

|    |                         |   |
|----|-------------------------|---|
| 1. | Record Nr.              | UNINA9910157681903321   |
|    | Autore                  | Osle Rafael Domingo   |
|    | Titolo                  | ¿Que es el Derecho global? // Rafael Domingo Osle   |
|    | Pubbl/distr/stampa      | [Place of publication not identified] : , : Fondo Editorial, , 2016<br>©2016  |
|    | ISBN                    | 9972-45-313-8   |
|    | Edizione                | [3.a edicion.]  |
|    | Descrizione fisica      | 1 online resource (222 pages)   |
|    | Disciplina              | 341.0946  |
|    | Soggetti                | International law - Spain   |
|    | Lingua di pubblicazione | Spagnolo  |
|    | Formato                 | Materiale a stampa  |
|    | Livello bibliografico   | Monografia  |
| 2. | Record Nr.              | UNINA9911019679103321   |
|    | Autore                  | Pilkey Walter D   |
|    | Titolo                  | Analysis and design of elastic beams : computational methods //<br>Walter D. Pilkey   |
|    | Pubbl/distr/stampa      | New York, : Wiley, c2002  |
|    | ISBN                    | 9786610362929<br>9781280362927<br>1280362928<br>9780470355725<br>0470355727<br>9780470172667<br>0470172665<br>9780471423218<br>0471423211 |
|    | Descrizione fisica      | 1 online resource (479 p.)  |
|    | Disciplina              | 624.1/7723  |
|    | Soggetti                | Girders<br>Thin-walled structures   |

|                         |  |
|-------------------------|--|
| Lingua di pubblicazione | Inglese  |
| Formato                 | Materiale a stampa   |
| Livello bibliografico   | Monografia   |
| Note generali           | Description based upon print version of record.  |
| Nota di bibliografia    | Includes bibliographical references and index.   |
| Nota di contenuto       | <p>ANALYSIS AND DESIGN OF ELASTIC BEAMS; CONTENTS; PREFACE; 1 BEAMS IN BENDING; 1.1 Review of Linear Elasticity; 1.1.1 Kinematical Strain-Displacement Equations; 1.1.2 Material Law; 1.1.3 Equations of Equilibrium; 1.1.4 Surface Forces and Boundary Conditions; 1.1.5 Other Forms of the Governing Differential Equations; 1.2 Bending Stresses in a Beam in Pure Bending; 1.3 Principal Bending Axes; 1.4 Axial Loads; 1.5 Elasticity Solution for Pure Bending; References; 2 BEAM ELEMENTS; 2.1 Fundamental Engineering Theory Equations for a Straight Beam; 2.1.1 Geometry of Deformation 2.1.2 Force-Deformation Relations 2.1.3 Equations of Equilibrium; 2.1.4 Boundary Conditions; 2.1.5 Displacement Form of the Governing Differential Equations; 2.1.6 Mixed Form of the Governing Differential Equations; 2.1.7 Principle of Virtual Work: Integral Form of the Governing Equations; 2.2 Response of Beam Elements; 2.2.1 First-Order Form of the Governing Equations; 2.2.2 Sign Conventions for Beams; 2.2.3 Definition of Stiffness Matrices; 2.2.4 Determination of Stiffness Matrices; 2.2.5 Development of an Element by Mapping from a Reference Element; 2.3 Mass Matrices for Dynamic Problems 2.3.1 Consistent Mass Matrices 2.3.2 Lumped Mass Matrices; 2.3.3 Exact Mass and Dynamic Stiffness Matrices; 2.4 Geometric Stiffness Matrices for Beams with Axial Loading; 2.5 Thermoelastic Analysis; References; 3 BEAM SYSTEMS; 3.1 Structural Systems; 3.1.1 Coordinate System and Degrees of Freedom; 3.1.2 Transformation of Forces and Displacements; 3.2 Displacement Method of Analysis; 3.2.1 Direct Stiffness Method; 3.2.2 Characteristics of the Displacement Method; 3.3 Transfer Matrix Method of Analysis; 3.4 Dynamic Responses; 3.4.1 Free Vibration Analysis; 3.4.2 Forced Response 3.5 Stability Analysis 3.6 Analyses Using Exact Stiffness Matrices; References; 4 FINITE ELEMENTS FOR CROSS-SECTIONAL ANALYSIS; 4.1 Shape Functions; 4.2 Transformation of Derivatives and Integrals; 4.3 Integrals; 4.4 Cross-Sectional Properties; 4.5 Modulus-Weighted Properties; References; 5 SAINT-VENANT TORSION; 5.1 Fundamentals of Saint-Venant Torsion; 5.1.1 Force Formulation; 5.1.2 Membrane Analogy; 5.2 Classical Formulas for Thin-Walled Cross Sections; 5.2.1 Open Sections; 5.2.2 Closed Sections, Hollow Shafts; 5.3 Composite Cross Sections; 5.4 Stiffness Matrices 5.4.1 Principle of Virtual Work 5.4.2 Weighted Residual Methods; 5.4.3 Isoparametric Elements; 5.5 Assembly of System Matrices; 5.6 Calculation of the Torsional Constant and Stresses; 5.7 Alternative Computational Methods; 5.7.1 Boundary Integral Equations; 5.7.2 Boundary Element Method; 5.7.3 Direct Integration of the Integral Equations; References; 6 BEAMS UNDER TRANSVERSE SHEAR LOADS; 6.1 Transverse Shear Stresses in a Prismatic Beam; 6.1.1 Approximate Shear Stress Formulas Based on Engineering Beam Theory; 6.1.2 Theory of Elasticity Solution; 6.1.3 Composite Cross Section 6.1.4 Finite Element Solution Formulation</p> |
| Sommario/riassunto      | <p>State-of-the-art coverage of modern computational methods for the analysis and design of beams</p> <p>Analysis and Design of Elastic Beams presents computer models and applications related to thin-walled beams such as those used in mechanical and aerospace designs, where thin, lightweight structures with high strength are needed. This book</p>   |

will enable readers to compute the cross-sectional properties of individual beams with arbitrary cross-sectional shapes, to apply a general-purpose computer analysis of a complete structure to determine the forces and moments in the individual members, and to

---