

Setting the standard

Global responsibility for quality and safety
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ABB is a global market leader in the area of paper machine drive systems. The business model within the company is based on a centrally managed but widely spread discipline. This model enables ABB to address the specific needs of local markets and, at the same time, provide global technological leadership. This in turn ensures the delivery of high quality world class solutions to all customers with the same principal functionality for control and safety.



Global responsibility

For many years ABB has been a pioneer in the development of paper machine (PM) drive systems. The high quality system solutions delivered by the company have been achieved by the consistency and repeatability of the work. In other words, decades of experience and thousands of projects combined with finely-tuned organizational and personnel skills have enabled the development of technological solutions that not only meet process requirements in all paper making production situations but which can also be implemented quickly and efficiently.

If the know-how contained in the global application standards is applied effectively, on-site engineers are able to ensure a high level of engineering reuse of up to 80 percent!

ABB drive systems can be found in many machines including pulp dryers, production machines for different paper types (with on- or off-line coating), the fastest LWC winding machines and the

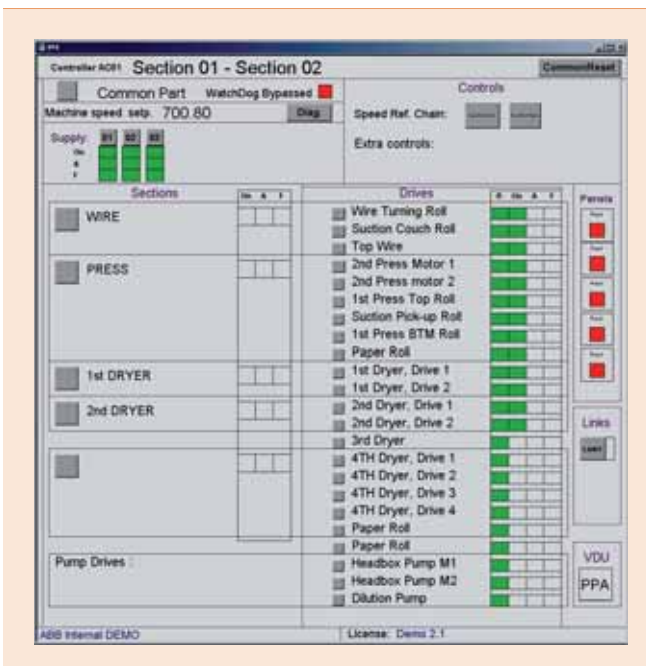
most up-to-date supercalenders for printing papers and many others. Even though the idea of efficient repetitive work is not easy to achieve, ABB implements on time and to the highest quality, an average of two PM drive systems per week! So how does the company do this? To begin with, it is to the customer's and supplier's advantage to standardize and stabilize the work as much as is reasonably possible for quick and smooth start-ups. ABB has been able to do this because of its *PM Drives Network*. The PM Drives Network encompasses a unique business model and a set of solution standards that are the result of years of experience and expertise in paper machine drive solutions. Global application standards constitute the bulk of the network and when the know-how contained in these standards is applied effectively, professional local lead engineers and lead commissioning engineers on-site are able to ensure a high level of engineering reuse of them up to 80 percent! Standard features include proven electrical design for safety and various safety related functions in the system software. Engineering reuse is not the only factor. The quality of ABB's PM drives operation is backed up by clearly defined domains of expertise. For example, local ABB engi-

neering units are authorized at different levels to execute projects to the highest global application standards. These levels are determined by the expected repeatability of the project as well as the experience of project engineers – each project lead engineer is usually certified according to personal experience. The authorized units are then committed to train and develop dedicated PM drive experts to efficiently manage the detailed features of the standards.

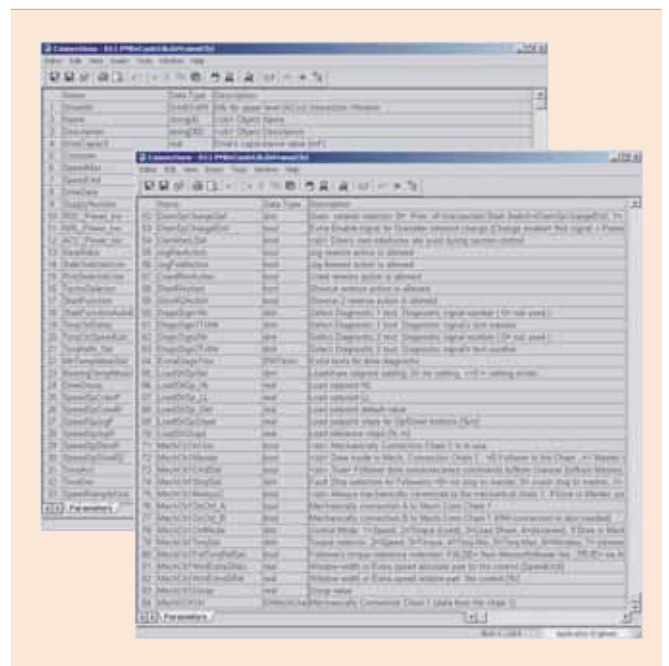
Standards for large, small and complex systems

PM drive systems primarily take care of power transmission from the electrical motors. For a delicate process such as paper making, engineers must have detailed knowledge of the sensitive control of megawatt class motors as well as an excellent understanding of the process characteristics. The motors are regulated by inverters which are themselves highly sophisticated devices with many functions and features. Providing a standard inverter solution for a single unit is not that difficult, but a standard for a coordinated inverter system solution (where tens or even hundreds of inverters are involved) is a demanding task. In spite of the complexity, however, high performance in-

All levels of the global Paper Machine (PM) drive programs are easily monitored and accessed through standard interactive windows in the programming tool



Standards include tens of preconfigured drive settings, transferred automatically from a standard system configuration chart



verter solutions are included in ABB's global application standards.

Large new systems with the latest machine solutions, the most advanced system controls, and general complex integration schemes are typical to only a few of the largest ABB drives projects yearly. In such cases the efficient reuse level can only be centrally maintained. However, ABB's PM Drives Network, with defined standards and certification ensures that all projects, no matter the size or complexity, are supported by experienced personnel at a local level. Operating in this way, ABB will always strive to maintain the highest quality possible.

For small machines and drive systems, ABB has recently launched the PMC800 basic drive. This system is based on the same functionality contained in the PMC800xA solution for high performance machines, but is configured to be used with a wider variety of available products. However more stringent standards are required if global solutions, using a broader selection of components and functions, are to be managed efficiently. Then, with just a little less customization, clients will get all the necessary functionality to fulfil their operational demands.

Safe solutions

The size of a project is irrelevant when it comes to safety. Irrespective of whether it is a small scale revamp a

large new greenfield project, system safety will not be compromised by non-standard engineering. Requirements and standards regarding safety may vary around the globe but the overall aim amounts to the same thing. In this area, the US, Europe and many emerging countries refer to the international IEC safety standards. Having the know-how to implement these and other local standards in a project from scratch requires extensive investment. However, safety functionality is included in ABB's PM Drive Network as a standard global application solution, and is distributed to local specialists. This working model is the safety assurance in ABB drive deliveries. Additionally, the company's global center of excellence for PM drives supplies complete – in terms of safety and functionality – fine-tuned system software packages for demanding machines, or machine parts, such as center winders, calendars, or for special machine concepts.

A global operation

Most paper companies operate globally, and on a global scale customers gain access to the same solutions and consistent services. These paper companies, like many global companies, depend to a large extent on the availability of knowledgeable and experienced local support. However there will always be times when wider service resources are required to solve particular problems. Remote connectivity is one of the most common ways

of getting expert help quickly and effectively. Whether the expert is on site or remotely connected, a global solution is easier to troubleshoot because engineers can quickly navigate the familiar system for any necessary changes.

With ABB's PM Drive Network, customers are offered high quality global solutions with local system service know-how, thus giving them a real competitive advantage.

Many process and machinery suppliers also operate on a global level. Suppliers naturally benefit from a proven solution just as much as the end user. Nowadays, working processes are standardized and the expectations for a smooth and prompt start-up are high. To avoid any unforeseen and costly delays, process suppliers will benefit enormously by being involved with the system suppliers in the development of standards and working processes for projects. These must then be made available to each and every project irrespective of whether they are managed locally or globally.

In the global paper making business, it is very important to meet the same requirements in all parts of the world. Quick start up times are crucial for all customers and this can be achieved if uniform standards and processes exist, ensuring repeatable and therefore prompt work. It is also important for customers to be able to exchange experiences between mills and communication becomes easier if global standard solutions exist. Not only this but maintenance methods and special skills for the different mills or machines can also be unified.

With ABB's PM Drive Network, customers in any part of the world are offered high quality global solutions with local system service know-how. In today's business world, this gives ABB's customers a real competitive advantage.

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Over 250 Paper Machine (PM) drives specialists serve paper makers in ABB's PM drives network

