1. Record Nr. UNISALENTO991003222939707536

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Titolo	Ship design for efficiency and economy [e-book] / H. Schneekluth and V. Bertram
Pubbl/distr/stampa	Oxford ; Boston : Butterworth-Heinemann, 1998
ISBN	9780750641333 0750641339
Edizione	[2nd ed.]
Descrizione fisica	220 p. : ill. ; 24 cm
Altri autori (Persone)	Bertram, Volker
Disciplina	623.81
Soggetti	Naval architecture Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	Main dimensions and main ratios: The ship's length; Ship's width and stability; Depth, draught and freeboard; Block coefficient and prismatic coefficient; Midship section area coefficient midship section design; Waterplane area coefficient; The design equation. Lines design; Statement of the problem; Shape of section area curve; Bow and forward section forms; Bulbous bow; Stern forms; Conventional propeller arrangement; Problems of design in broad, shallow-draught ships; Propeller clearances; The conventional method of lines design; Lines design using distortion of existing forms; Computational Fluid Dynamics for hull design. Optimization in Design: Introduction to methodology of optimization; Discussion of some important parameters; Special cases of optimization; Developments of the 1980s and 1990s. Some unconventional propulsion arrangements: Rudder propeller; Overlapping propellers; Contra-rotating propellers; Controllable-pitch propellers; Kort nozzles; Further devices to improve propulsion. Computation of weights and centres of mass: Steel Weight; Weight of 'equipment and outfit' (E&O); Weight of engine plant; Weight margin. Ship propulsion: Interaction between ship and propeller; Power prognosis using the admiralty formula; Ship resistance under trial conditions; Additional resistance under service conditions. Appendix: Stability regulations

Sommario/riassunto

The previous edition of Ship Design for Efficiency and Economy was published as a Butterworth's marine engineering title. It has now been completely revised and updated by Schneekluth and Bertram. This book gives advice to students and naval architects on how to design ships - in particular with regard to hull design. The previous edition of this book was published in 1987. Since then, there have been numerous important developments in this area and the new additions to this book reflect these changes. Chapter 3 has been completely rewritten with added information on methodology of optimization, optimization shells and concept exploration methods. There is also a new sub-chapter on Computational Fluid Dynamics (CFD) for ship-hull design. Plus, a new method to predict ship resistance based on the evaluation of modern ship hull design will be detailed. The emphasis of the this book is on design for operational economy. The material is directly usable not only in practice, in the design office and by shipowners, but also by students at both undergraduate and postgraduate levels