

Asia Paper Implements Honeywell's Color Control Solution to Improve Quality and Reduce Costs



“Honeywell’s color sensor and quality control solution has not only improved production performance and our peace of mind, but also saved us money by helping to meet customer specifications the first time around. Since the project was completed in January 2006, the mill has had zero color-related end-customer claims, saving production rework costs of about \$3/ton.”

MyungRak Kim, Engineering Department Manager, Asia Paper

Benefits

Asia Paper chose Honeywell's color measurement and control solution to increase paper quality and meet end-user needs for paper performance. The Honeywell solution has delivered the following benefits:

- Production cost savings
- Maintenance cost savings
- On-line color measurement of the full sheet width
- Reduced color-related customer claims
- Improved operations, maintenance and simplified operator workload



Asia Paper implemented Honeywell's color control solution to reduce costs and increase efficiency

Background

Asia Paper is one of the largest linerboard makers in Korea and operates two mills in Chungwon and Shihwa. Asia Paper has produced industrial grade paper for the last 40 years with a vision to become an internationally comprehensive papermaker through the use of only the best facilities and skills to produce the best products.

The Chungwon mill produces test linerboard, gypsum linerboard and Kraft paper totaling 420,000 tons per year. Its color and shade-sensitive grades are produced for approximately 100 days per year.

Challenge

Asia Paper's Chungwon mill produces over 10 grades of colored paper. The production staff was initially faced with the challenge of manufacturing these colored grades by the manual addition of powdered dyes. Despite the importance of these grades, color was controlled manually by the paper machine operators who compared the final color off the paper machine against a set of mill standards. This manual process was relatively slow and caused excessive losses in production, notably at startup and during shade changes.

Color control is a complex process that typically uses three color dyes that are mixed with fiber for the desired shade. The dynamics of working in three-dimensional color space for the operators over the entire grade range resulted in both customer claims and production losses that were deemed unacceptable by the Chungwon mill. The mill needed a more accurate, efficient and cost-effective color control process to solve these issues.

Solution

Operations staff at the Asia Paper mill evaluated alternatives and chose Honeywell based on its proven industry experience, advanced technology and service capabilities.

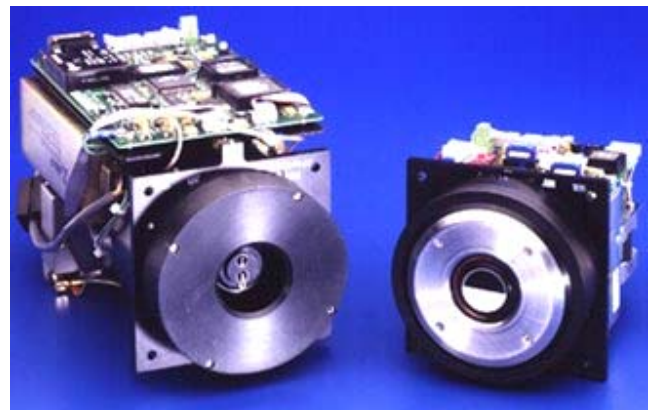
Honeywell's Precision Color Sensor was installed to provide accurate, reliable and repeatable on-line color measurements. The sensor was integrated with Asia Paper's existing MXOpen® and Da Vinci™ QCS systems, resulting in a fully integrated color measurement and control solution, forming the basis for sound color control.

The Precision Color Sensor provides scanning measurement of color, brightness, whiteness, fluorescence and other color appearance qualities. It is designed specifically for laboratory accurate measurements in an on-line environment.

With the new sensing technology from Honeywell, Asia Paper operations staff now has a higher degree of user confidence, enabling tight process control for reduced color rejects and less startup and color grade change culls. They now have a highly reliable system to manage operations during color changes.

As part of the color control strategy, each dye spectrum is integrated into the Honeywell system for correct dye selection and accurate control gain calculation in a dynamic production environment. The dyes are supervised by the MXOpen and Da Vinci QCS systems by metering them into the stock approach line using a dye pump with stroke and speed control. The dye flow range is designed to control around 5 percent of the color variance for each grade; something that was never achieved before.

"We are much more confident in our ability to match color targets and meet end-customer quality specifications," said MyungRak Kim, Engineering Department Manager, Asia Paper.



Honeywell's Precision Color Sensor provides accurate and reliable on-line color measurement

MXOpen® is a registered trademark of Honeywell International Inc. Da Vinci™ is a trademark of Honeywell International Inc.

More Information

For more information on any of Honeywell's color control solutions, visit www.honeywell.com/ps, or contact your Honeywell account manager.

Automation & Control Solutions

Process Solutions

Honeywell

2500 W. Union Hills Dr.

Phoenix, AZ 85027

Tel: +1-602-313-6665 or 877-466-3993

www.honeywell.com/ps

SS-06-14-ENG
June 2006
©2006 Honeywell International Inc.

Honeywell