April 20, 1961

PROGRESS REPORT EL7-A Plastic Refractory Tests

Inspection Trip- Detroit Steel Corp.
Portsmouth, Ohio
MP 2907

On April 10, 1961 D. VanBuskirk and the writer visited Detroit Steel at Portsmouth Ohio and observed the installation of Detrick Super 35 RS in the walls of the Loftus Soaking Pits being installed then. We were able to see the pits in three different stages of completion, one was just being started, the second about 1/3 finished and the third was almost 2/3 done. Since both the Monolithic Department and the Laboratory were there at the same time we were able to discuss this job from both viewpoints which should help future construction.

Among the points noted were that the space under the front or upper "piggyback" anchor tile was filled or not filled according to the skill of the individual ramming the plastic and also to a certain extent by the type of hammer head used on the air gun. This latter will be the subject of further discussion by the Monolithic Department. It was the practice of these people to unwrap three to four cartons of plastic for each rammer so as to keep him from waiting for material. This meant that the plastic invariably airdryed for at least 10-15 minutes before being rammed and in case of break periods, lunch hours etc it could set as much as an hour and one half before being placed in the wall. This practice , of course, caused all of the material to be less workable than our tests showed and on the lower workability cartons this was even more evident. This practice was not as harmful as it could here been though as the weather was wet and rainy with an average relative humidity of 90-95% and also the pits being constructed were in a cool area of the plant far away from any operating pits but under other circumstances this way of doing things could cause trouble and even unjustified complaints. They were ramming against J.M. Super X and wherever an air hammer would hit it this material would powder and sift down into the plastic fir brick contaminating it. We, in the laboratory, plan to do some experimental work on this but it would seem that the Detrick Company has a definite sales point for the use of Griptex block in this application as it would not powder nor contaminate the plastic.

Other points noticed were the placement of the scoring lines in the wall, the insertion of wood for expansion joints and other things of this kind.

After this experience a visit to a plastic job after it has been in service for a year or so would be valuable.

Respectfully Submitted,

H.E. Detrick Co.
MID LABORATORY

R.E. Abell

