

Cargo Access Equipment for Merchant Ships

Cargo Access Equipment for Merchant Ships

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Foreword

As President of International MacGregor I am deeply indebted to the authors of this excellent book for the very considerable amount of work and scholarship it contains. It is the first authoritative work on cargo access equipment to be published and I am sure that it will be greatly welcomed by the Marine Industries.

You will see from the authors' preface that the book was commissioned by the Henri Kummerman Foundation which was established in 1976 to assist and promote internationally research and development in the field of marine transportation and cargo handling.

The Foundation has already made a number of grants to universities and to students but this book is its first major contribution to the furthering of education in the Marine Industries. For me, it is a rewarding fruition of a long involvement in maritime affairs.

However, much requires to be done in the future and the Foundation can only succeed if it is encouraged and assisted by people who are forward thinking. I should be pleased therefore to hear from any readers of this book if they feel that they can help or be helped within the aims and objectives of the Foundation.

28 Chemin du Pommier,
1218 Geneva,
Switzerland.
May 1978

HENRI KUMMERMAN

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Preface

Shipboard cargo access equipment includes hatch covers, bow, stern and side doors, ramps, elevators and movable decks, all of which facilitate loading and discharging operations. Such equipment can account for 10% of a ship's initial cost. Worldwide some \$400 million is spent annually on equipping over 1000 ships. Yet, despite this importance, enhanced by the rapidly developing field of roll-on/roll-off (Ro-Ro) shipping, no comprehensive publication has ever been produced on cargo access equipment.

Recognizing the need for such a book, the President of the International MacGregor Organization, Henri Kummerman, through his Foundation commissioned the School of Marine Technology at the University of Newcastle upon Tyne to prepare a definitive reference work.

The MacGregor Organization is the world's largest manufacturer of cargo access equipment, and so widespread is the use of its products that the description 'MacGregor hatch' is often loosely used to describe any type of mechanical steel hatch cover.

In this book we have tried to cover all aspects of cargo access, including design requirements, description of principal types of equipment, economics of selection and operation, and performance in service. For those already familiar with cargo access equipment, we have included useful reference material such as weights and stowage requirements; while for those new to the subject, we have included sufficient background material on ship types and cargo handling for developments such as Ro-Ro shipping to be fully appreciated. The book does not confine itself to MacGregor products, but draws its material from all over the world and includes examples of the work of other important companies in the field such as Navire Cargo Gear and Kvaerner Brug.

The authors are not specialists in the field of cargo access equipment, but draw their experience from ship design, ship operation and mechanical engineering backgrounds. We have therefore greatly appreciated the cooperation of staff within the MacGregor Organization, especially those in the London, Whitley Bay and Paris offices, who have provided much of the

basic information and expert guidance essential to such an undertaking. We are also grateful to the many people in the shipowning, shipbuilding, ship repairing, port operations and cargo handling equipment industries who have helped us, as indicated in the acknowledgements.

We hope that the book will be useful not only to practitioners in the marine industries but also to institutions concerned with the teaching of marine technology – universities, polytechnics and nautical colleges – and also to the staffs of marine equipment companies, both as an introduction for newcomers and as a reference book for the more experienced.

We pondered the most suitable measurement units to use – SI, metric or imperial – but felt that the book's value to practical people around the world would be increased by the general use of metric units, e.g. for stresses, but with occasional use of imperial units where these have a special significance, e.g. for container sizes, or when they are still commonly employed, e.g. for drafts or stowage factors.

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