International J. of Engg. Research & Indu. Appls. (IJERIA).
ISSN 0974-1518, Vol. 4, No. III (August 2011), pp 79-86

# DENOISING OF PARTIAL DISCHARGE SIGNAL AND PERFORMANCE COMPARISON OF DIFFERENT WAVELETS

**BUTTI DASU, M. SIVA KUMAR, J. L. SANTHAKUMARI AND CH. SUJATHA**

**Abstract**

The Partial Discharge (PD) signal in any electrical equipment (like generator, motor, transformer etc.) is to be detected, which will help in the estimation of condition of its insulation. There by, the time up to which the equipment can be operated safely can also be estimated. This helps in the reliable operation of equipment, thereby decreasing the chances of failure of Power system .In this paper, a partial discharge signal is generated by simulating an exponential equation model and it is de-noised using different wavelet transform techniques, comparison of signal to noise ratio is carried out with different wavelet techniques. A computer oriented algorithm is developed for the generation of PD signal & and it is simulated through computer programming language developed in the MATLAB.

---

**Keywords**: Partial discharge Electrical discharge, de noising, chemical detection, acoustic detection, electrical detection, Wavelet Transform.