



## Long-standing plant issues with competitor products solved by Valve Doctor® team solution

### The challenge

While making a regular sales call to a power station in the US an IMI CCI sales employee learned that the plant was experiencing temperature control and cracking issues with the existing competitor attemperators. The customer had tried to resolve the problem by using the competitor's field service engineers, but with no success. After thorough investigation from an IMI CCI Valve Doctor®, they concluded that the poor temperature control and safety concerns were caused by the following issues:

**Water leakage** was causing cracking in the steam pipe and in HRSG tubes resulting in costly HRSG repairs.

**Cracking in the steam pipe**, due to insufficient distance to the first bend for water spray evaporation. This was leading to

the need to repair and replace pipes as well as other safety concerns.

**Thermal shock** was occurring in the attemperator within the steam pipe. This meant that the internal parts were subjected to high temperatures when during periods of no water flow and so thermal shock when water is re-introduced.

### The solution

After much investigation and discussion with the plant manager, IMI CCI's engineering team proposed the model DAM-B ring-style attemperator with OP-HT nozzles and 100DSV DRAG® control valves. The features of the IMI CCI solution include:

- > Spray nozzle injection perpendicular to the steam flow to maximise secondary atomisation. This provides the smallest droplet sizes, leading to the fastest

evaporation times.

- > The liner is designed to help increase steam velocity and therefore achieve superior attemperation.
- > Spray water nozzles made of Inconel 718 avoid oxidation at elevated temperatures.
- > Separate external water valve with DRAG® trim eliminates thermal shock; providing accurate water flow control to the nozzles.

The customer expects to recover the cost of the new solution in less than a year. The customer is now planning to implement the IMI CCI system solution at other plants facing similar issues.

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