

Flexicon Weigh Batch System Proves Cost Effectiveness for Lenox China

Lenox China is well-known as a maker of fine china which is sold through company stores and other retail outlets. The company has been in business for more than a century.

At their production site in Kingston, NC, three Flexicon units convey proprietary forms of feldspar, a raw material used in the manufacturing of china.

Prior to installation of the Flexicon conveyors, the feldspar was dumped by hand from 50-pound bags into a hopper sitting atop a scale. When the desired amount of material was collected, the full hopper would be removed and replaced with an empty hopper.



Flexicon flexible screw conveyors move three forms of feldspar from individual hoppers to a single weigh hopper at the Lenox China's manufacturing plant

Now 2,000-pound bulk bags of feldspar are lifted using an electric hoist and positioned above three hoppers feeding three Flexicon flexible screw conveyors. The Flexicon units transfer the material upwards, almost vertically, and discharge it into a large 6 foot-diameter weigh hopper.

Each Flexicon unit conveys a different raw material. Load cells supporting the weigh hopper signal the system to shut off the conveyors when the proper amount of raw material is in the hopper.

An automatic valve on the bottom of the weigh hopper opens, emptying its contents into a chute which transfers the material to a high-shear mixer, where the dry ingredients are mixed with water to produce a thick slurry.

The three Flexicon units combined move more than 2,000 pounds of material per day.

"The Flexicon system eliminates manual lifting and provides for more precise weighing of raw ingredients than was previously possible," says **BILL BEACH**, senior mechanical engineer of Lenox

China. "Picking up 50-pound bags by hand was labor intensive and not economical. The Flexicon system enables us to automate our process without increasing our costs. The equipment has proved to be the least costly of all the alternatives that could perform the functions we were looking for. The conveyors feature a simple design, are not complicated to take apart for routine maintenance and they are reliable mechanically, and require minimal maintenance, and service from Flexicon has been excellent."

"Another reason we decided on Flexicon was their test facility where they ran tests with our material to confirm that the unit could do the job before we bought it. This gave us the confidence to go ahead with them." **BILL BEACH** concludes.

Because the Flexicon units allowed Lenox to automate much of their operation, they could reduce their labour costs significantly. In addition, the change from 50 to 2,000-pound bags has resulted in a lot less handling of raw materials. It also allowed the company to buy in bulk, reducing their raw materials costs.

Compared to dribbling the feldspar from 50-pound bags the flexible screw conveyors allows better control when feeding raw materials into the hopper, whereas the enclosed tube keeps the operation free of dust, so dust control systems do not become clogged.

Contact information: pp. 318,319

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