

# VIBRA SCREW CASE HISTORY



## C-180 Conversion From Oil to Wood Fuel Made Feasible by Bin Activators

### Customer

Coulbourn Lumber Co., Inc., Windsor, N.C., manufacturers of lumber products.

### Problem

In order to conform to EPA standards, the Coulbourn Company installed a new #5 oil-burning boiler several years ago before the price of oil became prohibitive. In three years' time, the cost of oil for the boiler more than tripled, from \$60,000 a year to around \$200,000. As a result, Mr. Coulbourn decided to invest in a three-story water-tube boiler fed by wood-burning residue. Two silos, each 20 ft. in diameter and 50 ft. high, are used to store the residue. One receives kiln-dried pine curls ( $\frac{1}{2}'' \times \frac{3}{4}'' \times \frac{1}{10}''$ ) from the planing mill; the other receives green pine sawdust from the sawmill operation. The two products are blown into the boiler from a converging point to get just the right blend of dry and green to burn properly without smoking. Mr. Coulbourn knew from previous experience, however, that he would have trouble with bridging and clogging in the bin unless he provided a way to keep the material moving.

### Vibra Screw Equipment

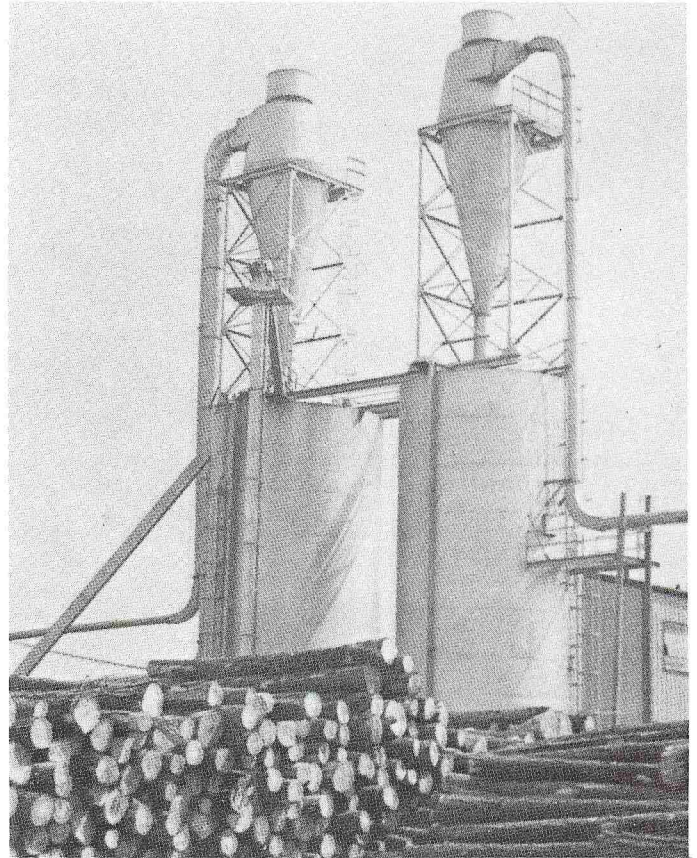
Two 12-ft. Bin Activators with conical baffles, carbon steel construction.

### Solution

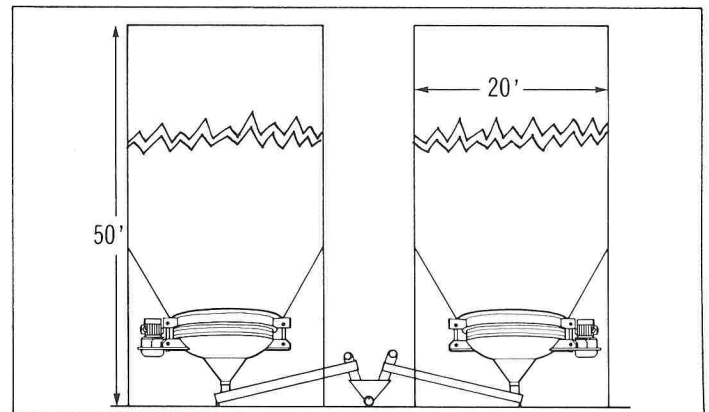
The company installed two Bin Activators, one under each silo, to prevent bridging and provide an even flow from both silos. The Bin Activator has an integral baffle which converts the horizontal vibrations of the Bin Activator itself into powerful vertical thrusts extending high up into the main bin. In this manner, the overhead bridging formerly experienced at Coulbourn has been eliminated.

### Results

The company says "the equipment is performing beautifully." Operation is virtually automatic, and maintenance minimal, with the result that the entire installation of boiler, silos, and Bin Activators has paid for itself in a little more than two and a half years' time.



Bin Activators have helped make economical conversion from oil-burning to water-tube boiler.



Cutaway drawing of Bin Activators which provide even flow of pine curls from one silo, sawdust from the other.