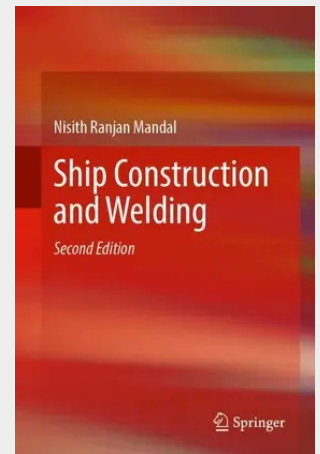


Ship Construction and Welding

This thoroughly revised and expanded edition presents a comprehensive guide to the principles and practices of modern ship construction, providing readers with an integrated understanding of the complete shipbuilding process. From ship classification and structural design to fabrication, welding, quality assurance, and accuracy control, the book combines engineering fundamentals with practical shipbuilding applications. The new edition has been substantially enhanced with expanded coverage of inland vessels, service vessels, and tugboats, along with detailed discussions on structural components, material selection, corrosion protection, plate and section forming, and the line-heating process. Particular emphasis is placed on welding, a critical aspect of ship construction, with comprehensive treatment of welding processes, welding-induced residual stresses, distortion mechanisms, and practical techniques for distortion control to ensure structural integrity and dimensional accuracy. A significant addition is a dedicated section on underwater welding, covering dry and wet welding methods, equipment, operational procedures, and essential safety practices. The book also presents an expanded discussion on welding defects, particularly crack formation, and introduces a comprehensive chapter on Quality Assurance, including standards for fusion-welded joints, assessment of imperfections, fatigue-related quality considerations, and methods of accuracy control. Organized in a logical sequence and supported by numerous illustrations, engineering drawings, and practical examples, the book effectively bridges theory and industrial practice. It serves as an invaluable reference for students, researchers, educators, naval architects, marine and welding engineers, shipyard professionals, and others involved in the design, construction, repair, and maintenance of ships.

This thoroughly revised and expanded edition presents a comprehensive guide to the principles and practices of modern ship construction, providing readers with an integrated understanding of the complete shipbuilding process. From ship classification and structural design to fabrication, welding, quality assurance, and accuracy control, the book combines engineering fundamentals with practical shipbuilding applications. The new edition has been substantially enhanced with expanded coverage of inland vessels, service vessels, and tugboats, along with detailed discussions on structural components, material selection, corrosion protection, plate and section forming, and the line-heating process. Particular emphasis is placed on welding, a critical aspect of ship construction, with comprehensive treatment of welding processes, welding-induced residual stresses, distortion mechanisms, and practical techniques for distortion control to ensure structural integrity and dimensional accuracy. A significant addition is a dedicated section on underwater welding, covering dry and wet welding methods, equipment, operational procedures, and essential safety practices. The book also presents an expanded discussion on welding defects, particularly crack formation, and introduces a comprehensive chapter on Quality Assurance, including standards for fusion-welded joints, assessment of imperfections, fatigue-related quality considerations, and methods of accuracy control. Organized in a logical sequence and supported by numerous illustrations, engineering drawings, and practical examples, the book effectively bridges theory and industrial practice. It serves as an invaluable reference for students, researchers, educators, naval architects, marine and welding engineers, shipyard professionals, and others involved in the design, construction, repair, and maintenance of ships.



149,79 €

139,99 € (zzgl. MwSt.)

vorbestellbar, Erscheinungstermin ca. Januar 2027

Artikelnummer: 9789819259557

Medium: Buch

ISBN: 978-981-9259-55-7

Verlag: Springer

Erscheinungstermin: 31.01.2027

Sprache(n): Englisch

Auflage: 2. Auflage 2027

Produktform: Gebunden

Seiten: 358

Format (B x H): 155 x 235 mm

