

CONTENTS

| | |
|--|-----------------|
| Preface | <i>page</i> vii |
| 1 An Overview of the History of Plasticity Theory | 1 |
| 2 Yielding | 6 |
| 3 Stress and Strain | 11 |
| 4 Isotropic Yield Criteria | 20 |
| 5 Bounding Theorems and Work Principles | 43 |
| 6 Slip-Line Field Theory | 47 |
| 7 Anisotropic Plasticity | 68 |
| 8 Slip and Dislocations | 83 |
| 9 Taylor and Bishop and Hill Models | 118 |
| 10 Pencil-Glide Calculations of Yield Loci | 147 |
| 11 Mechanical Twinning and Martensitic Shear | 160 |
| 12 Effects of Strain Hardening and Strain-Rate Dependence | 182 |
| 13 Defect Analysis | 205 |
| 14 Effects of Pressure and Sign of Stress State | 225 |

| | |
|--|------------|
| 15 Lower-Bound Models | 237 |
| 16 Plasticity Tests | 249 |
| Index | 265 |