Soy Protein Concentrate Manufacturer Saves More Than US$312,000 in One Year with New Spray System

Problem:
A manufacturer of Soy Protein Concentrate (SPC) needed to prevent product loss as it moved along an open conveyor from a production area to a crusher and then to the packaging center. The value of the lost SPC was estimated at more than US$300,000 annually. The manufacturer constructed an enclosure for the 50 m (165') conveyor but the powdered material continued to escape through small gaps in the tunnel structure.

Solution:
Spraying Systems Co.’s solution consisted of an AutoJet® Model 1550 Modular Spray System and three 1/4JAU air atomizing spray nozzles. The self-contained system includes an air operated double diaphragm pump. The spray nozzles apply a fine coating of soybean oil to the powdered SPC to slightly dampen the material and prevent it from becoming airborne. The nozzles are wall-mounted in the tunnel and provide complete coverage of the material.
Soy Protein Concentrate Manufacturer Saves More Than US$312,000 in One Year with New Spray System – Continued

Results:

The uniform coating of soybean oil applied to the SPC by the AutoJet® Spray System has greatly reduced the loss of the valuable SPC powder. The manufacturer is saving US$20,000 per month and offset the cost of the new spraying equipment in less than one month.

A CLOSER LOOK AT THE SYSTEM

AutoJet Model 1550 Modular Spray System regulates the air and liquid pressure to ensure even application of the soybean oil.

Three 1/4JAU air atomizing nozzles are mounted in the enclosure and apply the soybean oil uniformly across the conveyor.