GENERALISED CIRCUIT MODEL FOR THE ANALYSIS OF REE PHASE INDUCTION MOTOR FED FROM SINGLE PHASE SUPPLY USING STATIC PHASE CONVERTERS

by

N. C. SONPAL

A THESIS SUBMITTED TO THE
INDIAN INSTITUTE OF TECHNOLOGY, DELHI
FOR THE AWARD OF THE DEGREE OF
DOCTOR OF PHILOSOPHY

DEPARTMENT OF ELECTRICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY, DELHI

February, 1984

DEDICATED

TO

MY PARENTS

AND

SISTER VASUMATI

CERTIFICATE

Certified that the thesis entitled 'Generalised Circuit Model for the Analysis of Three Phase Induction Motor Fed From Single Phase Supply Using Static Phase Converters', which is being submitted by Mr. N.C. Sonpal, in partial fulfilment for the award of the Degree of Doctor of Philosophy in Electrical Engineering of the Indian Institute of Technology, Delhi, is a record of student's own work carried out by him under our joint supervision and guidance. The matter embodied in this thesis has not been submitted for the award of any other Degree or Diploma.

Dr. B.P. Singh
Assistant Professor

Dr. S.S. Murthy
Associate Professor

Department of Electrical Engg.,
Indian Institute of Technology,
Delhi, Hauz Khas,
New Delhi-110016

Prof. C.S. Jha
Education Advisor
(Tech.)
Ministry of Education
Government of India
New Delhi-110001

ACKNOWLEDGEMENT

The author wishes to acknowledge with great pleasure, the general guidance and encouragement received from Prof. C.S. Jha, Dr. S.S. Murthy and Dr. B.P. Singh, towards the present work.

Sincere thanks are also due to Mr. Bhim Singh and Mr. R. Anbarsu, the friends of the author and to the staff of the Electrical Machine Laboratory for their whole hearted cooperation and assistance. Thanks are also extended to Mr. V.P. Gulati for his excellent typing and to Mr. R.P. Kapoor for his help in preparing the drawings.

The author takes an opportunity to show his gratitude towards the Ministry of Education, Government of India, for awarding the research scholarship and the Department of Technical Education, Gujarat State, for sponsoring for the research work under Quality Improvement Programme, at Indian Institute of Technology, Delhi.

N.C. SONPAL

NEW DELHI

24th February, 1984

CONTENTS

CONTENTS (contd.)

CONTENTS (contd.)

CONTENTS (contd.)

CONTENTS (contd.)

CONTENTS (contd.)

CONTENTS (contd.)

CONTENTS (contd.)

=oo=
==