



Bin Activator Restores Material Flow at Southeastern Mills

Customer

Southeastern Mills, Rome Georgia, specializes in milling and processing grain and blending and packaging brand names for major food marketers throughout the U.S.

Problem

Southeastern Mills has six large storage tanks in use to store in-process materials such as biscuit mix, flour, corn meal and other dry grain products and additives. Each tank is approximately 9 feet in diameter and 16 feet high straight sides and 60 degree cone bottom. Materials are discharged into rotary feeders and pneumatically conveyed to the appropriate packaging machines. The bulk density of these materials ranges from 15 to 50 pounds per cubic ft.

These products tended to bridge over in the tanks' cone bottoms, occasionally preventing the smooth flow of material to their machines. Operators were frequently required to beat on the hopper cones with hammers to restore flow. When changing products, operators found it necessary to enter each bin and manually clean out several hundred pounds of undischarged material before they could fill the tank with another mix.

Solution

Vibra Screw Bin Activator, 7 ft. diameter.

Southeastern Mills solved its materials bridging problem by first installing one Vibra Screw Bin Activator under the bin. The trial unit completely eliminated the bridging problem.

The Bin Activator selected was especially designed for food service, with carbon steel construction epoxy coated, a cone baffle and rounded corners to minimize residue. The unit was flexibly mounted to the bottom of the bin and uses controlled vibration of a powerful gyrator which is mounted on the activator and rides with it. The special gyrator is guaranteed for 20,000 hours of continuous operation. The success of the first Bin Activator convinced Southeastern Mills to install identical Bin Activators on five additional identical bins.

A unique and patented one piece dished head provides for horizontal disengagement of material in the same direction of the applied force. Its design eliminates the welded seam of fabricated cone designs and prevents the wedging and packing action inherent in a cone. The dished head design also eliminates the need for cycling and removes the destructive mechanical hammering previously employed.

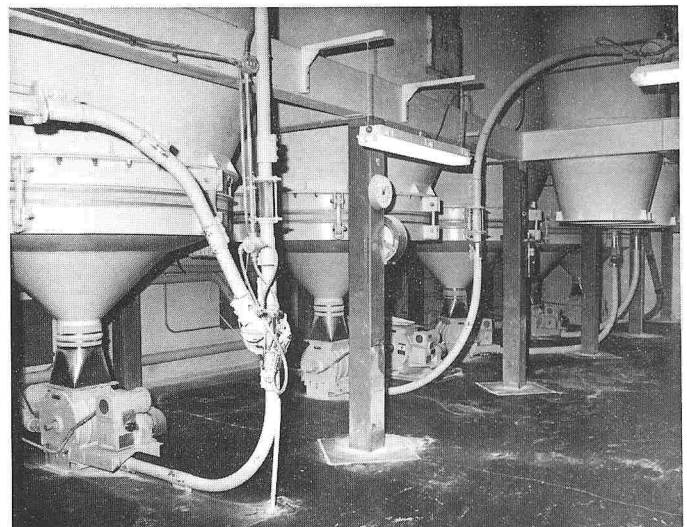


Vibra Screw Bin Activators improved the flow of milled grain products at Southeastern Mills.

Results

Addition of the Bin Activator provided a smooth, continuous flow of material to the packaging machines at the rates projected and expected by Southeastern Mills. Tank residue has been reduced to very small amounts, eliminating the need for operators to enter the bin between product changes for cleanout. Operators now simply run a small quantity of flour to purge the system and go directly into the next production run. Maintenance is essentially eliminated, providing the added benefit of less downtime.

Today Vibra Screw Bin Activators aid the flow of materials in six bins at Southeastern Mills.



Six Bin Activators eliminate packing and bridging with controlled vibration and an exclusive dished head design.