

Sand casting process speeded with installation of cost-saving Vibra Screw Bin Activator

The Customer:

Soundcast Company, Costa Mesa, California, Manufacturers of castings; A Division of Griswold Industries, Inc.

The Problem:

Conventional bulk-handling equipment for the gravity discharge of solid particulates is inefficient at moving moist foundry sand at uniform flow rates. The sand tends to bridge, lump and clog in the storage bin, and will not discharge freely through the bin outlet to a belt conveyor.

For the Soundcast Company, this has meant an irregular flow of the sand used in casting molds at its new plant in Costa Mesa, California. The result has been a high rejection rate of faulty molds, excessive down time and inflated labor costs.

The Key:

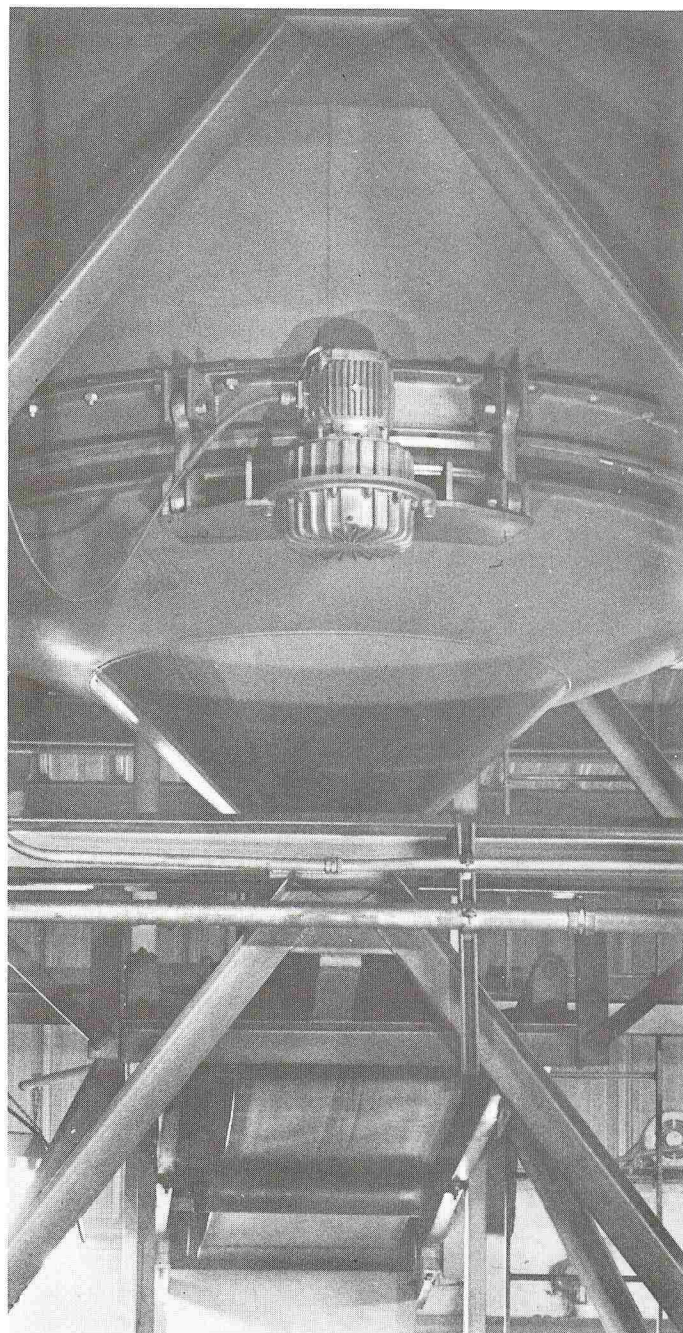
VIBRA SCREW CONTROLLED-VIBRATION EQUIPMENT — One 7 ft. diameter Vibra Screw Bin Activator.

The Solution:

A Vibra Screw Bin Activator 7 ft. in diameter with a 16 inch discharge nozzle, was flexibly attached to the tapered bottom of the storage bin. The action of a special gyrator vibrates the activator, causing stored sand to run freely and evenly through the discharge outlet to the conveyor. An integral curved baffle relieves the headload weight of material from the outlet while directing vibrations far upward into the bin. This discourages overhead bridging.

The Result:

The hard-to-handle sand flows on demand at required rates of 29,000 lbs./hr. Since the Vibra Screw Bin Activator was installed, about two years ago, Soundcast has not had to slow production of castings because of downtime of the discharge equipment. Furthermore, says Soundcast, the patented Vibra Screw device has paid for itself by eliminating the costly problems formerly experienced with conventional gravity discharge methods.



Vibra Screw 7 ft. Bin Activator, attached to Soundcast's 12 ft. diameter bin, discharges sand at 29,000 lbs. per hour to belt conveyor below. Note patented VIBRA SCREW Gyrator in foreground . . . it can deliver up to 6,000 lbs. force.