Automatic Selection of a Segmentation Method for the Detection of Flaws

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Abstract

Different types of images require different segmentation methods in order to successfully extract desired flaws. In the study a novel methodology capable of automatically switching to a proper segmentation method according to features extracted from an image has been developed. Based on the experimental results of the 1529 flaw samples collected from production lines, the segmentation rate is 91.6% and the classification rate is 96.6. The high classification rate indicates that the proposed methodology is successful in selecting a proper segmentation method for flaw detection automatically.

Keyword：Segmentation, Feature Extraction, Flaw Detection, Flaw Classification