QCS Family

Heat and Moisture Control Systems

Corrugator plants manufacturing high-quality board, require enhanced quality control to maximize board quality and plant productivity. Qualitek has the most advanced and innovative Corrugator Process and Quality Control System. This system optimizes the corrugator by producing high-quality board at the highest possible speeds. It combines automatic on-line controls of temperature and moisture. A unique speed optimization function results from balancing quality and production.

Corrugator Quality Control System

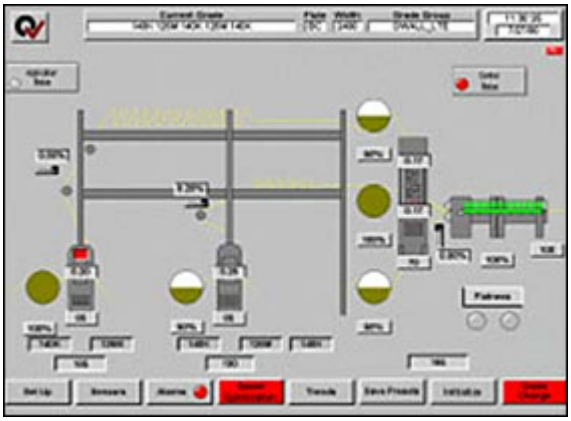
Description

"Controlling paper temperatures at critical locations will produce consistently stronger board, while inherently reducing moisture variability to produce more consistent board flatness. Supervisory moisture control will compensate for paper moisture fluctuations to further improve board flatness. Feed-forward speed compensation will make aggressive adjustments to maximize quality throughout transitions.

Supervisory moisture control will maintain desired moisture levels using a configurable selection of the available devices. Moisture control will accomplish this by first biasing the temperature targets of the preheaters and the doublefacer. Once all possible drying actions have been carried out, moisture control will adjust the web moisturizer output on appropriate grades. Feed-forward speed compensation will bias selected device outputs directly to compensate for speed changes as they occur, with subsequent feedback control of paper moisture and temperature producing a fine-tuned result.

The QCS System provides control reports, quality reports and easily-configured process trends that allow operators, engineers and managers to track product quality and correlate it with corrugator conditions.

Control Station [IPS] is an integrated process station that serves as the central process point for the system. It contains the integrated control, the operator visualization package, PLC functions and the intelligence to control the entire control system.



QCS fam

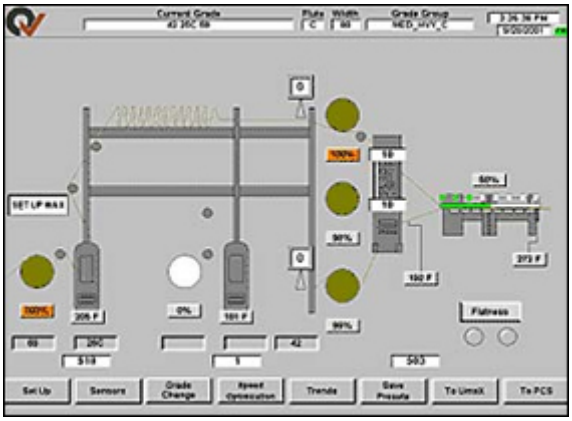
Benefits for the Converting Industry

- Improved board quality.
- Improved consistency of operation from shift to shift.
- Achieves integrated control of equipment from several suppliers.
- Provides operators with a user-friendly, "single window" for monitoring and controlling board quality.
- Decrease in starch consumption by 10%.
- Reduced labour costs.
- Increased average corrugator speed.
- Faster grade changes.
- Faster speed up to right quality.
- 2 - 4% increase in output.
- 1 - 2% increase in efficiency of the total corrugator line with integrated control.

VIB Systems GmbH • Am Kreuzstein 80 • 63477 Maintal • Germany • Phone: +49 6109 606-0 • Email:vib@vibsystems.de • www.vibsystems.com
VIB Systems, Inc. • 4661-A Hammermill Road • Tucker, GA 30084 • USA • Phone: +1 770 491 8981 • Email:vib@vibsystems.de • www.vibsystems.com

Technical Features

- Contact-free infrared temperature sensors.
- Contact-free moisture sensors.
- Integrated control including PLC functionalities (Interlocks, loops).
- Serial link protocol for connection to the scheduling systems and dry end controllers.



Operator Workstation and Overview Screen

Technical Specifications

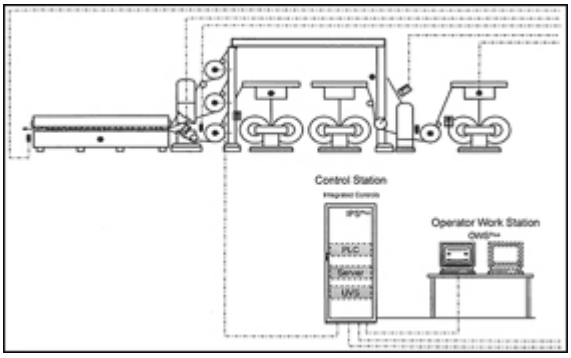
7 temperature measurements

Allen Bradley

IBM Server

Options

- Turnkey installation
- PLC
- Additional operator station



Corrugator Quality Control System Layout

PCS Family (Production Control Systems)

BridgeTek – bridge controls

SpliceTek – synchronized splicing

RollTek – diameter splicing

Qualitek UpTek – uptime maximizer

Steam and Condensate Systems

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