1. Record Nr. UNINA9910841344903321

Autore	Rees D. W. A (David W. A.), <1947->
Titolo	Mechanics of optimal structural design [[electronic resource]] : minimum weight structures / / David W.A. Rees
Pubbl/distr/stampa	Chichester, West Sussex, U.K. ; ; Hoboken, : J. Wiley, 2009
ISBN	1-282-45662-8 9786612456626 0-470-74978-4 0-470-74781-1
Descrizione fisica	1 online resource (584 p.)
Disciplina	624.1771 693
Soggetti	Lightweight construction Structural optimization
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	Mechanics of Optimal Structural Design; Contents; Preface; Glossary of Terms; Key Symbols; Chapter 1 Compression of Slender Struts; 1.1 Introduction; 1.2 Failure Criteria; 1.3 Solid Cross-Sections; 1.4 Thin-Walled, Tubular Sections; 1.5 Thin-Walled, Open Sections; 1.6 Summary of Results; References; Exercises; Chapter 2 Compression of Wide Struts; 2.1 Introduction; 2.2 Failure Criteria; 2.3 Cellular Sections; 2.4 Open Sections; 2.5 Corrugated Sandwich Panel; 2.6 Summary of Results; References; Exercise; Chapter 3 Bending of Slender Beams; 3.1 Introduction; 3.2 Solid Cross-Sections 3.3 Thin-Walled, Tubular Sections3.4 Open Sections; 3.5 Summary of Results; References; Exercises; Chapter 4 Torsion of Bars and Tubes; 4.1 Introduction; 4.2 Solid Cross-Sections; 4.3 Thin-Walled, Open Sections; 4.4 Thin-Walled, Closed Tubes; 4.5 Multi-Cell Tubes; References; Exercises; Chapter 5 Shear of Solid Bars, Tubes and Thin Sections; 5.1 Introduction; 5.2 Bars of Solid Section; 5.3 Thin-Walled Open Sections; 5.4 Thin-Walled, Closed Tubes; 5.5 Concluding Remarks; References; Exercise; Chapter 6 Combined Shear and Torsion in Thin-Walled Sections; 6.1 Introduction

6.2 Thin-Walled, Open Sections6.3 Thin-Walled, Closed Tubes; 6.4 Concluding Remarks; References; Exercises; Chapter 7 Combined Shear and Bending in Idealised Sections; 7.1 Introduction; 7.2 Idealised Beam Sections; 7.3 Idealised Open Sections; 7.4 Idealised Closed Tubes; References; Exercises; Chapter 8 Shear in Stiffened Webs; 8.1 Introduction; 8.2 Castellations in Shear; 8.3 Corrugated Web; 8.4 Flat Web with Stiffeners; References; Exercises; Chapter 9 Frame Assemblies; 9.1 Introduction; 9.2 Double-Strut Assembly; 9.3 Multiple-Strut Assembly; 9.4 Cantilevered Framework
9.5 Tetrahedron Framework9.6 Cantilever Frame with Two Struts; 9.7 Cantilever Frame with One Strut; References; Exercises; Chapter 10 Simply Supported Beams and Cantilevers; 10.1 Introduction; 10.2 Variable Bending Moments; 10.3 Cantilever with End-Load; 10.4 Cantilever with Distributed Loading; 10.5 Simply Supported Beam with Central Load; 10.6 Simply Supported Beam with Uniformly Distributed Load; 10.7 Additional Failure Criteria; References; Exercises; Chapter 11 Optimum Cross-Sections for Beams; 11.1 Introduction; 11.2 Approaching Optimum Sections; 11.3 Generalised Optimum Sections
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12.10 Simply Supported Beam with Central-Concentrated and Distributed Loadings

Sommario/riassunto

In a global climate where engineers are increasingly under pressure to make the most of limited resources, there are huge potential financial and environmental benefits to be gained by designing for minimum weight. With Mechanics of Optimal Structural Design, David Rees brings the original approach of weight optimization to the existing structural design literature, providing a methodology for attaining minimum weight of a range of structures under their working loads. He addresses the current gap in education between formal structural design teaching at undergraduate level and the prac