

DeZURIK ECCENTRIC PLUG VALVES FOR ACID ROCK DRAINAGE, LOW PH MINE SLURRY



Photo Credit: San Juan Mining and Reclamation Conference

These 18" & 24" Eccentric Plug Valves control the flow of acid rock drainage from a series of mine shafts.

The DeZURIK Eccentric Plug Valve was selected for an Acid Rock Drainage application. These 24" and 18" 300# Flanged, 450 psi rated valves were selected to control the flow of Acid Rock Drainage from a series of mine shafts known as the Idarado Mine Reclamation Project in San Miguel and Ouray counties of Colorado. Most of the year, these valves are in the full-open position allowing the channeled flow of acid rock drainage to pass onto the water treatment facility. However, during snow melt and occasional heavy rain, the valves are called upon to control the flow to prevent overflow conditions at the water treatment facility - a critical task to prevent untreated water from entering the Red Mountain Creek.

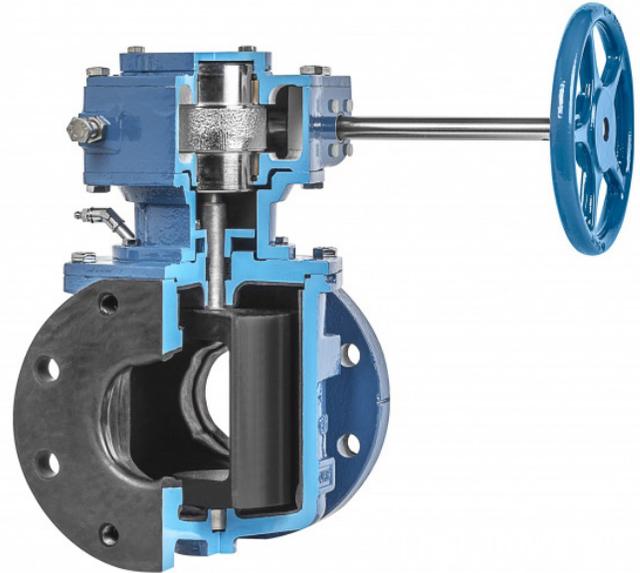
The drainage is comprised of iron oxides and sulfuric acid which in turn leaches additional metals, primarily zinc, from the internal rock formation resulting in a media with very low acidic pH. In addition, the drainage collects silt and abrasive solids creating a light-to-medium slurry. The system design included 900 feet of head pressure, approximately 390 psi, 10,000 GPM, with a requirement of less than 5 psi pressure drop across the valve. Adding to the project difficulty were tight space constraints and the remote location, exceeding 1000 feet into the mine tunnel.

Although a somewhat unusual project, the application requirements are very similar to many current mining systems in place. The DeZURIK Eccentric Plug Valve was the best solution to meet the various demands of abrasive and corrosive slurry including, vulcanized elastomer plug, nickel-welded seat, higher pressure capabilities, and a plug design that is out of the flow stream in the open position lowering pressure drop and wear.

In thousands of installations worldwide, DeZURIK Eccentric Plug Valves have a proven record of long-term reliability. Originally, the Eccentric Plug Valve was developed by Matt DeZURIK in 1928. Since then, DeZURIK has advanced valve reliability and application technology with the design enhancements. A wide variety of value-added design features and lowest total cost of ownership have made it the preferred choice of engineering, operations and maintenance personnel.



Large diameter DeZURIK PEC Valves in a tailings application



Abrasive Slurries / Grit:

The DeZURIK Soft Rubber Lined Eccentric Plug Valve has proven to be an excellent valve for on-off corrosive and abrasive slurry service because of its reliability. The raised seat and eccentric action pushes solids away to provide positive closure. DeZURIK soft rubber lined valves are used in grit, thickener feed and under-flow, ball and rod mill feeds, classifier feeds, reclaimed water, and tailing systems.

SALES AND SERVICE

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