



Engineering
GREAT Solutions

Complete system solution provided by IMI CCI solves plant trip issues

The challenge

An IMI CCI customer operating two 1100MW combined cycle power plants was facing issues with repeated turbine trips leading to significant losses. Upon investigation, the customer discovered that the original plant design did not account for the maximum steam flow rates produced during duct burning. This design led to undersized bypass valves which resulted in over-pressurising of the high-pressure (HP) drum and turbine trips. The customer and original Engineering, Procurement & Consulting (EPC) firm approached IMI CCI to provide a solution with minimal impact to the existing pipe configuration within a challenging lead time.

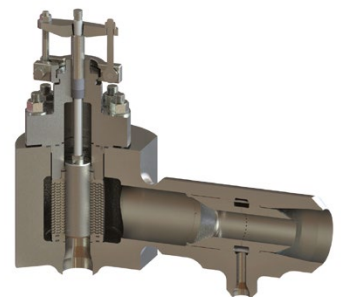
The solution

IMI CCI Valve Doctors® reviewed the actual process conditions using distributed control

system (DCS) data and the customer piping layout, and proposed a new HP to cold reheat (CRH) bypass line in parallel with the existing line, which contained an IMI CCI DRAG® valve. The new bypass valve would operate over the first 30% of the bypass flow, after which the existing bypass valve would supplement the new valve. IMI CCI proposed the 100D DRAG® valve with the new style venturi desuperheater. This valve will meet the challenging operating conditions of very low flows, outlet velocities, and pressure differential between spraywater and steam outlet. The venturi desuperheater is specifically designed to provide effective steam atomisation and desuperheating in low kinetic energy applications and features a no-weld design. This reduces the possibility of pipe cracking and, increases design life and serviceability. Additionally, when coupled with the 100DSV DRAG® spraywater control valve and IMI

Zikesch water isolation and check valves, IMI CCI was able to provide a single vendor system solution.

With the use of innovative product designs and a broad lineup of valve solutions, IMI CCI was able to provide a complete system solution to meet the tough performance demands of the applications.



100D bypass valve with venturi desuperheater

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