

ABSTRACT

Leather is the main material in the manufacture of shoes in PT. Karyamitra Budisentosa. It should be considered in producing leather shoes one of them is the quality of materials main leather. Classification of quality leather inspection process is still manual cause inaccuracies classification result, the production process was not optimal and produce defective products as well as the reporting of data that has not been well-organized. Therefore, it takes the classification of quality leather right to obtain a good level of accuracy and automated data reporting. Fuzzy model is one method that can be used to determine the classification of the quality of leather. This study applied fuzzy model in the automation system classification level of quality leather and describe the level of accuracy and automated data reporting and provide interface of man and machine. The process is done: feature extraction to obtain the variance, standard deviation, entropy, as well as morphological processes Sobel edge detection to get area of defect leather. The information is used as input for processing data using fuzzy model in the classification level of quality leather.

Fuzzy model that has been built will be testing the model by determining the level of accuracy and error of the model. The accuracy of 93.3% for the training data with error 6.7% while the level of accuracy for data testing error of 90% with 10%.

Keywords: *Fuzzy model, Feature Extraction, edge detection, Automation Systems*