Record Nr. UNINA9910299725103321 Autore Song Yuntao Titolo Tokamak engineering mechanics / / Yuntao Song [and others] Pubbl/distr/stampa Heidelberg [Germany]:,: Springer,, 2014 **ISBN** 3-642-39575-9 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (x, 241 pages): illustrations (some color) Mechanical Engineering Series, , 0941-5122 Collana 539.764 Disciplina **Tokamaks** Soggetti Mechanical engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "ISSN: 0941-5122." Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction -- Mechanical basics -- Electromagnetic, structural and thermal analyses of the vacuum vessel -- In-vessel components --Superconducting Magnet -- Thermal Shield -- Cryostat. Sommario/riassunto Tokamak Engineering Mechanics offers concise and thorough coverage of engineering mechanics theory and application for tokamaks, and the material is reinforced by numerous examples. Chapter topics include general principles, static mechanics, dynamic mechanics, thermal fluid mechanics and multiphysics structural mechanics of tokamak structure analysis. The theoretical principle of the design and the methods of the analysis for various components and load conditions are presented, while the latest engineering technologies are also introduced. The book will provide readers involved in the study of mechanical/fusion engineering with a general understanding of tokamak engineering mechanics. Yuntao Song is Head of the Tokamak Design Division at

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