CONTENTS

	Page
CHAPTER 1 TYPES OF ADHESIVES	1
Chemically Reactive Types	1
Evaporation or Diffusion Types	20
Hot Melt Types (Cooling)	27
Delayed-Tack Adhesives	35
Film Adhesives	36
Pressure Sensitive Types	40
New Technology	41
CHAPTER 2 DESIGN CONSIDERATIONS	45
Advantages and Disadvantages of Adhesive Bonding	46
Materials to be Bonded	47
Area Size to be Bonded	49
Joints D. G. L. G.	49
Performance Requirements of the Joint	55
CHAPTER 3 SELECTION OF ADHESIVES	59
Physical Requirements	60
Method of Application	63 64
Selection of Equipment Unit Cost Considerations	66
Plant Facilities	68
CHAPTER 4 SURFAC PREPARATION FOR BONDING	89
Surface Preparation for Metals	89
Surface Preparation for Nonmetallic Materials	90
Abrasive Cleaning	90
Chemical Cleaning	96
Miscellaneous Cleaning Methods	101
CHAPTER 5 METHODS OF BONDING	105
Manual Adhesive Application Methods	105
Machine Application Methods	108
Spray Application Equipment	115
Methods of Completing Assembly	119
Bonding with hot Melt Adhesives	121
CHAPTER 6 INSPECTION AND QUALITY CONTROL	123
Process Control	123
Bond Inspection and Testing	126
CHAPTER 7 CASE HISTORIES	143
Structural Bonding of Inner to Outer hood and Trunk Compartment Panels in the	1.10
Automotive Industry	143
Bonding in the Boat Building Industry	147
Food Packaging: Hot Melt Adhesives	152
Polysulfide Glass Bonding for Automotive Use	155
Aircraft-Bonding of Sandwich Panels	157
Glossary	161
Bibliography	169
Index	177