

Performance Upgrades



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Upgrade Your Desuperheating Performance with CCI's AB6300

- Reliable steam supply
- Superior pressure and temperature control
- Eliminate downstream equipment and plant trips
- Eliminate pipe cracks
- Superior low flow temperature control
- Improve thermal efficiency of heat transfer

Conventional Desuperheating System

Conventional desuperheating installation involves separate Globe style pressure reducing valve and desuperheater downstream. This installation works well for normal/maximum flow conditions. However during low flow conditions, we see poor temperature control downstream due to improper desuperheating. In lot of cases, this results in downstream equipment trips and pipe cracks. Similar problems are also seen in situations with low degree superheat, degree superheat is the difference in downstream temperature and saturation temperature.

During low steam flow conditions, the steam velocity through the pipe falls below the desired level (recommended steam velocity is above 10 m/s.) When spray water is injected into the system, there is not enough steam velocity to break these water droplets into smaller droplets and carry them through the pipe. This results in improper mixing and evaporation of the water droplets. The water droplets now are heavier and the steam is unable to carry it through the system and these water droplets start accumulating in the bottom of the pipe resulting in high thermal stress on the pipe.

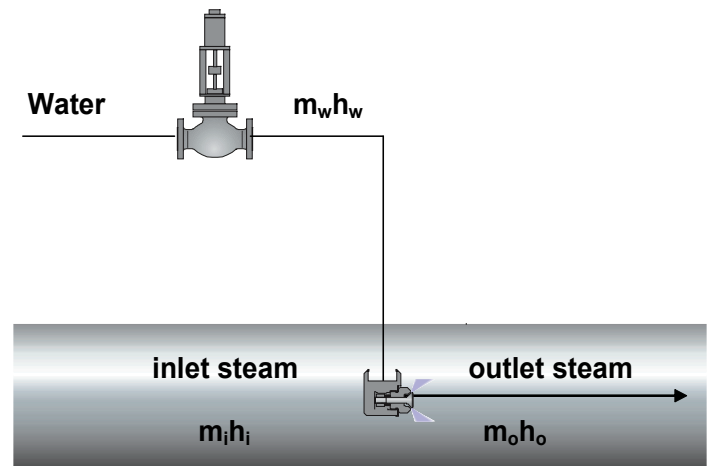


Figure 1

Performance Upgrades



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CCI's New System

This problem can now be eliminated with the new CCI globe style combined pressure reducing and desuperheating valve. This design requires minimum piping changes and provides superior low flow desuperheating due to the inbuilt steam assist design.

As shown in Figure 2, during low lifts up to 5%, the inlet cage is not exposed, instead the high pressure steam sent through a separate steam assist chamber is injected directly in the path of the spray water. The high velocity steam breaks the water into small droplet sizes achieving superior primary atomization. The result is excellent downstream temperature control through proper mixing and evaporation.

Depending on the downstream demand as the plug lifts, higher amount of steam flows through the inlet cage and a small portion of the high pressure inlet steam is sent through the steam assist chamber to inject with the spray water in the path of the high turbulent steam outlet flow.

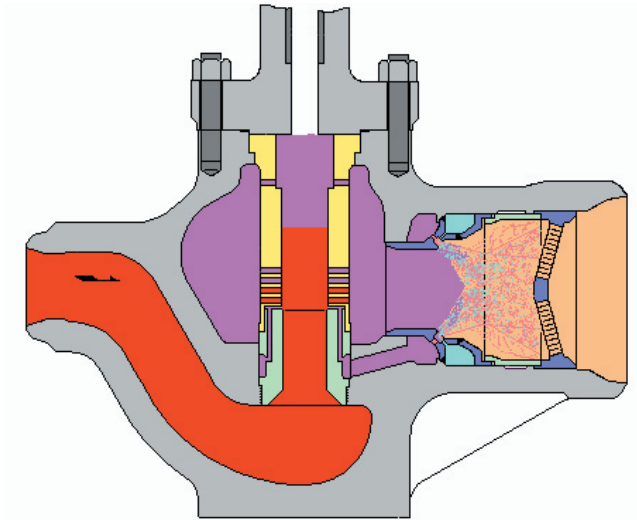


Figure 2



For your nearest contact, visit www.ccivalve.com or
email your request to performanceupgrades@ccivalve.com