

VIBRA SCREW

CASE HISTORY



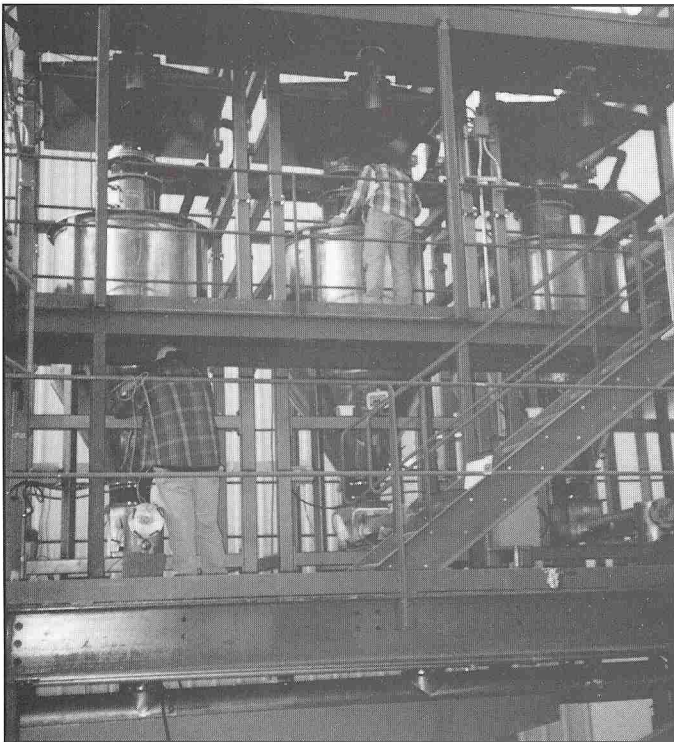
C-268

Processor Saves Money and Maintenance with Volumetric System

Customer

Therm-O-Rock Corporation, of New Eagle and Donora, Pennsylvania, is a toll processor that custom blends and packages minerals to produce specialty products for steel, foundry and construction industries.

Its products include exothermic compounds, foundry sands, cements and grouts. This supplier provides a high level, quality control service to its customers which entails checking the quality of material received, material in process and product to be shipped.



Vibra Screw Bulk Bag Unloaders refill 6" VersiFeeder Screw Feeders.

Problem

After a fire badly damaged its plant, Therm-O-Rock decided to build from the ground up at a new location. An engineering consultant specified handling and blending equipment based on loss-in-weight (gravimetric) control. Therm-O-Rock called in Vibra Screw, whose equipment had performed well at the former plant, and who is a leading manufacturer of the gravimetric equipment specified by the consultant. Yet Vibra Screw disagreed. Vibra Screw engineers believed that although the gravimetric system was first quality, a simpler, less expensive volumetric system would produce the quality Therm-O-Rock required. Should Therm-O-Rock spend less money, for a simpler system, in hopes of achieving the quality it required?

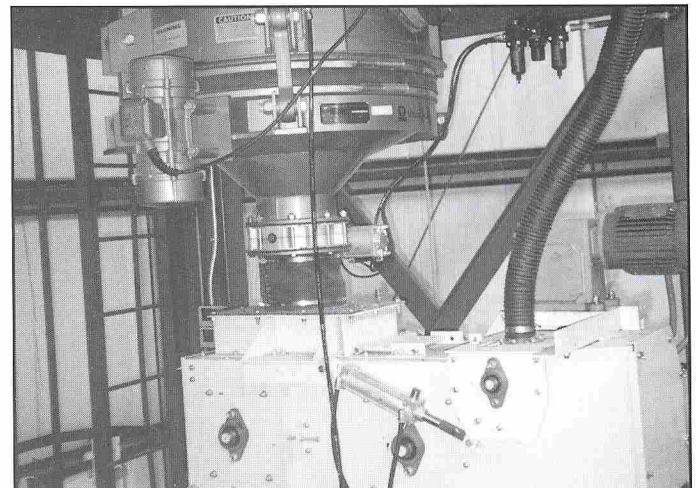
Solution

Therm-O-Rock sent raw materials and its quality control manager to Vibra Screw's test center to witness tests on volumetric equipment and on a scaled-down version of the proposed handling and blending system. With raw materials processed just as they would be at the plant, Therm-O-Rock put the finished products through extensive testing at its own lab and even sent the test product to some of its customers for additional QC testing. The materials passed everyone's tests. Gravimetric just wouldn't be necessary.

Results

As a result of the success of Vibra Screw's tests, Therm-O-Rock not only purchased its new equipment from Vibra Screw, it asked the manufacturer to take charge of the entire project. Vibra Screw designed two identical packaging lines, with a 12' diameter, 3000 cf silos, assisted by a 5' diameter Bin Activators. The Bin Activators discharge to scalping screeners after which 15' long, 10" screw conveyors carry materials to continuous vibratory blenders. Three Bulk Bag Unloaders supply specialty ingredients to each blender via 50 cf hoppers and 6" VersiFeeder screw feeders. The blending operation is continuous, so the equipment can't stop for hopper refilling or other interruptions. All processing equipment must be, and is, synchronized with a PLC custom designed by Vibra Screw.

From the date of the fire, Therm-O-Rock and Vibra Screw were able to design, build and start up the new plant in only thirteen months. Today, Therm-O-Rock performs at the quality level it demanded with high processing speeds, employing less maintenance than it might have under the earlier plan.



A Vibra Screw Live Bottom Bin supplies packaging equipment.