

**STRUCTURAL MECHANICS;
COMPRISING THE STRENGTH AND
RESISTANCE OF MATERIALS AND
ELEMENTS OF STRUCTURAL DESIGN,
WITH EXAMPLES AND PROBLEMS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649714704

Structural Mechanics; Comprising the Strength and Resistance of Materials and Elements of Structural Design, with Examples and Problems by Charles E. Greene & A. E. Greene

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CHARLES E. GREENE & A. E. GREENE

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Comprising the Strength and Resistance of Materials and Elements of Structural Design. With Examples and Problems. By the late Charles E. Greene, A.M., C.E. New Edition, Revised and Enlarged by A. E. Greene. 8vo, viii + 344 pages, 99 figures. \$2.50 net.

STRUCTURAL MECHANICS

COMPRISING THE

STRENGTH AND RESISTANCE OF MATERIALS AND
ELEMENTS OF STRUCTURAL DESIGN

WITH EXAMPLES AND PROBLEMS

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SECOND EDITION

FIRST THOUSAND

NEW YORK
JOHN WILEY & SONS
LONDON: CHAPMAN & HALL, LIMITED

1905

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ROBERT DRUMMOND, PRINTER, NEW YORK

Eng. lib
with
Dr. James H. Maxwell
3-1-1934
add. ed

PREFACE.

THE author, in teaching for many years the subjects embraced in the following pages, has found it advantageous to take at first but a portion of what is included in the several chapters, and, after a general survey of the field, to return and extend the investigation more in detail. Some of the sections, therefore, are not leaded and can be omitted at first reading. A few of the special investigations may become of interest only when the problems to which they relate occur in actual practice.

It is hoped that this book will be serviceable after the classroom work is concluded, and reference is facilitated by a more compact arrangement of the several matters than the course suggested above would give. The attempt has been made to deal with practicable cases, and the examples for the most part are shaped with that end in view. A full index will enable one to find any desired topic.

The treatment of the subject of internal stress is largely graphical. All the constructions are simple, and the results, besides being useful in themselves, shed much light on various problems. The time devoted to a careful study of the chapter in question will be well expended.

The notation is practically uniform throughout the book, and is that used by several standard authors. Forces and moments are expressed by capital letters, and unit loads and stresses by small letters. The coordinate x is measured along the length of a piece, the coordinate y in the direction of variation of stress

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in a section, and z is the line of no variation of stress, that is, the line parallel to the moment axis.

One who has mastered the subjects discussed here can use the current formulas, the pocket-book rules, and tables, not blindly, but with discrimination, and ought to be prepared to design intelligently.

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