

One Bin Activator Feeds Two Separate Systems in Pulp Mill Breakthrough

Customer

MacMillan Bloedel Limited, Port Alberni Division, British Columbia, Canada. Major producer of pulp and paper.

Problem

At its Port Alberni Division, MacMillan Bloedel processes wood chips to make unbleached market pulp, semi-bleached cedar, hemlock, and fir—all of which are difficult to move from storage because of their tendency to interlock and bridge. The chips, which have a density range of 21 to 27 lbs. per cu. ft., are stored in concrete silos, 40 ft. in diameter by 80 ft. high, with a capacity of 72,000 cu. ft. They sometimes have a moisture content as high as 50%, which aggravates their handling problem. The rotary table feeders which had been used to move the chips required regular maintenance and operator attention.

Solution

Vibra Screw Bin Activator, 12 ft. diameter, with dual outlets, each 3 ft. in diameter.

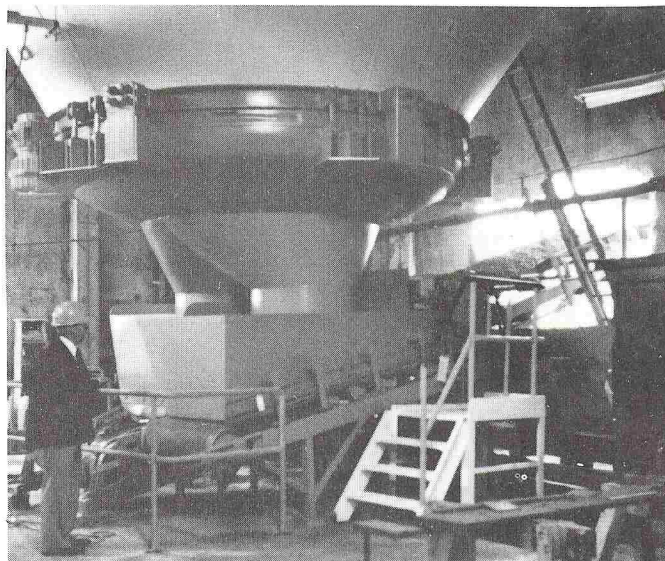
On the basis of previous successful experience with Bin Activators in moving wood chips, MacMillan Bloedel has increased its flexibility of operation by installing a Bin Activator with twin outlets on one silo to replace the table feeder, thus giving the capability of supplying each of two separate and independent systems. One outlet is designed to feed 25,000 cu. ft. of wood chips per hour to a batch digester, while the other outlet can discharge 18,000 cu. ft. of chips per hour to a Kamyr system. Both systems have variable speed conveyors to control the rate of chip feed.

The Vibra Screw Bin Activator is a patented device which replaces the lower cone section of the static bin, removing the compaction area which is the focal point of flow problems. The Bin Activator employs controlled vibration to produce a steady flow of material from both of its twin outlets. A powerful gyrator, also patented, vibrates the Bin Activator and the material in the bin, but not the bin itself. Directly above the outlets, an integral vibrated baffle relieves headload and transmits vibratory thrusts high up into the bin to eliminate bridging. The new method of operation provides a steadier, more uniform flow of wood chips.

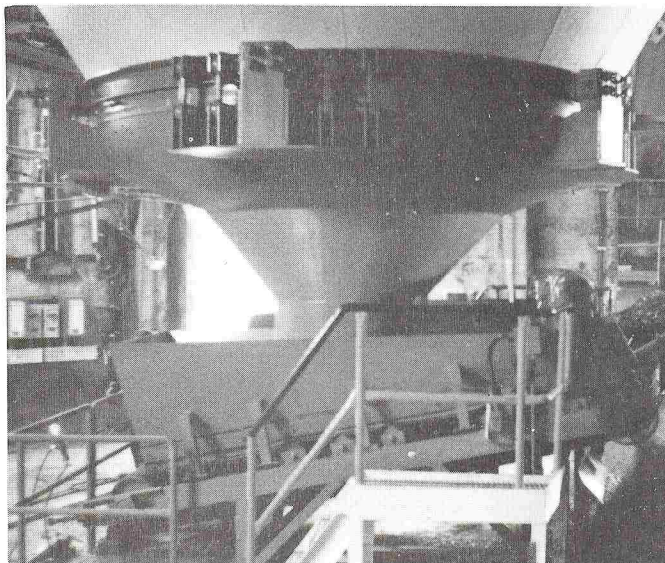
Results

A spokesman for the company says that the dual feed feature of the Bin Activator in the new system

is "almost like giving us another silo." During periods of continuous draw from the silos, problems with hangups have been substantially reduced. Although the system is still new, lower maintenance and lower power consumption are indicated, as well as higher production and fewer shutdowns due to hangups in the silo. A second system is scheduled to go onstream shortly.



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