

Contents

Chapter 1	Steel Nomenclature	1
<i>Anil Kumar Sinha, Chengjian Wu, and Guoquan Liu</i>		
Chapter 2	Classification and Mechanisms of Steel Transformation	91
<i>S.S. Babu</i>		
Chapter 3	Fundamental Concepts in Steel Heat Treatment	121
<i>Alexey V. Sverdlin and Arnold R. Ness</i>		
Chapter 4	Effects of Alloying Elements on the Heat Treatment of Steel	165
<i>Alexey V. Sverdlin and Arnold R. Ness</i>		
Chapter 5	Hardenability	213
<i>Božidar Liščić</i>		
Chapter 6	Steel Heat Treatment	277
<i>Božidar Liščić</i>		
Chapter 7	Heat Treatment with Gaseous Atmospheres.....	415
<i>Johann Grosch</i>		
Chapter 8	Nitriding Techniques, Ferritic Nitrocarburizing, and Austenitic Nitrocarburizing Techniques and Methods	475
<i>David Pye</i>		
Chapter 9	Quenching and Quenching Technology	539
<i>Hans M. Tensi, Anton Stich, and George E. Totten</i>		
Chapter 10	Distortion of Heat-Treated Components	607
<i>Michiharu Narazaki and George E. Totten</i>		
Chapter 11	Tool Steels.....	651
<i>Elhachmi Essudiqi</i>		
Chapter 12	Stainless Steel Heat Treatment	695
<i>Angelo Fernando Padilha, Ronald Lesley Plaut, and Paulo Rangel Rios</i>		

Chapter 13 Heat Treatment of Powder Metallurgy Steel Components741
Joseph W. Newkirk and Sanjay N. Thakur

Appendices

Appendix 1 Common Conversion Constants 789
Appendix 2 Temperature Conversion Table 791
Appendix 3 Volume Conversion Table 801
Appendix 4 Hardness Conversion Tables: Hardened Steel and Hard Alloys.....803
Appendix 5 Recommended MIL 6875 Specification Steel Heat
Treatment Conditions 805
Appendix 6 Colors of Hardening and Tempering Heats 815
Appendix 7 Weight Tables for Steel Bars817
Index.....821