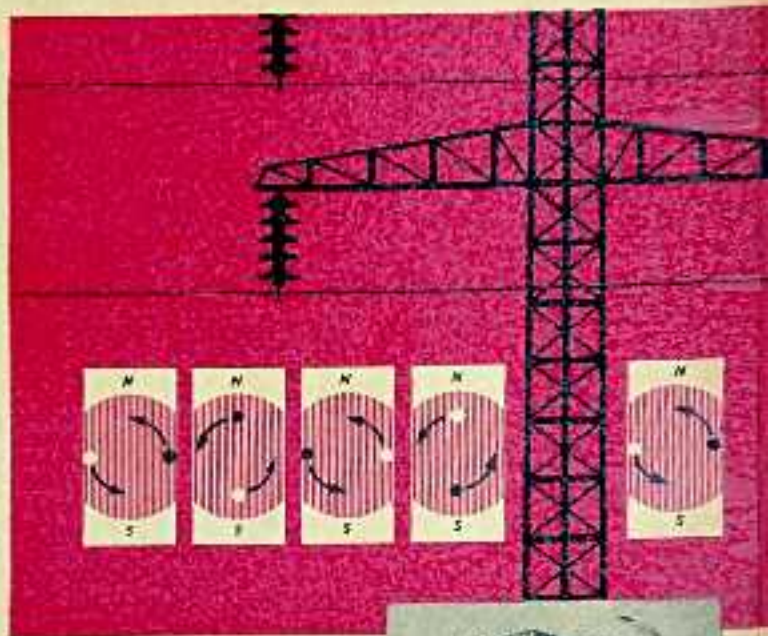


# Electrical Engineering Fundamentals I



TECHNICAL  
FUNDAMENTALS

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*Electrical Engineering  
Fundamentals*

BY HIRSH GRAFF

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## PREFACE

In the light of the progress in electrical engineering during the last few decades, it might be considered a venture to set forth facts, concepts and phenomena of a general nature in electrotechnology. The author is fully aware of the fact that a book on "Electrical Engineering Fundamentals" can only deal with the most important basic concepts and outline the essential aspects of this science so that it cannot claim to be exhaustive.

The book has been designed in such a way that the reader will come to know fundamental laws and rules derived from electrostatic and electro-technical phenomena described and interpreted in a simple language that makes for easy and interesting reading. Further, he is afforded an insight into essential branches of electrotechnology.

The operations involved in the solution of mathematical problems associated with the subjects dealt with are relatively simple so that readers with limited mathematical knowledge will be able to understand the discussed relations.

Pursuing the intent of the TECHNICAL FUNDAMENTALS series, the publishers have thought it to be natural to publish "Electrical Engineering Fundamentals" in two handy volumes. Each volume contains two main parts; the first volume dealing with "Theoretical Fundamentals" and "Introduction into the Measurement of Electric Quantities". The second volume contains the parts dealing with "Electric Power Engineering" and "Electric Information Techniques". Such a division seemed to be reasonable in order to comply with the modern trends in the exposition of electrical engineering.

"Electrical Engineering Fundamentals" is designed as a textbook treating the scientific basis of electrotechnology in detail and outlining the essential aspects of branches of this field. From this follows that this book cannot be devoted to the training of people in a particular trade in electrical engineering. Thus, this book is intended for readers who, besides information about specific subjects, wish to obtain a general view of the whole field of electrotechnology. This will also help readers to understand, readily and with ease, more advanced problems of this science.

# TABLE OF CONTENTS

|                                                                |           |
|----------------------------------------------------------------|-----------|
| <b>A. PHYSICOTECHNICAL FUNDAMENTALS</b>                        | <b>13</b> |
| <b>I. Effects of electric current</b>                          | <b>15</b> |
| 1. Thermal effect of electric current                          | 15        |
| 2. Luminous effect of electric current                         | 16        |
| 3. Magnetic effect of electric current                         | 17        |
| 4. Chemical effect of electric current                         | 17        |
| 5. Energetic aspects of the effects of electric current        | 17        |
| <b>II. On the essence of electricity</b>                       | <b>19</b> |
| <b>III. Electric charges</b>                                   | <b>22</b> |
| 1. Stationary electric charges                                 | 22        |
| On the theory of electric charge phenomena                     | 22        |
| Representations of electric charges                            | 23        |
| Instruments for indicating and measuring electric charges      | 26        |
| Properties of electric charges                                 | 28        |
| 2. Moving electric charges                                     | 31        |
| Electric current                                               | 31        |
| Mechanism of current conduction in metals                      | 32        |
| The current circuit                                            | 33        |
| <b>IV. Introduction into fundamental electrical quantities</b> | <b>36</b> |
| 1. Current intensity                                           | 37        |
| On the definition of the term current intensity                | 37        |
| The unit of current intensity                                  | 38        |
| Possibilities of evaluating the unit of current intensity      | 38        |
| 2. Quantity of electricity                                     | 40        |
| On the definition of the term quantity of electricity          | 40        |
| Unit of quantity of electricity                                | 41        |
| 3. The volt                                                    | 41        |
| On the definition of the term voltage                          | 41        |



