

# Cascades Tissue Group

www.ctgebiz.cascades.com



*“The level of engineering startup, system commissioning, and site support from the Invensys Operations Management application engineers, service engineers, and technical team was outstanding.”*

*Mike Armstrong  
Electrical and Instrumentation  
Manager*

## Cascades Tissue Group achieves operating efficiencies with Invensys Operations Management Solution

### Goals

- Reduce standard deviation of basis weight and moisture
- Automate controls and save time, maintain spec and ensure product consistency
- Increase uptime, greater overall capacity utilization and lower maintenance costs

### Challenges

- Update outdated controls at the Eau Claire mill and continue to strength its position in the increasingly competitive global paper industry

### Solutions and Products

- Foxboro® Distributed Control System - I/A Series®
- Wonderware® InTouch® HMI Software

### Results

- Improved product quality reduced breakage, resulting in improved uptime, greater overall capacity utilization, and lower maintenance costs
- The multivariable expert adaptive control brings greater efficiency in energy utilization, improves waste and discharge handling.
- New system prevents to the corrosive environment at the mill floor

**Eau Claire, Wisconsin** – Founded in 1964, Cascades, Inc. is a North American leader in the production, conversion, and marketing of packaging products, fine papers, and tissue papers. Internationally, the Cascades Group employs more than 14,000 people and operates some 160 modern and versatile operating units in Canada, the United States, Mexico, France, England, Germany and Sweden. In addition to its brands, Cascades Tissue Group is a major supplier of private label products for major chains and drugstores. Its bathroom tissue, paper towels, paper hand towels, facial tissue, paper napkins, and related products are offered under brand names such as Cascades, Doucelle, and Capri for the retail market, and New Horizon, North River, Decor, and Perkins for the commercial and industrial markets.

### **A hundred years of continuous service**

Cascades Tissue Group, a leading supplier of tissue paper products for more than 100 years, recently experienced growing concern that outdated controls at its Eau Claire mill would jeopardize its position in the increasingly competitive global paper industry.

Paul Olson, Paper Mill Superintendent, said, "Making tissue that is soft, yet strong and consistently high in quality requires superior control over the moisture and gauging, especially during paper grade changes. Adjusting for basis weight and moisture after a grade change manually can take the better part of an hour — and there is still chance of human error. By automating, we cannot only save time; we also maintain spec and ensure product consistency."

To meet this challenge, Cascades automated control of moisture and gauging on two tissue machines — migrating from an ABB Accuracy Model 1180 QCS system running a conglomeration of single-loop controllers to a modern Foxboro I/A Series Distributed Control System.

### **Implementing New Technology**

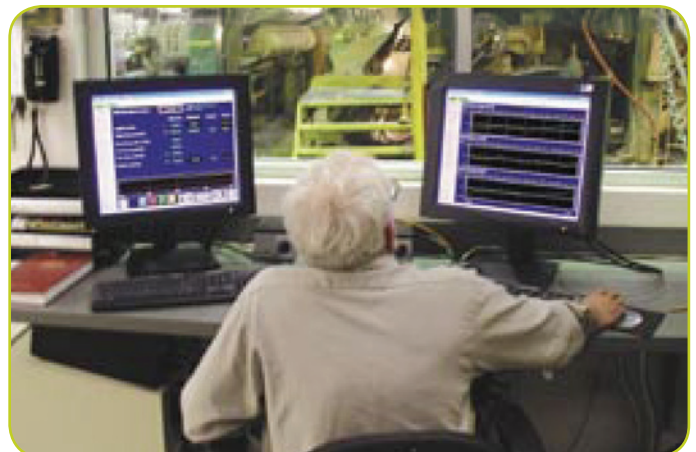
The new Invensys control architecture built on Foxboro technology includes a fault-tolerant I/A Series system controller, a server, two human machine interface (HMI) workstation terminals, with 200-series Fieldbus I/O modules, all communicating across a high-speed Ethernet network. This network configuration enabled the I/O to be located near the tissue machine wet end operation, reducing both control room space and field wiring.

Using this Invensys solution, the operations engineers have implemented regulatory and supervisory control functions in a unified, open system architecture. Operators receive better trending analysis that enables them to correlate variability for each production run. Stock preparation controls help reduce disturbances that can significantly impact paper quality and paper machine performance.

The pulp and paper industry experts of Invensys supported the Cascades production management teams throughout their engineering efforts.

### **Results and Future Growth**

Cascades set out to reduce standard deviation of both basis weight and moisture. With the new



controls from Invensys, it met both objectives. In addition to contributing to product quality, the new system has reduced breakage in parent webs, resulting in more uptime, greater overall capacity utilization, and lower maintenance costs.

Another important benefit of the upgrade was laying the foundation for implementing more advanced process controls. For example, the new Foxboro I/A Series Distributed Control System currently uses multivariable expert adaptive control, which reduces consistency swings while enabling performance trending and simplified troubleshooting. This brings greater efficiency in energy utilization, plus waste and discharge handling. Because components are now housed in a central control room, equipment is not exposed to the corrosive environment of the mill floor.

System maintainability and reliability also improve dramatically. Consolidated controls reduced the overall number of system components, with many of the components deployed equipped with self-diagnostics.

Cascades Tissue Group's capital investment is well protected. The open architecture of the Foxboro I/A Series Distributed Control System is designed to accommodate advances in process control, information technology, application development tools, instruments, networking, and communications as benefits become available. This includes technology resulting from Invensys engineering or third-party commercial off the shelf (COTS) solutions.

Commitment to backward compatibility of new technology ensures that Cascades Tissue Group will continue to receive substantial return on its automation investment for years to come.





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