

Paper Machine Drives Services Runnability+



Runnability+ is ABB's unique Asset Optimization Service to improve machine runnability. Runnability+ helps determine the actions to be chosen for achieving less downtime, fewer web breaks or even better web alignment. This will lead automatically to fewer ramp-up activities such as washing etc. Savings can be measured in better productivity and more comfortable machine operation.

Better productivity is achieved when the occasional stripes, wrinkles, or roll formation problems are prevented. Less recycling means also better productivity.

Web Tension Function Analysis

Using proper measurement and analysis methods the performance and design/installation quality of the tension measurements can be verified, enabling the necessary modifications to be made for better runnability and paper quality.

Control Accuracy Measurement

Dynamic control accuracy is measured. The consistency of both speed control and tension control accuracy is essential for a good end product.

Measurements and Analysis

ABB Pulp & Paper Drives specialists are ready to provide on-site measurements and analysis to resolve runnability problems. Properly made measurements provide the basis for effective analysis.

The tension control measurements include:

- Checking the mechanical solutions of tension measurement devices
 - Location and position
 - Couplings
 - Web angles
 - Electrical installations
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- Measurement of tension feedback signals
 - Stability
 - Interference
 - Evaluation of tension profile
 - Step response tests
 - Evaluation of control circuit implementation

The drive system performance study is based on the static accuracy statement (measurement) of speed control.

Measurements are based on the system type in use.

Dynamic accuracy measurement of speed control is performed by load variation simulation according to specific instructions.

Static accuracy measurement of tension control is performed using an observation period of sufficient length for specific preconditions to be fulfilled.

Dynamic accuracy measurement of tension control is performed during acceleration.

Different production set-ups always require a corresponding drive set-up. Wear of production machinery, a wide variation of grades or greater than expected set-up changes usually necessitate specific fine-tuning of control settings in order to maintain the right response from the controls.

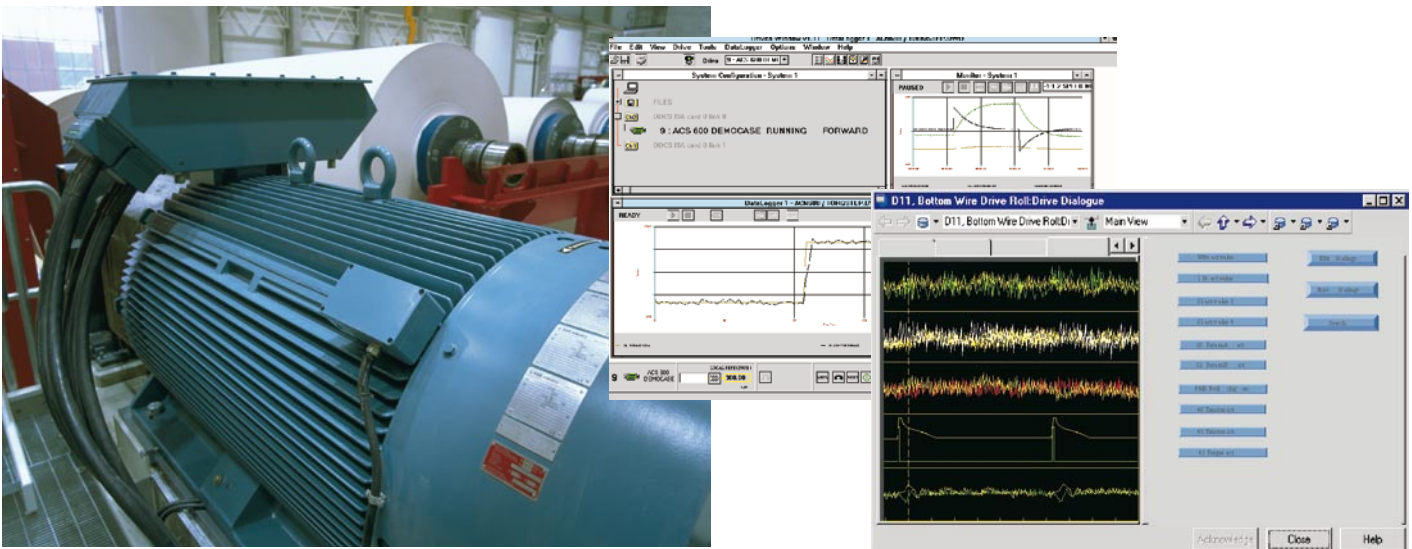
The engineer-in-charge, whose task is to solve any problems, can utilize all the ABB support resources necessary to correct the problem quickly and efficiently.

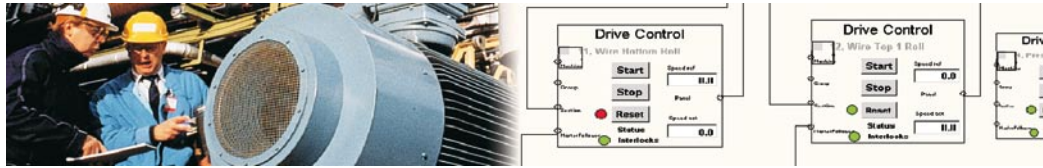
Phase I

Opportunity
Analysis

Phase II

Implementation and
Value Assessment





In-depth expertise in use

Tuning paper making machinery to its best performance is not a one-off job. Drive system experts are usually involved during the commissioning phase of a new investment. However, in-depth understanding of the drive system controls is also required at other times during the lifecycle of a production machine.

ABB Pulp & Paper Drives specialists work with runnability issues throughout the entire lifetime of the machinery. The Pulp and Paper Drives Project Support team implements the best practices from around the world.

When runnability starts to deteriorate, it is of utmost importance to make an in-depth analysis to find the possible corrective measures.

Experienced specialists undertake these analyses quickly and effectively, and furthermore the same specialist usually implements the corrective measures necessary for better runnability and machine performance.

ABB's expertise in tuning drives systems is indisputable. Over 2500 references with tens of thousands of drive sections, a global network of experts and detailed process expertise are the reasons behind ABB's market leadership in paper machine drive systems.

Pulp and Paper Drives Specialists

ABB's Pulp & Paper Drives Network consists of about 300 Paper Machine Drive experts with sales, engineering, project management and design engineering experience around the world.

This expertise is represented in the Pulp & Paper Drives Project Support team. The team consists of highly experienced engineers:

- Commissioning engineers
- Application engineers
- Design engineers

Each of them has several years of experience with vast numbers of projects, in engineering as well as in the field.

A customer consulting with this team can depend on receiving the best support for the most demanding and complex tasks for boosting productivity through the drive systems.

Technical Support

For asset optimization, other services are also available for several process areas, such as Paper Machine Automation and Drives, Quality Control and Machine Health. In addition to problem solving, these service programs are targeted for availability, efficiency and quality optimization.

ABB's technical support is also available through the local service unit. They will provide assistance with:

- Technical requests
- Product consultation
- Field service, commissioning
- SW update support
- Drives warranty support
- Technical analyses, repair services, calibration
- Service contracts, Call-center contracts



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