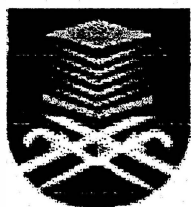


**DYNAMIC PERFORMANCE OF INDUCTION MOTOR – AN
EXPERIMENTAL STUDY**

Project report is presented in partial fulfillment for the award of the
Bachelor in Engineering (Electrical) (Hons) of
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ABU BAKAR BIN DAUD
FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM

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ABSTRACT

This thesis deals with experimental analysis of induction motor in the laboratory. The performance was analyzed based on sudden – off load and sudden switching when the motor was running with various load conditions. The various waveforms were captured by TDS 420 4 channels oscilloscope. These waveforms were analyzed to predict the performance of the induction motor.

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CHAPTER 1

INDUCTION MOTOR

1.0 Introduction

Induction motors are ac motors. Of all ac motors, the polyphase induction motor is the one that is extensively used for various kinds of industrial drives. It has following advantages and also some disadvantages:

Advantages:

- i. It has very simple and extremely rugged, almost unbreakable construction (especially squirrel cage type)
- ii. Its cost is low and it is very reliable.
- iii. It has sufficiently high efficiency. In normal running conditions, no brushes are needed, hence frictional losses are reduced. It has a reasonably good power factor.
- iv. It requires minimum of maintenance.
- v. It starts up from rest and needs no extra starting motor and has not to be synchronized. Its starting arrangement is simple especially for squirrel-cage type motor.

Disadvantages:

- i. Its speed cannot be varied without sacrificing some of efficiency.
- ii. Just like a dc shunt motor, its speed decrease with increase in load.
- iii. Its starting torque is somewhat inferior to that of a dc shunt motor.