

An Introduction

DESIGN OF TIMBER STRUCTURES

by

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Spon

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PREFACE

TIMBER has the unique distinction of being a potentially inexhaustible source of structural material: it was one of the first materials to be used for construction and, being a crop, will probably be one of the last. Because of its antiquity, an extensive empirical technique was developed long before science and mathematics had provided a theory for design, a circumstance which to some extent explains why timber not only became, but tended to remain, the material of the craftsman rather than of the mathematician.

Modern timber mechanics is a subject still in its infancy, being at most a few decades old, and this book has been written in an attempt to provide an introduction to a study of the information put at the disposal of the designer by research institutions in this country and abroad. It is hoped that the book will interest engineers who know little about timber, timber men who know little about engineering, and students who wish to learn something of both. An introductory textbook of this kind necessarily contains much that will be elementary to many readers; for such it is hoped that the bibliography will provide ample material for further study.

My grateful acknowledgements are due to the works referred to in the bibliography, to friends and colleagues in the timber trade and the engineering profession, and in particular to the many helpful discussions with members of the staff of the Forest Products Research Laboratory at Princes Risborough.

While I am responsible for any errors that remain, I wish to express my gratitude to Dr. H. E. Desch and Mr. B. Alwyn Jay for their invaluable assistance in checking Chapters 1 and 2. For permission to use certain of the photographs and diagrams my thanks are due to the Forest Products Laboratory of the U.S. Department of Agriculture and the Douglas Fir Plywood Association, to the British Standards Institution, and to Messrs. MacAndrews & Forbes Ltd. for information on Timber Connectors. Figures for which Crown Copyright is reserved were prepared at the Forest Products Research Laboratory,

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