FAULT DETECTION AND PREDICTION IN POWER CABLE USING INFRARED THERMOGRAPHY AND NEURAL NETWORK TECHNIQUE

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ABSTRACT

Infrared Thermography (IR) Scanning Camera in the commercial sector has been available since early 1960's. IR serves as an important and effective tool for predictive maintenance. Since that, there has been an increase in the number and types of equipment available, and the applications for which infrared are used.

This paper is of concern with the development of this equipment in order to minimize the various types of fault that may occur in power cables. A real time diagnostic and control technique also has been developed for use in power cables whose thermal increase can be correlated to their operating status. This diagnostic scheme experiments required several technological issues. This includes thermal profile for three-phase power cables, thermal data analysis, and simulated artificial neural network (ANN) to predict fault conditions based on thermal pattern.

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