



# CONTENTS

*Foreword* v

*Preface* vii

## Section 1 GLASS TECHNOLOGY

1. *Composition and Constitution* 3
2. *Properties of Glass* 16
3. *Chemical Durability* 91
4. *Stress Release and Annealing* 103
5. *Glass-Metal Seals* 119
6. *Strength Testing and Stress Determination* 132

## Section 2 GLASS MANUFACTURE

By Dr. C. H. Greene (Except Chapter 10)

7. *Raw Materials and Melting* 155
8. *Primary Forming Operations* 163
9. *Secondary, or Finishing, Operations* 176
10. *Manufacturing Tolerances and Glass Design* 185

## Section 3 APPLICATIONS

11. *Glass Containers* 197
12. *Flat Glass and Glazing* 207
13. *Laboratory Glassware and Thermometers* 227
14. *Applications in the Chemical Industry* 242
15. *Sight and Gage Glasses* 260
16. *Electric Lamps and Electron Tubes* 272
17. *Illumination* 303

- 18. *Electronic Circuit Components* 334
- 19. *Special Glasses and Their Applications* 356

## Section 4 FIBROUS GLASS

By J. A. Grant

- 20. *Composition and Properties of Fibers* 375
- 21. *Manufacturing Processes and Products* 381
- 22. *Applications of Fibrous-glass Wool* 390
- 23. *Applications of Fibrous-glass Textile Products* 411
- 24. *Fibrous-glass-reinforced Plastics* 426

## APPENDIXES

- A. *Federal and Military Specifications on Glass* 465
- B. *Definition of Glass Terms* 467

*Index* 473

