CASE HISTORY

Tissue and Towel

RECORDED BENEFITS

- Reduced wet strength chemistry usage by 25%
- Reduced wet tensile variation by 33%
- Improved wet tensile target adherence by 98%

AI-Driven Autonomous Control Delivers Immediate Cost Savings

OPTIX™ Applied Intelligence

Customer Challenge

A North American tissue and towel producer was interested in reducing raw material consumption while optimizing wet tensile quality. The mill employed an inefficient dosage scheme for wet strength chemistry. The dynamically-changing nature of continuous manufacturing and the periodic reel-to-reel quality measurement environment of tissue making presented operators a challenge for manual optimization.

Recommended Solution

Solenis recommended that the mill implement OPTIX Applied Intelligence – a machine-learning, predictive analytics platform with autonomous control capabilities. OPTIX generates a virtual measure of wet tensile quality in real-time and uses machine learning capabilities to remain robust and accurate in the face of changing machine conditions. Utilizing an IoT OnGuard™ controller and artificial intelligence (AI) to make data-driven process adjustments, the wet strength chemistry dosage is finely tuned to drive wet tensile quality to target.

Results Achieved

Immediately upon implementation of OPTIX autonomous control, the mill realized a 25% reduction in wet strength chemistry usage. The autonomous control algorithms adjusted the wet strength chemistry dosage up or down to ensure target adherence of the wet tensile quality parameter. This unprecedented, AI-driven autonomous control optimized wet tensile quality by reducing variation by 33% and increasing target adherence by 98%.