A project report on

**DETECTION & DIAGNOSIS OF INTERTURN AND L**-**G FAULTS BY USING WAVELET TRANSFORM TECHNIQUE**

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**FOR THE AWARD OF THE DEGREE OF**

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**IN**

**ELECTRICAL AND ELECTRONICS ENGINEERING**

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**CERTIFICATE**

This is to certify that the project report entitled **“DETECTION & DIAGNOSIS OF INTERTURN AND L-G FAULTS BY USING WAVELET TRANSFORM TECHNIQUE”** is the bonafide work done by

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Submitted in the partial fulfillment of the requirements for the award of Bachelor of Technology in **ELECTRICAL & ELECTRONICS ENGINEERING** during the academic year (2010-2014). The results embodied in this project report have not been submitted to any other University or Institute for the award of any degree or diploma.

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**ABSTRACT**

This project work proposes a protection scheme for a 3-phase induction motor to detect and diagnosis the Interturn and L-G faults by using Wavelet Transform Technique. Faulty signals are decomposed to one level by a simple code written in MATLAB. These signals are Analyzed with Bior5.5 wavelet. The sum of absolute values of A1 coefficients is utilized to detect the fault based on predefined value of Threshold. The sum of absolute values of A1 coefficients is below the predefined value of Threshold, and then the motor is under fault of Interturn. Otherwise, the sum of absolute values of A1 coefficients is above predefined value of Threshold, then the motor is under fault of L-G .In case of Interturn fault, one of the phases is below the threshold (Th1) and remaining phases are above the Th1. The phase which is below Th1 represents the Interturn fault on that phase. In case of L-G fault, one of the phases is above the threshold (Th2) and remaining phases are below the Th2.The phase which is below Th2 represents the L-G fault. From the generated approximation signal the severity of the fault has been determined.

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