

ASGCO® Helps Northeastern US Coal Burning Power Station Improve Material Flow and Reduce Maintenance Costs

Industry: Power Generation
Application: Bituminous Coal Transfer Chutes
Product: ASGCO® 3-DEM Designed Flo-Control® Chutes
Objective: To improve material flow and reduce dust spillage and maintenance issues

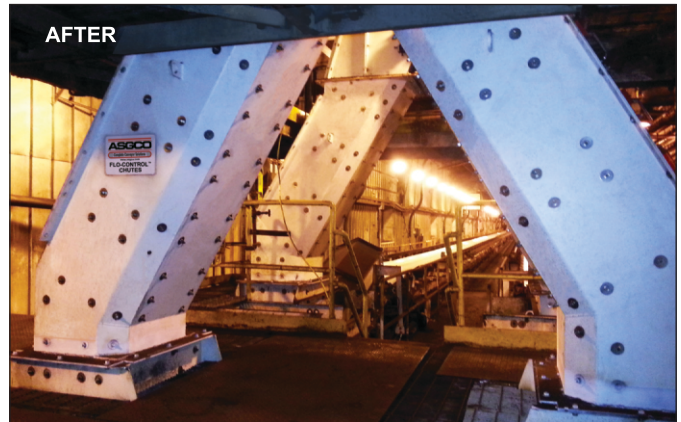
Challenge:

Constant abrasion from high moisture bituminous coal was causing serious wear and plugging on flow chutes at a major Northeastern US coal burning power station. ASGCO® 3-DEM® Designed Flo-Control® Chutes are custom tailored to adapt to unique challenges of any material in any environment.

A major US coal burning power plant was experiencing constant chute plugging after recent upgrades to its coal yard. These issues were compounded by spillage due to holes being formed almost immediately in the new round chutes that were installed. These problems led to major maintenance down time, and the round design of the newly installed chutes proved difficult to repair. This situation prevented the silos from being stocked with coal, reducing productivity, as well as adding a significant cost for repair and maintenance from holes in the new chute after 30 days of service. Because of the round design of the chutes, repairing the holes and replacing the liners became cost and time prohibitive.



After-market epoxy compound was needed to help seal the holes in the chutes.



Newly designed chutes with standard bolttable liners.

Solution:

After surveying the loading system, ASGCO® technicians recommended a 3-DEM® Chute Analysis program to redesign the failing chute sections. This cutting-edge simulation identifies the optimal design for full capacity flow under all conditions with no build up or plugging while also decreasing the wear on the internal liners. ASGCO® also recommended an advanced liner system that would allow for easy maintenance and minimal stocking requirements for liner plate replacement.

Results:

The redesigned ASGCO® Flo-Control® chutes completely eliminated the plugging and buildup and allowed for increased tonnage flows even with high moisture, low quality coal. Because of the efficient design of the new ASGCO® Flo-Control® chutes, internal liner wear life was increased over 12 times longer in high impact areas of the chutes. When these wear liners are due for scheduled replacement, the installation can be performed in as little as 3 hours, using standard sized liners that can be stocked for a very low cost. The client is completely satisfied with the performance of this system, and has seen immediate improvements to material flow and productivity as well as significantly reduced downtime and maintenance costs.