

**A HANDBOOK OF  
PRACTICAL  
SHIPBUILDING: WITH  
A GLOSSARY OF TERMS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649041145

A Handbook of Practical Shipbuilding: With a Glossary of Terms by J. D. MacBride

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A HANDBOOK  
OF  
PRACTICAL SHIPBUILDING  
WITH  
A GLOSSARY OF TERMS

BY  
J. D. MacBRIDE  
SUPERINTENDENT IN HULL CONSTRUCTION  
HOG ISLAND SHIPYARDS  
*(American International Shipbuilding Corporation)*

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**156 ILLUSTRATIONS, 2 FOLDING PLATES**

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NEW YORK  
D. VAN NOSTRAND COMPANY  
25 PARK PLACE  
1918

VM 145  
M3

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NO. 145  
SERIALS

PRESS OF  
BRALFORTH & CO.  
BOOK MANUFACTURERS  
BROOKLYN, N. Y.

## PREFACE

THIS handbook on the practical construction of a modern standard cargo steamer has been written in answer to some of the many questions which from time to time have been asked by men who have been working under the supervision of the writer, and is intended to fill the need for a guide to the new men starting in shipyard work.

During many years' experience in shipyards on all types of marine construction from the smallest of torpedo boats of years ago to the mighty war vessels and merchant ships of to-day the writer has been associated with the men who are to-day supervising the wonderful shipbuilding program on which this country is engaged, and he has endeavored to embody the results of this more than twenty years' experience in the book.

In the present struggle on land and sea, when everyone must use all his might, this manual of the necessary steps in fabricating and assembling of vessels has been prepared with the hope that it will prove a help to some of the many thousand men who must come into this industry from other trades.

Team work is necessary in all lines, sports and commercial enterprises alike, but in none is it more essential than in an enterprise where so many different trades are

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all working together, and the results of their labor must be co-ordinated to effect a satisfactory conclusion.

The riveters must follow the reamers and the reamers must follow the bolters-up, etc., therefore, it is necessary that all the men working on the ship should have an intelligent understanding of the general plan.

J. D. MACBRIDE.

November, 1918.



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# PRACTICAL SHIPBUILDING

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## CHAPTER I

### **Shipyard Organization**

The shipbuilding business is like any other in that its executive and financial departments are separate from the manufacturing or fabricating branches of the organization. As this volume is not concerned with the Economics of Shipbuilding, but with ship construction, we need not burden ourselves with descriptions of the duties of officials like the President, Treasurer, etc., whose functions do not bring them directly in touch with the actual work of putting a ship together.

In a modern shipyard the General Manager has charge of both Hull and Engine Departments, but he is the only connecting link, the two branches working quite independently of one another.

The Engine Department has a drafting room in which the designs and all detail drawings for use in the yard are made. Much of the work is made up of castings which are shipped in from outside firms according to plans furnished them and the shipyard is interested in making the rough casting over into a finished product ready for in-