

1. Record Nr.	UNINA9910788190403321
Titolo	Mechanical engineers' handbook : manufacturing and management // edited by Myer Kutz
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, Inc., , 2015 ©2015
ISBN	1-5231-2390-7 1-118-93082-7 1-118-93081-9
Edizione	[Fourth edition.]
Descrizione fisica	1 online resource (882 p.)
Disciplina	621
Soggetti	Mechanical engineering - Data processing Mechanical engineering
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 and index.
Nota di contenuto	Cover; Title Page; Copyright; Contents; Preface; Vision for the Fourth Edition; Contributors; Part 1 Manufacturing; Chapter 1 Organization, Management, and Improvement of Manufacturing Systems; 1 Introduction: What Is This Chapter About?; 2 Nature of Manufacturing System: Arena for Our Improvement; 3 Evolution of Leadership and Management: Handicap of Hierarchies; 4 Organizational Behaviors, Change, and Sports: Fruitless Quest for Stability; 5 System of Measurement and Organization: Stimulating Change; 6 Components of Manufacturing System: Simplified Way of Looking at System 7 Improvement, Problem Solving, and Systems Design: All-Embracing Recycling, Repeating, Spiraling Creative Process8 Workforce Considerations: Social Engineering, the Difficult Part; 9 Environmental Consciousness: Manufacturing Embedded in Society; 10 Implementation: Considerations and Examples for Companies of All Sizes; 11 A Look to the Future; References; Chapter 2 Environmentally Benign Manufacturing; 1 Introduction; 2 Environmentally Benign Manufacturing; 3 Manufacturing and Supply Chain; 4 Manufacturing Processes; 5 Manufactured Product; References; Bibliography Chapter 3 Production Planning 1 Introduction; 2 Forecasting; 3

Inventory Models; 4 Aggregate Planning-Master Scheduling; 5 Materials Requirements Planning; 6 Job Sequencing and Scheduling; 7 Japanese Manufacturing Philosophy; 8 Supply Chain Management; References; Bibliography; Chapter 4 Production Processes and Equipment; 1 Metal-Cutting Principles; 2 Machining Power and Cutting Forces; 3 Tool Life; 4 Metal-Cutting Economics; 5 Cutting-Tool Materials; 6 Turning Machines; 7 Drilling Machine; 8 Milling Processes; 9 Gear Manufacturing; 10 Thread Cutting and Forming; 11 Broaching 12 Shaping, Planning, And Slotting 13 Sawing, Shearing, And Cutting Off; 14 Machining Plastics; 15 Grinding, Abrasive Machining, And Finishing; 16 Nontraditional Machining; References; Bibliography; Chapter 5 Manufacturing Systems Evaluation; 1 Introduction; 2 Components of ECM; 3 Manufacturing Systems; 4 System Effects on ECM; 5 Assessment; 6 Summary; References; Chapter 6 Metal Forming, Shaping, and Casting; 1 Introduction; 2 Hot-working Processes; 3 Cold-working Processes; 4 Metal Casting And Molding Processes; 5 Plastic molding Processes; 6 Powder Metallurgy; 7 Surface Treatment Bibliography Chapter 7 Coatings and Surface Engineering: Physical Vapor Deposition; 1 Introduction; 2 Glow Discharge Plasma; 3 Film Formation and Growth; 4 Process Details; 5 Final Comments; References; Chapter 8 Mechanical Fasteners; 1 Introduction to Fastening and Joining; 2 Introduction To Fastening With Bolts And Rivets; 3 Bolted and Riveted Joint Types; 4 Efficiency; 5 Strength Of A Simple Lap Joint; 6 Sample Problem Of A Complex Butt Joint (Bearing-Type Connection); 7 Friction-Type Connections; 8 Upper Limits On Clamping Force; 9 Theoretical Behavior Of The Joint Under Tensile Loads
10 Evaluation Of Slip Characteristics

Sommario/riassunto

Full coverage of manufacturing and management in mechanical engineering Mechanical Engineers' Handbook, Fourth Edition provides a quick guide to specialized areas that engineers may encounter in their work, providing access to the basics of each and pointing toward trusted resources for further reading, if needed. The book's accessible information offers discussions, examples, and analyses of the topics covered, rather than the straight data, formulas, and calculations found in other handbooks. No single engineer can be a specialist in all areas that they are called upon to work in. It's a discipline
