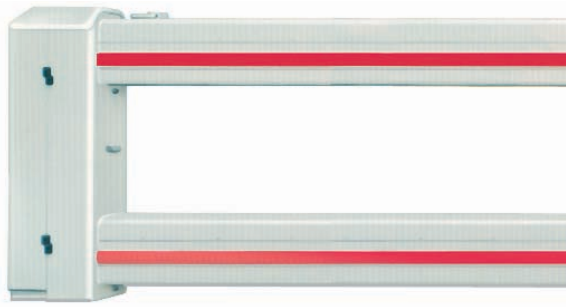
Industrial^IT Quality Control
Powered by System 800xA Extended Automation

Industrial^IT enabled™

Industrial^{IT} Quality Control

With more than 100 years of industry knowledge, ABB understands the papermaking business and the challenges you face today. We combine our extensive expert knowledge of your markets, your business and your processes with our world-class products and services.



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"We nailed every one of our ROIs on our projects with ABB. What ABB commits to, they deliver."

Bob McDonald, Vice President Operations, Fox River Paper, USA

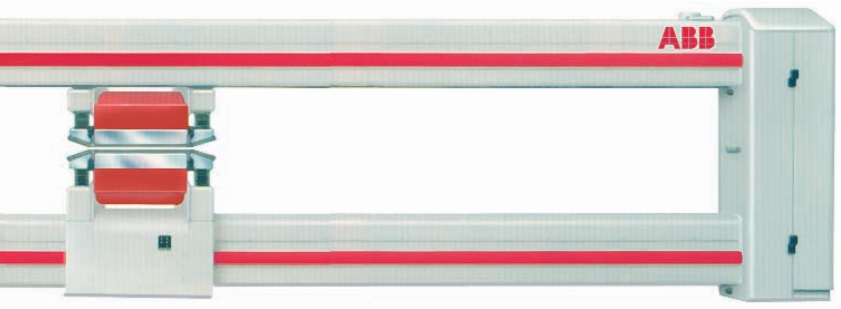
Scanners

ABB Scanning Platforms are the industry's strongest and smartest scanners, providing the process information necessary to optimize product quality. Scanning Platforms are self-contained; the on-board distributed architecture converts sensor inputs into engineering units that are spatial and temporally identified without external processing. The design facilitates rapid installation and expansion. A PC plugged into the end column or connected via OPC, makes troubleshooting easy. Working with ABB Operate^{IT} and Control^{IT} solutions, Measure^{IT} Sensors and Scanners give you outstanding process visibility coupled with the most advanced control in the industry.

ABB provides the scanning solution on more paper machines than any other scanning technology or any other scanning company.

Scanning Platform SP1200

The Scanning Platform SP1200 provides scanning sensor support on processes up to 13 meters and longer. Its rock-solid 10 mm steel A-frame design is unparalleled in providing a sound foundation for measurement success. To ensure reliable performance in even the harshest mill environments, the system is pressurized by air and has a welded and well-sealed exterior with no service covers.



Scanning Platform SP700

The Scanning Platform SP700 provides a compact design, featuring an unparalleled strength-to-size ratio. It offers the opportunity for SP1200 quality and performance where space restrictions require a small footprint.

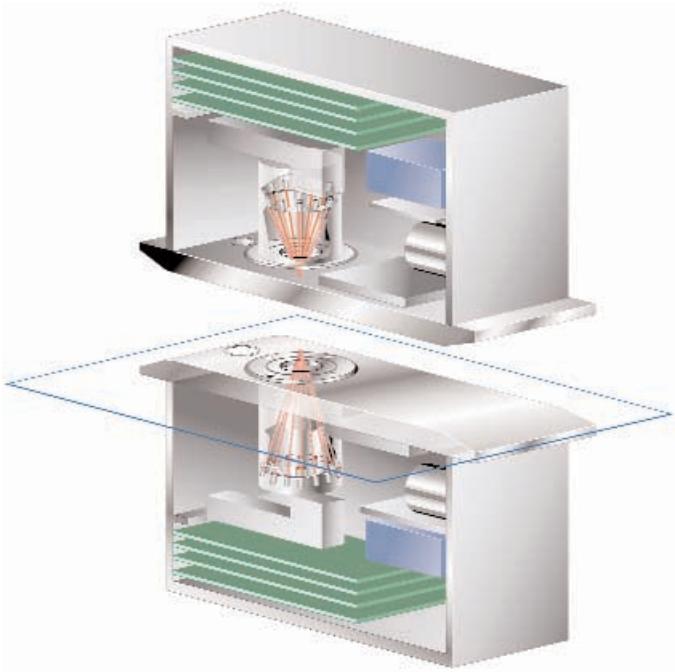
Scanning Platform RSP1200

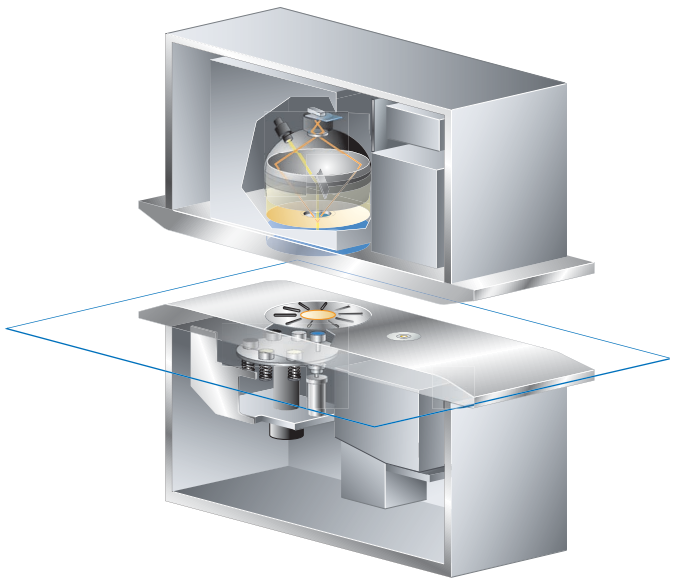
The Scanning Platform RSP1200 supports ABB single-sided infrared measurements for process locations such as wet presses, coaters and size presses.

Measurements

As an industry leader, ABB prides itself in its ability to provide unique, leading-edge process measurements such as Fiber Orientation.

In response to your needs, we also offer multiple basis weight, moisture, caliper and coat weight measurement solutions. This provides the freedom to choose process-optimized solutions.





Fiber Orientation

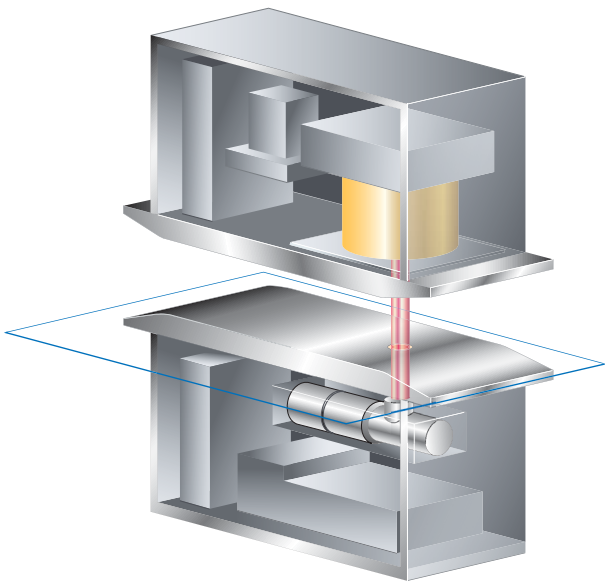
ABB continues its history of innovation with the first true online two-sided fiber orientation measurement, freeing operators from the constraints of laboratory gauges, and providing the information necessary to eliminate process problems such as curl and twist warp, while optimizing MD/CD sheet strength. Fiber orientation offers an insight into runnability on both the paper machine and converting equipment, and on your customers' printing presses or copy machines.

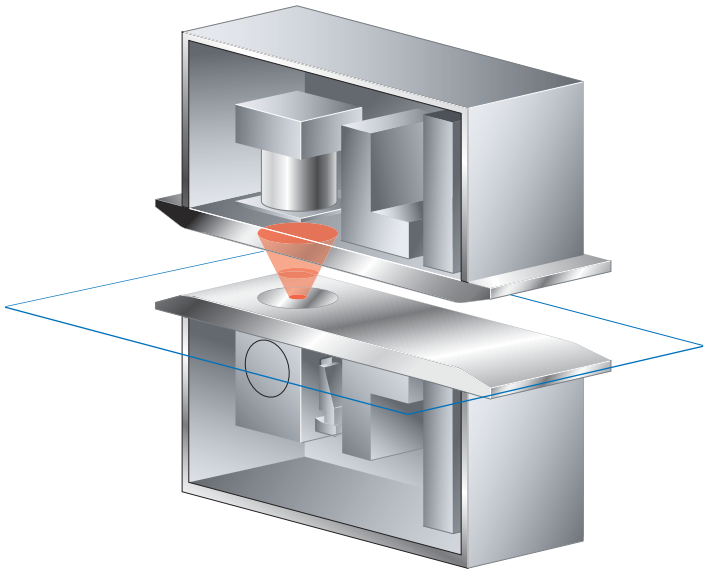
Color

ABB Color Measurement provides the capability to measure and control colors, from high whites and pastels to the deepest shades, with or without fluorescent whitening or optical brightening agents. The color solution provides online laboratory quality with a unique high-intensity, UV-rich Xenon flash; non-contacting, sealed optics; and patented opacity compensation. Advanced signal processing totally partitions the influence of whitening agents from shading dyes for improved color control and better agreement with laboratory instruments.

"Because of our choice of ABB, we have the technology and tools to manage a highly efficient newsprint mill."

Gilbert Placiard, Head of Electrical Department, Norske Skog Golbey, France



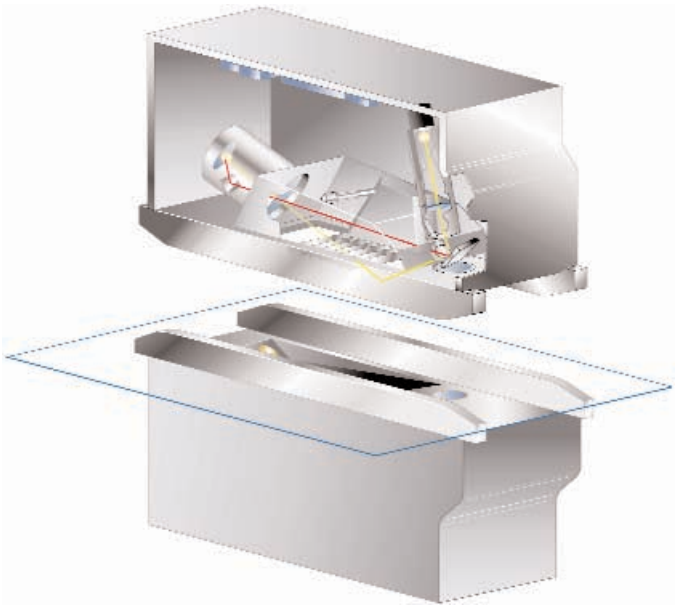


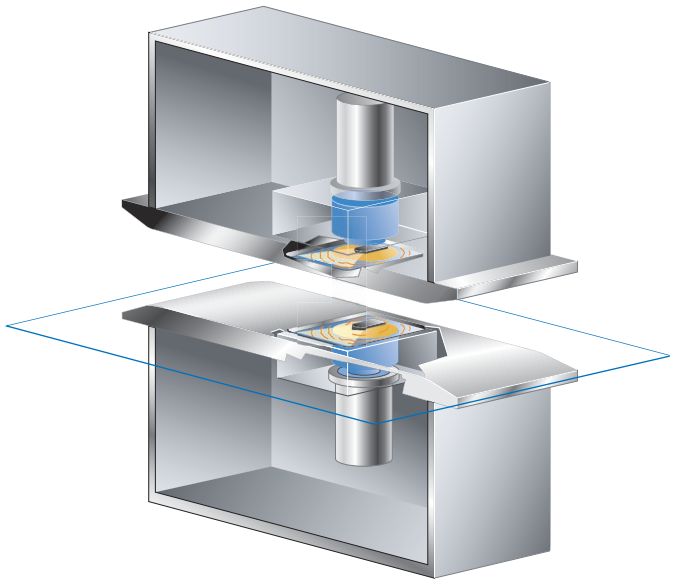
X-Ray

ABB X-Ray Measurement is optimized to measure the inorganic component of paper even in the face of a variety of furnishes. Inorganic mixtures that include titanium dioxide, calcium carbonate, silicon dioxide, talc, aluminum oxide and highly refined clay derivatives are measured with ease. ABB offers several application-optimized sensor models to match to your requirements for inorganic additives, coating composition and basis weight range.

Basis Weight

ABB Basis Weight Measurement provides unparalleled accuracy and streak resolution. These sensors minimize, measure and control the mass of air between the measurement heads, resulting in the most accurate weight measurement available. The sensors use Krypton, Strontium or Promethium isotope sources, depending on the application requirements.





Gloss

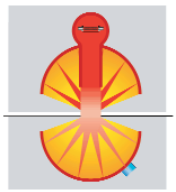
The Gloss Measurement simulates the human eye's perception of gloss to provide continuous online gloss measurement in accordance with TAPPI standards.

Caliper

ABB Caliper Measurement incorporates sensing heads that combine low density, extreme durability and dirt-repelling qualities. These unique sensing planes glide smoothly over the sheet for superior measurement without damaging the sheet. Caliper options include a Light Touch solution for the most delicate processes and sensing heads optimized to reduce maintenance on grades with high recycle content.

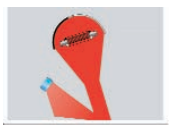
Moisture Measurement

Moisture is one of the most important and fundamental paper measurements. ABB offers the expertise and technology to precisely meet your moisture measurement requirements by utilizing one of three methods.



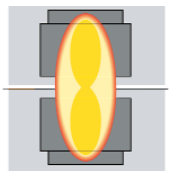
Transmission Moisture

Transmission Moisture Measurement analyzes multiple wavelengths of infrared energy transmitted through the sheet to directly calculate percent moisture and eliminate the need for basis weight compensation. Transmission Moisture Measurement provides high accuracy and precision with insensitivity to furnish variations, moisture layering and carbon black.



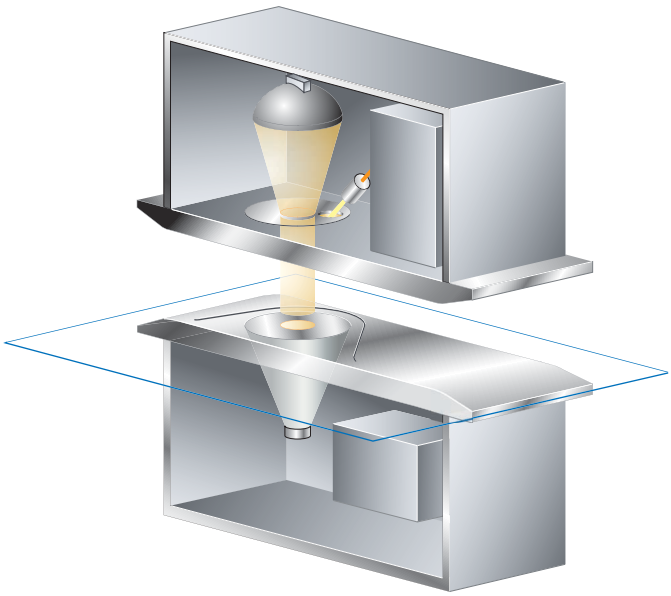
Reflection Moisture

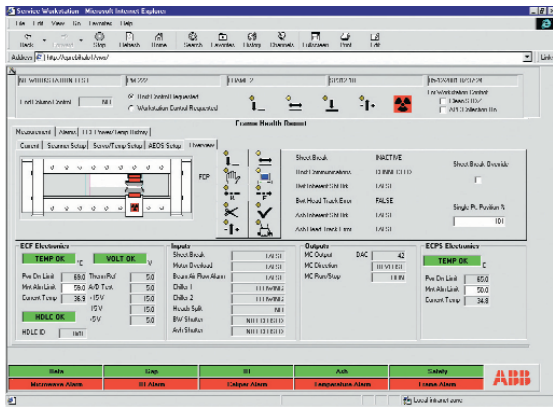
Reflection Moisture Measurement provides single-sided, non-contacting surface moisture measurement across a wide process range – from wet press to bone dry levels. ABB's Reflection Moisture Measurement requires no basis weight sensor compensation on most grades – providing direct moisture measurement.



Microwave Moisture

Microwave Moisture Measurement provides dual-sided, non-contacting measurement of processes with high moisture, high basis weight or dark pigments. It is insensitive to moisture layering and carbon black content found in recycled paper, multiply board and pulp dryer applications.





OptiPak

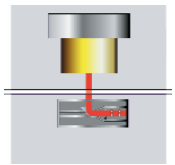
ABB combines measurement of formation, opacity and brightness in one compact package. Simultaneous measurement of these important optical sheet properties can provide the information necessary to reduce wet end breaks, improve uniformity and optimize opacifier use.

Service Workstation

Commission, monitor, maintain and troubleshoot ABB Scanning Platforms, Sensors and Profilers with Support^{IT} Service Workstation. This user-friendly application provides access to mill-wide networks and to remote users via the Internet or dedicated modem for system support. Support^{IT} Service Workstation includes advanced health reporting for the scanner, sensors and electronics.

Coat Weight Measurement

Customer requirements and process conditions require a consultative approach to coat weight technology selection. ABB offers the expertise and technology to precisely meet your coat weight measurement requirements by using one of three methods.

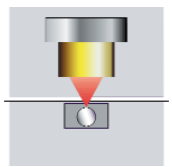


X-Ray Difference

X-Ray Difference offers high measurement sensitivity to coating solids, combined with low sensitivity to cellulose and water. ABB's patented X-ray filtering techniques eliminate calibration shifts due to coating composition changes. X-Ray Difference measurement is optimized for grades up to 350 gsm (215 lbs/3000ft^2).

Reflection Coat Weight

Reflection Coat Weight Measurement uses direct infrared absorption to measure the influence of clay, latex, calcium carbonate, cellulose and moisture to accurately calculate coat weight and percent moisture. Reflection Coat Weight is optimized for coated board grades or lightweight processes with simultaneous dual-side coating.



Dry Weight Difference

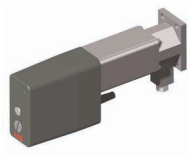
ABB's high signal-to-noise ratio Basis Weight Measurement offers unparalleled coat weight accuracy at a lower capital investment.

Profilers

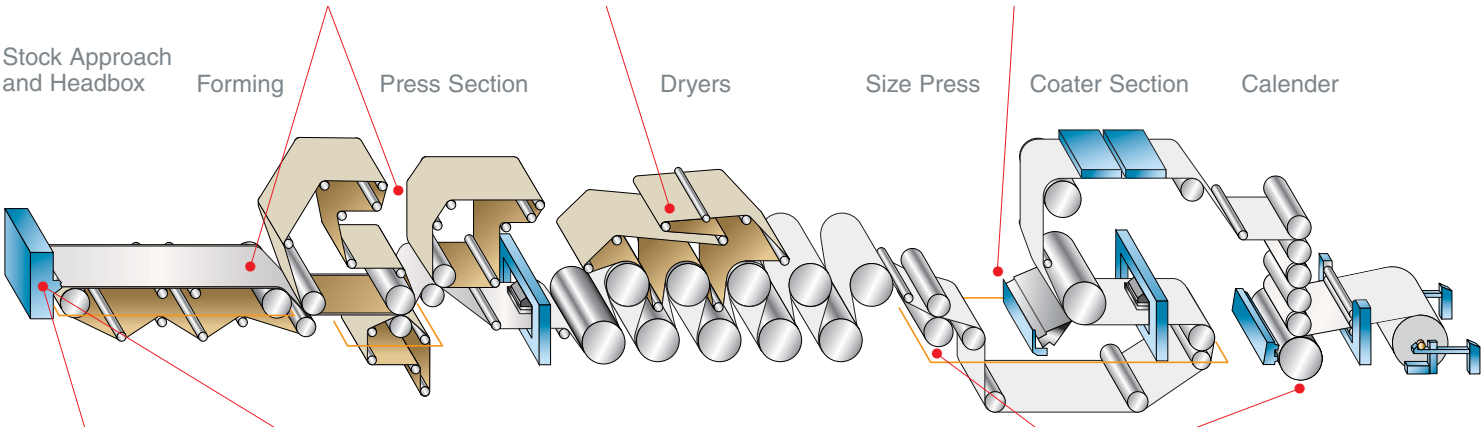
Today's profiling solutions require tighter zone spacing, higher precision, accurate mapping and creative control solutions. ABB's focus on quality using our new xP (eXtended Profiling) actuators, provides accuracy and precision required by today's challenging control applications.

SteamPlus xP

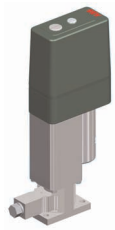
Air-Water xP



Coat Weight xP



Dilution xP



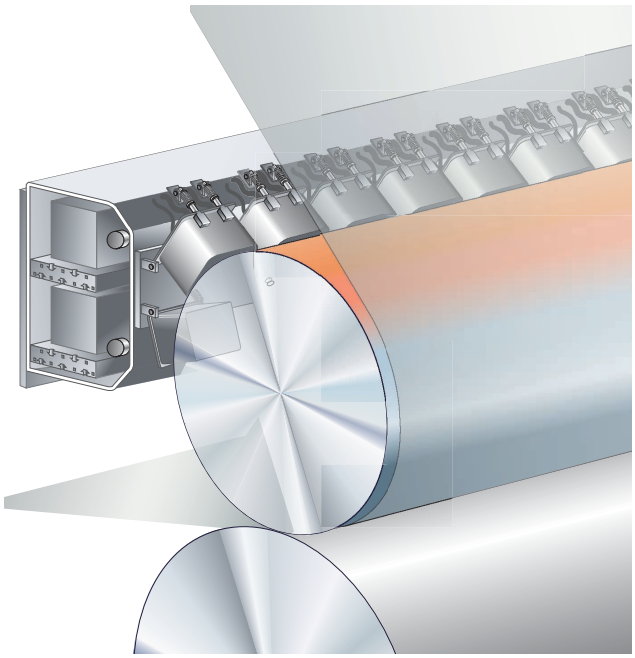
Slice xP

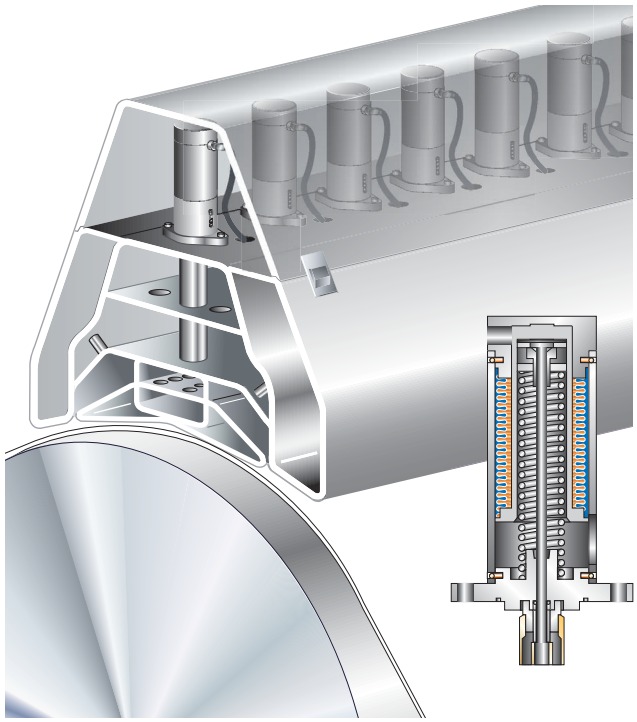
Induction xP

ABB's complete family of profilers will ensure the lowest CD variability on all primary sheet parameters.

"Caliper and gloss profiles must be perfect. ABB gloss profilers made the development of new grades possible."

Robert Comstock Jr., Assistant Vice President, Blandin Paper Company, Grand Rapids, Minnesota, USA





Induction xP Profiler

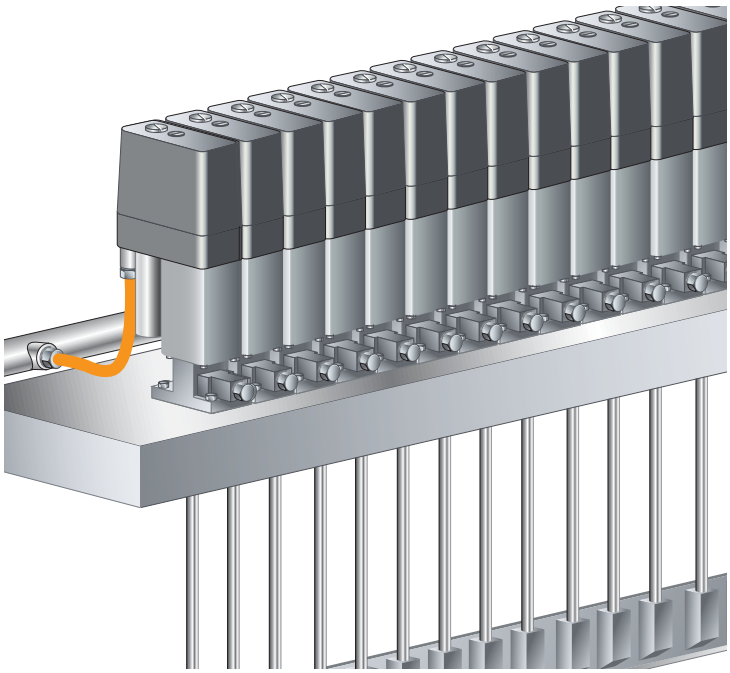
This revolutionary actuator from ABB controls caliper and sheet finish gloss by applying induction heating to hard nips, soft nips and supercalenders. It uses universal workcoil zones at 60 mm with 120 mm and hybrid options powered by the world's smallest, patent pending, water-cooled 6000 watt modules packaged into a single beam.

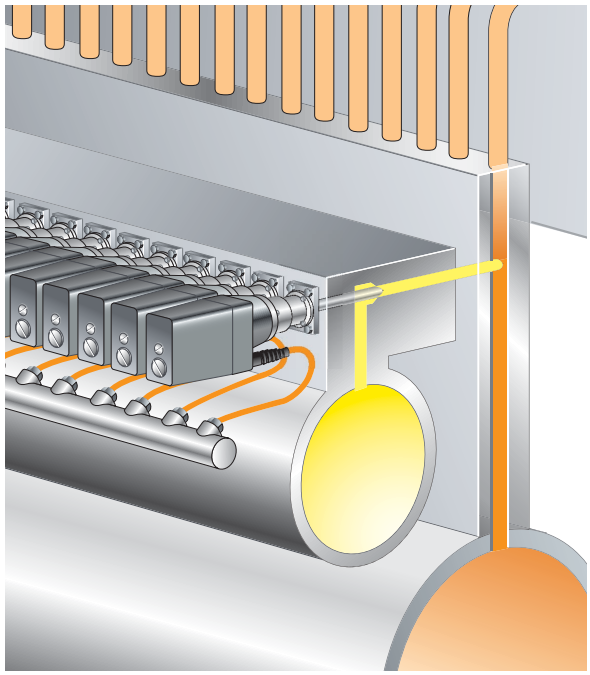
- 50-90% reduction in profile variability
- Improved sheet finishing properties
- Reduced rejects
- Improved reel build
- Highest power density and efficiency available
- Simplified workcoil gap adjustment

SteamPlus xP Profiler

ABB's new T880 actuator family, the T880S, (for standard applications) and the T880C (highly corrosive environments, e.g. tissue and newsprint) are both backed by a 10 year warranty. Built on the proven reliability of these T880 actuators, the SteamPlus profiler improves on previous generation steambox designs by controlling 100% of the steam flow across the web. Steam is never applied to areas of the sheet that are already below target, thus creating a flatter profile. The rigid box-beam design of the SteamPlus profiler allows a smaller and lighter beam construction, yet maintains structural integrity for installation in the most challenging locations. The addition of a steam heated outer chamber permits calender applications.

- 15% increase in production or 55% reduction in energy costs
- Up to 80% reduction in moisture profile variability
- 10-year valve guarantee
- Up to 80% improvement in gloss, smoothness and porosity





Slice xP Profiler

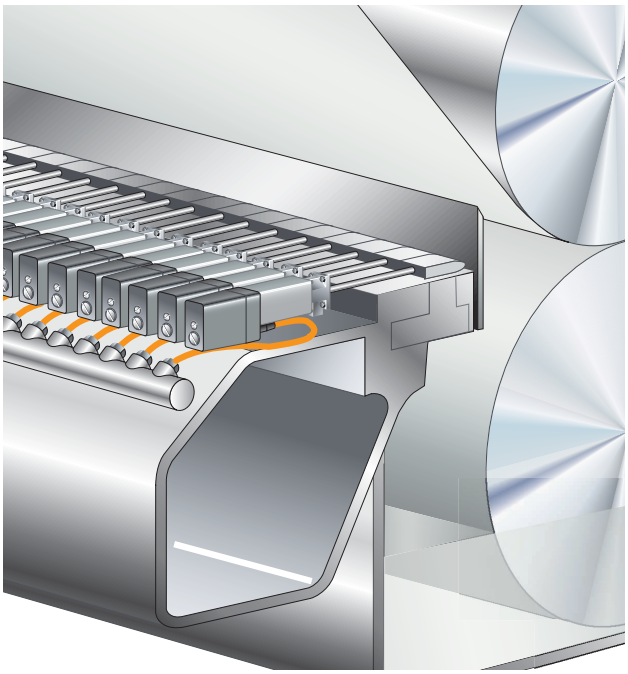
The Slice xP, with an embedded inductive sensor for precise measurement, uses ABB's standard AC800 controller and patent pending Multidrop Intelligent Power Management and bus communications to eliminate the risk and bulk of I/O, additional modules and extra cables on the headbox.

- 50-80% reduction in profile variability
- Fastest global moves of 128 um/sec (5 mil/sec)
- Quicker grade changes and upset recoveries
- Built-in proactive diagnostics
- Optimized Profibus/Modbus hybrid communications

Dilution xP Profiler

The Dilution xP uses the industry's most advanced mechatronic technology for superior control of cross-direction variations, including precision planetary gearing, zero backlash inductive measurement and optimized hybrid communications combined with power into simplified dilution header connections.

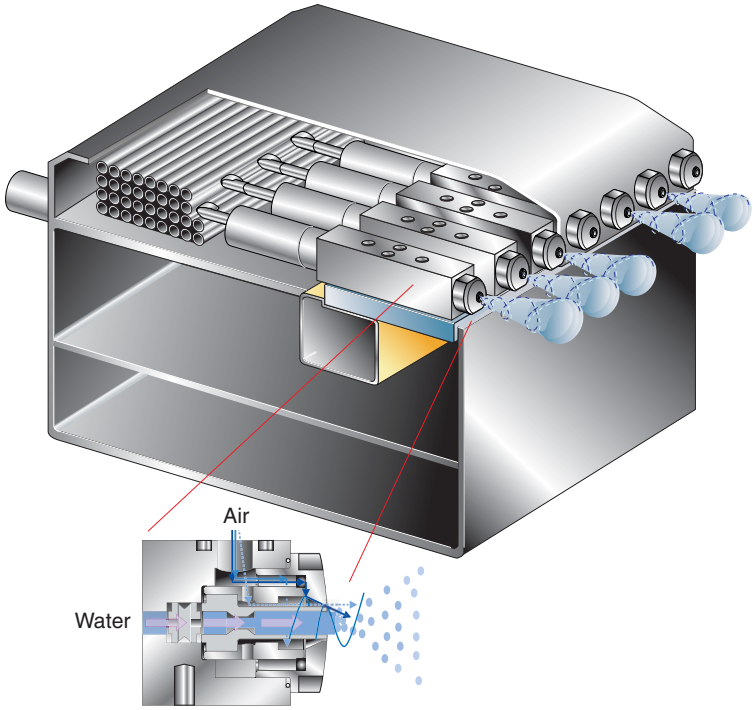
- 50-80% reduction in profile variability
- Fastest global moves of 8 degrees/sec
- Built-in proactive diagnostics
- Configurable flush cycles for all applications including radial distributors



Coat Weight xP Profiler

The Coat Weight xP ensures an optimum, smooth blade or rod coating application through precise positioning of the coater blade by using the same advanced interface hardware, cabling and mechatronic techniques as ABB's Slice xP and Dilution xP actuator systems.

- Faster recovery after blade changes and starts
- 50-85% reduction in coat weight variability
- Reduced rejects
- Experienced application engineering and fast installations
- Custom, super-flexible profile bars available



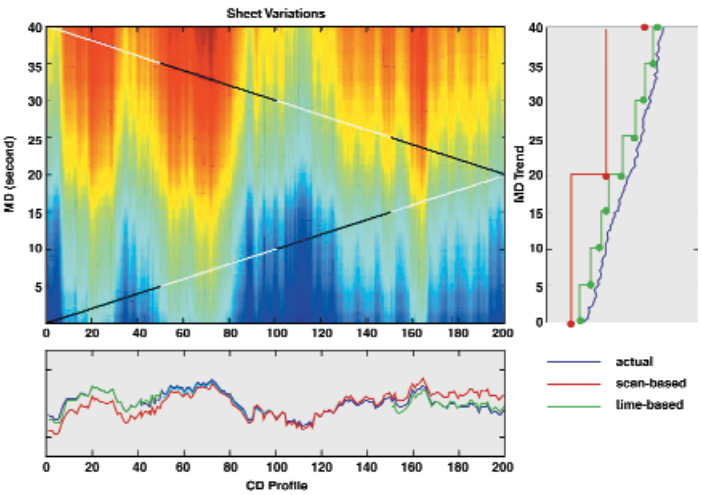
Air-Water xP Profiler

The Air-Water xP Profiler offers the most robust design in the industry. There is very little maintenance, and reliability is significantly improved by eliminating the requirement for electronics in the hot drying environment associated with remoisturizing actuators. Performance is ensured even if the water supply is less than optimum. The nozzle and actuator design eliminates small orifice requirements associated with needle valve or solenoid flow control arrangements and therefore is much less susceptible to plugging.

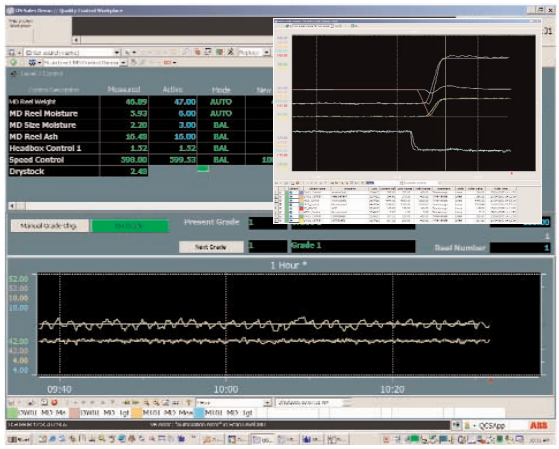
- 80% reductions in profile variability and improved reel building
- Precise, continuous flow control without electronics
- Pressure balanced flow control maintains predictable flow impervious to wear, build-up or water pressure variations
- Precise, homogeneous, droplet size delivers excellent sheet absorption
- Minimum zone-to-zone interaction eliminates air-induced streaks
- Common air and water headers eliminate tubing and piping in the actuator beam for simplified maintenance

Controls

ABB's Quality Control Solutions offer papermakers the most precise Machine-Direction/Cross-Direction measurement separation, the most reliable multivariable Machine-Direction Controls, leading-edge Cross-Direction Control features and powerful color control applications.



True sheet variation contour map comparing scan- and time-based MD and CD separation methods.



The operator's MD control window displays not only current, but also historical data, providing key information for necessary process decisions. Additional overlap displays allow simultaneous viewing of multiple process areas.

Time-Based Measurement

ABB Time-Based Measurement updates Machine-Direction (MD) measurement for control every five seconds, reducing unnecessary scan delay. A time-based model allows for continuous measurement updates, using either scan or single-point data. This approach eliminates unnecessary scan to scan averaging, the end result being optimal separation of the MD and CD components.

Time-Based Measurement enables more aggressive control (both MD and CD), which significantly reduces 2-Sigma variation.

Machine-Direction Controls

ABB MD Controls apply accurate control actions based on multivariable models to predict long delay process responses. This results in fast response for all operations and achieves targets with the shortest transition, ensuring optimum process variability reduction.

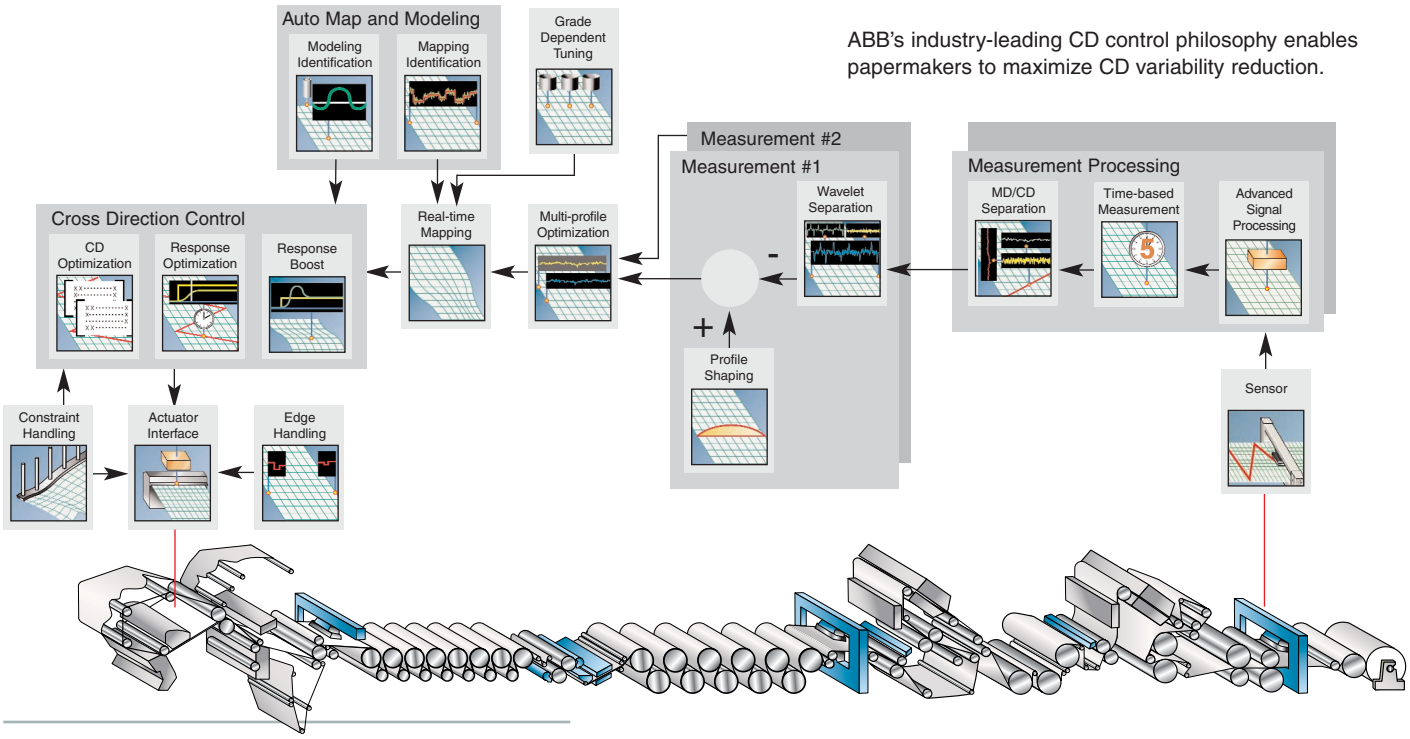
Automatic Grade Change utilizes patented advanced multivariable models for predicting and eliminating rapid sheet weight and moisture dynamic variations during grade change transitions. The new innovative grade change allows faster, smoother grade changes with less broke and without sheet breaks.

ABB MD Controls include:

- Dry Stock Flow Control
- Model-based multivariable feedback control
- Multi-frame Inferential Control
- Coordinated Dryer Control
- Dryer Ratio Control
- Headbox Control
- Coordinated Speed Change Control
- Speed Optimization Control
- Multi-Stock/Ply Distribution Applications
- On-machine Coat Weight and Gloss Applications

"ABB Control^{IT} CD solutions with LV control perform very well. The resulting profile uniformity is consistent and stable."

Dave Moore, Senior Process Engineer, SAPPI Somerset Mill, USA



ABB's industry-leading CD control philosophy enables papermakers to maximize CD variability reduction.

Cross-Direction Control

ABB Profile Control offers the most reliable and best performing solution to the pulp and paper industry. This advanced control suite provides a full range of options for all applications including weight, moisture, caliper, coat weight and gloss. The fully automated tools enable easy identification of the process response and the mapping parameters.

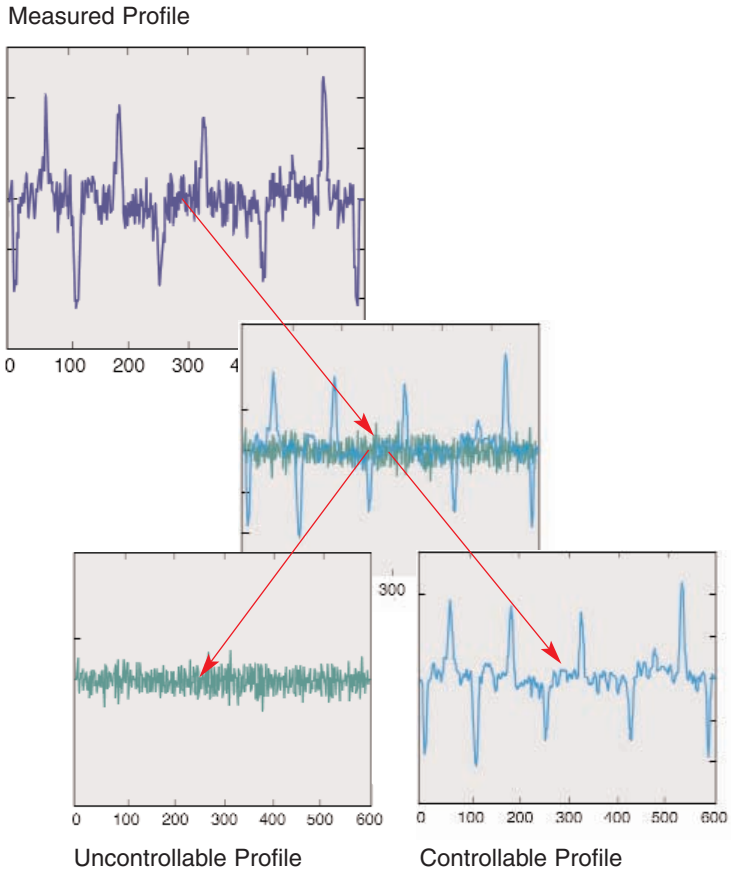
ABB's unique concept allows the operator the flexibility to control the weighted combination of multiple profiles with multiple target profile shapes.

The advanced sheet edge and edge actuator processing with fuzzy logic control are applied to optimize and maintain long-term CD control performance. ABB's Cross-Direction Control features include:

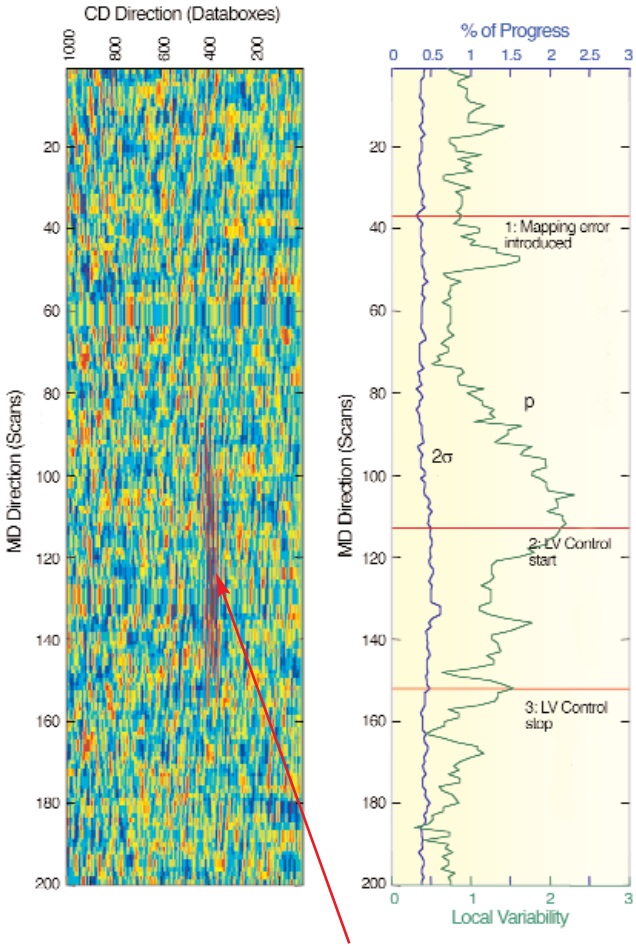
- Wavelet filtering
- Target profile shaping
- Multiple profile optimization
- Auto mapping and response identification
- Grade dependent tuning
- Sheet edge and edge actuator handling
- Fast startup and recovery

ABB's industry-leading CD Control philosophy enables papermakers to maximize CD variability reduction.

Enhanced CD displays allow for easy identification of the actuator to the process.



State-of-the-art technique for separating controllable profile variation from noise, enabling more aggressive CD control and lower 2-sigma.



LV control identifies and resolves mapping misalignment without human intervention or bump tests.

Wavelet Profile Filtering

ABB's CD Control utilizes patented modern wavelet algorithms that are widely used in image processing, communication, and many other applications. The wavelet filter implemented in ABB CD Control effectively separates the controllable profile from the scanning measurement. The application of the wavelet filter significantly increases profile signal to noise ratio, avoids aliasing effects, and contributes to improving the performance of CD control results.

Local Variability Control

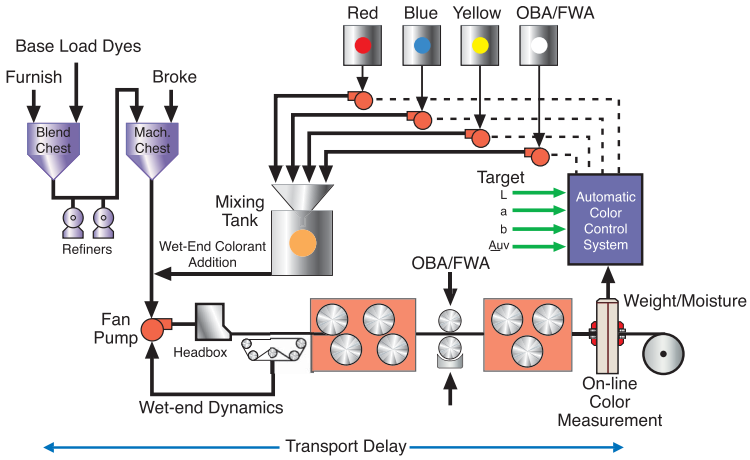
ABB's unique LV Control monitors both profiles and actuator actions continuously and promptly performs improvement to any region for correcting localized profile variations.

It automatically detects and corrects local mapping variations, without operator intervention or disruptive bump tests.

This control can also be added to the existing ABB Nexus based CD Controls. ABB's CD Solution with LV Control provides papermakers with consistently low 2-sigma profile values.

ABB's LV Control includes:

- Identification of problem areas
- Local mapping optimization
- Stable CD profiles under different machine conditions



ABB's advanced multivariable color control accurately models the different dye characteristics to provide uniform sheet color and shorter shade change times.

Combined numeric and graphic display enables the operator to adjust targets and pump settings while monitoring the effect on the historical trends.

Color Control and Advanced Shade Change

Controlling to different shade targets for colored sheets is one of a papermaker's most challenging tasks. ABB's Color Control and Automatic Shade Change Control offer a comprehensive solution in producing top-quality colored paper.

Control

ABB's Color Control pioneered the application of Kubellka-Munk theory to model dye addition. The control matrices dynamically adapt to dye characteristics, shade targets, color deviation weightings and machine running conditions. The amount of dye added is automatically normalized to throughput, and the shade is consistently maintained throughout any production change. The flexibility of the control allows use of various types of dye pumps and a wide range of dye selection including OBAs (Optical Brightening Agents). ABB's color control provides the ability to control Brightness/Whiteness using OBA dyes, which is vital to ensure consistency of shade on today's hi-white paper grades.

Shade Change

ABB's Advanced Shade Change models the complex coloring process from stock preparation to reel and provides the required boosting for desired fast response. The program coordinates the addition (or removal) of dyes and OBA, so that the combined responses reach the reel simultaneously. ABB's Advanced Shade Change also records the historical dye usage as part of the shade recipe allowing this data to be reused to produce the same shade on a consistent basis. The combined effect of all these features is a significant reduction in shade change time.

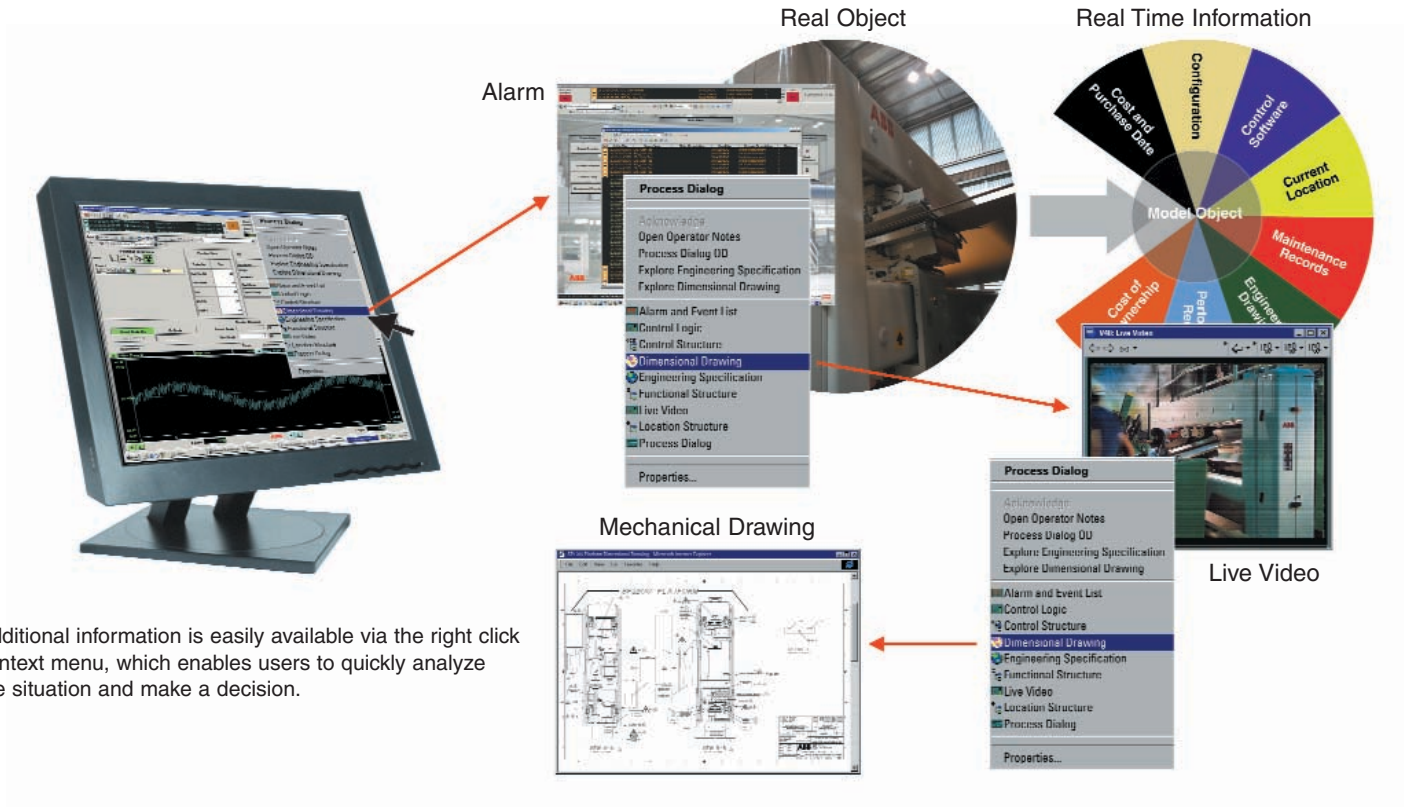
ABB's Color Control has been widely applied to all shades of the spectrum from deep shade specialty papers through light pastel grades to hi-white products. It has become an integral part of the QCS system for many mills.

This solution offers a complete set of features including:

- Multivariable Color Control
- Fluorescent Whiteness (OBA) Control
- Dual-Sided Color Control
- Advanced Shade Change

System Integration

ABB Quality Control Solutions are implemented on the System 800xA control platform. It enables you to view operator displays, control status, process data, machine drawings and other useful information, including paper quality control, drives, pulp mill control and stock preparation controls.



Additional information is easily available via the right click context menu, which enables users to quickly analyze the situation and make a decision.

Completely Integrated Solutions

ABB's Papermaking Suite is the realization of ABB's Industrial[IT] initiative. While others are only beginning the effort to tie fundamentally different systems together in a common user interface, ABB has been using a common platform for both control and user interface for all of its new products since the introduction of Industrial[IT] in 2001.

With its Papermaking Suite, ABB's pulp and paper customers can now realize the advantages of a system based on an architecture that ties together all major automation systems commonly found in a pulp and paper operation.

ABB's Papermaking Suite breaks down the information barriers found in a mill's systems to enable cost–effective enterprise–wide use of information. Whether it's putting automation system data in the front office, bringing legacy system interfaces into automation systems or building new production management applications, ABB's Papermaking Suite can do it.

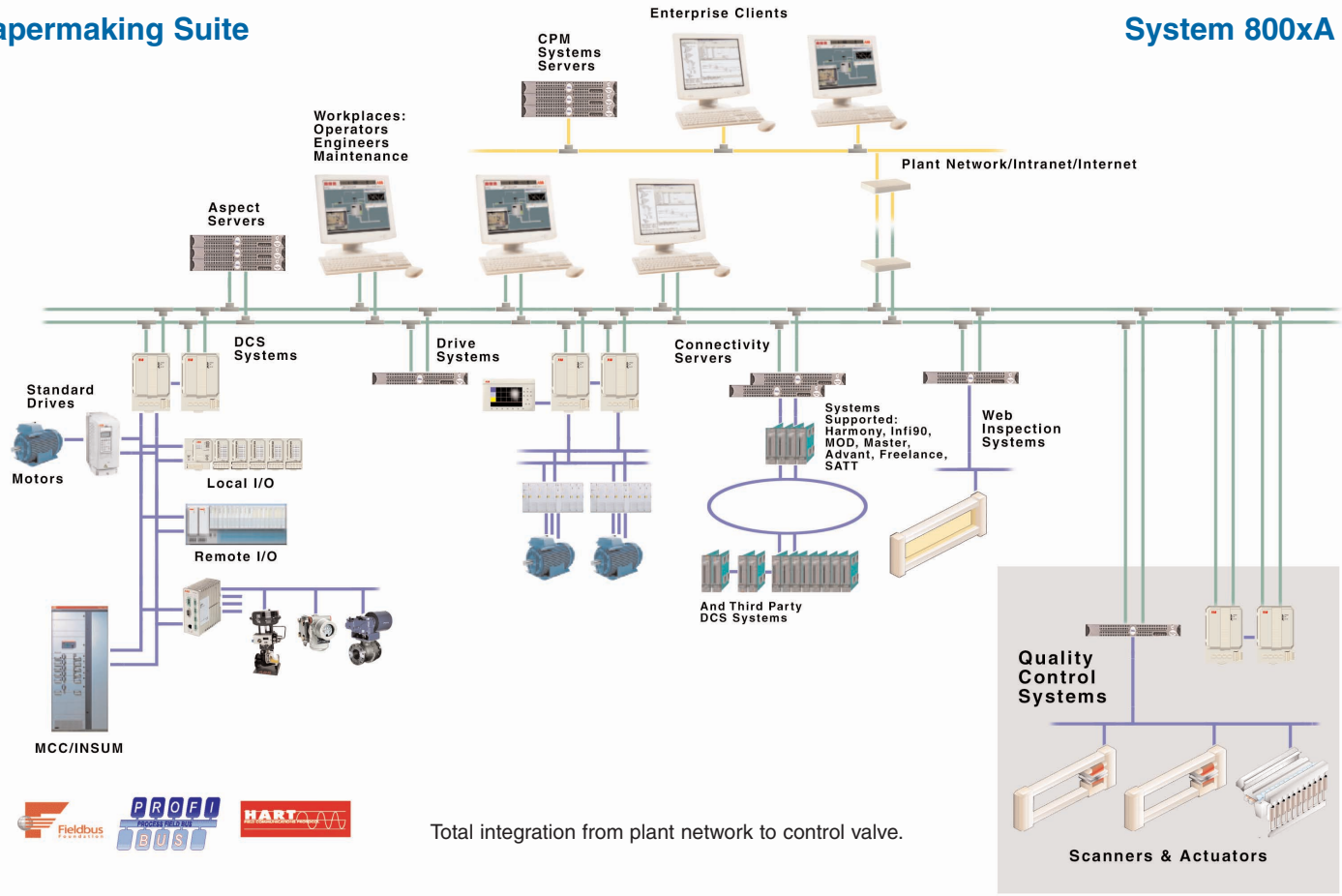
Industrial[IT] Quality Control is a core product of the Papermaking Suite. Working as a totally integrated component with other ABB Solutions such as Paper Machine Drives, Open Control Systems, Field Instrumentation, CPM Systems and Web Inspection Systems, paper companies are reducing maintenance costs and increasing asset utilization in addition to making better paper.

"With the changes ABB made throughout our mill, I am very happy to say we are getting the results we wanted. We are lucky to have all our information technology supplied by ABB."

Anthony Tan, MNI Production Manager

Papermaking Suite

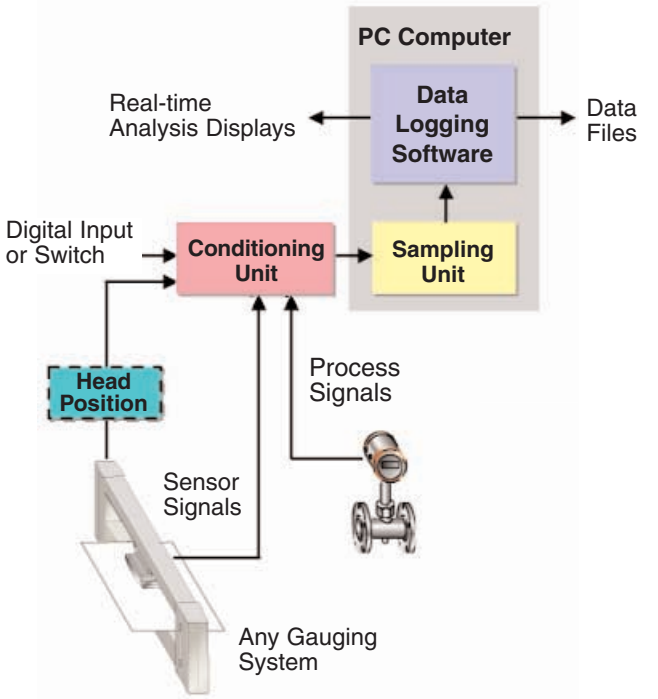
System 800xA

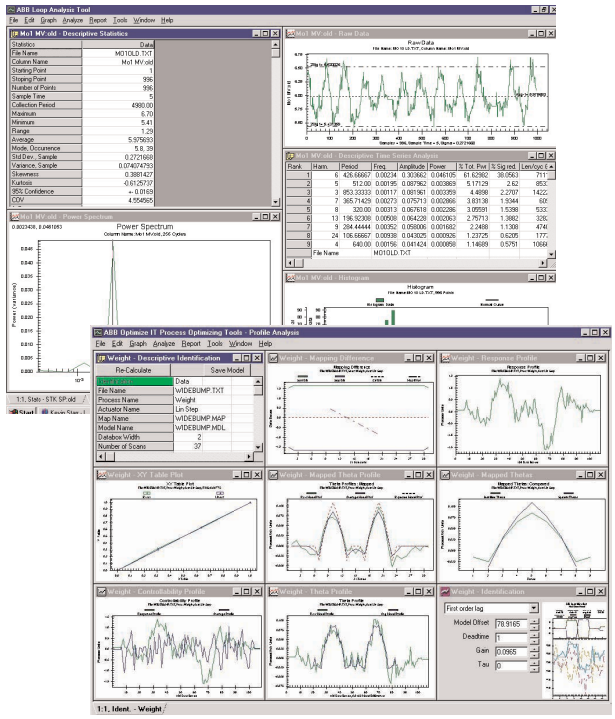


Total integration from plant network to control valve.

Optimizing Tools

ABB has developed a range of data collection and optimization tools compatible with all OPC systems. This enables the process engineer to easily access key information for analysis and optimization.





Process Data Collection Tool - AGP300/AG300

The AGP300/AG300, available in both portable and desktop models, enables you to capture sheet measurements from a gauging system as well as any analog signal, at high sampling speed from your machine. Backed by ABB's wide range of pulp and paper solutions and application expertise, this unit offers full flexibility to obtain valuable insight into your machine and diagnose your process effectively.

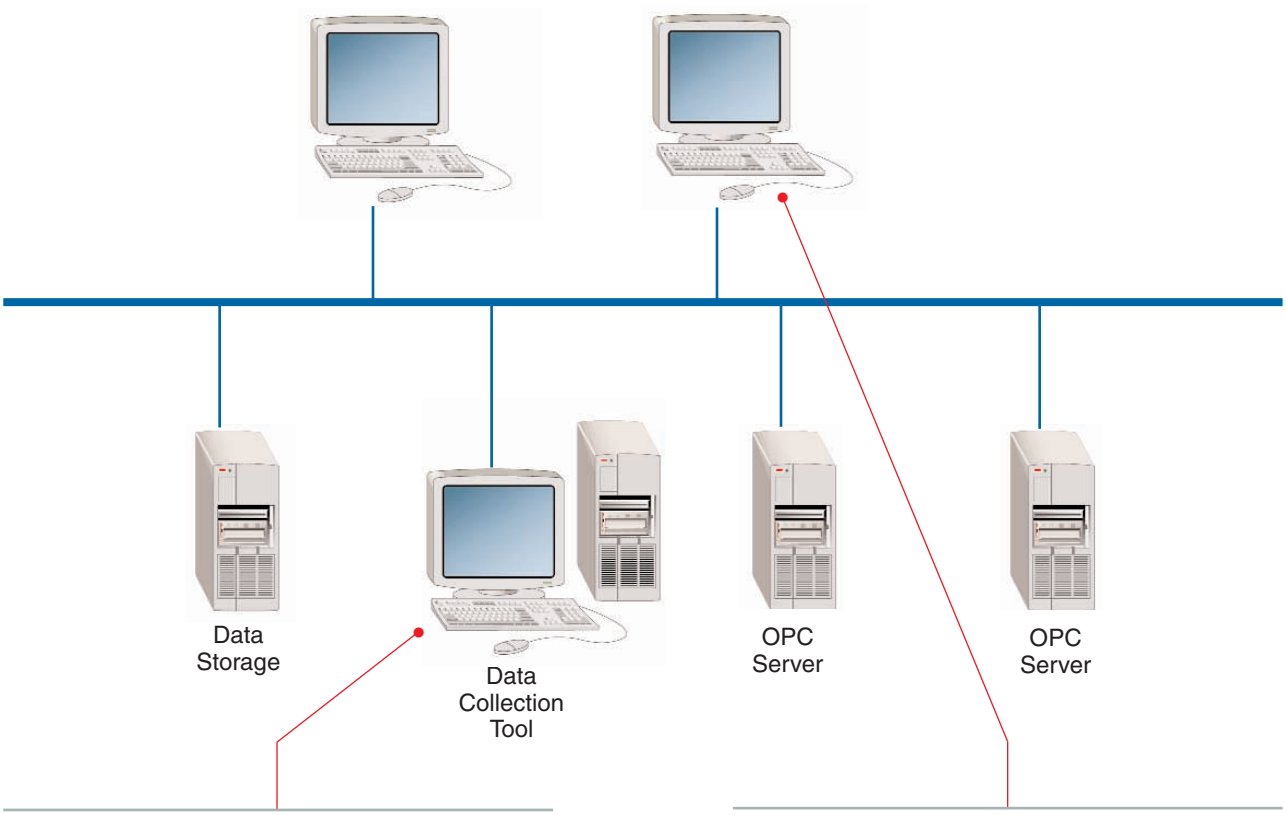
Data Acquisition Tools

Process Optimizing Tools - XGP300

The XGP300 provides a set of powerful software tools for detailed data analysis, tuning, reporting and control loop simulation. These tools can be used for analyzing machine-direction as well as cross-direction controls. This set of tools is designed for process engineers who have had training in process optimization. XGP-300 is an indispensable tool for optimizing processes and automation systems.

“We think of ABB as a partner, a companion enabling us to grow together. We see ABB not only as a supplier but as a consultant to help us modify our mill.”

Nguyen Dinh Tuan, Deputy General Director, Tan Mai Paper Company



OPC Data Collection Tool - ODA300

ODA300 provides an easy way to extract data from any number of OPC servers. ODA300 can automatically connect to standard OPC servers, make OPC tags available for selection and save an unlimited number of OPC real-time data tags in compact files. ODA300 can be used as a stand-alone or integral part of a quality control system for continuous or on-demand data logging.

Data Type Conversion Tool - OFC300

The OFC300 converts any files logged by the OPC Data Collection Tool to formats that can be used with various analysis tools such as Matlab, Excel and XGP300. The Data Type Conversion Tool also provides options to re-sample data and filter with user-specified conditions.

ABB provides a full suite of displays, giving access to all Quality Control information

Quality Control Objects and Aspects

These displays are an integral part of the 800xA Platform. Quality Control Objects and Aspects represent information associated with paper machine quality control. A user can control all of the papermaking process from one location.

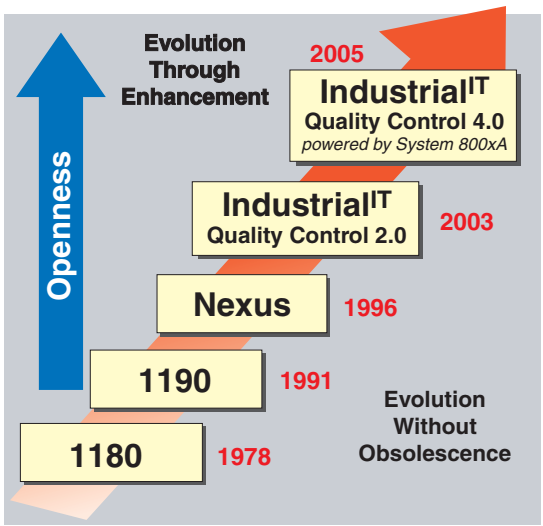
Easy to use displays are provided for machine operators. You can instantly view high resolution measurements, machine-direction and cross-direction variations, profile contour maps, reel reports, grade reports, documentation and support tools.

All data are easy to export to standard spread sheets for convenient data capture and analysis. Having access to real-time quality control information enables better process decisions – reducing waste, saving raw material and ultimately increasing shareholder value.

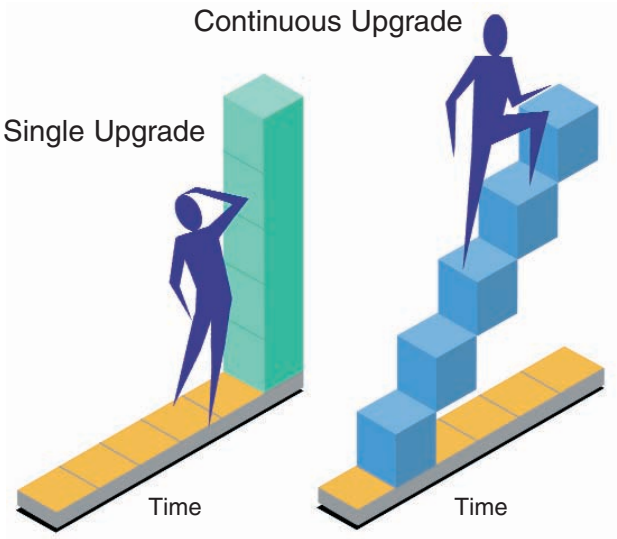
Lifecycle Management

"640k ought to be enough for anybody."

Attributed to Bill Gates, 1981



StepUp provides a path by which you can cost-effectively upgrade your current QCS system, allowing you to take advantage of the most recent technological advances.



SoftCare protects the value of our customers' existing software investments by keeping them current with the latest industry standards and third party OPC connectivity.

ABB's Lifecycle Management Advantage

With the introduction of open standards for operating systems and standard PC hardware and software, a new challenge was introduced to process automation system owners. While in the past there was a level of protection from frequent software updates and the need for constantly increased connectivity requirements, now these parameters are in constant state of flux. The need for a focused and active lifecycle management program is clear.

StepUp

StepUp programs simplify the upgrade process, provide enhanced performance capabilities, and maximize the value of installed systems and components. ABB StepUp programs also minimize maintenance costs and reduce downtime. As an added advantage, all StepUp services are designed to allow existing data to be used with upgraded systems. Key StepUp programs include:

- StepUp classic 1180M and 1190 systems to the latest Industrial^{IT} for Quality Control solution.
- StepUp classic Measurement Platform to the latest Scanning Platform SP1200.
- StepUp classic Advant Operator Stations to the latest QC Aspect Workplaces.

SoftCare

The SoftCare program enables customers to keep up with changing industry and IT standards (e.g., Microsoft). Through technology-driven enhancements customers effectively deal with software integration, security and compatibility. ABB goes further with each new software version by also providing ROI enhancements focused to the QCS system and customer process.

The pillars of SoftCare value include:

- SoftCare keeps customers current with technology changes.
- QCS Application Software stays current with System 800xA platform software version updates, the common architecture of Papermaking Suite.
- Both platform and QCS Applications software are updated with system enhancements to create ROI for our customers.
- Provides the latest maintenance resolutions and enhancements.
- Customer licenses evolve to the next generation solution (purchase software once, SoftCare removes the need for costly license updates).

Customers benefit from increased efficiency, reliability, production yields and ROA as well as lowered production and maintenance costs.

Meeting your specific needs; improving shareholder value

Industrial^{IT} can be successfully applied to any pulp or paper mill – regardless of location, size, age, technology, raw material or final product.

ABB technical expertise helps Pasadena Paper grow their business

When Pasadena Paper's Pasadena, Texas, operation wanted advice on how to produce a greater range of products, they turned to ABB.

"We place a high value on technical competence and that is how our relationship with ABB was established," says Fred Row, Mill Manager at Pasadena Paper.

Initially, ABB performed an audit that scrutinized the sources of variations and stability in Pasadena Paper's existing control system. As a result of the study, the mill made several process piping changes that resulted in improved stability. The results were immediate, and ABB received another assignment: installing a new Quality Control System and a Distributed Control System.

With ABB providing technical consulting, ABB Industrial^{IT} architecture, the integrated DCS, QCS, sensors and actuators, the mill was pleased with the results, which included improved quality and an expanded product line.

"Pasadena has improved the quality of the existing coated products, started producing new grades and will introduce a new line of digital papers," says Row. "Having the versatility to run a greater range of products has really expanded our customer base as well as increased the profitability of our operation." Row says he now receives compliments from his customers. "What better way to show the value of our investment in ABB."

Guangzhou Paper – one of China's oldest newsprint mills – integrates ABB information technology to boost mill production

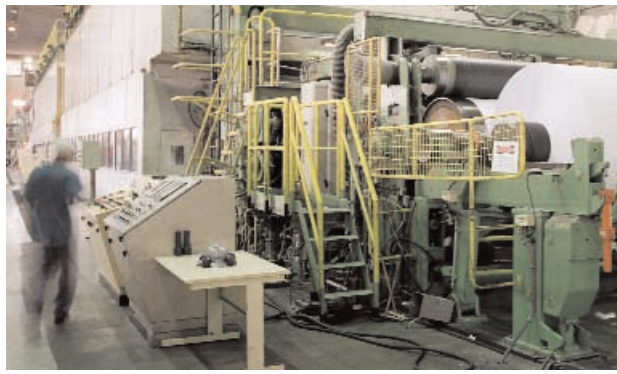
Founded in 1931, Guangzhou Paper Mill in the Guangdong Province, one of China's oldest newsprint mills, had a very modern problem – how make their mill more productive. They looked to ABB to provide information technology solutions that would not only increase production, but that would also lower energy costs and improve pollution control.

Guangzhou Paper had already worked with ABB on two major rebuilding projects and expansions. To obtain the technology they needed to control their PM8, Guangzhou Paper chose ABB's integrated open control and quality control systems for PM8 and also for PMs 6 and 7. The ABB products boosted Guangzhou Paper's newsprint production by 70%.

The mill also selected ABB open control for their bleaching system process. Additionally, Guangzhou slashed their electrical power costs with a new on-site station running two turbines generating 50 megawatts each and three 220 megaton-per-hour boilers, all controlled with ABB open control.

"Choosing ABB technology is a big plus because the same technology is also is used to control electrical, supervisory, quality and drive functions, providing integrated information technology with a common architecture for efficient, cost-effective operations," says Yang Guangyu, vice director and chief engineer at Guangzhou Paper.

Suzano obtains leading-edge solutions with ABB Industrial^{IT} technology



Suzano Papel e Celulose faced a challenge. They needed complete engineering, commissioning, start-up and training services automation for their PM BM7 in their Sao Paulo, Brazil, Suzano pulp and paper mill. They had to integrate their process automation. And they wanted a supplier supported by a local organization.

ABB had previously upgraded the mill's DC motors, so Suzano understood ABB's capabilities. They chose ABB as their automation supplier and ABB delivered a two scanning frame Quality Control solution.

Commissioning the new system was an easy process. Most training was done on-site with local ABB engineers and the installation was completed during a very short shut-down period. Startup and tuning goals were reached quickly, resulting in quick ROI for the mill.

"The centralization of all machine operation and control in the same operator workplace has made the operator's job much easier and more efficient," says Edson Kobayashi, Suzano Production Manager.

Walmor Martins, Suzano's Electrical, Instrumentation and Automation Maintenance Manager, says ABB's OCS/QCS robustness and reliability allowed Suzano to operate and maintain their systems without a resident engineer, which was close to impossible with the technology they had before installation.

"With the current ABB technology, PM BM7 has become the most modern paper machine within Suzano's mills," says Victor Wuo, Project Manager for Electrical, Instrumentation and Automation Systems at Suzano.

Stora Enso relies on ABB at the world's widest newsprint machine

Valued at approximately USD 500 million, Stora Enso's PM4, at their Langerbrugge mill in Belgium, is both the world's widest paper machine as well as the world's largest machine that exclusively converts recycled paper into newsprint. So it's no surprise that it's also the largest single investment Stora Enso has ever made.

To make this important paper machine run optimally, Stora Enso asked ABB to deliver a range of automation, electrification, drives, ventilation, installation materials and services, including an Industrial^{IT} Web Imaging System and a Quality Measurement System.

Start-up on PM4 proceeded especially smoothly. Within 14 days the paper machine ran for 48 hours without a single break and average production was running at 800-900 tpd.

"Our decision to use a comprehensive range of ABB solutions in our Langerbrugge project was based on our good relationship," said Sami Pitkänen, Stora Enso's Project Director. "I am very pleased with operation of the whole mill and with the role suppliers such as ABB played in completing the project on time."

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