CONVEYING COPPER CHLORIDE POWDER

Design Requirements

Product Type: Copper Chloride Powder

Capacity: 33,000 Pounds per hour

Duty: 24/7

Conveyor Pan Size: 24"W x 6"D x 60' - 6 3/4" L

Customer Challenge

A global animal feed ingredient producer, for beef, dairy, poultry, and swine nutritional supplements, contacted Triple/S Dynamics with a project they were working on in a new bagging area within their plant. The project included transferring materials from five silos, located indoors, in-line horizontally, to a new automated bagging area, where previously it was a manual bagger operation. Our customer stated that the conveyor cannot break up the material, as such, screw conveyors and pneumatic transfer conveyors were not an acceptable option for them.

Triple/S Solution

To confirm conveying capability, our customer sent in four buckets of sample product, each containing a 25kg bag of copper chloride powder for lab testing at our facility. The test objective was to observe the degree of particle breakdown over the course of conveying. Our customers goal was to achieve a mean particle size of at least 200um and convey at a rate of 250 kilograms per hour. A sieve analysis was collected for pre-run and post-run samples and testing revealed the copper chloride powder conveyed well on the Slipstick Horizontal Conveyor.

Triple/S Dynamics engineers provided the customer with a conceptual sketch to layout the best concept for dimensions and access within the customers facility. Once it was determined a good fit with easy access, Triple/S Dynamics designed a Slipstick Horizontal Motion Conveyor, 24"W x 6" D x 60' - 6 3/4"L to transport the copper chloride powder from five silos to two automatic bag filling lines. Product travel direction is reversible to allow product to discharge off either end of the conveyor pan by changing motor direction. Conveyor is equipped with dust-tight pan mounted covers, clamped and sealed, for easy access with booted inlet and outlet spouts. This conveyor provides an advantage to the customer due to the low profile design with an over mount drive which allowed the conveyor to be installed 8" off of the floor to accomodate silo discharges.

Triple/S and the Customer

Three years after installation of the Slipstick Horizontal Motion conveyor, our customer expanded the number of silos within their facility from five to six, which required a modification to their existing conveyor. Triple/S Dynamics designed a pan section, 24" W x 6"D x 10'-0"L, which added 10 feet to the existing conveyor giving the customer the ability to transfer product from the sixth silo.

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