CC: A. A. Brizzolara - Newark
R. A. Hageman - "
W. L. Monson - "
J. W. Minnich - Newport

BCC: C. C. Ballard - Louviers
W. L. Kuechler - "

Newport, Delaware
June 21, 1962

H. H. GYORGY
TECHNICAL SUPERVISOR
NEWPORT

PIGMENT DRYING IN ENTOLETER CLASSIFYING IMPACT MILL
Ref: Letter - WLMonson to RAHageman-6/4/62

In the reference letter, W. L. Monson postulates a 2 lb./hr. drying rate versus a 2,000 lb./hr. grinding rate in the Entoleter impact mill. I believe that drying rates much in excess of 2 lb./hr. are possible. W. L. Monson's concern about drying capacity is based on the extremely fast heat transfer rate required in the Entoleter as opposed to a conventional unit such as a spray dryer. I submit that such heat transfer rates are possible and have, in fact, been approached in the Strong-Scott Turbulizer.

Reliable data on the "Turbulizer" show a rate of 200,000 BTU/hr. cu. ft. This would translate into a drying rate of about 140 lb./hr. of inorganic pigment or 40 lb./hr. of organic pigment in the 0.5 cu. ft. volume of the Entoleter. It can be realistically assumed, I believe, that much higher heat transfer rates can be achieved in the Entoleter than in the "Turbulizer" due to greatly increased energy inputs and air velocity.

On the eight inch mill at the Engineering Test Center, I observed the drying of kerosene from 35% CPC presscake at a rate of about 3-4 lb./hr. pigment. This was done on a once-through basis with no attempt to adjust for conditions. This, in itself, indicates significant potential for drying applications.

In my contacts with Engineering Department, they have been quite enthusiastic about drying applications for the unit. Since they apparently have enough experience with the unit to make an estimate of drying capacity, I suggest they be asked for a recommendation.

A. N. AUSTER
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