

FROM MANUAL FIREFIGHTING TO CONFIDENT CONTROL: HOW A FLUFF PULP MILL RESTORED TRUST IN AUTOMATION AND UNLOCKED GROWTH

For years, operators at a large fluff pulp mill fought instability every shift. What had once been a reliable fiber line quietly became a major bottleneck. Production wasn't limited by demand or raw materials, it was constrained by two unstable digesters no one trusted to run automatically. Instruments drifted. Valves behaved unpredictably. Control loops were ignored. Manual mode became the default. Operators compensated by watching trends, anticipating upsets, and making fast, aggressive adjustments to keep production moving. But variability increased, and confidence in automation eroded further. Something had to change.

FIXING THE FUNDAMENTALS FIRST

Apperture Solutions, working with Emerson technologies, began with a focused assessment of the fiber line—starting at the field level, not the control room.

The root causes were clear:

- Degraded or poorly calibrated transmitters
- Unresponsive, inconsistent control valves
- Hardware incapable of supporting stable control

Instead of layering advanced strategies on top of weak foundations, the team restored them. Critical instruments and valves were repaired, recalibrated, or upgraded. Control loops were then re-tuned using Entech Toolkit Software, allowing the process to finally respond smoothly and predictably.

REBUILDING TRUST ON THE FLOOR

Technology alone wasn't enough. After years of manual operation, skepticism toward automation was understandable.

Operators were shown how the new control strategies mirrored their own intent—but executed changes gradually, consistently, and in coordination across the process.

As days turned into weeks, results replaced doubt:

- Variability dropped
- Upsets declined
- Manual interventions faded

Operators shifted from constant firefighting to supervisory control—freeing time to focus on throughput and overall performance.

STABILITY THAT ENABLED GROWTH

With reliable instrumentation, responsive valves, and trusted automation in place, the digesters transformed from chronic constraints into stable contributors.

The mill achieved:

- More stable digester operation
- Faster, smoother rate changes
- Reduced Kappa variability and lower white liquor consumption
- Improved fiber line reliability

Most importantly, the bottleneck disappeared, unlocking production capacity that had been unreachable for years. The measurable Impact?

- **8% increase in overall value**
- **\$34M in estimated annual savings from higher sustained production and efficiency**

By restoring the basics and rebuilding operator confidence, Apperture Solutions helped turn a manually driven operation into a stable, scalable system—technically and culturally.

WHAT COULD YOUR OPERATION ACHIEVE IF YOUR AUTOMATION EARNED TRUST AGAIN?

Contact Us and Make A Change Today