

A Novel Algorithm Based on Extended Form of LoG Filter to Detect Sharp Defects of Ceramic Tiles

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Abstract

Nowadays all parts of production process of ceramic tiles are automated with the exception of quality control [1] and the first step of making an automatic tile classifier is defect detection. In this paper a novel algorithm to detect sharp defects of ceramic tiles (such as cracks and spots) using extended form of LoG filter is presented. This algorithm is fast and simple and its sensitivity is regulatible so it can be used in real time applications. Accuracy decrease for patterns that have high contrast structures is the only shortcoming of proposed algorithm that can be improved by methods such as image division to distinct regions base on similarity of their pixels.