

VIBRA SCREW

CASE HISTORY



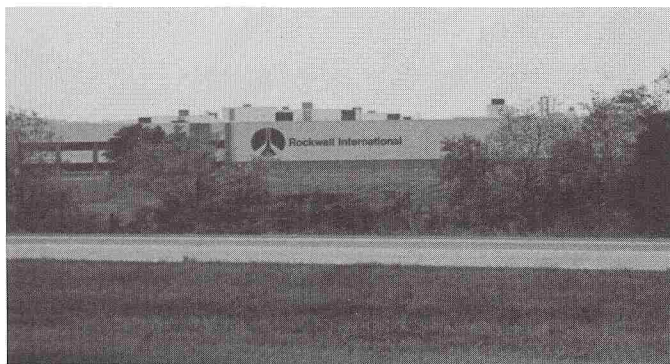
C-263 Bin Activators Easily Discharge Packed Steel Scrap.

Customer

Rockwell Automotive, a division of Rockwell International Corporation in Laurinburg, North Carolina, a major producer of class 8 truck axles, gears and drive components for many vehicle manufacturers.

Problem

Rockwell had difficulty discharging steel scrap from storage. The turnings, chips and shavings packed into the facility's storage silos, and workers spent five to six hours each week trying to coax the material to flow. In the process, worker safety was threatened.



Rockwell Automotive couldn't discharge packed steel scrap without possible danger to its equipment operators.

Three manufacturing areas feed up to 150,000 pounds of scrap per week to pneumatic conveyors which fill two silos in a recycle storage building. Gondola rail cars, each capable of hauling 135,000 pounds of scrap, wait beneath the silos.

Steel scrap is an unusually difficult material to discharge. When the material resisted discharge, which occurred often, workers used a pneumatic piston mounted on the side of the angled discharge chute to dislodge the bridged and packed scrap. When the pneumatic pistons failed, workers would bang on the silo sides with sledge hammers. When hammers failed, workers poked and prodded the silo outlet until the packed material began to flow. Rockwell is concerned with worker safety, and was determined to correct this problem.

Suspended under steel scrap silos
twenty feet above a rail car,
Vibra Screw Bin Activators discharge
20,000 to 30,000 pounds of
matted steel scrap
in just a few minutes.

Solution

The solution for Rockwell was Vibra Screw, eight foot diameter Bin Activators on each of its steel scrap silos. Rockwell engineers visited an Indiana installation where poor flowing brass scrap had been successfully handled with a Vibra Screw Bin Activator.

Vibra Screw conducted full scale tests of the actual material at its New Jersey test center. Test results suggested specially modified, heavy-duty Bin Activators. Unique, oil-filled gyrator assemblies would provide controlled vibration for positive bin flow. Vibra Screw engineers worked with Rockwell to create a remote, automated control station within view of the falling scrap, yet at a safe distance.

Results

With Vibra Screw Bin Activators to guaranty discharge, one Rockwell employee now takes only three to five minutes per day, merely pushing a button on his control panel to watch 20,000 to 30,000 pounds of scrap discharge safely into a waiting gondola car.

Occasionally, the stubborn scrap may need a minute to react to the Bin Activator's controlled vibration, but it always flows with no threat to the operator and with no wasted manhours. The operation has become routine and completely automatic.

