A Project Report Submitted to the

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELGAUM- 590010

Entitled

"*DESIGN OF PLC BASED CONTROL SYSTEM FOR THREE PHASE SLIP-RING INDUCTION MOTOR*"

IN PARTIAL FULFILLMENT OF THE AWARD OF THE DEGREE OF THE BACHELOR OF ENGINEERINGINELECTRICAL & ELECTRONICS

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ABSTRACT:

The aim of this project is to limit the starting current and increase the starting torque. High Starting torque is a desired feature in some special industrial applications which use 3-Ph Slip Ring Induction motor. There are different methods for starting of the Slip Ring induction Motor. But we have used the Rotor Resistance Control method for Starting the Induction Motor.

We are using a Programmable Logic Controller which can be programmed as per our requirement. We have designed a control panel and programmed the PLC according to our requirements. The motor will Start with high rotor resistance and as time passes the rotor resistance is been shorted and the motor will run at rated speed. The resistance is been cut from the rotor in two parts in two different time intervals. So this process of time management and controlling the relays in been done by the PLC. Depending upon the outputs of PLC the relays gets shorted and the resistance is been cut from the rotor.