

Keystone Butterfly Valves increases life up to 8X when upgraded to include ceramic lined internal component

RESULTS

- Upgraded to PSZ Ceramics to meet parent equipment maintenance intervals
- Service life of 12 months achieved
- No frequent shutdown of sand separation plant



F638 SE - chrome iron disc and liner control valve

APPLICATION

Mineral processing facility

INDUSTRY

Mining

CHALLENGE

Entry level severe service control valves not meeting parent equipment maintenance intervals.

SOLUTION

The challenge with mineral processing plants is to extend the campaign life between major overhauls. The driver of major overhauls is often the parent equipment. The parent equipment is typically the largest capital item in that plant area and is typically a filter, dryer, thickener, clarifier, autoclave or similar high value item. The high value item is often the most robust and the driver of campaign intervals. If a smaller value ancillary item such as a pump or valve can't last the campaign length of the parent equipment than this can result in costly down time to the parent equipment.

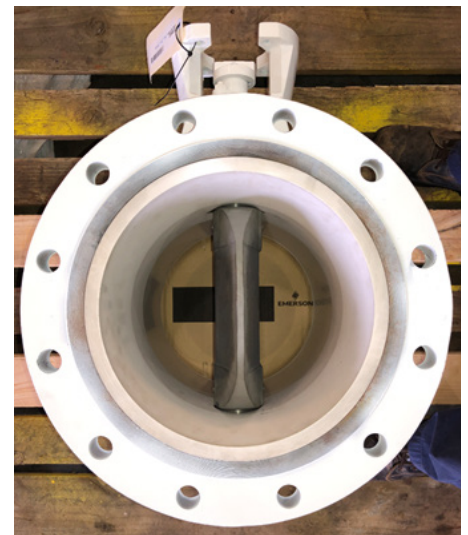
In several cases at a major customer upgrading entry level chrome iron control valves to include PSZ ceramic components extended the install time of this ancillary equipment to either meet or exceed that of the parent equipment.

Case Study 1: Sand Separation Plant

The sand slurry underflow from this sand separation plant was being controlled with a long body butterfly valve (F638 SE - chrome iron disc and liner) and the valve body was wearing out after 3 months. Transitioning the valve to a PSZ ceramic lined version (F638 S2 34) increased the valve life to 2 years. 8x the life cycle was achieved at 3x the valve cost, not to mention the elimination of all the isolation and maintainer costs for the 7 change outs being eliminated. The upgraded control valve meant that the sand separation plant was no longer being brought down regularly and early to change the control valve.

Case Study 2: Lime Slurry Control Valves

The standard chrome iron disc and liner control valve (F638 SE) was lasting as little as 2 weeks in lime slurry service. The lime slurry control valves were upgraded to ceramic disc and liner (F638 026) and service lives of 12 months are now being achieved.



F638 S2 34 - PSZ ceramic lined

Case Study 3: Seed Service Control Valves

The parent equipment maintenance for a seed application was 15 months and the standard chrome iron disc and liner control valve (F638 SE) was only lasting 6 months. Duplicate seed lines were initially installed, such that once the first valve failed the primary line could be switched over to the secondary seed line. However, with the desire to shorten the overhaul time period, it was decided to upgrade the control valves to PSZ ceramic lined version (F638 S2 34) and the upgraded control valve lasted for 2 years, longer than the parent equipment campaign interval.