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High Speed, High Resolution Coating Inspection

The ability to inspect coatings, at high speed and high resolution has been a long-standing industry need. Coating operations can exceed 100m./min. and defects of 10 μ m – 100 μ m must be detected. This is not possible for human inspectors. The only inspection option is to post production and this means rewinding and handling – adding to the cost and the risk of creating more defects. Also, process upsets go undetected until after the fact, reducing yield. The inability of conventional inspection systems to reliably operate in a production environment in reflection has frustrated the industry; missed defects and false hits plague these systems. Solid State Laser Reflection (SSLR) technology solves these problems. Line scan cameras and solid state lasers are married together inside a single scan unit for the first time. This scanner is easily installed even in the tightest locations. All active modules are in a single unit, located on one side of the film. In addition, SSLR is self-aligning, operates in ambient light and requires no maintenance. System theory will be explained and a number of application examples and results will be presented.