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Titolo	Applied welding engineering [[electronic resource]] : processes, codes, and standards / / by Ramesh Singh
Pubbl/distr/stampa	Amsterdam ; ; Waltham, : Elsevier/Butterworth-Heinemann, 2011
ISBN	1-283-28145-7 9786613281456 0-12-391917-7
Descrizione fisica	1 online resource (374 p.)
Disciplina	671.52
Soggetti	Welding Metallurgy Nondestructive testing Welding - Standards
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Front Cover; Applied Welding Engineering: Processes, Codes and Standards; Copyright Page; Acknowledgment; 1. Introduction to Basic Metallurgy; 1. Introduction; Pure Metals and Alloys; Smelting; Iron; Sponge Iron; 2. Alloys; Alloys; Effects of Alloying Elements; Carbon Steels; Sulfur; Manganese; Phosphorus; Silicon; Alloy Steels; The Effect of Alloying Elements on Ferrite; Effects of Alloying Elements on Carbide; 3. Physical Metallurgy; Crystal Lattices; Crystal Structure Nomenclature; Solidification; Lever Rule of Solidification; Constitutional Supercooling; Elementary Theory of Nucleation AllotropyCrystal Imperfections; Grain Size; 4. Structure of Materials; Phase Diagrams; Different Types of Phase Diagrams; Iron-Iron Carbide Phase Diagram; Explanation of the Iron-Carbon Phase Diagram; Rationale for Letter Designations in the Iron-Iron Carbide Phase Diagram; 5. Production of Steel; The Electric Arc Furnace (EAF) Process; Furnace Charging; Melting; Refining; Phosphorus Removal; Sulfur Removal; Nitrogen and Hydrogen Control; De-Slagging; Tapping; Basic Oxygen Furnace (BOF); Refining Reactions; Carbon; Silicon; Manganese; Phosphorus; Sulfur Removal; Deoxidation of Steel

Rimmed SteelCapped Steel; Semi-Killed Steel; Killed Steel; Deoxidation Equilibria; The Iron-Iron Carbide Phase Diagram; 6. Classification of Steels; Carbon Steels; Low-Carbon; Medium-Carbon; High-Carbon; Ultrahigh-Carbon; High-Strength Low-Alloy (HSLA) Steels; Classification of HSLA; Low-Alloy Steels; Low-Carbon Quenched and Tempered Steels; Medium-Carbon Ultrahigh-Strength Steels; Bearing Steels; Chromium-Molybdenum Heat-Resistant Steels; AISI Series; Some Examples AISI Classifications; 7. Cast Iron; Types of Cast Iron; White Cast Iron; Malleable Cast Iron; Ferritic Malleable Iron
White Heart Cast IronBlack Heart Cast Iron; Pearlite Malleable Cast Iron; Martensitic Malleable Iron; Gray Cast Iron; Castability of Gray Cast Iron; Chilled Cast Iron; Nodular (Spheroidal Graphite) Cast Iron; Castability, Solidification and Shrinkage; Alloy Cast Irons; 8. Stainless Steels; Stainless Steel Production; Forming; Heat Treatment; Cutting Stainless Steel; Finishing; Fabrication of Stainless Steel; Welding and Joining; Types of Stainless Steels; Classification of Stainless Steel; Martensitic Stainless Steels; Ferritic Stainless Steels; Pitting Resistance Equivalent (PRE)
Austenitic Stainless SteelsDuplex Stainless Steels; Precipitation-Hardening (PH) Stainless Steels; 9. Non-Ferrous Materials; Copper and Copper Alloys; Aluminum and Aluminum Alloys; Physical Metallurgy of Aluminum; Effect of Alloying Elements on Aluminum; Effect of Iron; Effect of Silicon; Effect of Manganese; Effect of Magnesium; Effect of Copper; Effect of Zinc; Effect of Chromium; Effect of Zirconium; Effect of Lithium; Age Hardenable Alloys; Nickel and Nickel Alloys; Titanium and Titanium Alloys; 10. Working With Metals; Elastic Limit; Plastic Deformation; Fracture
Polycrystalline Materials

Sommario/riassunto

While there are several books on market that are designed to serve a company's daily shop-floor needs. Their focus is mainly on the physically making specific types of welds on specific types of materials with specific welding processes. There is nearly zero focus on the design, maintenance and troubleshooting of the welding systems and equipment. Applied Welding Engineering: Processes, Codes and Standards is designed to provide a practical in-depth instruction for the selection of the materials incorporated in the joint, joint inspection, and the quality control for the final product. Weld

2. Record Nr. UNINA9910969555103321

Titolo	Mississippi river water quality and the Clean Water Act : progress, challenges, and opportunities / / National Research Council of the National Academies
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, c2008
ISBN	9786611209254 9780309177818 0309177812 9781281209252 1281209252 9780309114103 0309114101
Edizione	[1st ed.]
Descrizione fisica	1 online resource (251 p.)
Disciplina	577.627
Soggetti	Water - Pollution - Mississippi River Water quality - Mississippi River Nutrient pollution of water - Mississippi River Mississippi River
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 212-226).
Nota di contenuto	""Front Matter""; ""Preface""; ""Contents""; ""Summary""; ""1 Introduction""; ""2 Characteristics of the Mississippi River System""; ""3 The Clean Water Act""; ""4 Implementing the Clean Water Act Along the Mississippi River""; ""5 Evaluating Mississippi River Water Quality""; ""6 Agricultural Practices and Mississippi River Water Quality""; ""7 Collaboration for Water Quality Improvement Along the Mississippi River Corridor""; ""References""; ""Appendixes""; ""Appendix A: Guest Speakers at Committee Meetings""; ""Appendix B: Acronyms"" ""Appendix C: Biographical Information: Committee on the Mississippi River and the Clean Water Act""
Sommario/riassunto	The Mississippi River is, in many ways, the nation's best known and most important river system. Mississippi River water quality is of

paramount importance for sustaining the many uses of the river including drinking water, recreational and commercial activities, and support for the river's ecosystems and the environmental goods and services they provide. The Clean Water Act, passed by Congress in 1972, is the cornerstone of surface water quality protection in the United States, employing regulatory and nonregulatory measures designed to reduce direct pollutant discharges into waterways. The Clean Water Act has reduced much pollution in the Mississippi River from "point sources" such as industries and water treatment plants, but problems stemming from urban runoff, agriculture, and other "non-point sources" have proven more difficult to address. This book concludes that too little coordination among the 10 states along the river has left the Mississippi River an "orphan" from a water quality monitoring and assessment perspective. Stronger leadership from the U.S. Environmental Protection Agency (EPA) is needed to address these problems. Specifically, the EPA should establish a water quality data-sharing system for the length of the river, and work with the states to establish and achieve water quality standards. The Mississippi River corridor states also should be more proactive and cooperative in their water quality programs. For this effort, the EPA and the Mississippi River states should draw upon the lengthy experience of federal-interstate cooperation in managing water quality in the Chesapeake Bay.