
PULP AND PAPER

Southeast Asia paper mill improves productivity with ABB Ability™ Advanced Digital Services



Suite of ABB services ensure mill's machines run longer and perform better

ABB Field Service Management, QCS Performance Services and QCS Performance Fingerprint ensure mill increases productivity and quality

01 ABB Ability™ Advanced Digital Services significantly reduce sheet breaks, lower product costs and increase production

Achieving sustainable performance

A top-producing paper mill in Southeast Asia has utilized ABB paper machine optimization and control systems to maintain high levels of performance and consistent product quality for over two decades.

This long-term relationship has allowed ABB to develop a deep understanding of the mill's people, processes, technology and goals. ABB applies this knowledge to provide the mill with sustainable gains in productivity, equipment availability and paper quality.

But the mill is located in a harsh tropical climate where temperatures average 30 °C (86 °F) and humidity is intense. This reduces automation lifespans and makes maintenance tasks more difficult. Even so, the mill's managers continue to seek long-term optimization improvements and provide sustainable automation and process reliability – all with a fast return on investment.

Customer challenge

- Optimize paper machine performance and efficiency
- Implement sustainable performance improvements
- Keep maintenance costs low
- Maintain high product quality
- Equatorial heat and humid hard on equipment

ABB's solution

ABB began by providing the mill with control and quality control systems, drives and electrification, as well as multi-variable cross-direction control and paper quality measurements in 1996. In 2003, the mill's CEO asked ABB to help them further



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improve. ABB responded with QCS Performance Services to help the mill achieve significantly fewer sheet breaks, lower overall product costs and increase production.

ABB also implemented a preventive maintenance program that included two ABB engineers working on-site -- one specializing in drives and the other in control systems. They have remained in-residence ever since to ensure performance goals are met.

The first month that ABB implemented these services, the mill experienced production increases of eight percent. This set a new record. ABB also provided training for plant personnel so they could obtain the best possible performance from the mill's automation system.

The mill also relied on ABB's on-site QCS Performance Fingerprint audit on both of the mill's paper machines to establish current machine performance benchmarks that provided the basis for evaluating and identifying ongoing improvement opportunities.

The resulting diagnostic report not only provides improvement recommendations but the associated return on investment (ROI) of those recommendations. Typical savings ranged between \$150,000 and \$350,000.

As part of its machine management and maintenance strategy the mill relies on ABB Field Service Management to significantly increase visibility into service and maintenance activities. Field Service Management ensures that proactive service activities increase productivity and that spare parts inventories are up to date.

Results

The mill has maintained maximum efficiency and performance while meeting production and quality goals on both its paper machines, one of which is over 20 years old.

Field Service Management guarantees upgrades and equipment maintenance are implemented on-schedule. Because maintenance at the mill is proactive, costs are low and predictable, and the customer is confident their automation is performing well.

Benefits

- Achieved optimum uptime and productivity
- Proactive maintenance that controls and reduces costs
- Increased efficiency and time savings
- Consistent product quality

Featured Solutions

ABB Ability™

All of the mill's digital service are part of ABB Ability™, ABB's unified, cross-industry digital capability — extending from device to edge to cloud — with devices, systems, solutions, services and a platform that enable our customers to know more, do more, do better, together. ABB Ability™ connects our customers to the power of the Industrial Internet of Things (IIoT) and, through our services and expertise, goes further by turning data insights into the direct action that "closes the loop" and generates customer value in the physical world.

ABB Ability™ Performance Optimization for QCS

To ensure high availability of pulp and paper mill Quality Control System features, ABB provides a range of services to improve plant performance and to proactively alert users to impending issues so they can be addressed before they become problems that affect quality or production.

ABB Ability™ QCS Performance Fingerprint

QCS Performance Fingerprint is ABB's diagnostic service for QCS that generates benchmarks, improvement plans, and an economic benefit projection. The service is non-invasive, utilizes proven data analysis methods, and is executed with ABB's advanced technical tools.

Field Service Management

Field Service Management is how ABB delivers state-of-the-art services. It is based on a set of tools and processes designed to fulfill customer needs, keep production running and improve asset performance.

These standardized tools and procedures allow us to serve all types of ABB assets and maximize efficiency and safety by:

- Presenting a full picture of all installed equipment
- Offering maintenance based on globally gathered KPI's
- Optimizing spare parts inventory, by aligning parts needs with service
- Providing a vehicle to manage obsolescence
- Managing service compliance

The ABB field services team is global, with more than 26,000 professionals providing fast, reliable, and efficient response.



ABB Inc.

Industrial Automation Service

579 Executive Campus Drive

Westerville, OH 43082-8870

United States

E-mail: automation.service@us.abb.com

abb.com/pulpandpaper

