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4.2 Deflection of rigid frames; (a) Virtual work method; (b) Conjugate beam method; 4.3 Deflection of pin-jointed frames; Supplementary problems; Chapter 5 Influence lines; Notation; 5.1 Introduction; 5.2 Construction of influence lines; 5.3 Maximum effects; (a) Single concentrated load; (b) Uniformly distributed load; (c) Train of wheel loads; (d) Envelope of maximum effects; 5.4 Pin-jointed truss; (a) Stringers and cross beams; (b) Influence lines for a Warren truss; (c) Influence lines for a Pratt truss
(d) Influence lines for a bowstring truss5.5 Three-hinged arch; Supplementary problems; Chapter 6 Space frames; Notation; 6.1 Introduction; 6.2 Conditions of equilibrium; 6.3 Pin-jointed space frames; 6.4 Member forces; Supplementary problems; Answers to supplementary problems part 1; Chapter 1; Chapter 2; Chapter 3; Chapter 4; Chapter 5; Chapter 6; Part Two: Analysis of Indeterminate Structures; Chapter 1 Statical indeterminacy; Notation; 1.1 Introduction; 1.2 Indeterminacy in pin-jointed frames; 1.3 Indeterminacy in rigid frames; 1.4 Indeterminacy in rigid frames with internal hinges
(a) Hinges within a member(b) Hinges at a joint; Supplementary problems; References; Chapter 2 Virtual work methods; Notation; 2.1 Introduction; 2.2 Virtual work relationships; 2.3 Sign convention; 2.4 Illustrative examples; 2.5 Volume integration; 2.6 Solution of indeterminate structures; Supplementary problems; References; Chapter 3 Indeterminate pin-jointed frames; Notation; 3.1 Introduction; 3.2 Frames one degree redundant; 3.3 Frames two degrees redundant; 3.4 Frames redundant externally; 3.5 Frames with axial forces and bending moments; 3.6 Two-hinged arch; 3.7 The tied arch
3.8 Spandrel braced arch

Sommario/riassunto

Structural Analysis Rules of Thumb provides a comprehensive review of the classical methods of structural analysis and also the recent advances in computer applications.  The prefect guide for the Professional Engineer's exam, Williams covers principles of structural analysis to advanced concepts.  Methods of analysis are presented in a concise and direct manner and the different methods of approach to a problem are illustrated by specific examples. In addition, the book include the clear and concise approach to the subject and the focus on the most direct solution to a problem.  Numerous work