

VIBRA SCREW CASE HISTORY



C-225

Bin Activator and Belt Feeder Keep Chips On Go at Georgia-Pacific

Customer

Georgia-Pacific Corporation, Woodland Division, Woodland, Maine. Major new hardwood kraft mill.

Problem

Located in one of the northernmost areas of the U.S., the Woodland mill has an excellent supply of hardwood for chips, primarily birch, maple, and poplar. They also have hard winters, which make the chips difficult to handle. In this operation, chips are reclaimed from an open stockpile, and conveyed to a storage silo which is 24 ft. in diameter by 30 ft. straight side with a 60° bottom cone. The chips are about 1/2 in. to 3/4 in. by 3/8 in. in size, and their bulk density is 19 to 21 lbs. per cu. ft. From storage, the chips go by a pneumatic conveyor system to the digester in the kraft mill. In winter, a layer of frost often covers the chips, which interlock and build up in storage until they arch, stopping flow.

Solution

Vibra Screw Bin Activator, 12 ft. diameter, 304 stainless steel construction, preassembled mounting ring.

Vibra Screw Heavy Duty Belt Feeder, carbon steel construction, 72-in. wide belt.

Georgia-Pacific was one of the first users of Bin Activators in the pulp and paper industry. On the basis of their experience, the company installed a 12 ft. diameter Bin Activator to insure uninterrupted flow of wood chips. Operating in conjunction with the Bin Activator is a volumetric Heavy Duty Belt Feeder which provides the capability to regulate downstream flow so that it "locks in step" with input into storage from the chip stockpile. The Bin Activator is flexibly mounted on the bin bottom, and it employs controlled vibration supplied by a powerful gyrator. The Bin Activator and the contents of the bin vibrate, but not the bin itself. An integral baffle transmits vibratory thrusts far up into the bin to eliminate bridging. Since the baffle is mounted directly above the discharge outlet, it also relieves headload at the point where compaction otherwise occurs. As material flows from the Bin Activator onto the belt of the volumetric feeder, belt speed can be easily adjusted as required from a central control panel. The chips move onto the belt in a stream about 2 ft. high and 6 ft. wide. As

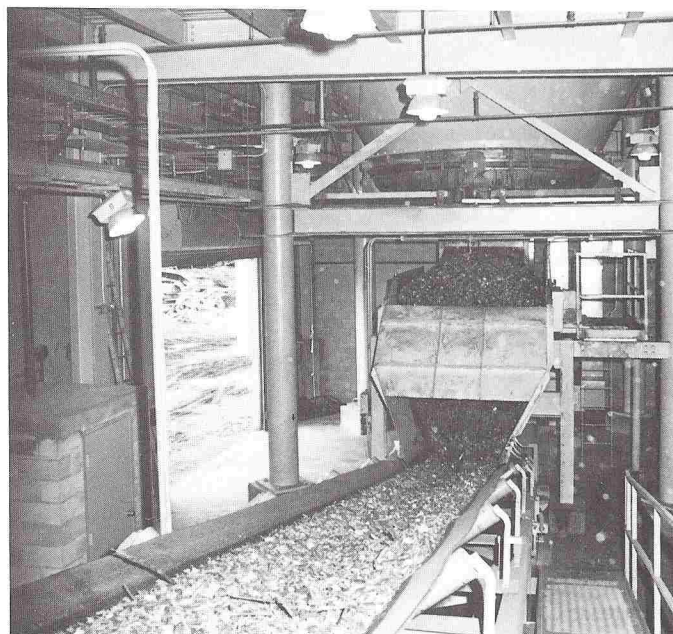
the chips flow by at about 262 cu. ft. per minute, more than a ton of chips are on the belt at any given time during production.

Results

The Bin Activator and Belt Feeder have been employed on a 24-hours-a-day, 7-days-a-week basis since their installation. After about a year of operation, the equipment is working efficiently to help keep production moving.



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