

RECORDED BENEFITS

- Full autonomous chemistry control
- Optimized wet strength resin use
- Improved quality target adherence

Autonomous Chemistry Control: The Right Dose at the Right Time

OPTIX™ Applied Intelligence

Customer Challenge

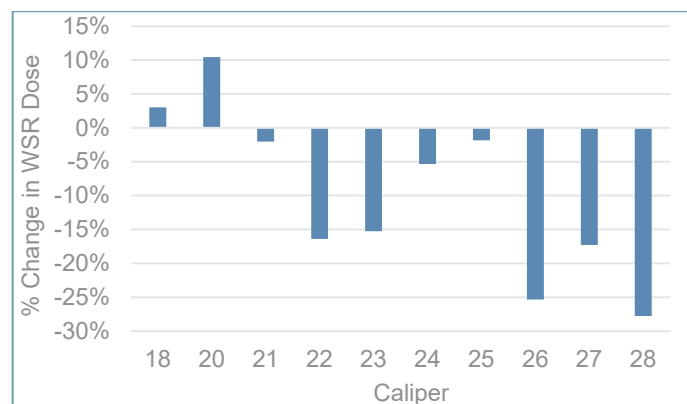
A North American virgin coated paperboard mill was interested in optimizing its wet strength resin (WSR) consumption while maintaining wet tear quality. The dynamically-changing nature of paper manufacturing presented operators a challenge for manual WSR optimization. Additionally, delayed quality tests caused mill operators to reactively control and overdose WSR.

Recommended Solution

Solenis implemented OPTIX Applied Intelligence – a machine-learning, predictive analytics platform with autonomous control capabilities. OPTIX generates a real-time, virtual measure of wet tear and incorporates an AI-driven control loop to optimize the associated chemistry program. Machine learning is utilized to ensure the quality measure remains accurate.

Results Achieved

Through full autonomous control of the WSR chemistry, OPTIX was able to optimize the dosage for all the customer's grades and achieve an average dosage reduction of 18% on the heavy weight grades. Customized algorithms allowed OPTIX to improve or maintained wet strength target adherence while producing no additional reject. During process changes and upset conditions, OPTIX proactively increased WSR dosage to ensure wet strength quality persisted. AI-autonomous control has been embraced by mill operators as a new tool to control wet strength chemistry. Additionally, the improved quality compliance has satisfied the quality control department and eliminated petitions from the quality manager.



All statements, information and data presented herein are believed to be accurate and reliable, but are not to be taken as a guarantee, an express warranty, or an implied warranty of merchantability or fitness for a particular purpose, or representation, express or implied, for which Solenis and its affiliates and subsidiaries assume legal responsibility. ™Trademark, Solenis or its subsidiaries, protected in various countries. *Trademark owned by a third party. ©2021 Solenis.