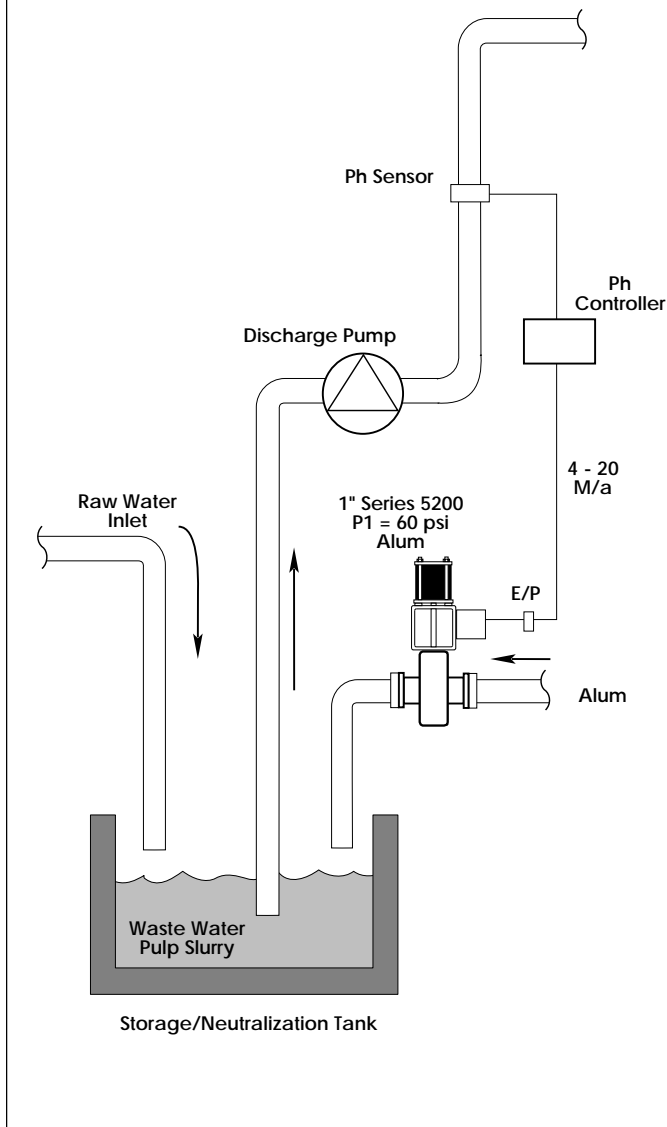


Application Data

Paper ♦ Ph Control ♦ Series 5200



CONTROLLING PH OF PULP EFFLUENT USING SERIES 5200 CONTROL VALVES



Red Valve Series 5200 Control Valves are used in conjunction with a Ph controller to maintain the Ph level of effluent from a pulping process. This system saves money on final treatment and decreases the risk of injury to plant workers by automating the process.

Ph control is required to neutralize these effluents. Wide swings of Ph in discharges to the environment are extremely dangerous, not only to wildlife, but also as possible contaminants of ground water supplies. The most common method for neutralizing the Ph is using additives such as alum or milk of lime. Both of these treatments are highly abrasive, having a high particulate content, and would quickly corrode, dehydrate, and plug metal seated valves.

In this application, the raw discharge from the pulping process is strongly alkaline and requires the addition of an acidic agent (alum) in order to balance it. Alum, in itself, is not only abrasive, but also highly corrosive. A Ph sensor, downstream of the discharge pump from the storage/neutralization tank, senses any variation in Ph. When a variation occurs, the Ph controller sends an adjusting signal to the Series 5200 Control Valve which controls the flow of alum into the storage/neutralization tank. As a result, the Ph of the effluent is neutralized before it is pumped to the wastewater treatment plant. This reduces the cost of final treatment, the potential for injury to plant workers, and the risk of dangerous discharge damage to the environment. Also, the rubber sleeve of the Series 5200 Control Valve is resistant to both the abrasive clogging of the alum and its corrosiveness. This prolongs the functional life of the Control Valve in this application and reduces the maintenance cycle dramatically.

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

