

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

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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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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.

Table of Contents

| | |
|--|----|
| Chapter1: Introduction..... | |
| Chapter 2: Induction Motor..... | 16 |
| 2.1. Principles of Operation..... | 16 |
| 2.1.1 Synchronous Speed..... | 16 |
| 2.1.2 Slip..... | 18 |
| 2.1.3 Torque..... | 19 |
| 2.2 Construction..... | 19 |
| 2.3 Speed Control of Induction Motor..... | 20 |
| 2.4 Power Factor..... | 20 |
| 2.5. Efficiency..... | 21 |
| Chapter 3: Speed Control of Three Phase Induction Motor..... | 24 |
| 3.1. Control Methods..... | 25 |
| 3.1.1 Controlling Supply Voltage | |
| 3.1.2 Multiple Stator Winding Method | |
| 3.1.3 V/f Control or Frequency Control | |
| 3.2 Converter..... | 25 |
| 3.3 Types of Converter..... | 25 |
| 3.3.1 Cycloconverter..... | |
| 3.3.2 Voltage Source Converter | |
| 3.3.3 Matrix Converter | |
| 3.3.3.1 The Topology | |
| 3.3.3.2 The Performance | |

| | |
|--|----|
| 3.3.3.2.1 The Output Voltage | |
| 3.3.3.3 Implementation of Matrix Converter | |
| 3.3.3.3.1 The Bidirectional Switch Realization and Commutation | |
| 3.3.3.3.2 The Input Filter Problem | |
| Chapter 4: Control Scheme of Converter..... | 27 |
| 4.1 Introduction..... | 27 |
| 4.2 Types of Converter..... | 27 |
| 4.2.1 Pulse Width Modulation | |
| 4.2.1.1 Generation of PWM Signals | |
| 4.2.1.2 Generation of PWM through Function Generator | |
| 4.2.2 Space Vector Modulation | |
| 4.2.2.1 Generation of SVM | |
| 4.2.3 SPWM | |
| 4.2.3.1 Implementation of SPWM | |
| Chapter 5: Motor Modelling..... | 32 |
| 5.1 Equivalent Circuit of Induction Motor | |
| 5.2 Model | |
| 5.3 Transfer Function | |
| 5.4 D-q Model of Induction Motor | |
| Chapter 6: Simulation and Result..... | 33 |
| 6.1 Simulations | |
| 6.2 Results | |
| Chapter 7: Conclusion and Future Work..... | 34 |
| REFERENCES..... | 48 |

