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**A PROJECT REPORT
ON**

**“DSP BASED CONVERTER – INVERTER CONTROL STRATEGY FOR SINGLE
PHASE WIND POWER GENERATION SYSTEM”**

Submitted in partial fulfillment of the requirements for the award of
**BACHELOR OF ENGINEERING
IN
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ABSTRACT

In this project work, we developed digital control techniques for Boost converter and PWM inverter which have potential application for power transmission system. The study is done in the field of inverter topologies, which is used to interface a wind energy module to the power grid/load. The boost converter and inverter are developed with focus on low cost, high reliability and mass-production.

The switching strategy to control the boost converter and inverter to which the load may be grid supply system or domestic lighting is developed. The control strategy for the inverter should be such that, the required voltage amplitude and frequency (50 Hz) has to be supplied by the system.

The switching strategy aims at reducing Electromagnetic Interference (EMI) problems, elimination of harmonics and hence Total Harmonic Distortion (THD), to reduce switching losses and also to operate the inverter at lowers switching frequencies.

The controller is implemented on DSP and they are designed in such a way that they can be easily modified if any need arise in future. We have to just change the interconnection between the logic blocks. This feature of reprogramming capability of Digital Signal Processor makes it suitable to make our design using Digital Signal Processor.