

## B. W. SINCLAIR INFORMATION UPDATE

### TWIN-SCREW RIBBON FEEDER PROVIDES BULK STORAGE BETWEEN CENTRIFUGES AND GRANULATORS

The process of manufacturing sugar involves many steps, some of which entail handling slurries, dewatered solids, and liquids. SINCLAIR furnishes equipment regularly to this industry, including this twin-screw feeder system recently installed at an East Coast refinery.



The system consists of a rectangular storage hopper, approx. 3 ft. wide x 15 ft. long x 5 ft. high, saddled to mount into an existing overhead screw conveyor line. As sugar falls from a series of six batch centrifuges, the overhead unit conveys it into this new hopper that accumulates it before discharging through a downspout to the inlet of a rotary granulator. The hopper is mated to a BWSI Twin-16" ribbon-flight variable pitch screw feeder with counter-rotating screws driven by independent electromechanical drive modules. The open-helix ribbon flight provides compression relief to prevent material adhesion and compaction.



The hopper has four Lexan™ polycarbonate view ports installed in BWSI CamLock™ Quick-Access Inspection Hatches for continuous monitoring of the sugar levels. We also furnished a series of nozzles to hold customer-supplied level control probes. The conveyor extension section features two rectangular discharge spouts, one for directing material to the granulator, the other to a "re-melt" system. Each discharge opening is fitted with a special BWSI Rectangular Cam-Roller Flat Gate Valve with pneumatic actuator and instrumentation.



All product contact surfaces are fabricated from AISI-304LSS, with white neoprene gaskets, Damar Cinchseal™ air-purged elastomer gland seals, Dodge Type E™ tapered roller bearing pillow blocks, and Falk FZ™ helical concentric shaft gear reducers.

Twin-screw live bottom hopper technology can also be applied to numerous other industries where hopping and feeding sluggish, cohesive materials is required.

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