A HANDBOOK ON REINFORCED CONCRETE FOR ARCHITECTS, ENGINEERS, AND CONTRACTORS

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649214556

A handbook on reinforced concrete for architects, engineers, and contractors by F. D. Warren

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

www.triestepublishing.com

F. D. WARREN

A HANDBOOK ON REINFORCED CONCRETE FOR ARCHITECTS, ENGINEERS, AND CONTRACTORS

Trieste

A HANDBOOK

ON

REINFORCED CONCRETE

FOR ARCHITECTS ENGINEERS, AND CONTRACTORS

BY

F. D. WARREN

MASSACHUSETTS INSTITUTE TECHNOLOGY, 1900

NEW YORK

D. VAN NOSTRAND COMPANY

1906

Stanhope Press
F. H. GILSON COMPANY
BOSTON, U.S.A.

PREFACE.

In preparing this volume, I have endeavored to produce a reference handbook that would be particularly adapted to the wants of architects, engineers, and contractors. Appreciating the value of a reference book to a designer in any of these branches, and especially when business methods and competition demand an economy of time, such a choice in preference to a text-book, resulted. All due care has been exercised to avoid conflicts with data compiled in the many valuable text-books on the subject.

It was purposed to produce a work treating upon a general form of design rather than upon any one particular or patented system, but to which any of the latter may be applied. The treatment of the many phases entering the design has been carried out along well-known formulæ based upon the theory of elasticity, but modified by the usual assumptions, such as the "conservation of planes" and "Hookes' Law," and not upon empirical formulæ based upon experiments. Attention should be called to the fact that before applying the theory of elasticity to any particular part of the design, a sufficient number of tests were carried out along this basis

to approve it, and determine the coefficients and constants.

The book is divided into four parts: Part I gives a general but concise résumé of the subject from a practical standpoint, bringing out some of the difficulties met with in practice, and suggesting remedies. Under Part II is compiled a series of tests justifying the use of various constants and coefficients in preparing the tables under Part III, as well as bearing out the theory of elasticity. Part III contains a series of tables from which it is hoped the designer may obtain all necessary information to meet the more common cases in practice. It was not intended to cover the more intricate designs, as this is a feature that requires considerable thought and time, both of which may be profitably applied. Part IV treats of the design of trussed roofs from a practical standpoint.

Finally, if this volume will tend to do away with the use of some of the "empirical formulæ" and "rule of thumb" methods of designing reinforced concrete structures, and tend to concentrate all toward a standard and universal system, as well as remove some of the prejudicial influences at work tending to demerit its worth because of unfamiliarity with its design, it will have accomplished its purpose in the mind of the writer.

CONTENTS.

PART I.

PART II.

PART III.

PART IV.