1. Record Nr. UNINA9910495170203321 Autore Zhou Hong Titolo FE computation on accuracy fabrication of ship and offshore structure based on processing mechanics / / Hong Zhou, Jiangchao Wang Singapore:,: Springer,, [2021] Pubbl/distr/stampa ©2021 **ISBN** 981-16-4087-4 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (XI, 224 p. 231 illus., 206 illus. in color.) Disciplina 671.52 Soggetti Welding - Mathematical models Shipbuilding Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Background and Introduction -- Fundament of FE Computation --Investigation on Thermodynamic Behavior during Thick Plate Cutting of High Strength Steel -- Hull Plate Bending with Induction Heating --Out-of-plane Welding Distortion Prediction of Typical Welded Joints and Ship Structures -- Application of Computational Welding Mechanics for Accurate Fabrication of Ship Structure -- Application of Accurate Fabrication of Offshore Structure. This book provides insight on processing mechanics during ship and Sommario/riassunto offshore structure, and researchers, scientists, and engineers in the field of manufacturing process mechanics can benefit from the book. This book is written by subject experts based on the recent research results in FE computation on accuracy fabrication of ship and offshore structures based on processing mechanics. In order to deal with actual engineering problems during construction of ship and offshore structure, it proposes advanced computational approaches such as thermal elastic-plastic and elastic FE computations and employed to examine physical behavior and clarifies generation mechanism of mechanical response. As such, this book provides valuable knowledge,

useful methods, and practical algorithms that can be considered in

manufacturing process mechanics.