

Bloomington Ind.

Jan 12, 1909

Professor Chas. F. Binns

Alfred

Dear Friend,

I turned over the information you furnished me to my firm here and they desire me to convey their thanks to you.

Their clay according to the shale geologist's report analyzes as follows:

SiO₂ 69.41

Al₂O₃ 18.81

Mgo .54

CaO .90

Fe₂O₃ 2.64

H₂O? 7.65

It resembles shale in structure in the bank, looks very sandy, weathers down slowly, but slakes in the auger (?) readily. It has been used raw and pugged in horse (?) mills, ground in (?) etc. for 65 years at old Anapolis but it had never been pressed til we started. The first press took 7 hours to pump and was soft even then. On my suggestion, a couple of presses were brought (?) out of clay weathered for two years, some left on a flat at the station from a shipment out to same outside point. These took two times to press. By using clay that has had a freeze and thaw, one or more times a rate of pressing at around 4 hours has been kept up.

The pump is a duplex steam one (caution) (?) and uses almost 2 days and their new brasses (?) are required. The bears much mica and we think this mica clogs the clothes and cuts the brasses (?) also.

An agitator is not necessary for the slip from this clay as it does not settle in 48 hours even.

I am requested to ask you if you think this clay would work better (press better) with the air system.

I know your answer already but I have one further point to bring to your notice; this being some notions of my own and not official.

I recalled our work in colloid forms of clay.

I found that this clay taken raw from the mine and (?) up and used for casting slip, was slow to set to the mold and would not let loose when dry, the ware so made cracking ? ? (if I may so state it) and I used a sponge to clean it out of the molds. Weathered clay did not clean (?) so. I found in experimenting that acidifying with HCl. I got the same results as by weathering. I have the promise of the superintendent to try acidifying the slip preparatory to ? and I confidently expect surprising results. Possibly not practical but interesting. I desire a fair test and I am rather hoping the air system will be installed thus insuring a steady, sure, presence.

Regards to your family,

Yours very truly,

Paul E. Cox