

Red Valve Control Pinch Valves Overcome Slurry Handling and Piping Challenges

A slurry can be loosely defined as any material that is primarily a liquid, but contains more than 10% solids. A slurry can be anything from pure water that contains a small amount of sand, to materials like lime mud that are very thick and viscous. Valves designed long ago for use on domestic water systems cannot always handle the rigorous demands of slurries.

As an example, lime slurry is often used in pH control. When a valve is shut, the upstream pressure in the line tends to dewater the lime, leaving a dry plug at the point of closure. When the valve is opened again, this plug will block the flow. Quarter-turn valves often compound the problem by packing the lime even tighter when they are operated. Lime will also quickly scale and build up inside the valve, especially in any crevices or dead spaces that exist. The solids content of a slurry also makes it difficult to achieve a tight seal when closing. The seating area of metal valves can become blocked by or filled with solids, preventing a bubble-tight shut off.

One of Red Valve's first pinch valve applications was on the first long-distance slurry pipeline in 1957. Our pinch valves are commonly specified for harsh work on the most difficult slurries. The elastomer walls of pinch valve sleeves are ideally suited for slurry applications because they resist abrasion and seal tightly around entrapped solids. The flexing action of the sleeve breaks up dewatered material and prevents buildup. Solid rock particles easily pass through the pinch valve's 100% full-port elastomer sleeve, the valve's only wetted part.

Red Valve Pinch Valves are also ideal for pressure and level control applications. With a patented cone sleeve sized to match an application's control requirements, Red Valve Pinch Valves provide precise, repeatable control across a wide range of pressure and flow conditions.



PVM - Series 70 Open Frame Manual Pinch Valve installed on a pipeline that carries rock tailings from the ore processing plant.



PVA - Type A Air-Actuated Pinch Valves being used on lime slurry control.