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**Localization of thermal anomalies in electrical equipment using Infrared Thermography
and support vector machine**

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Abstract: Analysis and processing of databases obtained from infrared thermal inspections made on electrical installations require the development of new tools to obtain more information to visual inspections. Consequently, methods based on the capture of thermal images show a great potential and are increasingly employed in this field. However, there is a need for the development of effective techniques to analyse these databases in order to extract significant information relating to the state of the infrastructures. This paper presents a technique explaining how this approach can be implemented and proposes a system that can help to detect faults in thermal images of electrical installations. The proposed method classifies and identifies the region of interest (ROI). The identification is conducted using support vector machine (SVM) algorithm. The aim here is to capture the faults that exist in electrical equipments during an inspection of some machines using A40 FLIR camera. After that, binarization techniques are employed to select the region of interest. Later the comparative analysis of the obtained misclassification errors using the proposed method with Fuzzy c means and Ostu, has also be addressed

Keywords: Infrared thermography; thermal images; fault diagnosis, SVM

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