



## VORTEX SEAL TITE GRAVITY DIVERTER HANDLING PRB COAL

Customer: Regional coal-fired energy plant

Material: 2" x 0 PRB Coal

Application: Diverting coal to various locations throughout the facility.

Challenge: Source new diverters that will outperform those that are currently in service.

Valves:

ZXC36-2CS-30  
ZXC48-2CS-SL-45



Results:

When this 550 MW coal-fired energy plant was planning a systems upgrade, the engineering consultant in charge of the project asked them to seriously consider Vortex diverters as part of their coal handling system. The consultant worked with Vortex in the past and was impressed with the many features available through Vortex. He especially likes the unique flow pattern of material through the valve (that protects the leading edge of the flapper from abrasion) and the exterior access panels (that allow internal inspection or replacement of the flapper or wear liners WITHOUT HAVING TO TAKE THE VALVE OUT OF PLACE). Both features offer tremendous savings in maintenance costs.

A 36" Vortex diverter with 30 degree symmetrical off legs was chosen to replace a diverter handling 300 ton an hour of 2" x 0 coal from a storage bin to either of two belt conveyors. The belt conveyors transport the coal to a grinding mill. A 48" Vortex diverter was chosen to receive coal from a belt conveyor that transports it from the rail car unloading station. It directs material at a rate of 2,000 ton an hour to one of two belt conveyors that transport the material to either side of the facility itself.

Both diverters are electric actuated and equipped with replaceable AR wear liners (optional) to address the abrasiveness of the material handled. Additionally, a special blade design offers dust tight sealing of material to the off leg (another feature the original equipment did not have). Facility personnel have been extremely pleased with the performance of the Vortex diverters.