



Contents lists available at [SciVerse ScienceDirect](#)

Infrared Physics & Technology

journal homepage: www.elsevier.com/locate/infrared



Review

Recent progress in diagnosing the reliability of electrical equipment by using infrared thermography

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ARTICLE INFO

Article history:

Received 16 September 2011

Available online 24 March 2012

Keywords:

Infrared thermography

Thermal anomaly

Image processing

Artificial intelligence

Qualitative

Quantitative

ABSTRACT

Infrared thermography (IRT) has gained more attention and become an interesting method in electrical preventive maintenance due to its high precision and sensitivity imaging characteristics. This paper provides a review of the application of IRT for diagnosing electrical equipment, including their thermal anomalies and methods of measurement. Improvement of the inspection techniques is highlighted in order to investigate the reliability of electrical equipments due to the effect of the environmental factors and equipment condition. Factors related to the target equipment and the inspection tool together with their characteristics is also presented. Due to the complex analysis, various automatic diagnostic systems are proposed for faster and more accurate analysis. Typical engineering solutions using recent technologies are reviewed which could be used to improve the quality of IRT inspection.

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