

## **Control Valve Solutions for Critical Power Applications**

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I have had the Trimteck-Optimux OpGL Globe Control Valve installed for about 16 months. Mine is a severe duty socket-weld valve to reduce 1450psi/1000°F steam to 300psi steam to supply the air ejector for the turbine condenser. The valve was designed to supply 750#/hour with one set of jets in service, and 1500#/hour with two sets of jets in service. The original sizing of the orifice was 1/4", however evaluation of the flow characteristics showed that the flow with two jets in service was reaching >90% of the valve opening. Trimteck resized the orifice to 3/8" opening and re-evaluated the characteristics. This was a much better fit, with the one jet in service being around 40% open and the 2 jets in service being around 60%.

The valve arrived on time, and we brought it to our shop to test and examine before installation. We hooked up air and stroked the valve. The positioner was on the valve 180° from where we needed to be. I called tech support and they were able to talk me through rotating the actuator 180°. It was really easy.

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The valve was installed and nominal values were put into the control circuit in the DCS. It worked great with these numbers the first time the unit came on after outage. There were a few minor adjustments to the control numbers but within a week the valve was controlling to within 4-5psi. On startup the valve would operate from full open and close as the inlet pressure increased. The factory had predicted the valve to run at 40% open with one jet in service it runs at 39%. I was very impressed.

After about 10 months I noticed the valve was leaking at the stem packing. On a brief outage we tried to tighten packing, but we did not succeed in stopping the leak. Our annual outage was just a few weeks away so we decided to leave the valve in service and replace both upper and lower packing during the outage. I also decided to inspect trim as the valve had been in a severe service application for 12 months. We had not had an operating control valve in this application in 10 years, and I did not know what to expect when it was disassembled.



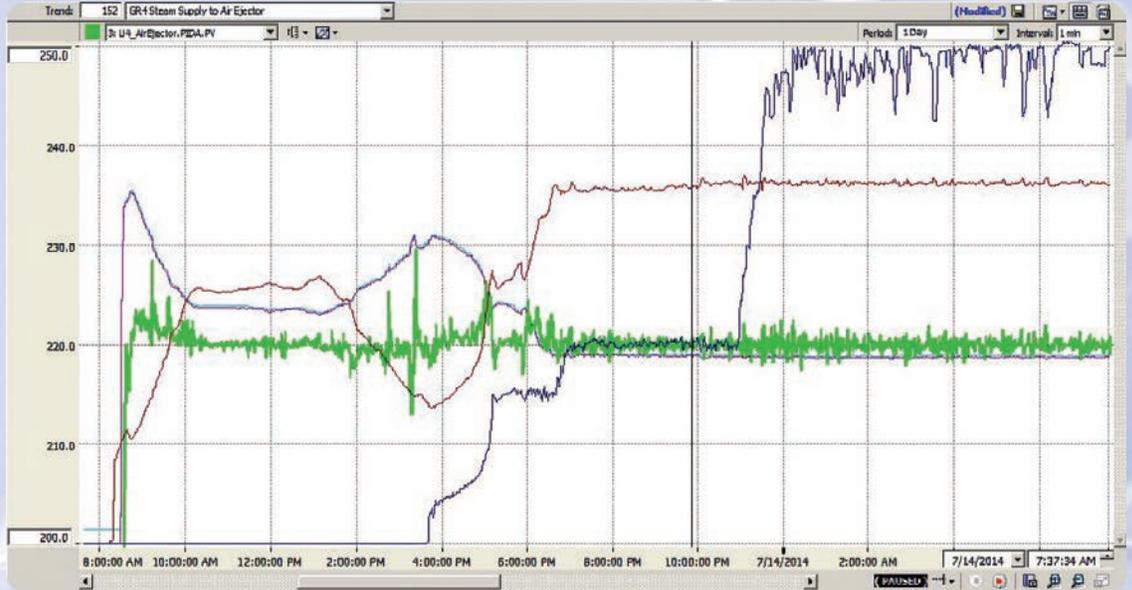
The valve was very simple to disassemble. We pulled the actuator and valve as an assembly and took it to our shop for further inspection and disassembly. We called tech support with one question and they were extremely helpful. The tech on the other end of the phone seemed to have assembled the valve I had on the bench. Upon inspection of the plug, seat, and stem there was no discernable wear whatsoever. Even where the packing had leaked there was no indication of wear. We reassembled the valve and returned to service. We have tightened the packing one time after that.

I am overall very happy with the performance of the valve. The ease of disassembly to me surpasses any valve that I have worked on (including Fisher). I currently have my Fisher valves rebuilt by an outside contractor. I will not hesitate to let my technicians work on this valve, and other than myself, at our facility there is very little valve experience.

I have 30 years of power plant experience and have worked with many types of valves in many different applications from low-pressure (dp) low temperature (such as water tank level control), to high pressure, high temperature (gland steam control). I am familiar with many brands (Copes Vulcan, Fisher, Leslie, and DFT). I consider the Trimteck to be as good as any you can buy. I however did not buy Trimteck because it was the cheapest or the best (I was unfamiliar with the brand). The biggest contributing factor was their ability to supply me with the valve I needed in the time frame I needed. I called a couple of references, both of who were pleased with their valves. I also went to the trimteck.com and gathered information. I am very glad I decided to go with Trimteck. The wear characteristics seem to surpass the others, and the company has had the best tech support of any valve company I have worked with.



*Installation was straightforward. We spun the actuator 180-degrees to make the positioner more accessible and welded the valve in place.*



*The primary purpose of the valve (in green) is to regulate steam to the air ejector during start-up. As the chart indicates, the process is controlled to within 10 pounds through a wide range of open positions. The OpGL holds a steady state to within +/- 2 psi while moving less than 1%. The repeatability is less than 0.5% over several months of operation.*

## About Trimteck

Trimteck is a NASA VDB-approved, ISO 9001-2008-certified U.S. company (Registration No. 2012-98243) with over thirty years of experience engineering, manufacturing, and marketing high-quality, cost-effective flow, pressure, and temperature control solutions and equipment for critical processes, and our products are currently helping customers safely improve quality, optimize throughput, and reduce emissions and energy costs across an array of industries in more than 42 countries.

We manufacture a comprehensive line of control valves – and variety of actuators, positioners, severe service trims, and other accessories – that our applications engineers and representatives use to solve even the most complex flow control problems quickly and economically.



Products in compliance with:

ASME B16.34

ANSI/ISA-75.05.01-2000 (R2005)

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