

ABSTRACT

Indonesia is the world's top 10 ceramic users. To obtain best quality need to consider process of quality control, in SNI ISO 13006: 2010 there are six variables characteristic requirements related to quality of ceramic tiles. Currently the process of ceramic quality inspection in Indonesia, particularly in the Balai Besar Keramik is still done manually by human vision. Therefore, it is necessary to design a visual inspection system for digital image processing of ceramic automation using Fuzzy Logic method. Fuzzy model is one method that can be used to determine ceramic surface quality control. This research aims to apply fuzzy model in design of automation system for ceramic surface quality control and describes its accuracy rate and automatic database. To perform feature extraction using GLCM extraction method to obtain autocorrelation, sum of square (variance), and number of object. The information is used as input for data processing using fuzzy model in the identification of quality of ceramic surface defect. This research uses 13 real time test data which can produce the accuracy of automatic ceramic quality identification 92.31%.

Keywords : Automated Ceramic Surface Inspection, Ceramic Defect Detection, Image Processing, Fuzzy Logic Model