



VORTEX ROLLER GATE HANDLING SLUDGE

Customer: City Wastewater Treatment Plant

Material: Sludge

Application: Shut off the flow of waste water sludge between a hopper and a truck load out

Challenge: Customer required slide gates that would seal the flow of material and not prematurely seize up due to rusting

Valve: Vortex Roller Gate with special service inlet SA27.5V1

Results:

City wastewater departments has the awesome responsibility of collecting sanitary sewage, conveying the sewage to a wastewater facility, treating the sewage to appropriate levels, and disposing the material in compliance with legal requirements.

In this particular operation, once the sewage has been treated and thickened into sludge, it is then pumped into a centrifuge. The centrifuge spins the water out of the material – leaving a moist sludge that is hauled away to be incinerated or placed in a landfill. (During this process the material enters the centrifuge at 60% moisture and exits at 10% moisture.)

The carbon steel gates that were a part of the original system quickly rusted and deteriorated to the point that the blade could not be opened to discharge the sludge. Vortex was contacted for a solution to this problem.

Four Vortex Roller Gate Valves were purchased for the application. They were constructed to a special size (27.5" square) and bolt hole pattern to be a direct replacement for the original gates. The 304 stainless material contact and polymer blade guides address moisture issues, prevent binding of the blade, and offer extended service life. Additionally, a stainless steel special service inlet was added to the inlet of the valve to deflect material away from the seals and support rollers as it moves through the gates – reducing wear.

Vortex provided a perfect solution for this customer's problem.

