ABB Ability™ Papcel

Supervisory system dedicated to paper formulation

A powerful supervisory system

You are looking for flexibility to deal with numerous and various grades to produce.

You are looking for rigor and security, while keeping the highest quality standards.

You are aiming at good batches with no corrections and better productivity.

Papcel™ was designed to meet these major requirements.

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For many years, Cellier, as an Activity of ABB France, Industrial Automation Division, has enhanced its reputation in the design and construction of facilities for coating, starch and wet end chemical preparation. As formulation is one of the keys of successful coating production, suitable software like Papcel™ implemented in the control system is vital to achieve high quality.

Papcel™ is a powerful supervisory system including:

Recipe manager
Continuous or semi-continuous processes are cost-effectively and efficiently executed. The control principle enables thanks to its simplicity and flexibility to manage the more complex recipes. The simulation and the cost calculation functions give you an optimal control of your cost price.

Batch manager
Production orders can be downloaded from an enterprise resource planning system (ERP) or created according to the needs. They can be manage using modification, deletion and validation functions.

Resource manager
No mistake. Papcel™ manages the use of the shared resources between concurrent recipes.

Increased productivity and quality

A flexible specialised tool
Papcel™ was designed by paper coating specialists to cover the needs of modern paper mills. The system provides real flexibility for coating formulae required by paper producers.

Papcel™ automatically adjusts the quantities of each component to be dosed, taking in account:
- the proportions defined in coating formula,
- the actual density and solid content of the raw materials,
- the final target of solid content.

Quality of coating
Stable and proven, Papcel™ control system ensures a production of quality. Papcel™ doses with the highest accuracy all the components according to our specification. The target solid content is always reached by a precise water adjustment. With Papcel™ you will produce only the necessary quantities according to the paper machine consumption.

— Control room with multiscreen user interfaces

Papcel interface on Paper Machine

Easy to operate
With a familiar intuitive windows ergonomy. Papcel™ makes information available wherever needed: control room, laboratory, coater, etc …

Quick and right information
Overview and zoom in displays give fast and complete information to authorized users.

Precise production scheduling
Modern mills derive considerable benefits from precise scheduling of the production. Papcel™ reduces and organises the everyday operations according to the following functions :

- scheduling of the coating colour production,
- automatic/manual launching of recipes.
- control and monitoring of the work in progress,
- adjustment of production at batch end (minimisation of product losses),
- production reports.

Papcel™ integrates all these features, providing for each function various displays with both overall and details views.

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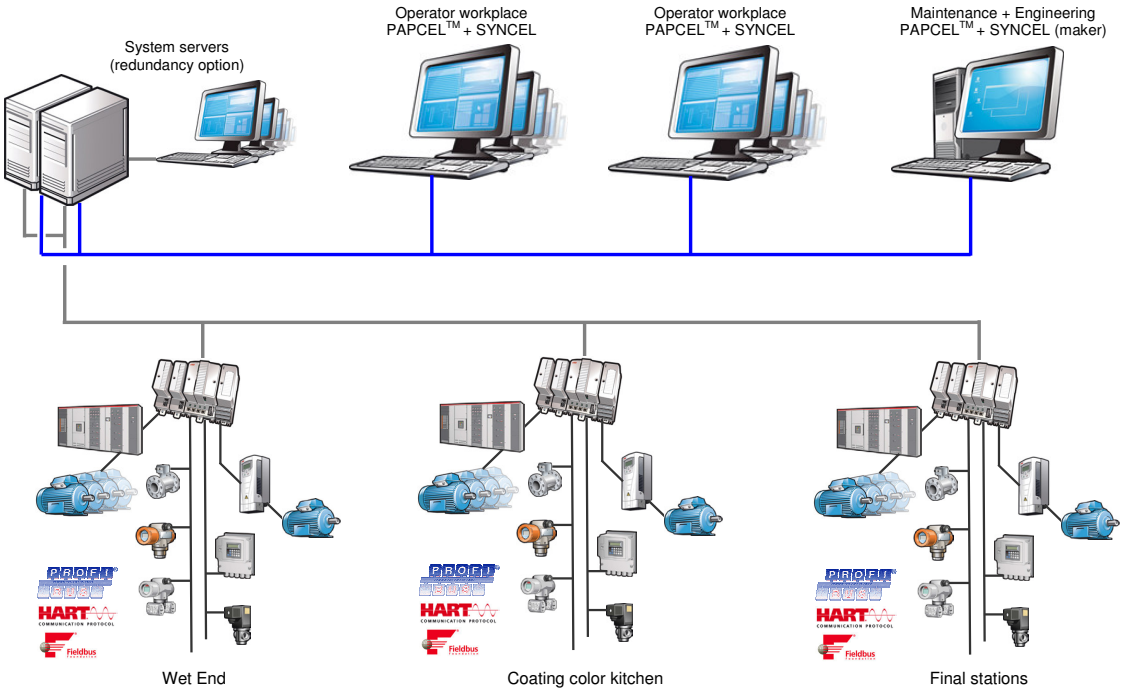
System typical architecture



Traceability, analysis, historics

Papcel™ and its graphic module Syncel collect the production data relative to each coating preparation and provide valuable and precise reports on a chosen period with:

- number and date of blend run,
- actual quantities of component used,
- exact produced quantity of each formula as well as batch numbers used,
- events, forced actions, defects, etc.

Results of each individual operation are reported and stored. Data can be retrieved so as to be processed or exported to statistical tools. The data analysis enables to enhance the production.

Analytical tools

Papcel™ provides powerful analytical tools to identify and analyse the production phases which need productivity improvements. These tools enable to:

- follow-up of production, dosing and waiting times,
- optimise human resources,
- optimise process and maintenance operations,
- increase productivity and quality.

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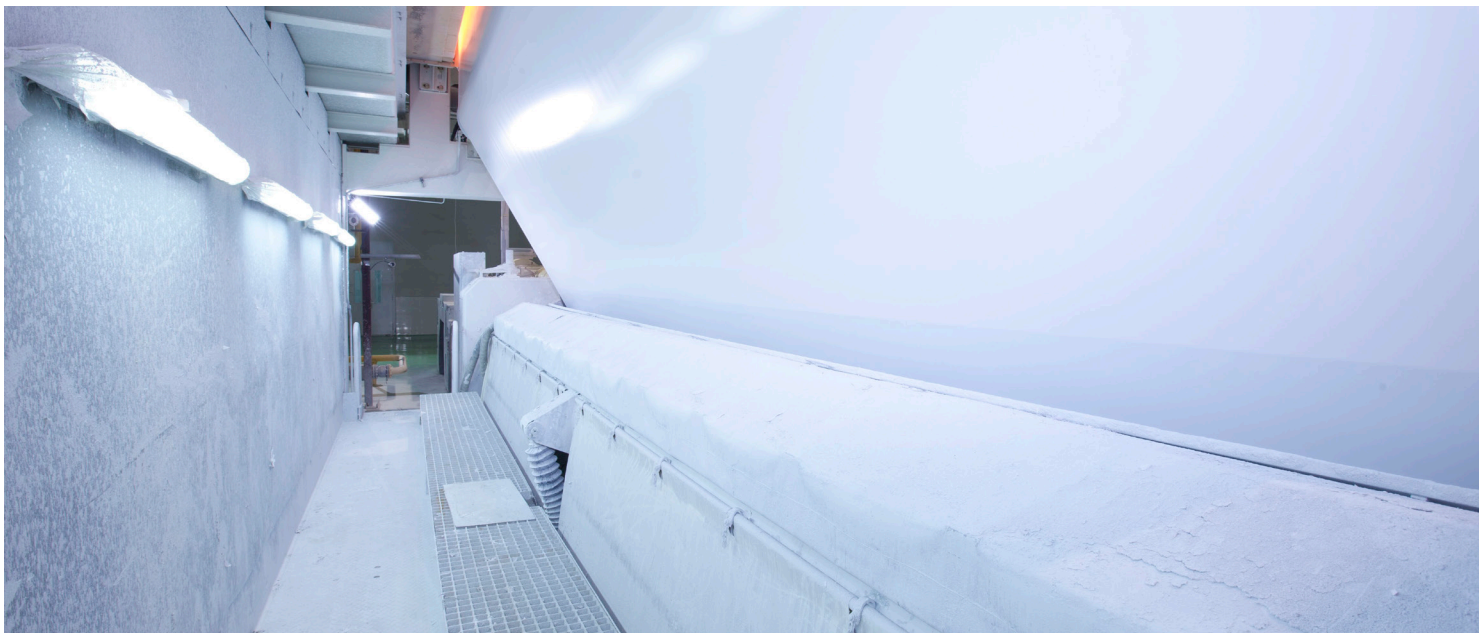
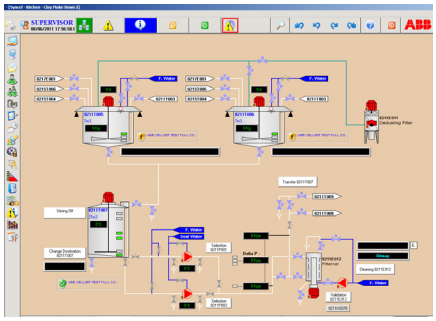
Papcel optimizes the use of chemicals and exact produced quantity



A cost-effective investment



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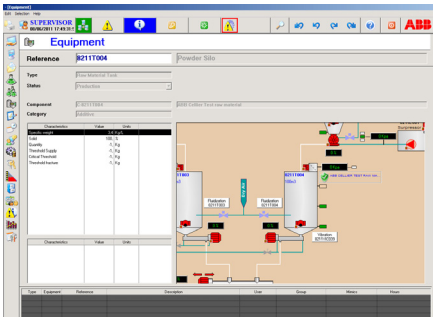

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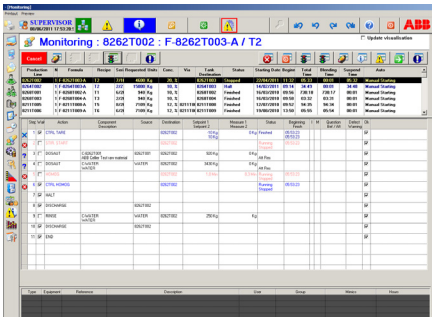

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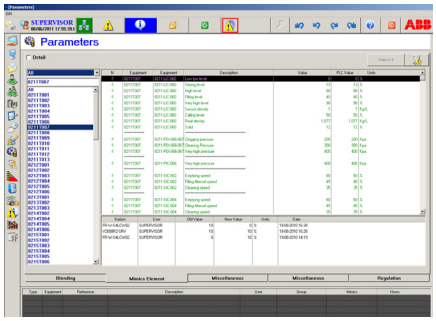

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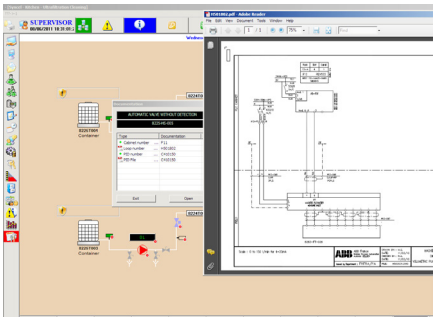

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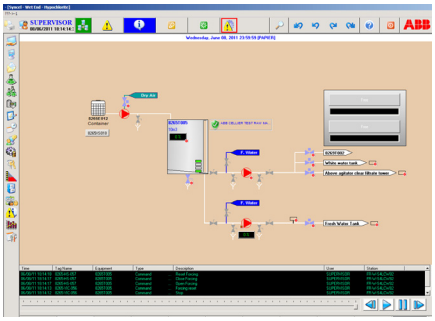

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01 Synoptic screen

02 Equipment screen with process data and synoptic

03 Monitoring screen

04 Parameter screen

05 Access functions to documentation (electrical diagram)

06 Synoptic screen with "replay" function

A cost-effective investment
Papcel™ functions for process control and quality control bring numerous benefits, among them the following:

- easy process tuning,
- best stability and quality of coating colour,
- reduced manpower,
- reduced inventory,
- compliance with regulations,
- preventive maintenance.

Syncel graphic module

- SCADA system.
- Animated synoptic screens.
- Management and record or events.
- Integrated electrical and manufacturer documentations.
- Compatible with all OPC servers.

The replay function enables the visualisation of animated synoptics of production modules starting from a date over several months ago.

Simple configuration
Configuration tools are part of Papcel™ system. They enable an easy modification of process parameters as well as of synoptics. For the configuration of circuits as for the creation or modification of synoptics, development licences are included in the Papcel™ software.

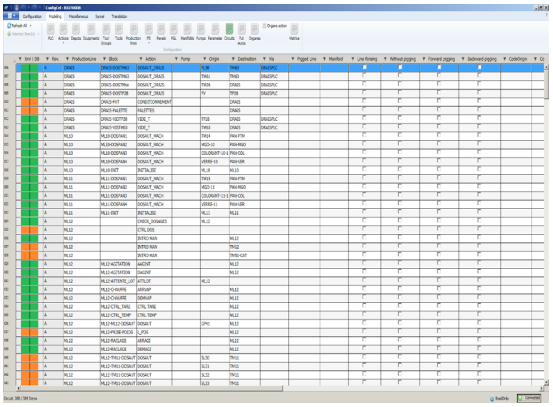
Modularity
Designed to control the heart of the coating kitchen, Papcel™ can naturally control several extensions like the receipt of materials, raw material storage, laboratory and existing automation. The client-server architecture makes it possible to add specialised workstations. Papcel™ federates all your existing or future sub-systems around the coating kitchen.

An open system
Based on the most recent technologies (Windows, client-server architecture, relational database) and standard software tools, Papcel ™

With CMMS integration, Papcel™ enables an efficient preventive maintenance.

is associated to interface libraries available for the most common PLC's and DCS's.

Papcel™ has the capability to exchange data with your enterprise resource planning system, to update its data real time, thus optimizing the overall efficiency of the entire production facility.



Papcel™ configuration tools enable process modifications

CMMS integration

With its CMMS (Computerized Maintenance Management System), Papcel™ enables efficient maintenance activities, by:

- managing maintenance operations (scheduling of work orders, planning of spare parts, service contracts, etc.),
- integrating technical documentations (quick access to instruction manuals and easy diagnosis and corrective actions),
- consequently improving plant availability and reducing downtime risks and costs.

Main references

- Ahlstrom Labelpack Stenay, France
- April Rizhao, China
- Arjobex, France
- Bilt, India
- Burgo Avezzano, Italy
- Condat (Lecta Group), France
- DaeHan, Corea
- Hansol, Corea
- Huatai, China
- IP Svétogorsk, Russia
- Korsnas, Sweden
- Minfeng, China
- Ningxia, China
- Oji Paper, China, Thailand
- Pamenang, Indonesia
- Papeterie de Docelles, France
- Papeterie de l'Aa, France
- Shin Ho, Corea
- Sunpaper, China
- West Coast, India

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