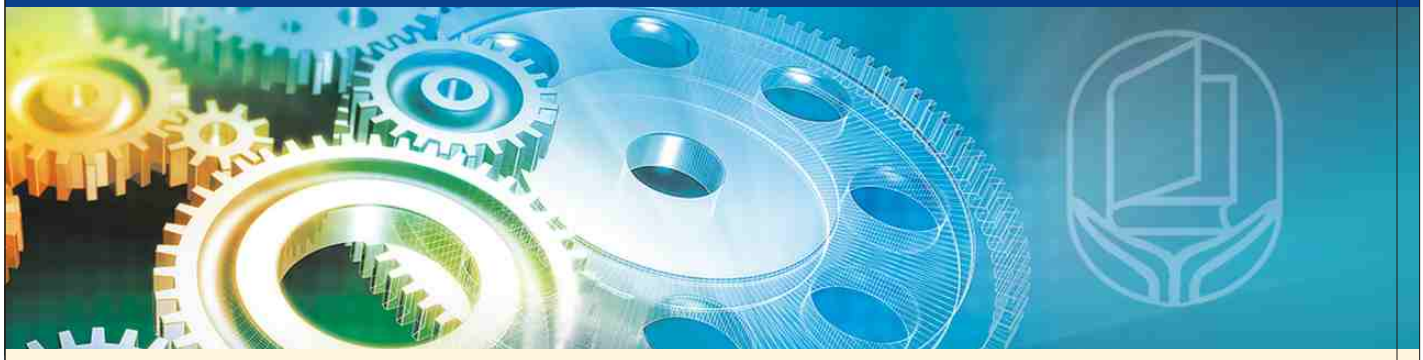
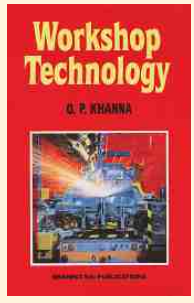
MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)



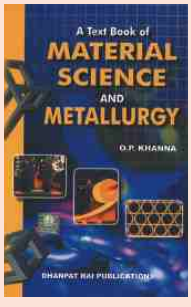
WORKSHOP TECHNOLOGY

O.P. Khanna



ISBN: 978-81-89928-30-8

1. Introduction (Industrial safety, Accidents & House Kepping) 2. Materials 3. Foundry 4. Welding, Brazing and Soldering 5. Transmission of Power 6. Bench Work and Fitting 7. Plumbing (Pipes and Pipe Fittings) 8. Carpentry 9. Smithy and Forging 10. Sheet Metal 11. Lathe 12. Drilling 13. Shaping Machine 14. Theory of Metal Cutting 15. Cold and Hot Working Processes 16. Limits, Fits and Tolerances 17. Metallic and Non-Metallic Coatings 18. Plastic Processing Techniques 19. Metal Sawing.



A TEXT-BOOK OF MATERIAL SCIENCE & METALLURGY

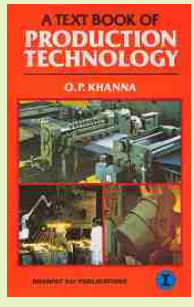
O.P. Khanna

ISBN: 978-81-89928-31-5

PART-1 MATERIAL SCIENCE 1. Introduction to Material Science and Metallurgy 2. Engineering Materials 3. Properties of Engineering Materials 4. Selection of Materials 5. Ferrous Materials 6. Non-Ferrous Materials 7. Materials for High and Low Temperature Service 8. Tool and Die Materials 9. Bearing Materials 10. Spring Materials 11. Die-Casting Alloys 12. Magnetic Materials 13. Precious Metals 14. Metals for Nuclear Energy 15. Identification of Metals and Alloys 16. Ceramic Materials 17. Refractories 18. Refractory Metals 19. Glass 20. Polymers 21. Elastomers (Rubber) 22. Plastics Materials 23. Composite Materials 24. Adhesives 25. Insulating Materials 26. Miscellaneous Materials PART-2 EXTRACTIVE METALLURGY 27. Ferrous Extractive Metallurgy 28. Extraction of Aluminium 29. Extraction of Copper 30. Extraction of Magnesium 31. Extraction of Zinc 32. Extraction of Lead 33. Extraction of Tin 34. Extraction of Nickel. PART-3 PHYSICAL METALLURGY 35. Crystallography 36. Electron Theory of Metals and Electronic Properties 37. Imperfections in Metal Crystals 38. Solid Solution 39. Phase Diagrams 40. Iron-Carbon System 41. Solidification of Metals 42. Metallography 43. Heat Treatment Processes 44. Case Hardening and Surface Treatment 45. Heat Treatment Furnaces 46. Temperature Measurement and Control in Metallurgy (Pyrometry) 47. Diffusion in Solids 48. Corrosion and Oxidation. PART-4 MECHANICAL METALLURGY 49. Testing of Materials 50. Metallurgy of Welding, Brazing and Soldering 51. Foundry Metallurgy 52. Residual Stresses and their Measurement 53. Powder Metallurgy 54. Deformation of Metals 55. Failure of Metals 56. Strengthening of Metals 57. Mechanical Working Processes 58. Question Bank.

A TEXT-BOOK OF PRODUCTION TECHNOLOGY (Vol I)

O.P. Khanna



ISBN: 978-81-89928-32-2

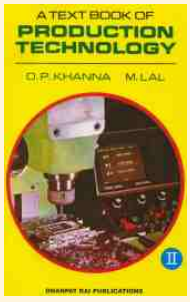
1. Introduction 2. Engineering Metals and Alloys 3. Heat Treatment Processes 4. Testing of Materials 5. Surface Cleaning 6. Finishes and Coatings 7. Painting 8. Plastics 9. Wood Working Machines 10. Foundry 11. Welding 12. Fasteners 13. Adhesive Bonding 14. Powder Metallurgy 15. Mechanical Working of Metals 16. Smithy and Forging 17. Metal Spinning 18. Fundamentals of Metal Forming 19. Metal Forming Processes 20. Press Work 21. Rolling 22. Extrusion 23. Drawing of Rods, Wires and Tubes 24. High Velocity Forming of Metals 25. Pipe and Tube Manufacture 26. Typical Examination Problems.

DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com

MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)

A TEXT-BOOK OF PRODUCTION TECHNOLOGY (Vol II)

O.P. Khanna



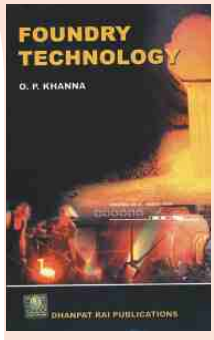
ISBN: 978-81-89928-33-9

1. Introduction to Machine Tools 2. Kinematics of Machine Tools 3. Metal Sawing 4. Lathe 5. Turret, Capstan and Automatic Lathes 6. Shaping Machine 7. Slotting Machine 8. Planing Machine 9. Drilling and Reaming 10. Boring 11. Milling Machine 12. Gear Manufacturing 13. Broaching 14. Grinding Machines 15. Surface Finishing Processes 16. Metrology 17. Jigs and Fixtures 18. Newer Machining Processes 19. Automation and Transfer Machines 20. Numerical Control of Machine Tools 21. CAD/CAM, FMS and CIMS 22. Robotics 23. Testing of Machine Tools 24. Installation of Machine Tools 25. Machine Tool Vibrations 26. Machining of Plastics and Ceramics 27. Thread Manufacturing 28. Tool Making and Die-Sinking Machines 29. Automatics 30. Theory of Metal Cutting 31. Tool Wear and Machinability 32. Press Tool Design 33. Cutting Tool Design 34. Machine Tool Design 35. Machine Tool Maintenance 36. Repair of Machine Tools 37. Advanced Manufacturing Systems 38. Economics of Machining.

A TEXT BOOK OF FOUNDRY TECHNOLOGY

O.P. Khanna

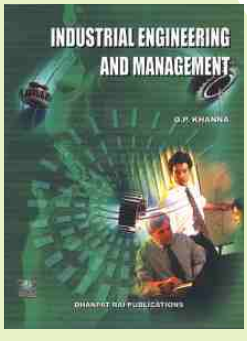
ISBN: 978-81-89928-34-6



1. Introduction 2. Foundry Materials 3. Pattern and Pattern Making 4. Molding and Core Sands 5. Developments in Binder Technology 6. Sand Preparation 7. Sand Reclamation 8. Sand Control Tests 9. Core and Core-Making 10. Molds and Mold Making 11. Principles of Gating 12. Principles of Risering 13. Melting Furnaces and Practice 14. Ladle Metallurgy 15. Temperature Measurements 16. Testing for Metal Composition 17. Filtering Molten Metal 18. Metal Pouring 19. Solidification of Castings 20. Austenite Grain Size, Metal Properties and Grain Size Control 21. Shakeout/Cleaning/Finishing 22. Dressing of Castings 23. Special Casting Techniques 24. Design of Castings 25. Production of Iron Castings 26. Meehanite Castings 27. Steel Foundry Practice 28. Copper Alloy Foundry Practice 29. Aluminium Alloy Foundry Practice 30. Magnesium Alloy Foundry Practice 31. Zinc Alloy Foundry Practice 32. Residual Stresses in Castings 33. Foundry Metallurgy 34. Heat Treatment of Castings 35. Inspection, Testing and Quality Control in Foundries 36. Defects in Castings 37. Salvage of Defective Castings 38. Foundry Mechanization 39. Material Handling/Robotics in Foundry 40. Foundry Environment, Health and Safety 41. Dust Problems in Foundries 42. Preventive Maintenance in Foundries 43. Returning a Sick Foundry to Profitability 44. Applications of Computers in Foundry Industry 45. Planning The 21st Century Casting Process 46. Question Bank.

INDUSTRIAL ENGINEERING AND MANAGEMENT

O.P. Khanna

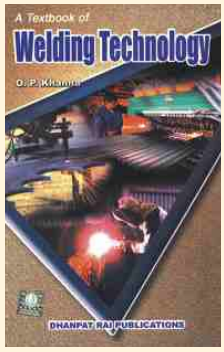


ISBN: 978-81-89928-35-3

1. Industrial Engineering and Management 2. Production and Productivity 3. Organisation 4. Plant Location, Layout and Line Balancing 5. Product Design, Planning and Development 6. Process Planning and Group Technology 7. Production, Planning and Control 8. Inspection and Quality Control 9. Work Study 10. Network Analysis 11. Operations Research 12. Systems Concept & Value Analysis 13. Plant Maintenance 14. Replacement Analysis 15. Management Concept 16. Industrial Ownership 17. Supervisory and Leadership 18. Decision Making 19. Industrial Psychology 20. Personnel Management 21. Union and Industrial (Labour) Relations 22. Industrial (Labour) Legislation 23. Materials, Purchase and Stores Management 24. Inventory Control and Management 25. Material Handling 26. Financial Management 27. Cost Accounting and Control 28. Budget and Budgetary Control 29. Job Evaluation and Merit Rating 30. Wage Payment Plans 31. Sales and Marketing Management 32. Small Scale Industries and Entrepreneurship 33. Environmental Pollution 34. Management by Objectives 35. Engineering Economics 36. Computers 37. Business and Environment 38. Professional and Business Ethics 39. Management Information Systems.

DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com

MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)

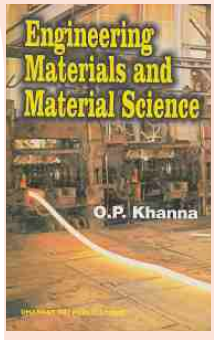


A TEXT BOOK OF WELDING TECHNOLOGY — O.P. Khanna

ISBN: 978-81-89928-36-0

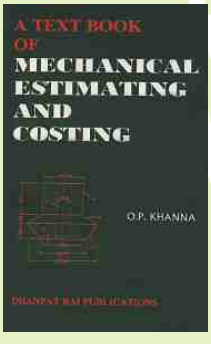
1. Welding—A Fabrication Process 2. Safety Recommendations in Welding and Cutting 3. Gas Welding Processes and Equipments 4. Arc Welding Processes and Equipments 5. Resistance Welding 6. Solid-State Welding Processes 7. Thermochemical Welding Processes 8. Radiant Energy Welding Processes 9. Underwater Welding Processes 10. Braze (or Bronze) Welding 11. Brazing 12. Soldering 13. Adhesive Bonding 14. Weldability and Weldability Testing 15. Welding of Wrought Iron 16. Welding of Cast Iron 17. Welding Carbon Steels 18. Welding of Alloy Steels 19. Welding of Tool Steels 20. Welding of Stainless Steels 21. Welding of Aluminium and its Alloys 22. Welding of Magnesium and its Alloys 23. Welding of Copper and its Alloys 24. Welding of Dissimilar Metals 25. Welding of Plastics 26. Hardfacing of Materials 27. Metallizing or Metal Spraying 28. Physics of Welding 29. Metallurgy of Welding, Brazing and Soldering 30. Defects in Welds 31. Residual Welding Stresses 32. Stress Relief Heat Treatment of Weldments 33. Welding Distortion 34. Welding Jigs and Fixtures 35. Thermal Cutting of Metals 36. Maintenance of Welding Equipments 37. Welding at Site 38. Inspection and Testing of Welds 39. Quality Control in Welding 40. Welding Symbols 41. Welding Design 42. Computer-Aided Welding Design 43. Computer Systems for Welding Engineering 44. Estimation of Welding Costs 45. Welding Robots 46. Welding Automation 47. Question Bank.

ENGINEERING MATERIALS AND MATERIAL SCIENCE — O.P. Khanna



ISBN: 978-81-89928-37-7

1. General 2. Structure of Metals and their Deformation 3. Ferrous Materials 4. Non-Ferrous Materials 5. Metallurgical Considerations 6. Identification of Metals and Alloys 7. Testing of Metals and Alloys 8. Selection, Specification, Forms and Availability of Materials 9. Fundamentals of Heat-Treatment 10. Plastic Materials 11. Insulating Materials 12. Ceramic Materials 13. Miscellaneous Materials.

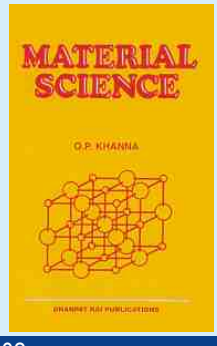


A TEXT-BOOK OF MECHANICAL ESTIMATING & COSTING — O.P. Khanna

ISBN: 978-81-89928-38-4

1. Fundamentals of Estimating 2. Cost Accounting 3. Elements of Cost 4. Overheads and Depreciation 5. Mensuration 6. Estimation of Material Cost 7. Estimation in Machine Shop 8. Estimation of Forging Cost 9. Estimation in Foundry Shop 10. Estimating Welding Costs 11. Estimation in Sheet Metal Shop 12. Budget and Budgetary Control 13. Profit 14. Production Planning and Control 15. Inspection and Quality Control 16. Work Study.

MATERIAL SCIENCE — O.P. Khanna

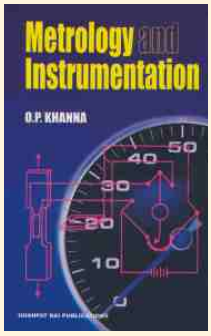


ISBN: 978-81-89928-39-1

1. Structure of Atoms and Molecules 2. Engineering Materials 3. Mechanical Properties 4. Technological Properties of Metals 5. Electrical Properties of Metals 6. Electronic Properties and Electron Theory of Metals 7. Thermal Properties of Metals 8. Chemical Properties of Metals 9. Deformation of Metals 10. Material and their Heat Treatment 11. Powder Metallurgy 12. Ceramic Materials 13. Organic Materials 14. Agglomerated Structures 15. Corrosion 16. Processes 17. Phase Diagrams 18. Failure of Metals 19. Diffusion in Solids.

DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com

MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)



METROLOGY AND INSTRUMENTATION

O.P. Khanna

ISBN: 978-81-89928-40-7

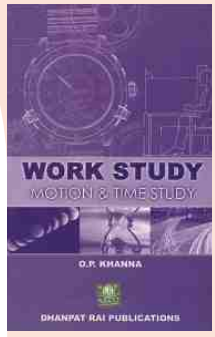
1. General 2. Structure of Metals and their Deformation 3. Ferrous Materials 4. Non-Ferrous Materials 5. Metallurgical Considerations 6. Identification of Metals and Alloys 7. Testing of Metals and Alloys 8. Selection, Specification, Forms and Availability of Materials 9. Fundamentals of Heat-Treatment 10. Plastic Materials 11. Insulating Materials 12. Ceramic Materials 13. Miscellaneous Materials.

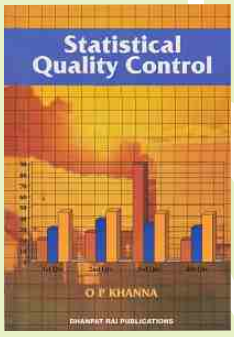
WORK STUDY (TIME AND MOTION STUDY)

O.P. Khanna

ISBN: 978-81-89928-41-4

1. Introduction 2. Method Study (Motion Study) 3. Work Measurement (Time Study) 4. Productivity and Work Study 5. Ergonomics 6. Health and Occupational Safety 7. Job Evaluation and Merit Rating 8. Wage Payment Plans for Direct and Indirect Workers 9. Plant Layout 10. Material Handling 11. Organisation and Training of Work Study Department and its Place in the Organisation of an Enterprise 12. Work Content of a Job and Management Techniques to Reduce Work Content and Ineffective Time 13. The Human (Factors in the Application) Context of Work Study 14. Statistical Aids to Work Study 15. Measurement of Indirect Work 16. Value Analysis and value Engineering 17. Organisation and Methods (O & M) 18. Question Bank.





STATISTICAL QUALITY CONTROL

O.P. Khanna

ISBN: 978-81-89928-42-1

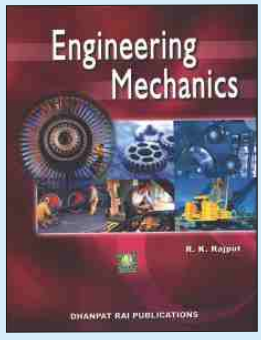
1. Inspection 2. Probability and Statistics 3. Quality Planning and Control 4. Process Control 5. Acceptance Sampling 6. Life Testing and Reliability 7. Tolerance and Specifications 8. Vendor (Supplier) Concept 9. Quality System Certification 10. Quality System Standards ISO 9000 11. Quality Assurances (Q.A) 12. Total Quality Management (TQM) 13. Field Complaints 14. Total Quality Control (TQC) 15. Taguchi Methods 16. Quality Circles.

A TEXT BOOK OF ENGINEERING MECHANICS

R.K. Rajput

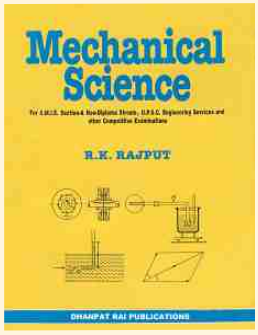
ISBN: 978-81-89928-43-8

1. Basic Concepts 2. Laws of Forces 3. Moments and their Applications 4. Centre of Gravity and Centroid 5. Moment of Inertia 6. Friction 7. Simple Lifting Machines 8. Analysis of Framed Structure 9. Equilibrium of Strings 10. Virtual Work 11. Plane Motion 12. Motion under Variable Acceleration 13. Projectiles 14. Relative Velocity 15. Motion of Rotation 16. Combined Motion of Rotation and Translation 17. Simple Harmonic Motion and Free Vibrations 18. Laws of Motion 19. Motion of Connected Bodies 20. Collision of Elastic Bodies 21. Work, Power and Energy 22. Kinetics of Curvilinear and Rotary Motion 23. Transmission of Power by Belts and Ropes 24. Forces in Space 25. Gear Trains 26. Bending Moments and Shearing Forces 27. Balancing of Rotating Masses 28. Vibrations 29. Additional Typical/Competitive Examination Questions.



DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com

MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)



MECHANICAL SCIENCE

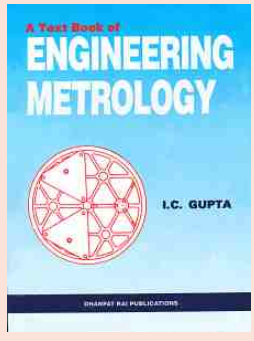
R.K. Rajput

ISBN: 978-81-89928-44-5

PART - I : SOLID MECHANICS 1. Introduction 2. Laws of Forces 3. Moments and their Applications 4. Analysis of Trusses 5. Equilibrium of Strings 6. Friction 7. Centroid and Moment of Inertia 8. Virtual Work 9. Simple Lifting Machines 10. Plane Motion 11. Motion Under Variable Acceleration 12. Projectiles 13. Laws of Motion 14. Motion of Connected Bodies 15. Work, Power and Energy 16. Motion of Rotation 17. Kinetics of Curvilinear and Rotary Motion 18. Simple Harmonic Motion and Free Vibrations. PART - II : FLUID MECHANICS 1. Properties of Fluids 2. Pressure Measurement 3. Hydrostatic Forces on Surtaces 4. Buoyancy and Floatation 5. Principles of Fluid Dynamics 6. Venturimeters 7. Flow Through Pipe, PART - III: STRENGTH OF MATERIALS 1. Simple Stresses and Strains 2. Principal Stresses and Strains 3. Thin Shells 4. Bending Moments and Shearing Forces 5. Slope and Deflection of Beams 6. Torsion of Shafts 7. Helical Springs 8. Strain Energy and Inpact Loading. PART - IV : THERMODYNAMICS 1. Basic Concepts 2. First Law of Thermodynamics 3. Second Law of Thermodynamics 4. Properties of Steam 5. Ideal Heat Engines Cycles 6. Internal Combustion Engines 7. Gas Turbines 8. Steam Turbines.

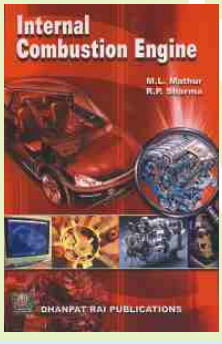
A TEXT-BOOK OF ENGINEERING METROLOGY

I.C. Gupta



ISBN: 978-81-89928-45-2

1. Principles of Engineering Metrology 2. Fundamental Length Standards 3. Interferometry 4. Linear Measurements 5. Comparators 6. Angular Measurement and Circular Division 7. Measurement of Taper and Radius 8. Geometric Features 9. Limits, Fits and Tolerances; Design of Limit Gauges 10. Surface Texture 11. Measurement and Gauging of Screw Threads 12. Measurement and Gauging of Gears 13. Acceptance Tests for Machine Tools 14. Metrology Instrument & Machine Design 15. Manufacture, Testing and Calibration of Instruments and Gauges 16. Special Measuring Machines 17. Non-Destructive Testing 18. Statistical Quality Control.



A COURSE IN INTERNAL COMBUSTION ENGINES

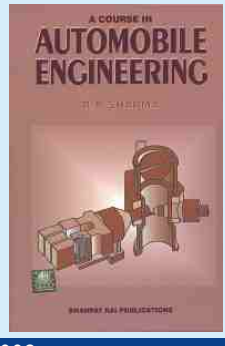
M.L. Mathur
R.P. Sharma

ISBN: 978-81-89928-46-9

1. Introduction 2. Air Standard Cycles 3. Fuel Air Cycles 4. Actual Cycles 5. Combustion in SI Engines 6. Combustion in CI Engines 7. Comparison of SI and CI Engines 8. Fuels 9. Alternative Fuels for IC Engines 10. Air Capacity of Four Storke Engines 11. Carburetion 12. Fuel Injection 13. Ignition 14. Engine Friction and Lubrication 15. Engine Cooling 16. Two-Stroke Engines 17. Supercharging 18. Testing and Performance 19. Dual - Fuel and Multifuel Engines 20. Air Pollution 21. Stratified Charge Engine 22. Stirling Engine 23. The Wankel Rotary Combustion Engine 24. Variable Compression Ration Engine 25. Free Piston Engine 26. Gas Turbines 27. Testing of Internal Combustion Engines according to Indian and International Standards 28. Standards for Emission of Pollutants from Motor Vehicles as per Central Motor Vehicles Rules, 1989.

A COURSE IN AUTOMOBILE ENGINEERING

R.P. Sharma

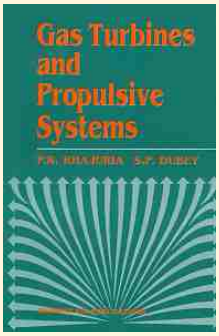


ISBN: 978-81-89928-47-6

1. General Introduction to the Automobile 2. Engine Operations 3. Engine Construction 4. Lubricantion 5. Engine Cooling 6. Ignition System 7. Carburetion 8. Fuels 9. Fuel Supply System 10. Starter Motor, Generator and Auxiliary Electric Equipment 11. Fuel Injection 12. Stirling Engine 13. Steam-Rankine Engine 14. The Wankel Rotary Combustion Engine 15. The Automotive Gas Turbine 16. Other Alternative Power Plants 17. Air Pollution 18. Wheels, Rims and Types 19. Brakes 20. Front Axle and Steering 21. Suspension Systems 22. The Clutch 23. Transmission System 24. Propeller Shafts, Final Drive and Differentials 25. Automotive Chassis Body 26. Automotive Air-Conditioning.

DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com

MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)



GAS TURBINES AND PROPULSIVE SYSTEMS

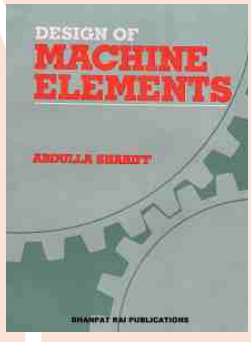
P.R. Khajuria & S.P. Dubey

ISBN: 978-81-89928-48-3

1. Introduction 2. The Fundamentals of Gas Dynamics 3. Ideal Power Plant Cycles 4. Performance of Actual Gas Turbine Cycles 5. Principle of Rotating Machines 6. Centrifugal Compressors 7. Axial-Flow Compressors 8. Three-Dimensional Flow in Axial-Flow Turbo-Machines 9. Combustion Systems 10. Axial Flow Gas Turbines 11. The Regenerator 12. Jet Propulsion 13. Rocket Propulsion 14. Performance of Gas-Turbine Power Plant 15. Materials for Gas Turbines 16. Recent Developments and Typical Applications of Gas Turbines.

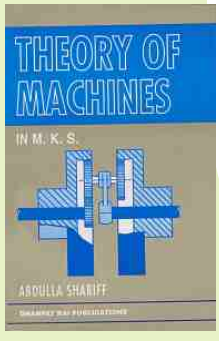
DESIGN OF MACHINE ELEMENTS

Abdulla Shariff



ISBN: 978-81-89928-49-0

1. Introduction 2. Fundamental Mechanics 3. Riveted Joints 4. Welded Joints 5. Screw Fastenings 6. Power Screw 7. Keys, Cotters and Pin Joints 8. Shafts 9. Couplings 10. Clutches 11. Brakes and Dynamometers 12. Belt, Rope and Chain Drives 13. Hoisting Machinery and Chain Drive 14. Springs 15. Spur Gears 16. Bevel Gears 17. Worm Gears 18. Engine Parts 19. Flywheel 20. Bearings 21. Curved Beam 22. Pressure Vessels, Heads and Cover Plates 23. Packings and Seals 24. Miscellaneous.



THEORY OF MACHINES

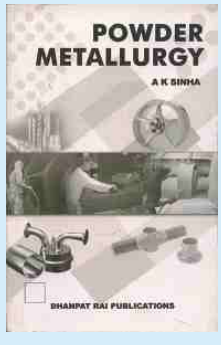
Abdulla Shariff

ISBN: 978-81-89928-50-6

1. Introduction to Theory of Machines 2. Simple Mechanisms 3. Motion–Force–Work and Energy 4. Basic Concepts of Velocity, Acceleration and Power Transmission in Mechanisms 5. Analysis of Velocity and Acceleration in Mechanisms 6. Straight Line Motion Mechanism 7. Friction 8. Belt, Rope and Chain Drives 9. Brakes and Dynamometers 10. Toothed Gearing 11. Gear Trains 12. Force Analysis of Machinery 13. Turning Moment Diagrams and Flywheel 14. Cams 15. Governors 16. Balancing 17. Vibrations 18. The Gyroscope 19. Miscellaneous Motion Problems 20. Valve Diagrams and Reversing Gears.

POWDER METALLURGY

A.K. Sinha



ISBN: 978-81-89928-51-3

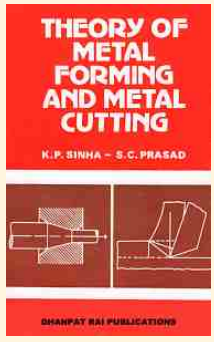
1. Introduction 2. Characteristics and Testings of Metal Powders 3. Powder Manufacture 4. Powder Conditioning 5. Powder Compaction 6. Sintering 7. Bearing Materials 8. Sintered Friction Materials 9. Tool Materials 10. Ferrites 11. Cermets 12. Dispersion — Strengthened Materials 13. Finishing Operations.

DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com

MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)

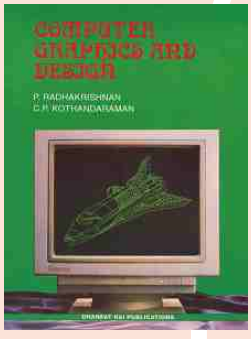
THEORY OF METAL FORMING AND METAL CUTTING

K.P. Sinha
S.C. Prasad



ISBN: 978-81-89928-52-0

PART - I : THEORY OF DEFORMATION : 1. Theory of Stress 2. Theory of Strains 3. Theory of Plasticity 4. Slip Line Field Theory and Load Bounding 5. Load Bounding 6. Friction and Lubrication.
PART - II : THEORY OF METAL FORMING PROCESSES : 1. Forging 2. Drawing and Extrusion 3. Rolling 4. Analysis of Rotary Forging.
PART - III : METAL CUTTING : 1. Process of Metal Cutting 2. Mechanics of Metal Cutting 3. Thermal Aspect of Metal Cutting 4. Tool Wear 5. Machinability 6. Effect of Tool Parameters 7. Chatter 8. Economics of Metal Cutting.
PART - IV : TOOL MATERIAL AND CUTTING FLUIDS : 1. Tool Material 2. Cutting Fluids.



COMPUTER GRAPHICS AND DESIGN

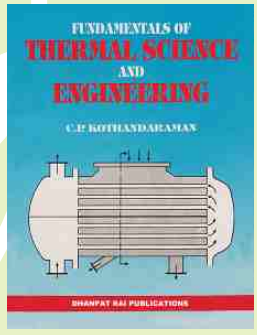
P. Radhakrishnan
C.P. Kothandaraman

ISBN: 978-81-89928-53-7

1. An Overview of Computer Aided Design (CAD) 2. Computer Hardware and Software 3. Principles of Computer Graphics 4. Graphical Input Techniques 5. Transformations in Graphics 6. Computer Drafting through High Level Languages 7. Design and Drafting using 2-D and 3-D Wire Frame Modelling Packages 8. Modelling of Curves and Surfaces 9. Solid Modelling 10. Design Database 11. Graphic Standards 12. Interfacing Design Analysis and Drafting 13. Finite Element Modelling and Analysis 14. Applications of CAD 15. Optimization in Computer Aided Design.

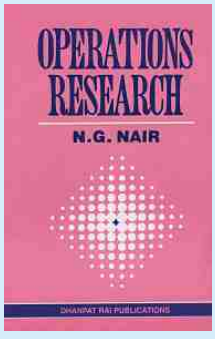
FUNDAMENTALS OF THERMAL SCIENCE AND ENGINEERING

C.P. Kothandaraman



ISBN: 978-81-89928-54-4

1. Basics of Thermodynamics 2. Compressible Fluid Flow 3. Steam Generation 4. Steam Engines 5. Reciprocating Compressors 6. Internal Combustion Engines 7. Steam Turbines 8. Gas Turbines 9. Condensing Systems 10. Refrigeration.



OPERATIONS RESEARCH

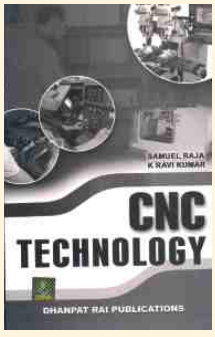
N.G. Nair

ISBN: 978-81-89928-55-1

1. Operational Mathematics 2. Introduction to Operations Research 3. Linear Programming — Problem formulation and Graphical Solution 4. Linear Programming — Simplex Method 5. L.P.P. — Special Cases 6. Transportation Problem 7. Assignment and Routing Problem 8. Game and Strategies 9. Decision Theory 10. Queuing Theory 11. Replacement and Reliability 12. Inventory Control 13. Project Management : Network Theory.

DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com

MECHANICAL ENGINEERING
(HEAT-POWER, PRODUCTION, INDUSTRIAL, AUTO & DESIGN)



CNC TECHNOLOGY

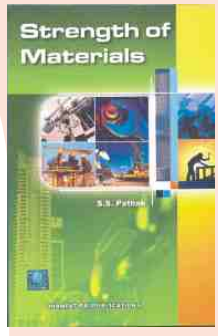
Samuel Raja & K Ravi Kumar

ISBN: 978-81-89928-56-8

1. Introduction 2. Constructional Features of CNC Machines 3. CNC Part Programming 4. Tooling and Work Holding Devices 5. Economics and Maintenance.

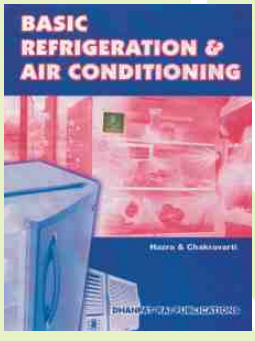
STRENGTH OF MATERIALS

S.S. Pathak



ISBN: 978-81-89928-57-5

1. Simple Stress and Strain 2. Compound Stress 3. 3-D Stress 4. Centre of Gravity 5. Moment of Inertia 6. Shearing Force and Bending Moment 7. Bending Stress in Beam 8. Combined Bending and Direct Stress 9. Shear Stress in Beam 10. Deflection of Beams 11. Indeterminate Beam 12. Torsion 13. Strain Energy and Its Application 14. Springs 15. Theories of Failure 16. Thin Cylindrical Vessel 17. Thick Cylinder and Sphere 18. Column and Strut 19. Curved Beam 20. Unsymmertical Bending and Shear Centre 21. Rotational Stresses.



BASIC REFRIGERATION & AIR CONDITIONING

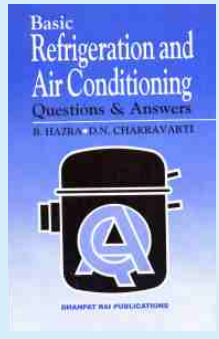
B. Hazra
D.N. Chakravarti

ISBN: 978-81-89928-58-2

1. Dress, Behaviour and Good House Keeping 2. Hand Tools and Their Uses 3. Fastening 4. Sheet Metal Work 5. Refrigeration Tools and Materials 6. Fundamentals 7. Basic Practicals in Fitting 8. Basic Refrigeration 9. Conventional Refrigeration System 10. Domestic Refrigeration System 11. Domestic Air-Conditioning System 12. Commercial Refrigeration System 13. Commercial Refrigeration Controls 14. Air-Conditioning 15. Automobile Air-Conditioning System 16. Basic Electronics.

BASIC REFRIGERATION AND AIR CONDITIONING QUESTIONS & ANSWERS

B. Hazra
D.N. Chakravarti



ISBN: 978-81-89928-59-9

1. Fundamentals 2. Demestic Refrigeration 3. Domestic Refrigeration (Short Questions) 4. Domestic Refrigeration (Objective Questions) 5. Commercial Refrigeration 6. Commercial Refrigeration (Short Questions) 7. Commercial Refrigeration (Objective Questions) 8. Air-Conditioning 9. Air-Conditioning (Short Questions) 10. Air-Conditioning (Objective Questions) 11. Electricity 12. Calculations 13. Glossary of Terms 14. Electrical & Refrigeration Symbols 15. Electrical Circuit diagrams of Refrigerator, Air-Conditioner, Walk-in cooler, Display Case, Multi-temperature system, water-cooler. 16. Appendix.

DHANPAT RAI PUBLICATIONS (P) LTD., 22, Ansari Road, Daryaganj, New Delhi - 110002
Ph. : 23274073, 23246573 E-mail: ishkapur@vsnl.com Web Site: www.dhanpatrai.com