ASGCO Complete Conveyor Solutions

3-DEM Solves "Another" Major Transfer Chute Problem at Northeast Biomass Power Plant

Industry	Biomass Fired Power Plant in the Northeast United States
Application	Transfer point on truck dump to screening system conveyors
Material	Biomass / RDF fuel 830 PCF
Product	3-DEM Chute Design, Fabrication and Installation
Objective	Eliminate chute plugging and overloading during truck unloading cycles
Detail	Supply from truck dump conveyor is a 48" wide at 300 FPM and 160 TPH and feeds a rotary disk screen

Original chute would build up and plug as well as of center load the screen.

Vibrators and UHMW liners were added with no effect.

Challenge

This transfer point was a constant bottleneck in the fuel transfer process. While in operation, the chute would build up and plug when running at less than 50 percent of the design capacity. Vibrators and internal UHMW were added but the problem still remained. Due to the angle of discharge onto the disk screen, off center loading caused reduced capacity and an excess of rejected oversize material to pass over the screen.

ASGCO Flo-Control curved chute solved plugging and sticking problems without vibrators or UHMW liners

Results

The new transfer chute now operates at the design capacity without build up or plugging. The biomass fuel is center loaded onto the disk screen improving the efficiency and reducing the amount of oversize reject material. There is no longer a need for chute vibrators and the plant has decreased the time needed to unload fuel delivery trucks.

Material is now center loaded onto the screen, increasing capacity and reducing the truck unload times.