

SOLID MECHANICS



WILLIAM F. HOSFORD

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This is a textbook for courses in departments of Mechanical, Civil and Aeronautical Engineering commonly called strength of materials or mechanics of materials. The intent of this book is to provide a background in the mechanics of solids for students of mechanical engineering while limiting the information on why materials behave as they do. It is assumed that the students have already had courses covering materials science and basic statics. Much of the material is drawn from another book by the author, *Mechanical Behavior of Materials*. To make the text suitable for Mechanical Engineers, the chapters on slip, dislocations, twinning, residual stresses, and hardening mechanisms have been eliminated and the treatments in other chapters about ductility, viscoelasticity, creep, ceramics, and polymers have been simplified.

William Hosford is a Professor Emeritus of Materials Science at the University of Michigan. He is the author of numerous research and publications books, including *Materials for Engineers*; *Metal Forming* third edition (with Robert M. Caddell); *Materials Science: An Intermediate Text*; *Reporting Results* (with David C. Van Aken); *Mechanics of Crystals and Textured Polycrystals*; *Mechanical Metallurgy*; and *Wilderness Canoe Tripping*.

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CAMBRIDGE
UNIVERSITY PRESS

CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore,
São Paulo, Delhi, Dubai, Tokyo

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press, New York

www.cambridge.org

Information on this title: www.cambridge.org/9780521192293

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First published in print format 2010

ISBN-13 978-0-511-71247-0 eBook (NetLibrary)

ISBN-13 978-0-521-19229-3 Hardback

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Contents

| | |
|-----------------------------------|---------------|
| <i>Preface</i> | <i>page x</i> |
| 1 Stress and Strain | 1 |
| Introduction | 1 |
| Stress | 2 |
| Sign Convention | 3 |
| Transformation of Axes | 4 |
| Principal Stresses | 6 |
| Mohr's Stress Circles | 6 |
| Strains | 9 |
| Small Strains | 11 |
| Transformation of Axes | 12 |
| Mohr's Strain Circles | 14 |
| Force and Moment Balances | 15 |
| Common Boundary Conditions | 17 |
| Note | 18 |
| Problems | 18 |
| 2 Elasticity | 21 |
| Introduction | 21 |
| Isotropic Elasticity | 21 |
| Variation of Young's Modulus | 24 |
| Isotropic Thermal Expansion | 26 |
| Notes | 27 |
| Problems | 29 |
| 3 Mechanical Testing | 31 |
| Introduction | 31 |
| Tensile Testing | 31 |
| Ductility | 35 |
| True Stress and Strain | 37 |

| | |
|--|-----------|
| Temperature Rise | 38 |
| Compression Test | 38 |
| Plane-Strain Compression and Tension | 42 |
| Biaxial Tension (Hydraulic Bulge Test) | 43 |
| Torsion Test | 45 |
| Bend Tests | 47 |
| Hardness Tests | 49 |
| Notes | 52 |
| Problems | 53 |
| 4 Strain Hardening of Metals | 57 |
| Introduction | 57 |
| Mathematical Approximations | 57 |
| Power-Law Approximation | 59 |
| Necking | 59 |
| Work per Volume | 62 |
| Localization of Strain at Defects | 62 |
| Notes | 64 |
| Problems | 64 |
| 5 Plasticity Theory | 67 |
| Introduction | 67 |
| Yield Criteria | 67 |
| Tresca (maximum shear stress criterion) | 68 |
| Von Mises Criterion | 69 |
| Flow Rules | 71 |
| Principle of Normality | 73 |
| Effective Stress and Effective Strain | 74 |
| Other Isotropic Yield Criteria | 77 |
| Effect of Strain Hardening on the Yield Locus | 78 |
| Notes | 78 |
| Problems | 80 |
| 6 Strain-Rate and Temperature Dependence of Flow Stress | 84 |
| Introduction | 84 |
| Strain-Rate Dependence of Flow Stress | 84 |
| Superplasticity | 87 |
| Combined Strain and Strain-Rate Effects | 92 |
| Temperature Dependence | 93 |
| Combined Temperature and Strain-Rate Effects | 93 |
| Hot Working | 97 |
| Notes | 98 |
| Problems | 99 |

| | | |
|-----------|--|-----|
| 7 | Viscoelasticity | 102 |
| | Introduction | 102 |
| | Rheological Models | 102 |
| | Series Combination of a Spring and Dashpot | 103 |
| | Parallel Combination of Spring and Dashpot | 104 |
| | Combined Parallel-Series Model | 105 |
| | More Complex Models | 107 |
| | Damping | 107 |
| | Natural Decay | 108 |
| | Elastic Modulus – Relaxed vs. Unrelaxed | 109 |
| | Thermoelastic Effect | 110 |
| | Other Damping Mechanisms | 112 |
| | Notes | 113 |
| | Problems | 114 |
| 8 | Creep and Stress Rupture | 117 |
| | Introduction | 117 |
| | Creep Mechanisms | 117 |
| | Cavitation | 121 |
| | Rupture vs. Creep | 122 |
| | Extrapolation Schemes | 123 |
| | Notes | 126 |
| | Problems | 126 |
| 9 | Ductility and Fracture | 130 |
| | Introduction | 130 |
| | Ductile Fracture | 132 |
| | Void Failure Criterion | 136 |
| | Brittle Fracture | 136 |
| | Impact Energy | 137 |
| | Notes | 141 |
| | Problems | 142 |
| 10 | Fracture Mechanics | 143 |
| | Introduction | 143 |
| | Theoretical Fracture Strength | 143 |
| | Stress Concentration | 145 |
| | Griffith and Orowan Theories | 146 |
| | Fracture Modes | 147 |
| | Irwin’s Fracture Analysis | 148 |
| | Plastic Zone Size | 150 |
| | Thin Sheets | 152 |
| | Metallurgical Variables | 153 |

| | |
|---------------------------------------|------------|
| Fracture Mechanics in Design | 154 |
| Compact Tensile Specimens | 155 |
| The J -Integral | 156 |
| Notes | 158 |
| Problems | 158 |
| 11 Fatigue | 161 |
| Introduction | 161 |
| Surface Observations | 161 |
| Nomenclature | 163 |
| S-N Curves | 164 |
| Effect of Mean Stress | 166 |
| The Palmgren-Miner Rule | 168 |
| Stress Concentration | 169 |
| Surface Conditions | 171 |
| Design Estimates | 173 |
| Metallurgical Variables | 174 |
| Strains to Failure | 175 |
| Crack Propagation | 177 |
| Cyclic Stress-Strain Behavior | 180 |
| Temperature and Cycling Rate Effects | 181 |
| Fatigue Testing | 182 |
| Design Considerations | 182 |
| Notes | 183 |
| Problems | 184 |
| 12 Polymers and Ceramics | 187 |
| Introduction | 187 |
| Elasticity of Polymers | 187 |
| Glass Transition | 187 |
| Time Dependence of Properties | 189 |
| Rubber Elasticity | 190 |
| Yielding | 191 |
| Effect of Pressure | 194 |
| Crazing | 194 |
| Fracture | 195 |
| Ceramics | 195 |
| Weibull Analysis | 195 |
| Porosity | 196 |
| Fracture Toughness | 198 |
| Toughening of Ceramics | 199 |
| Glasses | 199 |
| Thermally Induced Stresses | 199 |
| Glassy Metals | 201 |