CASE STUDY

MOGAS supplies replacement valves and service contracts to improve autoclave operations

Challenge

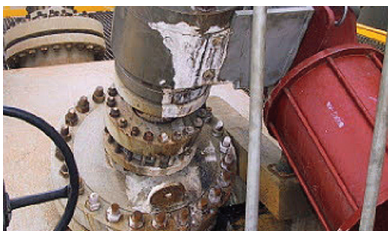
Valve design problems with competitor valves soon after commission, coupled with being in a very isolated location, forced this major Asian mining complex to set up a task force to address the mounting problems. One of the major problem areas was with the 10-inch discharge line valve and 6- and 8-inch vent line valves on the POx autoclave.

The first failures occurred with the super duplex valves. The Belleville springs dissolved, resulting in the ball dropping within valve body. More failures came from inadequate coating on super duplex and titanium valves, resulting in the coating completely wearing off.

Another major failure occured when the small peek inner stem seal was severely damaged, due to the actuator bracket twisting and distorting when the valve was opened or closed—causing the stem to deform. This resulted in acidic slurry leaking out through the packing area, leading to corrosion in the stem packing area.

Conditions	
Application:	POx Autoclave
Temperature:	>410° F (210° C)
Pressure:	>377 psig (2600 kpa)
Valve Model:	CA-1AS
Valve Size:	1/2 to 10 inch (10 to 250 dn)
No. of Valves:	20

These pieces are all that remain after the Belleville springs dissolved in a competitor's super duplex valve.



Competitor's valve leaked acidic slurry.

Solution

After a period of "careful evaluation" the mining operators purchased trial valves from two valve companies; one was MOGAS. Based on proven valve performance—and 'first-class" after sales support at other autoclave sites by MOGAS and authorized representative Optimum Control—MOGAS was chosen to supply replacement valves and spare parts. The initial replacement order included more than twenty 1- to 6-inch ferralium and titanium valves.

Additionally, MOGAS coated the valve trims with TiO_2 on all non-MOGAS repaired valves, lengthening run times to an entire 10- to 12-month campaign and greatly assisting maintenance planning.

To ensure a quick turnaround, Optimum Control stocked a dedicated inventory of spare parts.

Results

The POx autoclave avoided many unplanned shutdowns and now boasts better than 93% run time on their autoclaves. Also, most TiO_2 coated trims removed after a full operational cycle were in such a good state of repair that they were simply recoated for reuse, saving a lot of money in repair costs.

"Buying MOGAS eliminated the frustration we previously endured dealing with other valve manufacturers and service suppliers."

Mine Materials Co-ordinator

Confidence with MOGAS and Optimum Control led to a three-year sole supplier and service agreement.

MOGAS® SEVERE SERVICE BALL VALVES