

Abstract

ALICE (A Large Ion Collider Experiment) is one of the physics projects developed by CERN. The project is to observe the results of collisions between protons and protons, protons and nucleus and nucleus and nucleus. Thousands of sensor chips are used to record the collision trajectory. Visual inspection with digital image processing has been developed to analyze the conditions of cutting the sensor chip, using the Hough Transform, Edge Detection, and Template Matching methods. The distance from the edge to the sealring chip will be used as a reference to determine how the chip cutting conditions. The results obtained are quite good and support for the next research process.

Keywords: *Hough Transform, Edge Detection, Template Matching, image processing.*