1. Record Nr.   UNINA9910815048603321

   Autore   Sadd Martin H (Martin Howard)

   Titolo   Elasticity : theory, applications, and numerics / / Martin H. Sadd

   Pubbl/distr/stampa Amsterdam : , : Elsevier, , [2014]
                     ©2014

   ISBN   0-12-410432-0

   Edizione   [Third edition.]

   Descrizione fisica 1 online resource (xvii, 582 pages) : illustrations

   Disciplina   531/.382

   Soggetti   Elasticity

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Monografia

   Note generali   Bibliographic Level Mode of Issuance: Monograph

   Nota di bibliografia Includes bibliographical references and index.

   Nota di contenuto 1. Mathematical preliminaries -- 2. Deformation : displacements and strains -- 3. Stress and equilibrium -- 4. Material behavior : linear elastic solids -- 5. Formulation and solution strategies -- 6. Strain energy and related principles -- 7. Two-dimensional formulation -- 8. Two-dimensional problem solution -- 9. Extension, torsion, and flexure of elastic cylinders -- 10. Complex variable methods -- 11. Anisotropic elasticity -- 12. Thermoelasticity -- 13. Displacement potentials and stress functions: applications to three dimensional problems -- 14. Nonhomogeneous elasticity -- 15. Micromechanics applications -- 16. Numerical finite and boundary element methods -- App. A. Basic field equations in Cartesian, cylindrical and spherical coordinates -- App. B. Transformation of field variables between Cartesian, cylindrical, and spherical components -- App. C. MATLAB primer -- App. D. Review of Mechanics of Materials.