PREFACE TO VOLUME II

This volume forms a companion to, and is, in fact, a continuation of Volume I. There is no definite point of division between the two volumes and this treatise was divided into two sections solely to make it less cumbersome and more convenient for reference.

The treatments of many of the subjects are new and some of the formulæ have never previously been published. Like Volume I, this book is founded on experience and accepted practice, and is in no wise an academic treatise.

The fundamentals of electric circuits, discussed from a physical instead of a mathematical standpoint, have been included after careful consideration, in the belief and expectation that this portion of the text will be useful and convenient for engineers who already understand the principles of electrical circuits and alternating currents. The author is glad to be enabled to include Mr. H. B. Dwight's chart for the solution of transmission line problems, as it constitutes an admirable method of quick computation and saves both time and labor.

With the generally accepted practice of using steel towers for transmission lines, the author is compelled to take issue. The economical reasons for supporting transmission lines on wood or concrete poles in preference to steel towers seem clear and unescapable. That the short discussion on this subject will turn the tide of conventional design from a practice which seems almost universal, is not to be expected and, undoubtedly, the use of steel towers will still continue. For the use of such engineers as prefer conventionality to economy, a complete discussion of steel towers is included.

Much labor has been expended in an attempt to make all mathematical discussions clear and simple. Wherever equations are given, the significance of the symbols used will be found in close proximity to the equation.

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Also, the assistance of Mr. F. G. Switzer, who furnished much of the material for the chapters on Generators and Transformers, and of Mr. J. B. Shelby, who supplied many of the data for the chapter on Switchboards, is here acknowledged. Certain of the manufacturing companies have supplied many helpful data and cuts, and their names are mentioned in the text in connection with the descriptions of their apparatus and devices.

LAMAR LYNDON.

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