Record Nr. UNINA9910299474103321 Autore Vullo Vincenzo Titolo Circular Cylinders and Pressure Vessels: Stress Analysis and Design / / by Vincenzo Vullo Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2014 **ISBN** 3-319-00690-8 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (409 p.) Collana Springer Series in Solid and Structural Mechanics, , 2195-3511;; 3 Disciplina 621.82 Soggetti Engineering design Machinery Mechanics Mechanics, Applied **Engineering Design** Machinery and Machine Elements Solid Mechanics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto From the Contents: Thin-Walled Circular Cylinders under Internal/External Pressure and Stressed in the Linear Elastic Field --Instability of Thin-Walled Circular Cylinders under External Pressure --Other Types of Instability in Thin-Walled Circular Cylinders -- Thick-Walled Circular Cylinders under Internal/External Pressure Stressed in the Elastic Field. Sommario/riassunto This book provides comprehensive coverage of stress and strain analysis of circular cylinders and pressure vessels, one of the classic topics of machine design theory and methodology. Whereas other books offer only a partial treatment of the subject and frequently consider stress analysis solely in the elastic field, Circular Cylinders and Pressure Vessels broadens the design horizons, analyzing theoretically what happens at pressures that stress the material beyond its yield point and at thermal loads that give rise to creep. The consideration of

both traditional and advanced topics ensures that the book will be of

value for a broad spectrum of readers, including students in

postgraduate, and doctoral programs and established researchers and design engineers. The relations provided will serve as a sound basis for the design of products that are safe, technologically sophisticated, and compliant with standards and codes and for the development of innovative applications.