write a progress report.

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I am attaching two test sections of the above material. These test sections were cut from a specimen that had the block formed and castable applied in a trial production run and dried in the plant drying oven with our standard production block insulation. If this material was manufactured it would require a slower oven.

Test sections are marked - " Oven dried at 400° F" and fired at 1500° F.

R. W. H.

NOTE: Material is oven dried at 400° F - this is the way material would be shipped.

After installation, temperature would be raised to 1500° F. to glaze surface and fuse binder.