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بسم الله الرحمن الرحيم

شبكة المعلومات الجامعية

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جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد أعدت دون أية تغيرات

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تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of 15-25- c and relative humidity 20-40%

بعض الوثائـــــــق الاصليـــــة تالفـــة

بالرسالة صفحات لم ترد بالاصل

Ain Shams University
Faculty of Engineering

Microprocessor Speed Control of Electrical Motors Using 3-Phase Semiconductor Converter

M.Sc. Thesis

By

Eng. Emad Ibrahim Abd El Rehim
B.Sc. Electronics & Communication Engineering

Submitted in partial fulfillment of the requirments for the **M.Sc.** Degree in Electrical Engineering

Supervised By

Prof.Dr. AZIZ IBRAHIM SAID
Electrical Power & M/cs.Dept., Faculty of Engineering
Ain Shams University

Dr. ABLA SOLIMAN ATTIA
Electrical Power & M/cs.Dept., Faculty of Engineering
Ain Shams University

2001

Approval Sheet

For the thesis entitled

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Prepared By

Eng. Emad Ibrahim Abd El Rehim

Submitted in partial fulfillment of the requirments for the M.Sc. Degree in Electrical Engineering

Approved By

Name **signature**

1-Prof.Dr. S. WAHSH

Prof. Of Power Electronics

Electronics Research Institute

Said Wah

2- Prof. Dr. M. A. L. BADR

Faculty of Engineering., Ain Shams University

Electrical power & Machines Department

M. A. L. Badr

3-Prof.Dr. A. I. SAID

Faculty of Engineering., Ain Shams University

Electrical power & Machines Department

A. I. Said

4-Dr. A. S. ATTIA

Faculty of Engineering., Ain Shams University

Electrical power & Machines Department

A. ATTIA

STATEMENT

This dissertation is submitted to Ain Shams University for the Degree of Master in Electrical Engineering.

The work included in this thesis was carried out by the author in the Department of Electrical Power& Machines, Faculty of Engineering, Ain Shams University.

No part of this thesis has been submitted for a degree or a qualification at any other University or Institution.

Date:
Signature:
Name: ***Emad Ibrahim Abd El-Rehim***

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ABSTRACT

Speed control of electrical motors is a common need in various industrial processes. DC motors are advantageous as variable speed drives for such applications. The conventional analog control and measuring devices used for speed control of dc motor drives, are now widely replaced by digital components. Speed control of dc motor by varying the armature voltage using three phase controllable rectifier gives precise, simple and cheap control method.

This thesis presents analytical and experimental studies for a microprocessor based speed control of dc motor fed from semi converter supply during both transient and steady state condition.

Also, this thesis presents experimental studies for a microprocessor based speed control of AC motor fed from 3-phase variable voltage variable frequency inverter. This inverter has two modes of operation , The first for normal speed and the second for decleration. The squirrel cage IM is chosen for this application.