

### Exceeding Expectations

- Innovative Design
- Increased Reliability
- 300% ROIC
- Easier to Troubleshoot

**“ Our Aging DCS System Is Causing Downtime And Inconsistent Batches During Our Digesting Process. Can You Upgrade Our Control System And Improve Batch Consistency?”**

### What Our Client Said

Our paper mill produces a large amount of cardboard for the shipping industry. However, our digester process is becoming inconsistent, and as a result, we are struggling to achieve our daily production target. Here's the problem: Our current batch digesters cause the steam headers that mix the pulp solution to swing back and forth, creating inconsistent batches. In addition, our DCS system is becoming unreliable, which is adversely impacting the cooking process. The result is a chain reaction of runtime issues, starting in our washing and cascading process through stock preparation all the way to the paper machine.

### What We Heard

We need an experienced pulp and paper integrator to upgrade our outdated digester controls and reconfigure our cook program to improve consistency and reduce downtime. We need LSI's team of experts to provide a solution that uses steam more reliably, making batches more uniform and overall production more efficient.

### What We Did

LSI's team began by listening to requests from equipment operators, maintenance workers and engineers. This allowed us to see firsthand what issues they were facing during their day-to-day production process. LSI partnered with a digester expert to plan and design the new controls and cook program. After the design process was complete, LSI upgraded the DCS system and moved all PLC controls into a DeltaV system. Redundant controls and spare I/O were incorporated into a junction box to facilitate future instrumentation projects. All MCCs were upgraded along with dozens of power panels, improving safety and reliability with the new system. In the end, LSI's design increased reliability, while reducing variability, improving throughput, maximizing production rates and enhancing stock quality.

### LSI provided:

- Pulp and paper expertise
- Digester expertise
- Upgraded cook process
- DeltaV configuration
- MCC upgrades
- Power panel upgrades
- Simulation development system
- Systems integration

## *The Results Speak For Themselves*

### **300% rate of return**

The improved quality and consistency of stock allowed for increased throughput via previously “maxed out” washer lines, leading to fewer breakdowns and project payback in less than three months.

### **Reduced chemical costs**

Added stock quality – along with newly automated defoamer rate controls – reduced defoamer usage on the washer lines, leading to major chemical cost savings.

### **Long-term savings**

LSI’s newly designed controls for the facility’s digesters eliminated unwanted steam header movement. This control change improved the consistency of each batch and led to an increased production rate and revenue.

### **Reduced installation costs**

The LSI team reduced installation costs and cut overtime by utilizing an existing rack room and reusing most of the existing wire.

### **Troubleshooting made easy**

Individual fusing and hardware diagrams included on faceplates throughout the digester control system have reduced troubleshooting times.

***Let LSI listen to your challenges today. Together, we can modernize your processes and improve your rate of production.***



### **LSI listened,**

**then assembled a team with the right pulp and paper experience to successfully undergo a project of this scope. In the end, maintenance downtime was reduced significantly, and unplanned downtime due to controls hardware was virtually eliminated.**

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***LSI’s pulp and paper experts exceeded all functionality and reliability goals put forth by our client. Following completion, the facility saw a project payback in less than three months. The client was so pleased with the outcome that they have asked LSI to repeat this same project at several of their other facilities.***

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