Contents

	Preface	v
	Extract from the Foreword to the 12th German Edition	ix
	Conversion Factors	xi
Part 1: M	I aterials	
	. Metals, Alloys, Carbides . Non-metals	3 43
Part 2: E	ngineering Processes	
3.	Soldering and Welding	93
4.	Surface Treatment	108
5.	The Working of Glass	115
6.	Metal Coatings	138
7.	Thin Films	155
8.	Thin Wires and Filaments	162
Part 3: S	pecial Techniques	
9.	High-pressure Techniques	173
10.	Vacuum Techniques	188
11.	Acoustic Methods	234
12.	Electron Microscopy	246
13.	Magnetic Fields	252
· 14.	Optical Procedures	266
15.	Photography	279
		vii

CONTENTS

16.	Visualization of Schlieren	291
17.	Controls	302
18.	Mounting, Manipulating and Metal	
	Forming	324
Part 4: E	quipments and Accessories	
1 9 .	Acoustic Equipment	337
	Electrodes	355
21.	Resistors and Insulators	366
22.	Nernst Burners	376
23.	Electric Ovens	381
24.	Optical Instruments	396
25.	X-ray Tubes	416
26.	Thermal Instruments	419
27.	Chronographs	451
28.	Particle Detectors	455
29.	Cells	506
30.	Lasers	516
31.	Various Instruments and Equipments	519
Part 5: Tl	ne Laboratory and the Worker	
32.	Setting Up the Laboratory	527
	Safety in the Laboratory	544
	Work in the Laboratory	561
	References	575
	Index	599

The Plates are positioned between pages 212 and 213