

Dark Field Technologies, Extended Abstract
Session 4A, Wednesday 9AM

New Automatic Inspection Technologies for Coated and Metallized Webs

Metallized, coated and laminated glass, plastic film and metals all have one thing in common; production rates and yields must be maximized in the face of increasing quality and cost pressures. Automatic inspection systems provide the means to achieve this goal. This paper explores the two exciting new on-line inspection technologies, laser-cameras and AI-based defect classification.

New retro-reflective laser-camera systems have been developed for the glass industry. This unique technology utilizes the benefits of two different technologies; laser-based retro-reflective systems and camera technologies. The technology is being extended to cover uncoated and coated/metallized/laminated products. Prior to this development, applications specialists had to choose between scanning laser systems or camera systems. While both systems had their unique benefits, no single system offered the benefits of lasers and cameras in a single, elegant design. The operating principles of retro-reflective laser systems are provided and operation compared with traditional camera systems.

The need to simply classify defects has been a long standing issue in the world of automatic inspection. The second part of this paper provides an overview of a new technology which makes defect classification as simple as “click and drop”. The system is a self-learning system and accumulates intelligence on defect classification as more defects as presented to it.