ELECTRICAL PRINCIPLES III

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ELECTRICAL PRINCIPLES III

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First published 1978 by
THE MACMILLAN PRESS LTD
London and Basingstoke
Associated companies in Delhi Dublin
Hong Kong Johannesburg Lagos Melbourne
New York Singapore and Tokyo

Typeset in 10/12 Times

British Library Cataloguing in Publication Data

Morris, Noel Malcolm
Electrical principles III. — (Macmillan
technician series).
1. Electric engineering
I. Title
621.3 TK145
ISBN 978-0-333-23103-6 ISBN 978-1-349-03550-2 (eBook)
DOI 10.1007/978-1-349-03550-2

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Preface

A sound knowledge of the principles of electricity is essential to technicians in all branches of the electrical and electronics industry; this book covers the requirements of Electrical Principles III and Electrical and Electronic Principles III of the Technician Education Council courses.

The nine chapters of the book provide coverage of the principal areas of work. The first chapter deals with important circuit theorems; there follows a chapter on a.c. circuits, including series circuits, parallel circuits and resonance. In chapter 3 the essentials of three-phase circuits are described. Chapter 4 is devoted to the principles of transformers, including not only the efficient use of power transformers but also the use of the transformer in the electronic field as an impedance matching device. Following this are three chapters on rotating machines; the first of these outlines the basic principles, while the second and third of these chapters deal with d.c. and a.c. machines respectively. Chapter 8 provides coverage of transients in d.c. circuits, and chapter 9 is devoted to measuring instruments and measurements including both the power and light-current fields.

I would like to thank the editorial and production staff of the Macmillan Press for their advice and help during the production of the book. It is also a pleasure to thank my wife for her excellent work during its preparation.

NOEL M. MORRIS

The cover photograph shows a Wayne Kerr Compurent Meter type B424, by courtesy of Wilmot Breeden Electronics Ltd.