

STEAM PRECISION POWERS PAPER PERFECTION:**INNOVATION THAT TRANSFORMS ONE ROLL AT A TIME**

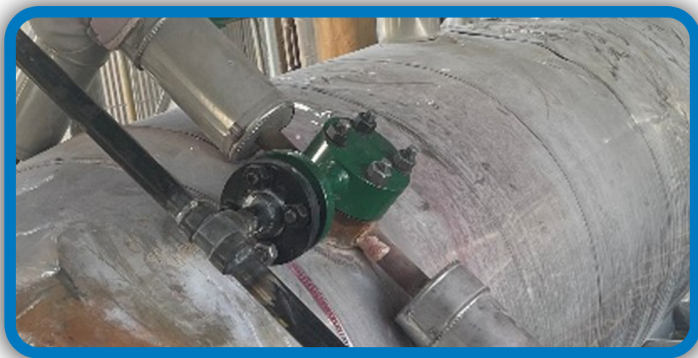
At a integrated paper mill steam isn't just a utility, it's the heartbeat of production. When steam quality falters, everything from equipment reliability to product consistency is at risk. That's exactly what happened when outdated steam conditioning equipment began causing costly disruptions.

A RIPPLE EFFECT OF RELIABILITY ISSUES

The mill's legacy setup, a pressure-reducing Fisher control valve paired with a separate desuperheater, struggled under fluctuating steam demands. Incomplete mixing led to condensate flooding, temperature spikes, and erosion damage. The consequences were felt across the operation: unplanned maintenance, paper machine downtime, and compromised product quality.

"This nozzle design is exactly what we needed to fix our process issues."

- Utilities Operations Manager



A SMARTER, SAFER UPGRADE In 2024, the mill partnered with R.E. Mason and Emerson to install four Fisher ATST Steam Atomized Attenuator Nozzles into the existing TBX-T Desuperheater, along with a Fisher Atomizing Steam Valve. This advanced solution uses steam-atomized water injection to produce ultra-fine droplets that vaporize rapidly, even at low flow rates. The 3D-printed nozzle design expanded the turndown range, slashing the minimum effective desuperheating flow from 90,000 lbs/hour to just 35,000 lbs/hour.

RESULTS THAT SPEAK FOR THEMSELVES

The transformation was immediate and measurable:

- **Condensate carryover eliminated**
- **Precise temperature control restored**
- **Equipment reliability improved**
- **Unplanned maintenance costs reduced**
- **Paper machine availability increased**
- **Consistent product quality maintained**