Abstract

The problem of flaw in tea leaves Camellia Sinensis is an important problem in tea plantation in Indonesia. The existence of flaw in the tea leaves causes a significant decreasing in production. During this time, the evaluation of tea leaves conditions to check of flawed tea leaves are still vulnerable in diagnosing faults. Flawed tea leaves are difficult to distinguis from normal observation. Observation of the human eye is not very accurate in seeing something.

In designing a system of flawed tea leaves has several stages preprocessing, feature extraction and classification algorithms. To distinguish the condition of each leaf, used color feature extraction and leaf length comparisons. The feature extraction was obtained information about parameter each leaf conditions to distinguish from one another. Algorithm classification using PNN that has good accuracy and timing.

The result of this final project that there is the highest accuracy on the training process that is 100% and on the testing process that is 93,33% with using feature extraction color RGB, HSI and leaf length ratio.

Keywords : flaw in tea leaves Camellia Sinensis, the color feature extraction, PNN