# TRANSFORMER PRACTICE; MANUFACTURE, ASSEMBLING, CONNECTIONS, OPERATION AND TESTING

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649724345

Transformer Practice; Manufacture, Assembling, Connections, Operation and Testing by William T. Taylor

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd. Cover @ 2017

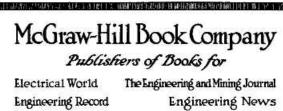
This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

# WILLIAM T. TAYLOR

# TRANSFORMER PRACTICE; MANUFACTURE, ASSEMBLING, CONNECTIONS, OPERATION AND TESTING

Trieste



Engineering Record Engineering News Railway Age Gazette American Machinist Signal Engineer American Engineer Electric Railway Journal Coal Age Metallurgical and Chemical Engineering Power

小花 计一进时时间时间上去在生产上的现在分词 人名马尔尔 化间接 网络动物植物 化合金油

## TRANSFORMER PRACTICE

### MANUFACTURE, ASSEMBLING, CONNECTIONS, OPERATION AND TESTING

BY

1 .

WILLIAM T. TAYLOR FELLOW, AJ.E.E., MI.E.E. AND MIM.E., ETC.

Second Edition Entirely Rewritten—Enlarged and Reset

McGRAW-HILL BOOK COMPANY, Inc. 239 WEST 39TH STREET, NEW YORK 6 BOUVERIE STREET, LONDON, E. C. 1913 COPYRIGHT, 1909, 1913, BY THE MCGRAW-HILL BOOK COMPANY, INC. 1

1

ł

ł

1

.

12

.

۰.

.

æ

#### TER.MAPLE.PRESS.TORE.PA

196803 JUL 21 1915 てつロ ・てえい

 $\mathbf{h}_{i}$ 

È

ł

6979744

#### PREFACE TO SECOND EDITION

The writer seeks to keep this book practical and for a reference on all matters connected with the operation of transformers and static induction apparatus. It is particularly intended for those who are operating or constructing plants or transformers and is written with the view of assisting engineers out of certain operating difficulties which they can readily solve when they are short of the right apparatus and need a temporary arrangement such as using certain changes of phases.

New schemes of any kind will be appreciated and will add to the value of this book.

v

WILLIAM T. TAYLOR.

CHAPLANCA, PERU, SOUTH AMERICA, August, 1913.

### PREFACE TO FIRST EDITION

Although much has been written on the fundamental principles of transformers, little data have been published concerning their connection, installation and operation. It was this lack of easily available information and the widespread desire of operators and engineers in the field to possess such information, that led the author to put in type these notes, which had been written up in the course of a number of years of experience in the field.

A working knowledge of the fundamental principles of electrical engineering is presupposed, and for this reason the treatment does not go into the whys and wherefores very deeply, but simply states the facts in as few words as possible. To aid in understanding quickly the phase relations and relative values of the various e.m.fs. and currents involved in a given system, vector diagrams are given with all diagrams of circuit connections.

W. T. TAYLOR.

BARAMULLA, KASHMIR, INDIA, December, 1908.

### CONTENTS

	PAGE
PREFA	σε
CHAPTE	
Ι.	Introduction
п.	Simple Transformer Manipulations
ш.	Two-phase Transformer Connections
IV.	Three-phase Transformation System
v.	Three-phase Transformer Difficulties
VI.	Three-phase Two-phase Systems and Transformation 97
VII.	Six-phase Transformation and Operation
VIII.	Methods of Cooling Transformers
IX.	Construction, Installation and Operation of Large Transformers 136
х.	Auto Transformers
XI.	Constant-current Transformers and Operation
XII.	Series Transformers and Their Operation
xm.	Regulators and Compensators
XIV.	Transformer Testing in Practice
XV.	Transformer Specifications
	Appendix
	Index

vii

\* <sup>200</sup>

2 2 17

т а "т л

6