



Engineering
GREAT Solutions

IMI CCI demonstrates problem-solving skills to replace competitor turbine bypass valves in Asian power plant

The challenge

A combined cycle gas turbine power plant in Asia needed to solve the problem of persistent trim and diffuser erosion in a competitor's high pressure turbine bypass valves. The problems in the competitor bypass valves arose when the plant moved from base-loading to daily cycling and the installed bypass valves could not handle the frequent start-ups and shut-downs. Attempts by the manufacturer to overhaul the existing design of the diffuser failed to prevent further erosion -increasing the maintenance and operation costs. The plant operators advised their client to replace the valves.

In early 2016 the plant operators challenged IMI CCI to solve the erosion issue and

devise a solution that would fit the existing piping dimensions.

The solution

IMI CCI offered a VLB valve with BTG® technology, which is specifically designed for daily cycling. The added value for the customer lay with our problem solving capability and the ability to customise the valve design to meet the customer's exact requirements. Our Valve Doctor® team rose to the customer's challenge with the custom-designed VLB. This solution incorporated additional stages of pressure reduction; matched the dimension of the existing valves (thus minimising the piping modification the client would need to undertake); and provided an easier

maintenance configuration. As the distance from the valve centreline to the condenser was short, the solution included additional nozzles to improve attemperation.



Standard VLB Steam Conditioning Valve

This project demonstrates how the combination of our highly engineered valves and our problem-solving capability deliver value for our customers.

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