Leading supplier of corrugated packaging chooses ISRA print inspection technology

Continuous quality control reduces production costs for printed corrugated board

At its production facility in Mannheim, DS Smith assures print quality with the CartonSTAR 100% inline inspection system from ISRA VISION, one of the world’s leading providers of surface inspection systems. The system reliably distinguishes between quality-relevant print errors and non-homogeneous textures on the corrugated board surface. Continuous quality and process control of the printed image also permanently reduces product costs and ensures that resources are used sustainably.

Printed corrugated board is becoming increasingly important as a packaging material –especially due to the rise in online retail, for which there is little alternative to corrugated packaging. The rapid growth of the sector is closely intertwined with this reliable packaging material.

DS Smith is one of the world’s leading suppliers of corrugated packaging. Headquartered in London, the company focuses on developing and producing sustainable packaging solutions in 37 countries. It employs more than 30,000 people globally. On the Mitsubishi EVOL100 production line, newly installed at the production facility in Mannheim, DS Smith produces various types of boxes and trays for food, technical products and hygiene items. These are then printed using flexographic printing.

In order to remain in line with the company’s own standards, printed image monitoring was needed. The installation of an inspection system is practically standard in the sector, making it an absolute necessity. Positive experiences from colleagues at the sister plant in Arnstadt drew the attention of DS Smith’s Packaging Division to ISRA.
The CartonSTAR inspection system enjoys a very high level of acceptance among the machine operators in Mannheim, who appreciate the two-camera solution with high-performance backline LED lighting. The system particularly benefits users directly on the machine, as the complete inspection of the printed images significantly minimizes the risk of defective printing.

The 100 % monitoring of the printed image reduces the number of complaints enormously – despite the constantly increasing demands of the user’s customers. Even single defective sheets with errors in the printed image are reliably detected and removed before further processing. The system is capable of “ignoring” the inhomogeneous surface structure of the corrugated board while still reliably identifying all quality-related defects – even at maximum speeds of 18,000 sheets per hour. All defects are accurately classified. Head of Production Daniel Malolepszy: “This feature allows relevant and non-relevant defects to be detected, thereby making a crucial contribution to the commercial success of the CartonSTAR system. The fact that the classification can be conducted quickly and easily in line with the customer's needs increases the productivity of the printing process significantly. The advantages of using the inspection system can thus be clearly measured in improved productivity and the falling cost of complaints.

By documenting all incidents, the inspection system also enables verifiable quality management. With inspection during the printing process, DS Smith can guarantee continuous feedback on the printed image and material quality. For the user, CartonSTAR is an “absolutely well-conceived system.” A further benefit is the excellent experience with ISRA’s service staff. With the ISRA inspection solution, DS Smith has increased the quality of its products, permanently reduced product costs, and ensured that resources are used sustainably. Also ensuring complete process control, the system strengthens the company’s market position and secures a crucial competitive advantage. Return-on-investment is generally achieved within 12 months.
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