

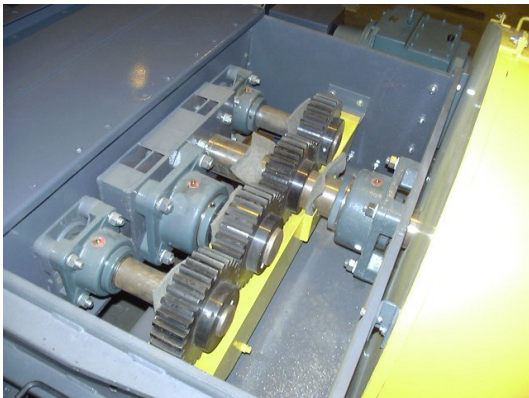
## B. W. SINCLAIR INFORMATION UPDATE

### NOTCHED SPIRAL LIVE-BOTTOM FEEDERS METER SLUGGISH POWDER

One of the nation's leading cement producers has recently installed four BWSI multi-screw Live Bottom Feeders to meter synthetic gypsum into their process. The client selected the SINCLAIR feeders after a review of our design and operational philosophy.



The units feature either 4-screw or 6-screw modules, depending on storage hopper size. The rotors are fitted with interrupted helix "notched spiral" flights of abrasion-resistant steel construction. The special flight profile allows higher rotational speeds and a better mass-flow discharge pattern. Every other rotor has reverse-hand flighting to provide a counter-rotating agitation.



Precision-machined spur pinion gears are intermeshed in the slave drive system to power the non-driven rotors. The gears operate in a continuous lubricant bath reservoir. Waste pack lip seals and Dodge Type E-xtra™ tapered roller bearing flange

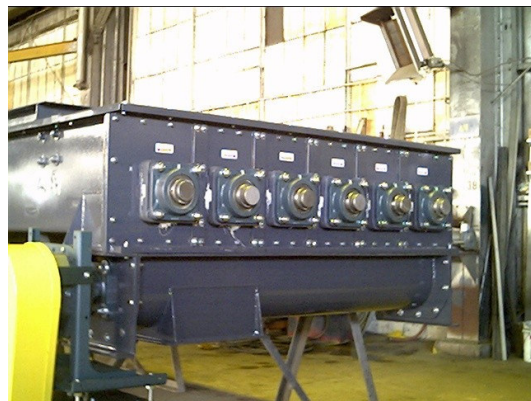
blocks support the individual transmission shafts and provide axial thrust control.



A Dodge Quantis™ inline helical gear reducer, direct-coupled to a 25 HP DC variable-speed motor drives the multiple screws through a roller chain primary reduction gear.

The synthetic gypsum (calcium sulfate) material is a byproduct of flue-gas scrubbing systems installed at many power plants, and is used by the cement mill as an additive in the manufacturing process. Being able to consume the vast amounts of material produced by coal-fired power plant scrubbers benefits the environment as well as the production requirements of the mill.

To consolidate the discharge into a single spout for transfer to the next conveyor, SINCLAIR provides an integral collector screw conveyor bolted directly to the discharge throat of the feeder.



Such "live bottom" hopper feeders are also successfully employed for many other sluggish products.

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