



CASE STUDY – HIGH SHEAR MIXING OF CLAY COMPOSITIONS

High Shear mixers are used in a wide variety of applications in many different industries. Finding the right blend and being able to produce the same mix consistently is the key to success at Highwater Clays, a clay and glaze supplier to the arts & crafts industry. The company has two locations with the main production center located in Asheville, North Carolina. Highwater Clays produces a wide range of clay bodies using fireclays, ball clays, kaolin, and stoneware clays. All the clay bodies consist of complex compositions and must be mixed into one reliable consistency.



MIXING THEN VS. NOW

To achieve this consistent mix, Highwater Clays relies on a Lancaster Products K6 high shear mixer. The company installed the K6 mixer over twenty years ago and, with successful business growth, needs to add another high shear mixer to keep up with demand. Highwater Clay's Operations Manager Jonathan St.Onge elaborates, "We use the mixer for clay mixing only, and the mixer runs all day every day. Very seldom do we have any problems or issues."

He continues, "The Lancaster high shear mixer blends effortlessly and completely; it's well made and well thought out in the design. Previously, we had the old paddle mixers, which created pockets of under saturated clay in the blending process. The entire clay mixture must be allowed to get wet and stay wet in the mixer. If not, this results in pockets of wet and dry areas in the mix. But with the Lancaster mixer, there are never voids or dry pockets in the mix."

"The Lancaster mixer blends effortlessly and completely; are well made and well thought out in the design."

Jonathan St.Onge – Operations Manager

SAVING CHANGEOVER TIME



Lancaster Products K6 High Shear mixer is used in the production of clay bodies for the Arts & Crafts Industry.

In addition to creating a better clay body mix, the production process improved exponentially when the previous mixers were replaced with the Lancaster K6 mixer. St.Onge explains, "We run color mixes starting with a bright white up to a dark red. At the end of each color process, we need to wash the machine to change it over. The Lancaster mixer is very easy to access for cleaning, due to the size of the doors. It takes about three hours to completely wash and clean the mixer and be ready to start again. The old paddle mixers would take two to three days to disassemble and clean! Our production with the Lancaster mixers has increased dramatically just from this process alone. Our operators are much happier now, even though washing the mixer isn't much fun."

MIXER INSTALLATION AND SETUP

Two decades ago, Highwater Clays removed the paddle mixing system and selected a Lancaster Products mixer as a replacement. The K6 High Shear mixer is a comprehensive system - Lancaster Products provides the equipment, setup, and operator training. St.Onge comments, "The environment in our facility can be extremely dusty at times. It is a 'mud factory' after all. But while we mitigate dust with collection protocols, this can still affect the automation of our machinery." He adds, "With Lancaster's help, we reconfigured the mixer to more of a blend of automation and manual operation. This approach worked very well and increased our production from the previous mixers. The Lancaster Mixers have completely satisfied the needs of our production and are very easy to clean and operate."

CONTINUED SUPPORT

Highwater Clays continues to grow and expand their production capabilities. The K6 mixer is slated for an overhaul and maintenance, and a new K6 mixer is coming on-line later in the year. "Lancaster Products has been great to work with." St.Onge exclaims. "We had a situation where there was 'catastrophic operator error,' and we needed help to get the mixer running again. The people at Lancaster Products were very understanding about the situation and jumped in to get the mixer fixed and keep our production moving."

COMPANY BACKGROUND

Highwater Clays has been blending the earth's best clays for 40 years. Featuring two locations, the main production facility in Ashville, NC., and a retail store in Clearwater, FL, the company serves the arts and crafts community nationwide. www.highwaterclays.com

