

PULP AND PAPER

ABB boosts Swedish printing paper producer's availability with modernization package for winder



—
Holmen Braviken paper mill (photo credit: Holmen)

Challenge

Braviken's RM3, which is one of three winder machines that are located at the production line, produces reels based on up to 50 ton tambours. It is a job that places high demands on both equipment and operators. When recurring operational disruptions affected the machine availability, it was time to investigate a modernization plan to upgrade the systems and optimize performance.

Solution

Braviken chose ABB for RM3's automation and electrical systems upgrade, including the project management, design, installation, training, commissioning and optimization of the winder process. All control and operation of the winder has been included in ABB Ability™ System 800xA, providing a common platform for all the machine's functions, including safety logic.

A main reason ABB was chosen was because the site already had ABB's control system for another machine (RM4), and they were happy with its functionality.

Holmen's paper mill in Braviken just outside Norrköping, Sweden produces printing paper in one of the world's most production-efficient mills. With high demands on equipment that lead to availability challenges, the mill turned to ABB for an upgrade and optimization project that helped the mill reduce downtime and improve runnability.

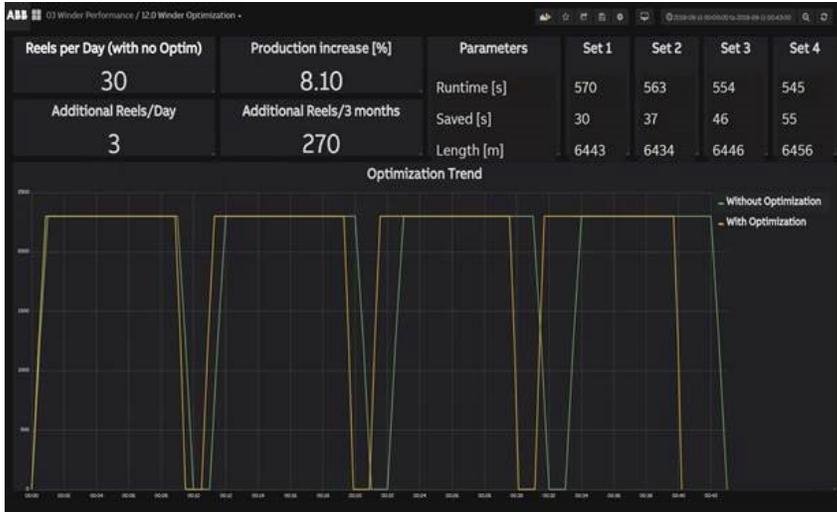
Integrated automation solution drives immediate results

The new automation solution for RM3 includes machine control, sectional drive system, automatic slitter positioning, machine safety solution, recipe for roll data and rider roll control.

The machine supports grades between 40 and 60 grams/m² with different densities and thicknesses, putting complex demands on the winder. ABB's solution has helped the winder run fast and still produce good, durable rolls.

The benefits of an integrated solution are several. It contributes to effective control, optimization and monitoring. This results in better runnability, reduced downtime and easier troubleshooting.

Plus, common graphics make the work more visual, and for Braviken, it was a boost to get all signals in one system. The graphics and alarm lists make it easier for operators to find fault locations.



A dashboard view of Winder Performance Optimization showing how it can help improve production capacity

The machine safety meets all requirements

Machine safety was an important part of RM3's modernization; all directives and standards that the machine owner and supplier must live up to had to be met.

With the completion of the risk assessment, ABB has delivered a safety solution that complies with the machinery directive. All safety features, such as speed monitoring of sectional drive system and scale protection are now controlled and monitored by System 800xA.

Improved production capacity at winder

With control over the entire process area, there were also greater opportunities to optimize all the functionality of the winder. Included with the project delivery was Winder Performance Optimization, an ABB Ability™ Performance Service that monitors performance KPIs, identifies improvement actions and enables the dynamic adjustment of speed to meet capacity for each roll set. The digital service ensures full traceability connected to, among other things, each produced roll. These are important inputs for production and mill management to measure productivity, evaluate production and review workflows.

Collaboration key for functionality – and results

In a project of this kind, the cooperation between customer and supplier is crucial. Before implementation began, all winder functions were reviewed and Braviken had the opportunity to influence programs and logic for the machine.

The results of such an approach have been immediate. The higher availability after the rebuild has increased the productivity of the machine, and the high degree of automation also means a good flow of work for the operators who run the winder, positively impacting productivity.

The winder modernization project has enabled Braviken to operate smoothly and efficiently with no production losses.

ABB Inc.
579 Executive Campus Drive
Westerville, Ohio 43082, USA
Tel: +1 614 818 6300
Email: se-pulpandpaper@abb.com

ABB Ltd
2 Ayer Rajah Crescent
139935 Singapore
Singapore
Telephone: +65 6776 5711