

Sticks to Wall, Yet Moves Through Bin Activator

Customer

Burgess Pigment Company, Sandersville, Georgia, producers of pigments for paint companies throughout the United States.

Problem

Kaolin clay is notoriously hard to handle because of its characteristic tackiness; when it is thrown against a wall, it will stick to it. On the other hand, with its fine particle size (—325 mesh) and low density (25 lbs./ cu. ft.) it can fluidize to such an extent that it will stream from even the tiniest crack.

At the Burgess Company, clay was discharged from a 12-ft. diam. x 15-ft. bin equipped with a rotary airlock at the outlet. The clay often packed and bridged. Even when the material was flowing, discharge was far from steady; it came in surges.

Controlled Vibration Equipment

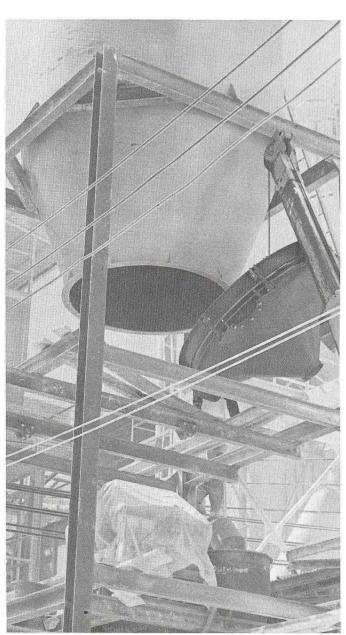
Two 7-ft. Vibra Screw Bin Activators, carbon steel construction.

Solution

The company installed a Vibra Screw Bin Activator to provide positive delivery of the clay. The Bin Activator is a vibrated bin bottom flexibly hung from the bottom of the storage bin and replacing much of the bin's compaction-causing static cone section. In operation, vibrations are transmitted throughout the material to make it mobile and free flowing while simultaneously densifying it to control any tendency to fluidize. Discharge is positive and controlled at production rates of 4 tons per hour.

Results

Steady feed rates are now in effect, and the company has not experienced downtime or maintenance problems. With the elimination of bridging and packing, Burgess is able to maintain maximum production. As a result of this favorable experience, a second Bin Activator was later installed to handle another system.



Second Bin Activator being readied for service at Burgess. Installation is facilitated by preassembled mounting ring.