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Screening: Applying attribute limitsRanking: Indices on charts; Documentation; 5.5 Computer-Aided Selection; 5.6 The Structural Index; 5.7 Summary and Conclusions; 5.8 Further Reading; 6. Case Studies: Materials Selection; 6.1 Introduction and Synopsis; 6.2 Materials for Oars; 6.3 Mirrors for Large Telescopes; 6.4 Materials for Table Legs; 6.5 Cost: Structural Materials for Buildings; 6.6 Materials for Flywheels; 6.7 Materials for Springs; 6.8 Elastic Hinges and Couplings; 6.9 Materials for Seals; 6.10 Deflection-limited Design with Brittle Polymers; 6.11 Safe Pressure Vessels
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Sommario/riassunto

Understanding materials, their properties and behavior is fundamental to engineering design, and a key application of materials science. Written for all students of engineering, materials science and design, this book describes the procedures for material selection in mechanical design in order to ensure that the most suitable materials for a given application are identified from the full range of materials and section shapes available. Extensively revised for this fourth edition, Materials Selection in Mechanical Design is recognized as one of the leading materials selection texts, an