

- I Fundamentals of Materials Science
- 1 Introduction to Materials Technology
- 2 Ferrous Metals
- 3 Nonferrous Metals
- 4 Heat Treatment
- 5 Polymers and Elastomers
- 6 Wood and Wood Products
- 7 Ceramics and Glass
- 8 Cement, Concrete, and Asphalt
- 9 Composites
- 10 Adhesives and Coatings
- 11 Fuels and Lubricants
- II Principles of Mechanical and Nondestructive Testing
- 12 Mechanical Behavior
- 13 Introduction to Materials Testing
- 14 Tensile Testing
- 15 Creep Testing
- 16 Compression Testing
- 17 Shear Testing
- 18 Bend or Flexure Testing
- 19 Hardness Testing
- 20 Impact Testing
- 21 Fatigue Testing
- 22 Nondestructive Testing
- Appendix A Sources of Further Information
- Appendix B Measurement and Property of Materials
- Appendix C Laboratory Exercises
- Appendix D Glossary of Selected Terms
- Appendix E Answers to Selected Questions and Problems