Abstract

The quality of the wood is determined by the number of defects and its distribution. In a piece of timber, the most common type of imperfection is called knot that decreases the strength of the wood. Manual selection and classification process of knots is tedious and time consuming job. An automatic sensing machine is able to inspect wood automatically and correctly identify the defects it possess, and its effect on the quality of the final product. In this paper, it is proposed to detect and classify the knots in timber boards. The image of knots is preprocessed using Hilbert transform and Gabor filters. The features obtained from preprocessing, is classified using data mining techniques and compared with bagging technique.

References

Wood Knot Classification using Bagging

- Dengsheng Zhang, Aylwin Wong, Maria Indrawan, Guojun Lu. Content-based Image Retrieval Using Gabor Texture Features.

Index Terms
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Wood Knots Hilbert Transforms Gabor Filter Naïve Bayes Radial Basis Function