

Flow Control of a Manganese Dioxide/Manganese Sulfate Slurry

Case Study: Barranquilla, Colombia
March 2009

Industry: Chemical



Process Conditions:

Size	1"
Valve Model	CBA Style Ball Valve
Quantity	7 pcs
Temperature	85° C
Application	Control of slurry
Media	MnO ₂ slurry in Aqueous solution of Manganese Sulfate – 30%. Solids content: 10-15% v/v, 15-25% w/w. Average particle size: 50 microns, max 150 microns, PH=2
Pressure	40 psi
Problem	The customer is a manufacturer of Manganese products for an assortment of industries, including pesticides and abrasive materials. The process is within an SO ₂ absorber. They had tried a series of plastic and lined valves for this application with limited success. Corrosion and erosion of the valve bodies was the problem. Because of the diversity of the products, it was necessary to control the product flow into the process. This led to high erosion of the valves in service.
SKYCERA Solution	SKYCERA [®] offers a CBA Style Ball Valve valve for this application that included complete automation. Due to the changing nature of the flow conditions, the customer required a valve that had replaceable v-ports in the body. SKYCERA [®] shipped 7 ball valves into the service with 30 degree v-ports installed from the factory. The automation included a spring-return pneumatic actuator with a 4-20 mA positioner.