Abstract

Machine vision is a non-contact sensing technology, which has been widely used in various applications, e.g. automatic inspection and robot guidance, in recent years. A basic machine vision system consists of a camera, a frame grabber, a computer, an illuminant source and image processing software. This research studies the application of machine vision for the measurement of tooth dimensions of a circular saw blade. Through backlit illumination, a CCD camera captured the image of the saw blade tooth. The image is then processed and analyzed for the tooth radius and depth. The results are compared with those obtained by an automatic precision measuring instrument (M-V Vertex 410) to verify the accuracy and precision of the
machine vision system.

References


Index Terms

Computer Science

Information Sciences
Measurement of Circular Saw Blade Tooth Dimensions based on Machine Vision

Keywords
Machine Vision  Tool Inspection  Circular Saw Blade  Tooth Dimension