MATLAB/SIMULINK IMPLEMENTATION FOR REDUCING THE MOTOR DERATING AND TORQUE PULSATION OF INDUCTION MOTOR USING MATRIX CONVERTER

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Submitted to the faculty of the Department of Electrical Engineering School of Engineering, of the University of Management and Technology Lahore, in the partial fulfillment of the requirements for the Degree of

BACHELOR OF SCIENCE

IN

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Head of the Department Project Advisor

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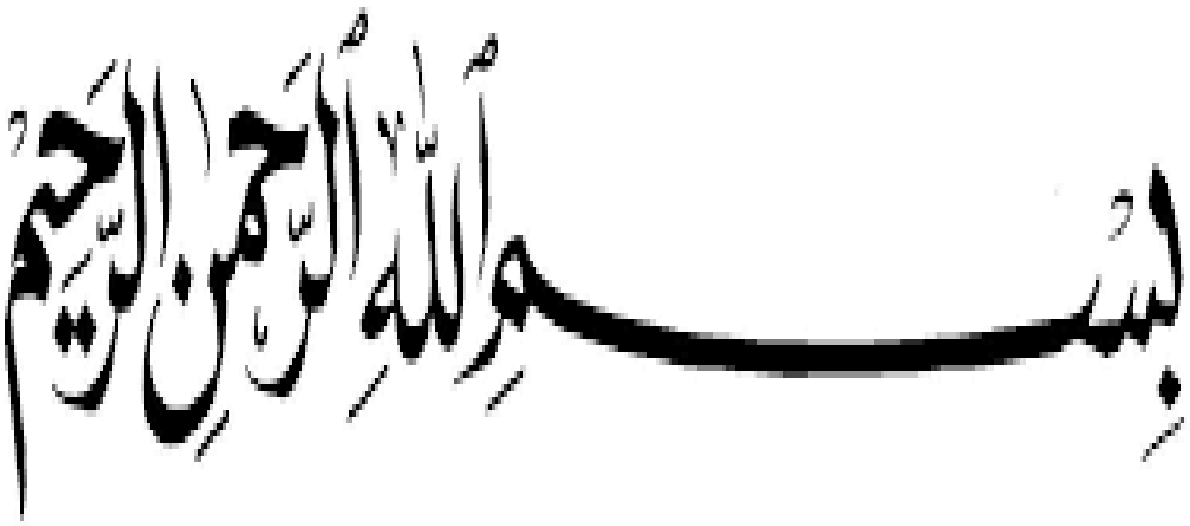

Dedication

With the blessings of ALLAH Almighty,

we are able to dedicate this project to

our Parents, Teachers and University

for leading us into intellectual pursuit

and who inspired us towards the

sacred task of learning and providing

us with moral support.

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We bow before **ALLAH Almighty** for granting us with infinite blessings and providing us with the strength to complete our project and degree.May we obey Him.

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Appreciations to all our friends for their enthusiastic support and help.

At the end,Heartiest Congratulations to all our **team members** whose combined effort led to the successful completion of our project.

ABSTRACT

The output voltages of the variable voltage and variable frequency voltage source is not a pure sine wave and so is the output current from variable frequency current source. If the induction motor is fed by these inverters odd harmonics would be seen in the input supply of the induction motor which leads to the impure nature of the sine wave. This lead to the additional loses of the machine which reduces the efficiency and causes de-rating of the motor. It can be overcome by the use of matrix converter as its main attribute is pure sine wave as an output. The regeneration ability and four quadrant operation of the matrix converter makes it superior then other inverter drives.

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