x-rite
PANTONE®
Case study

"Smurfit Kappa uses the ERX50 to avoid colour fluctuations in paper production. With this solution from X-Rite, the whiteness remains constant throughout the entire production process. Smurfit Kappa sets itself high standards when it comes to quality – and this system makes sure they can meet them."

– Michael Bungenberg, Assistant Manager (Paper) at Smurfit Kappa C.D. Haupt Papier- und Pappenfabrik GmbH

More accurate operation – more precise control: Quality guaranteed through on-line colour measurement in the paper industry

Smurfit Kappa | Corrugated board, solid board and carton board | Market leader

Challenge:

Smurfit Kappa is a market leader in the sustainable development and production of packaging solutions from corrugated cardboard, solid board and carton board, both from fresh fibres and from recycled waste paper. This is a huge responsibility and the company needs to rely on the best, sustainable technologies and resources available for its quality inspections, monitoring and control during paper production. The top priority is having a stable and effective process control. Especially with high-quality, white top grades, it is essential to adhere to the colour location setting and control as precisely as possible in the paper.

Solution:

To ensure the required quality standards, Smurfit Kappa opted for the non-contact, on-line colour measurement system ERX50 from X-Rite – one of the most professional spectrophotometers for direct measurement on the paper machine. In contrast to laboratory measurement, this system shows the measured parameters on-line in real time so any corrective action required can be taken during current production before the tolerance range is exceeded.
The ERX50 is supplied as a complete turnkey package with measuring device with 45°: 0° geometry, software and measuring frame.

Results:

The beauty of installing this on-line measuring system is that, thanks to maintenance-free and non-contact, continuous measurement of the paper, you can reliably measure and regulate optical parameters such as whiteness and/or lab value within very tight limits. This saves on raw materials and additives and makes production sustainable and resource-efficient.
Using the ERX50 measuring device also enables Smurfit Kappa to achieve faster type changeovers with less loss of production. This has a sustainable, positive influence on both quality and cost. Depending on the grades, changeover cycles and requirements of the individual products, savings are immediately noticeable and produce a positive influence on the effectiveness of the entire process.
On-line monitoring of the optical parameters is a fast, efficient way to improve the process. Installation of all the components is easy, space-saving and can be done without incurring additional downtime. This also makes implementation of the system a low-risk task. Depending on the product and the application, significant savings can be achieved, making investment in this equipment a self-financing project.

x-rite
PANTONE®
Case Study

Always one step ahead

C.D. Haupt Strohpappenfabrik in Frankenberg, Hesse, was established in 1854 and has for many years been owned by the Irish Smurfit Kappa Group. Smurfit Kappa is one of the leading international suppliers in the paper-based packaging industry. Around 42,000 employees across 350 sites in 33 countries make this success possible. In 2014, turnover amounted to approximately 8.1 million euros.

Smurfit Kappa operates in four business segments: packaging, paper, recycling and forestry. The Group manufactures more than 9.6 billion m^2 of corrugated board packaging and some 6.2 million tonnes of paper and cardboard every year. All products are made from sustainable raw materials and are 100% recyclable.

A global network of factories provide a complete range of papers for the packaging industry. The range of types includes brown and white kraftliner and testliner as well as corrugated media and semi-chemical pulp. At Smurfit Kappa, product development and quality assurance go hand in hand. The goal is to provide the market with the most effective and efficient solutions for the respective requirements.

On-line colour control – the optimal solution

The software supplied with the ERX50 meets all the requirements for achieving the aforementioned goals. The system is compact, intuitive and very user-friendly. In addition to a colour progress display, the device also controls various dosing units so corrections can be carried out automatically.

The colour control software controls up to 3 dye pumps plus one brightener pump.

Even colour transitions in type changes can be automated, lightening the load for both man and machine while ensuring fast and efficient type changeovers.

For a measurement, the paper is illuminated with white, daylight-like xenon light at an angle of 45 degrees for approximately 1/1,000 second. The reflected light is captured and fed into the high-resolution ERX50 spectrometer. Simultaneously to the first measurement, a further reference measurement is taken using a second, identical spectrometer. In both spectrometers, the measurement signals are separated into 401 different wavelength signals. The result is a true 1 nm spectral measurement resolution.

x-rite

PANTONE®

Case Study

"In papermaking, the solution from X-Rite makes quality control significantly easier across the entire production process."

Maintaining the paper quality

Using this on-line solution from X-Rite gives paper production the ability to produce various types of paper at the high level demanded – reliably, cost-effectively and with consistent quality.

"Without the on-line measuring device from X-Rite, we would not be able to determine the whiteness of the paper so precisely and maintain it throughout the entire production," says Michael Bungenberg, Assistant Manager (Paper) at Smurfit Kappa C.D. Haupt Papier- und Pappenfabrik GmbH

x·rite
PANTONE®

YOUR COLOUR RESOURCE
for All Your Global Communication Needs.

X-Rite, Inc. – Corporate Headquarters
4300 44th St. SE
Grand Rapids, MI 49512 USA
Phone 800-248-9748 or
616-803-2100
xrite.com

Pantone
590 Commerce Blvd.
Carlstadt, NJ 07072-3098 USA
Phone 201-935-5500
pantone.com

YOUR COLOUR.
ALWAYS IN HARMONY.