

Application Data

Process Control ♦ Evaporator Tanks ♦ Control Valves



This system is used to maintain a controlled level in evaporator tanks. Quarter turn ball valves were used in this application, but they were susceptible to plugging of the stem and high torque, causing the actuators to stall. As a result the valves were unable to maintain level control, causing an overflow problem. Red Valve Company was contacted to review the application and suggest a solution.

Red Valve proposed installing 2" x 1" Series 5200 Control Valves with Cone Sleeve trim for the feed valves and 3" x 2" Series 5200 Control Valves for the vessel discharge valves. All valves require fail close actuators and electro-pneumatic positioners. Six Control Valves, three of each type, were purchased. The system is diagrammed below.

The 2" x 1" Series 5200 Control Valves are handling a feed brine Sodium Sulphate solution with a

temperature between 130°F to 160°F. They must maintain a flow rate of 65+1.5 igpm to each evaporator tank. The 3" x 2" Series 5200 Control Valves are required to handle Sodium Sulphate slurry discharge at a flow rate of 35+1.5 igpm into their process system.

After six months of operation we have been advised by the end user that the valves are maintaining excellent flow control of their system. They no longer have high maintenance problems or overflow conditions, allowing for a more productive operation.

Red Valve's complete product line of Control Valves are designed to meet our customer's exact flow requirements and specific applications.

Red Valve Series 5200 Control Pinch Valves Used on Evaporator System

