

AUTOMATED VISUAL INSPECTION FOR CONTAMINATION DETECTION IN ELECTRONIC INDUSTRY

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Abstract: Machine vision has been widely employed in many applications. Automated visual inspection is the well-known application, which is applying machine vision for industries. Compared with the inspection done by human, automated visual inspection provides more reliable results. Thus, it is more suitable for repeated operations such as industrial inspections. This article shows an approach to detect the most frequently occurring defects in electronic industry. It proposes an approach used for detecting contaminated products by using automated visual inspection system, which is now applied to Thailand Hard Disk Drive (HDD) industry. It provides implementation details of the system i.e. algorithms, environmental constraints and experimental results. This article also shows strong relationship between machine vision and two closed fields i.e. image processing and computer graphics.

Key words: Contamination detection, automated visual inspection concept, practical application of BLOBs analysis.



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