

# VIBRA SCREW CASE HISTORY



C-161

## Beaunit Plant Solves Quicklime Flow Stoppages with Bin Activator Installation

### Customer

Beaunit Corporation's Viscose Plant at Elizabethton, Tennessee. Beaunit is a leading producer of industrial fiber and textile products.

### Problem

In the fiber washing phase of its operations, the Beaunit plant uses great quantities of water, which becomes contaminated with high concentrations of sulfuric acid and zinc. Before the water can be discharged, these materials must be removed; in this case, the acid is neutralized and the zinc precipitated by a lime slaking system. The system also neutralizes the sulfurous acid taken from wet scrubbers atop boiler stacks in the power house.

The water purification process depends on a large volume of quicklime, which must be stored and fed to the slaker at an even, continuous flow rate of about 15,000 lbs. per day.

Quicklime has a tendency to bridge and clog when discharged from the storage bin by gravity alone.

### Solution

Vibra Screw Controlled-Vibration Equipment — One 7' diameter Vibra Screw Bin Activator.

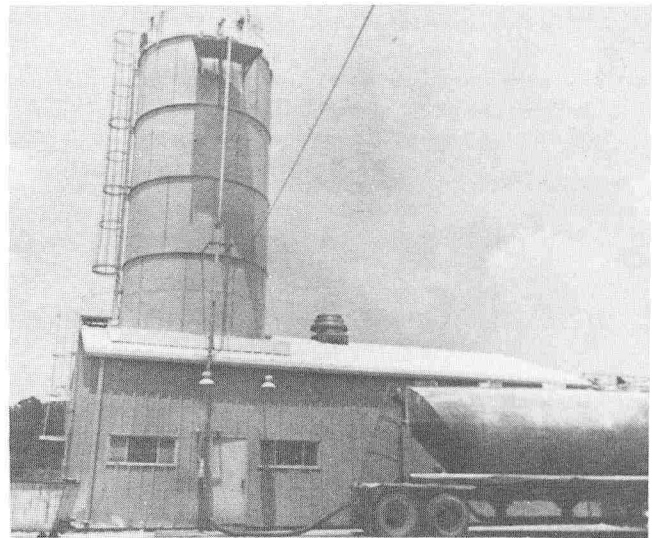
The Vibra Screw Bin Activator is a vibrated bin bottom, flexibly attached to the storage bin. It replaces most of the cone-shaped static bottom, where the weight of the quicklime causes compaction and consequent flow stoppages.

The storage silo, 46' high by 15' diameter, called for a 7' diameter Vibra Screw Bin Activator, as was recommended by the manufacturer of the silo. The action of the equipment's patented gyrator assembly vibrates the stored quicklime with forces of up to 6,000 lbs., allowing the material to move freely through the bottom opening.

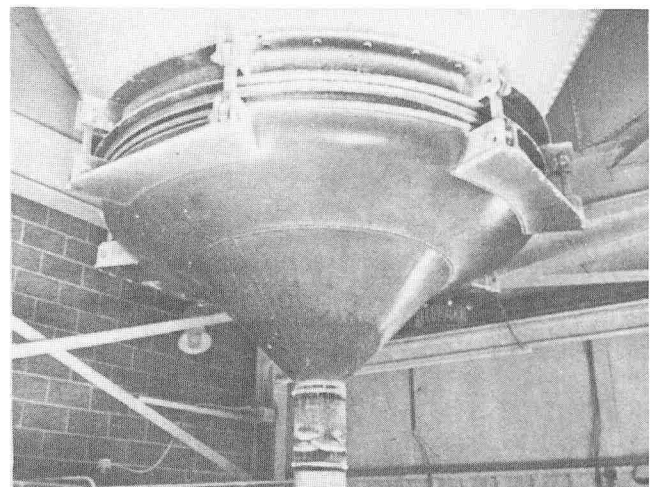
The curved baffle relieves headload from the outlet while directing vibrations far up into the bin to discourage overhead bridging. The Bin Activator's unique dished head contour eliminates wedging and provides efficient operation with low power requirements.

### Result

The Beaunit plant's quicklime silo now discharges freely on demand, without clogging of any kind. This allows the slaking system to function efficiently and without interruption or downtime. Since its installation, the Vibra Screw Bin Activator has operated according to specifications, and has needed no servicing.



Storage bin at Beaunit Corporation plant, Elizabethton, Tennessee, where quicklime is stored for water purification process.



This 7-ft. diam. Bin Activator keeps quicklime moving without the former bridging and clogging.