

Durable Valve Solutions for Abrasive Mine Tailings

When mining most minerals and precious metals, large quantities of earth are removed from the ground in order to obtain a small quantity of the desired material. Mine tailings, often referred to as overburden, is the material that is left over after the mineral or precious metal is removed. The tailings material is often pumped out to large tailings ponds where it will settle and the water used to transport it will evaporate.

Tailings are very abrasive and often corrosive. Valves used on tailing lines must be able to withstand this internal attack, and remain operational for long periods of time. The remote location of the tailings ponds means that reliability and low maintenance are critical since access is not always convenient. Valves are usually exposed to the elements, so an enclosed operating mechanism is needed to help ensure that the valve will be operational when called upon.

Red Valve presents comprehensive solutions tailored to address any valve application challenge encountered within a tailings disposal system. In slurry applications, the elastomer sleeve inside of a control pinch valve is the only part of the valve that comes in contact with the process. Elastomer sleeves are tougher and more resilient than metal. When in the open position, Red Valve Pinch Valves act like a fully unobstructed, wear-resistant pipe, ensuring unhindered flow without any restrictions in the line. Unlike flow patterns of conventional ball, plug or butterfly valves (which create a deflection that causes wear) the flow pattern of a Red Valve Pinch Valve is streamlined, even when throttled. Upon closure, these valves offer Class VI Shutoff capabilities.

Each Red Valve Control Pinch Valve and Slurry Knife Gate Valve is supported by our extensive expertise and commitment to pioneering design, rigorous engineering standards, and adept manufacturing processes. Versatility and longevity define Red Valve products, offering effective tailing solutions to manage the most demanding tailing applications with ease.



PVM - Series 75 Manual Pinch Valves installed around a mine tailings pond.



Open Frame Large-Diameter PCV - Series 5700 Control Pinch Valves used to control mine tailings.