

Papcel™ supervisory system

Optimisation of paper chemicals and coating colour preparation units



For many years, Cellier, as an Activity of ABB France, Process 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.

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.

A powerful DCS

Papcel™ is a powerful DCS 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 are downloaded from an enterprise resource planning system (ERP) or created according to the needs. They can be managed using modification, deletion and validation functions.

Resource manager

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

A powerful DCS dedicated to paper formulation

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.

Easy to operate

With a familiar intuitive windows ergonomoy. 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.

Syncel graphic module

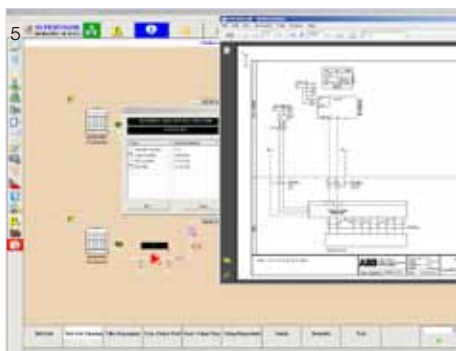
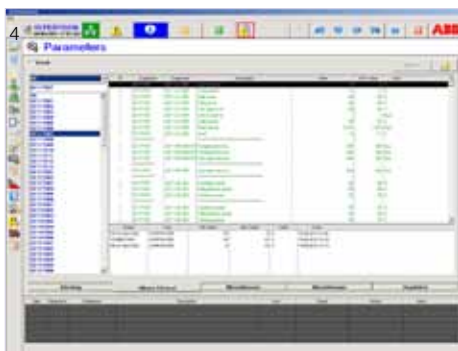
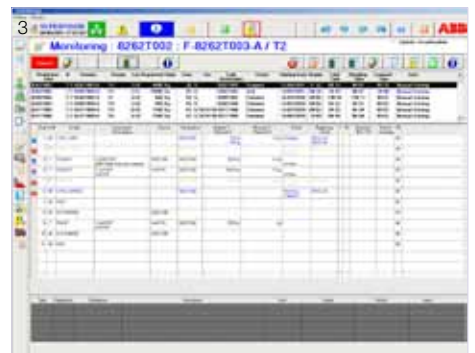
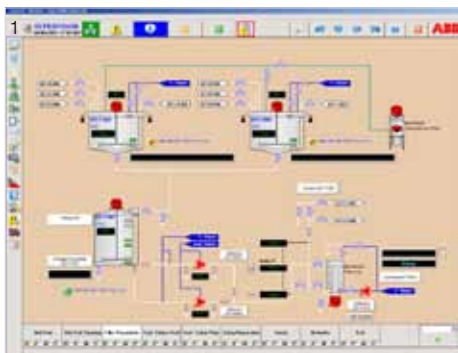
- SCADA system.
- Animated synoptic screens.
- Management and record of events.
- Integrated electrical and manufacturer documentations.
- Compatible with all OPC servers.

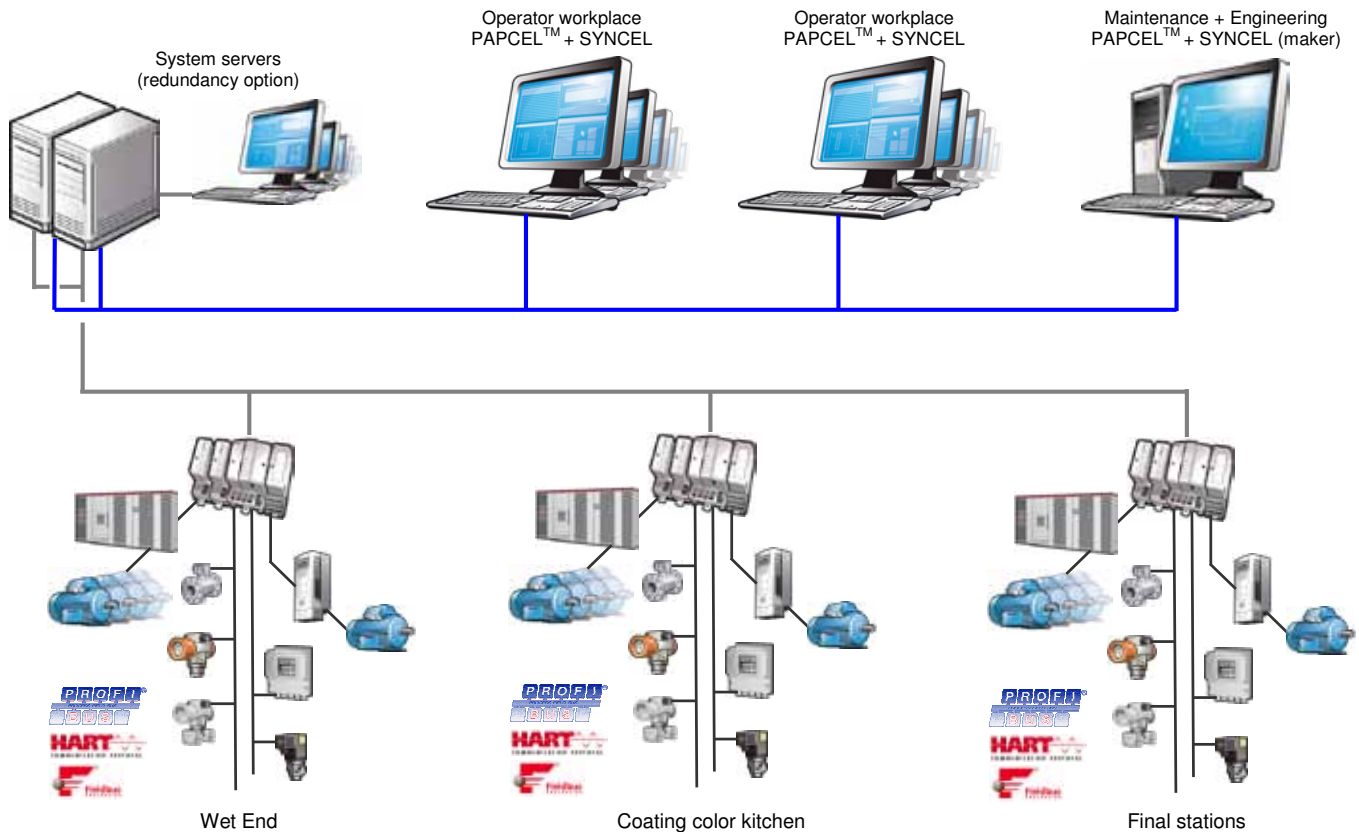
The replay function enables the visualisation of animated synoptics of production modules starting from a date over several months ago.

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:

1 | Synoptic screen 2 | Equipment screen with process data and synoptic 3 | Monitoring screen 4 | Parameter screen 5 | Access functions to documentation (electrical diagram) 6 | Synoptic screen with "replay" function





Papcel™ typical architecture

- 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.

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 71, Windows 2008, client-server architecture, relational database) and standard software tools, Papcel™ 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 up-date its data real time, thus optimizing the overall efficiency of the entire production facility.

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, Chine, Thailand
- Pamenang, Indonesia
- Papeterie de Docelles, France
- Papeterie de l'Aa, France
- Shin Ho, Corea
- Sunpaper, China
- West Coast, India

Cellier Activity

For more than forty years, Cellier, as an Activity of ABB France, Division Process Automation, has been a process engineering company supplying turnkey production units worldwide. Cellier designs, engineers, assembles and starts up complete automated installations for the paper, lubricant, paint and specialty chemical industries. Cellier has acquired know-how in the various processes and techniques used by its industrial partners for the formulation of liquids and powders:

- receipt and storage of raw materials,
- transfer, dosing,
- dispersion, reaction, mixing (batch and in-line),
- filtration,
- pipe pigging,
- packaging and palletizing,
- treatment and recycling of waste,
- automation and control systems.

We take care of your project and ensure the audit, the training of users, the after-sale service up to the complete maintenance of your plant.

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