

Automatic Diagnosis of Electrical Equipment Using Infrared Thermography

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Abstract : Analysis and processing of data bases resulting from infrared thermal measurements made on the electrical installation requires the development of new tools in order to obtain correct and additional information to the visual inspections. Consequently, the methods based on the capture of infrared digital images show a great potential and are employed increasingly in various fields. Although, there is an enormous need for the development of effective techniques to analyse these data base in order to extract relevant information relating to the state of the equipments. Our goal consists in introducing recent techniques of modeling based on new methods, image and signal processing to develop mathematical models in this field. The aim of this work is to capture the anomalies existing in electrical equipments during an inspection of some machines using A40 Flir camera. After, we use binarisation techniques in order to select the region of interest and we make comparison between these methods of thermal images obtained to choose the best one.

Keywords : infrared thermography, defect detection, troubleshooting, electrical equipment

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