

Contents

Cast Irons	1	Fabrication Characteristics of Carbon and Low-Alloy Steels	571
Classification and Basic Metallurgy of Cast Iron	3	Sheet Formability of Steels	573
Gray Iron	12	Bulk Formability of Steels	581
Ductile Iron	33	Machinability of Steels	591
Compacted Graphite Iron	56	Weldability of Steels	603
Malleable Iron	71	Service Characteristics of Carbon and Low-Alloy Steels	615
Alloy Cast Irons	85	Elevated-Temperature Properties of Ferritic Steels	617
Carbon and Low-Alloy Steels	105	Effect of Neutron Irradiation on Properties of Steels	653
Steel Processing Technology	107	Low-Temperature Properties of Structural Steels	662
Microstructures, Processing, and Properties of Steels	126	Fatigue Resistance of Steels	673
Classification and Designation of Carbon and Low-Alloy Steels	140	Embrittlement of Steels	689
Physical Properties of Carbon and Low-Alloy Steels	195	Notch Toughness of Steels	737
Carbon and Low-Alloy Steel Sheet and Strip	200	Specialty Steels and Heat-Resistant Alloys	755
Precoated Steel Sheet	212	Wrought Tool Steels	757
Carbon and Low-Alloy Steel Plate	226	P/M Tool Steels	780
Hot-Rolled Steel Bars and Shapes	240	Maraging Steels	793
Cold-Finished Steel Bars	248	Ferrous Powder Metallurgy Materials	801
Steel Wire Rod	272	Austenitic Manganese Steels	822
Steel Wire	277	Wrought Stainless Steels	841
Threaded Steel Fasteners	289	Cast Stainless Steels	908
Steel Springs	302	Elevated-Temperature Properties of Stainless Steels	930
Steel Tubular Products	327	Wrought and P/M Superalloys	950
Closed-Die Forgings	337	Appendix: P/M Cobalt-Base Wear-Resistant Materials	977
High-Strength Low-Alloy Steel Forgings	358	Polycrystalline Cast Superalloys	981
Steel Castings	363	Directionally Solidified and Single-Crystal Superalloys	995
Bearing Steels	380	Special Engineering Topics	1007
High-Strength Structural and High-Strength Low-Alloy Steels	389	Strategic Materials Availability and Supply	1009
Dual-Phase Steels	424	Appendix: Manganese Availability	1021
Ultrahigh-Strength Steels	430	Recycling of Iron, Steel, and Superalloys	1023
Hardenability of Carbon and Low-Alloy Steels	449	Metric Conversion Guide	1035
Hardenable Carbon and Low-Alloy Steels	451	Abbreviations, Symbols, and Tradenames	1038
Hardenability of Carbon and Low-Alloy Steels	464	Index	1043
Hardenability Curves	485		