

# Mechanical Engineering

# 1 N D O 1 V L



**New Age International Publishers** 

## NEW AGE INTERNATIONAL (P) LIMITED, PUBLISHERS

Established in 1966, New Age International is among the world's leading publishers of educational textbooks and reference books. It has published 1000+ titles in various disciplines of Science and Technology, Management and Commerce, Medical Sciences, Social Sciences and Humanities. Authored by eminent academics and professionals from Indian Institute of Technology and Indian Institute of Management and other internationally-renowned institutions, these titles are being profitably used by a wide spectrum of teachers and students.

New Age International has three offices in New Delhi and eight branch offices in the metropolitan cities of India. It also has a number of accounts with other distributors, stockists and retailers. The promotion, marketing and distribution activities of the company are performed by the branches in conjunction with their local dealers.

The editorial and production units are located in the Head Office at New Delhi. New Age International publishes around 100 new titles/editions each year. Titles are taken up for publication only after their contents have been evaluated by a panel of editorial and subject experts. The organisation emphasises quality norms in terms of both editorial content and physical inputs like paper, printing and binding. The focus of the company is on providing authentic, reliable and user-friendly books at affordable prices.

# **Complimentary Copies**

Complimentary copies of books in this catalogue are available on formal request by the teachers who wish to consider them for possible course adoption.

To request a complimentary copy, please write to our head office only. Please include your position, the course title and approximate enrolment, text currently in use. Complimentary copies will not be sent without this information. It is also necessary to send the syllabus of your university for the course, you are requesting a specimen copy.

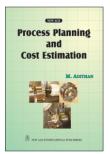


All prices are subject to change without prior notice. Prices are indicated in Indian Rupees. For Further information.

Please visit us our website www.newagepublishers.com



TEXTBOOKS NEW EDITIONS

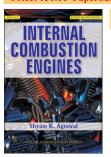


### 1 PROCESS PLANNING AND COST ESTIMATION

**Adithan, M.,** Professor in Mechanical Engg. and Dean, VIT University, Vellore, Tamil Nadu

**Contents:** Work Study and Ergonomics • Process Planning • Introduction to Cost Estimation • Cost Estimation • Production Cost Estimation.

ISBN: 978-81-224-2129-3 Publication Year: 2007 Edition: 1st Pages: 220 Price: 150 00 Pagerback



# 2 INTERNAL COMBUSTION ENGINES

**Second Edition** 

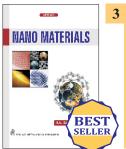
Agrawal, Shyam K., Formerly Professor, Deptt. of Mechanical Engg., Bhagalpur Engineering College, Bhagalpur, Bihar

Contents: Introduction • Air Standard Cycles • Thermochemistry • Working Cycles • Combustion in SI Engines • Combustion in CI

Engines • Fuels • Carburetor and Fuel Injection
• Two Stroke Engines • Engine Cooling and

Lubrication • Ignition Systems • Compressors and Supercharging • Engine Testing • Gas Turbines • Jet Propulsion • Alternate Potential Engines • Exhaust Emissions

ISBN: 978-81-224-1782-1 Publication Year: 2006 Edition: 2nd Reprint: 2008 Pages: 548 Price: 245.00 Paperback



### NANO MATERIALS

Bandyopadhyay, A.K., Professor, Govt.
College of Engineering & Ceramic
Technology, Kolkata

Contents: General Introduction • Silicon Carbide

- Nano Particles of Alumina and Zirconia
- Mechanical Properties Magnetic Properties
- Electrical Properties Optical Properties Other Methods and Other Nano Materials.

ISBN: 978-81-224-2257-3 Publication Year: 2008 Edition: 1st Pages: 324 Price: 175.00 Paperback



### 4 MECHANICAL SCIENCE-II

Bhattacharya, B. Asst. Professor, Deptt. of Applied Mechanics, Bengal Engg. & Science University, Shibpur, W.B.

### Bera S.C

Contents: Basic Concept and Some Definitions
• Zeroth Law and Temperature • Properties and
Thermodynamic Processes of Gas • First Law of
Thermodynamics and its Application • Second Law
of Thermodynamics • Entropy • Properties of
Pure Substances • Thermodynamic Air Standard

Cycles • Steam Power Cycle • Introduction and Fundamental Concepts • Fluid Statics • Kinematics of Fluid Flow • Dynamics of Fluid Flow.

ISBN: 978-81-224-2614-4 Publication Year: 2009 Edition: 1st Pages: 432 Price: 200.00 Paperback



### A TEXTBOOK ON ELEMENTS OF CIVIL ENGINEERING AND ENGG. MECHANICS

(As per VTU Syllabus)

### **Second Edition**



**Bhavikatti, S.S.,** Principal, Vijayanagar Engineering College, Bellary, Karnataka

Contents: Introduction to Civil Engineering • Roads • Bridges and Dams • Introduction to

**Engineering Mechanics** • Composition of Coplanar Concurrent Forces • Composition of Coplanar Non-concurrent Force System • Centroid of Plane Figures • Equilibrium of Coplanar Concurrent Force System • Equilibrium of Non-concurrent System of Forces and Support Reactions • Friction • Moment of Inertia of an Area

ISBN: 978-81-224-2072-2 Publication Year: 2007 Edition: 2nd Reprint: 2008 Pages: 232 Price: 115.00 Paperback



# 6 ENGINEERING MECHANICS



**Third Edition** 

**Bhavikatti, S.S.,** *Principal, Vijayanagar Engineering College, Bellary, Karnataka* 

Contents: Introduction to engineering mechanics
• Resultant and equilibrium of system of coplanar concurrent forces • Resultant and equilibrium of system of coplanar non-concurrent forces • Analysis of pin-jointed plane frames • Friction • Lifting

machines • Virtual work method • Centroid and moment of inertia • Centre of gravity and mass moment of inertia • Introduction to dynamics • Linear motion

- Projectiles Relative velocity D` Alembert`s principle Work energy method
   Impulse momentum Impact of elastic bodies Circular motion of rigid bodies
- Rotation of rigid bodies General plane motion of rigid bodies.
- Rotation of rigid bodies General plane motion of rigid bodies

ISBN: 978-81-224-2374-7 Publication Year: 2008 Edition: 3rd Reprint: 2008 Pages: 468 Price: 250.00 Paperback



# NON- CONVENTIONAL ENERGY RESOURCES

### **Second Edition**

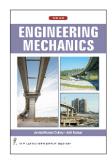
**Chauhan, D.S.,** Vice Chancellor, U.P. Technical University, Institute of Engg. & Technology, Lucknow, U.P.

**Srivastava, S.K.**, *Prof. of Physics, Head of Applied Science & Humanities, Instt. of Engg. & Tech., Lucknow, U.P.* 

Contents: Energy Resources • Solar Cell • Solar Radiation • Solar Energy Collectors • Storage of Solar Energy • Geothermal Energy • Magneto hydrodynamic (MHD) Power Generator • Fuel Cell • Thermionic and Thermoelectric Generators • Wind Energy • Biomass • Ocean Thermal Energy Conversion • Tidal and Wave Energy • Hydrogen Energy • Micro Hydel Power

ISBN: 978-81-224-1768-5 Publication Year: 2006 Edition: 2nd Reprint: 2009 Pages: 236 Price: 120.00 Pagerback

4 COLOUR



### **ENGINEERING MECHANICS**

Dubey, Arvind Kumar, Director of Arvind Physics Centre for IIT-JEE and Medical Entrance Examinations, Motihari, Bihar.

Kumar, Anil, Director of Concept Classes of IIT-JEE/AIEEE/CET, Bangalore, Karnakata

Contents: Mathematics and Mechanics • Systems of Units • Vector • Newton's Laws of Motion • Centroid • Moment of Inertia (Area) • Friction Coplanar Forces

ISBN: 978-81-224-2396-9 Publication Year: 2008 Edition: 1st Pages: 444 Price: 295.00 Paperback



### ALL ABOUT MACHINE **TOOLS**

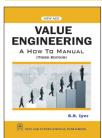
**Second Edition** 

 ${\bf Gerling, H.} \, Director \, of \, Trade, \, Schurete$ 

Contents: Turning operations: Manufacture of cylindrical bolts • Manufacture of stepped bolts • Manufacture of shafts • Manufacture of eccentric shafts • Profile turning • Machining of housings and castings • Mass production of turned parts • Drilling and Boring Operations: Drilling of simple holes on the drilling machine

holes on the drilling machine • Boring of cross holes on the horizontal boring machine • Manufacture of bushes • Manufacture of Tappered Parts: Manufacture of a lathe centre • Drilling holes for taper-pins • Milling Operations: Milling of plane surfaces • Milling of keyways • Milling of slides • Milling of hexagons • Shaping and Planing Operations: Shaping of V-blocks • Planing of guide gibs • Manufacture of Parts on the Slotting Machine: Slotting of keyways • Broaching Operations: Broaching of multiple spline bores • Grinding Operations: Grinding of shafts • Grinding of bores • Grinding of parallels • Fine-finishing operations • Threading Operations: Threading operations on the turning lathe with taps and dies • Cutting of male threads with the threading tool • Cutting of internal threads with the threading tool • Manufacturer of Gears: Milling of spur gears by the indexing method

ISBN: 978-81-224-1826-2 Publication Year: 2006 Edition: 2nd Reprint: 2008



### 10 VALUE ENGINEERING

### Third Edition

Iyer, S.S., Certified Value Engineering Specialist (CVS).

Contents: Value Engineering Concept, Theory and Fundamentals • Value Engineering Job Plan Step by Step Application • Project Work, Work Sheets, Objective, Techniques, Guidelines, Check Lists, Key Questions.

ISBN: 978-81-224-2405-8 Publication Year: 2009 Edition: 3rd Pages: 296



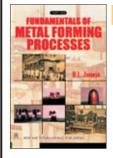
### 11 NUMERICAL METHODS **Fifth Edition**

Jain, Mahinder Kumar, Post-doctoral fellow, Institute for Applied Mathematics, University of Hamburg, West Germany Ivengar, S.R.K., Professor of Mathematics,

Indian Institute of Technology, Delhi Jain, R.K., Professor of Mathematics, Indian Institute of Technology, Delhi

Contents: High Speed Computation • Transcendental and Polynomial Equations • System of Linear Algebraic Equations and Eigenvalue Problems • Interpolation and Approximation • Differentiation and Intergration • Ordinary Differential Equations: Initial Value Problems • Ordinary Differential Equations: Boundary Value Problems

ISBN: 978-81-224-2001-2 Publication Year: 2007 Edition: 5th Reprint: 2009 Pages: 816 Price: 350.00 Paperback



### 12 FUNDAMENTALS OF METAL **FORMING PROCESSES**

Juneja, B.L., Department of Mechanical Engg., Indian Institute of Technology, Hauz Khas, New Delhi

Contents: Plastic Deformation and Related Properties • Metal Forming Processes • Analysis of Stresses and Strains • Yield Conditions and Stress-Strain Relations • Theory of Slip Lines and Upper & Lower Bound Theorems • Forging Processes · Analysis of Strip Rolling Process · Longitudinal

Rolling Technology and Equipment • Wire, Tube and Strip Drawing Processes • Extrusion Processes • Sheet Metal Forming Processes • Transverse Rolling Processes • Measurement of Friction in Metal Forming • Experimentation in Metal Forming.

ISBN: 978-81-224-1952-8 Publication Year: 2006 Edition: 1st Pages: 480 Price: 295.00



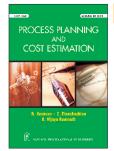
### 13 WESTERMANN TABLES FOR THE METAL TRADE

Jutzz, H.

### **Revised Second Edition**

Contents: Materials • Numbers • Mechanics Engineering Components • Metal Cutting Engineering Drawings • Measures Operations • and Weights

ISBN: 978-81-224-1730-2 **Publication Year:** 2006 **Edition:** 2nd **Reprint:** 2008 Pages: 160 Price: 125.00 Paperback



### 14 PROCESS PLANNING AND **COST ESTIMATION**

### **Second Edition**

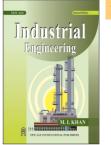
Kesavan, R., Prof., Deptt. of Production Technology, Anna University, Chennai, Tamil Nadu.

Elanchezhian, C., Assistant Prof. Deptt. of Mechanical Engg., Sri Sai Ram Engineering College, Chennai, Tamil Nadu.

Ramanath, B. Vijaya, Prof., Deptt. of Mechanical Engg., Sri Sai Ram Engineering College, Chennai, Tamil Nadu.

Contents: • Work Study • Process Planning • Introduction to Cost Estimation Cost Estimation • Production Cost Estimation.

SBN: 978-81-224-2605-2 **Publication Year:** 2008 **Edition:** 2nd **Pages:** 252



### 15 INDUSTRIAL ENGINEERING

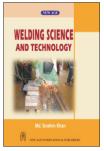
Khan, M.I., Prof. & Head, Deptt. of Mechanical Engg., Instt. of Integral Technology, Lucknow,

### **Second Edition**

Contents: Introduction • Productivity • Work Study: Definition, Purpose and Scope • Method Study • Work Measurement • Job Evaluation and Merit Rating • Plant Layout and Materials Handling • Production Planning and Control Depreciation and Replacement Analysis

• Inventory Control • Material Requirement Planning (MRP) • Quality Assurance, Total Quality Management (TQM) and Just-in-Time (JIT) • Business Organisation and Forms of Ownership • Manpower (Human Resource) Planning and Factory Legislation (India) • Sales Management, Forecasting, Accounting and Budgetary Control • Project Management Through PERT/CPM • Break-even Analysis · Operations Research · Engineering Economy

ISBN: 978-81-224-2059-3 Publication Year: 2007 Edition: 2nd Reprint: 2007 Pages: 340 Price: 170.00 Paperback



### 16 WELDING SCIENCE AND **TECHNOLOGY**

Khan, Md. Ibrahim, Professor and Head, Deptt. of Mechanical Engineering, Integral University, Lucknow

Contents: Introduction to Welding Technology • Review of Conventional Welding Processes • Welding Science • Shielded Metal ARE (SMA) Welding • Thermal and Metallurgical Aspects in Welding • Analytical and Mathematical Analysis · Welding of Materials · Welding Procedure and Process Planning • Weld Quality • Testing and

Inspection of Welds • Welding of Pipelines and Piping • Life Prediction of Welded Structures • Welding of Plastics • Welding Under the Influence of Magnetic Field.

ISBN: 978-81-224-2073-9 Publication Year: 2008 Edition: 1st Pages: 288 Price: 195.00 Paperbac



### 17 TOM: PLANNING, DESIGN AND IMPLEMENTATION

Khanna, V.K., Director of Galgotia Business School, Greater Noida, U.P.

Vrat, Prem • Sahay, B.S. • Shankar, Ravi

Contents: Introduction: TQM Basics and Beyond • TQM Basic Concepts • TQM Practices in the Automobile Sector-A Survey • TQM Modeling of the Automobile Manufacturing Sector • Scenario Building and Policy Experimentation • TQM Implementation Strategies.

ISBN: 978-81-224-2233-7 Publication Year: 2007 Edition: 1st Pages: 398 Price: 295.00 Paperback



# **18 HEAT AND MASS TRANSFER**

**DATA BOOK** Sixth Edition



Kothandaraman, C.P., Retd. Professor, Mechanical Engg., P.S.G. College of Tech., Coimbatore, Tamil Nadu.

Subramanyam, S., Former Principal of P.S.G College of Tech., Coimbatore.

Contents: Property values • Conduction • Radiation

• Convection • Heat Exchanger • Mass Transfer.

ISBN: 978-81-224-2012-8 Publication Year: 2007 Edition: 6th Reprint: 2009 Pages: 196 Price: 125.00 Paperback



### 19 STEAM TABLES

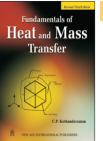
### **Second Edition**

Kothandaraman, C.P., Retd. Professor, Mechanical Engg., P.S.G. College of Tech., Coimbatore, Tamil Nadu

Contents: T1-Properties of Saturated Steam: Temperature Base T2- Properties of Saturated Steam: Pressure Base T3-Properties of Superheated Steam T4- Enthalpy of Formation and Heating Values at 25°C, 1 atm. T5-Property Values

of Water in Saturated State T6- Thermodynamic Properties of Gases at 15°C Charts 1 Psychrometric Chart Charts 2 Mollier Chart for Steam Charts 3 Generalised Compressibility Chart.

ISBN: 978-81-224-1865-1 Publication Year: 2006 Edition: 2nd Reprint: 2008 Pages: 40 Price: 40.00 Paperback



# 20 FUNDAMENTALS OF HEAT & MASS TRANSFER MASS TRANSFER AlcTE



Kothandaraman, C.P., Retd.

Professor, Mechanical Engg., P.S.G. College of Tech., Coimbatore, Tamil Nadu.

Contents: An Overview of Heat Transfer • Steady State Conduction • Conduction with Heat Generation • Heat Transfer with Extended Surfaces (FINS) • Two Dimensional Steady Heat Conduction • Transient Heat Conduction

Convection • Convective Heat Transfer Practical Correlation Flow Over Surfaces • Forced Convection • Natural Convection • Phase Change Processes Boiling, Condensation, Freezing and Melting • Heat Exchangers • Thermal Radiation • Mass Transfer

ISBN: 978-81-224-1772-2 **Publication Year:** 2006 **Edition:** 3rd **Reprint:** 2008 Pages: 728 Price: 295.00 Paperback



### 21 FLUID MECHANICS AND **MACHINERY**

### **Second Edition**

Kothandaraman, C.P., Retd. Professor, Mechanical Engg., P.S.G. College of Tech., Coimbatore, Tamil Nadu.

Rudramoorthy, R., Principal, P.S.G College of Technology, Coimbatore, Tamil Nadu.

Contents: Physical Properties of Fluids • Pressure Distribution in Fluids • Forces on Surfaces Immersed

in Fluids • Buoyancy Forces and Stability of Floating Bodies • Fluid Flow-Basic Concepts-Hydrodynamics • Bernoulli Equation and Applications • Flow in Closed Conduits (Pipes) • Dimensional Analysis • Similitude and Model Testing • Boundary Layer Theory and Flow Over Surfaces • Flow Measurements • Flow in Open Channels • Dynamics of Fluid Flow • Hydraulic Turbines • Rotodynamic Pumps • Reciprocating Pumps.

ISBN: 978-81-224-1975-7 Publication Year: 2006 Edition: 2nd Reprint: 2008 Pages: 614 Price: 295.00 Paperback



### 22 REFRIGERANT TABLES AND **CHARTS**

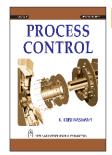
### **Second Edition**

Kothandaraman, C.P., Retd. Professor, Mechanical Engg., P.S.G. College of Tech., Coimbatore, Tamil Nadu.

Contents: T1- R12, Dichloro difluoromethane. CCl2F2 • T2- R22, Mono-chlorodifluoromethane, CHClF2 • T3- R717, Ammonia, Nh3 • T4-R11, Trichlorofluoromethane, CCl3F • T5-R134a, Tetra fluoroethane, CH2FCF3 • T6-

R152a, Difluoroethane, C2H4F2 • T7- R500, Azeotropic Mixture of R22 and R152a in the ratio 73.8: 26.2 • T8- R290, Propane, C3H8 • T9- R600a, Isobutane, C4H10 • T10- Physical Properties of Refrigerants • T11-Comparison of Performance of Refrigerants per kW of Cooling • T12- Heat Gain from Occupants in Conditioned Space • T13- Outside Summer Design Conditions for Selected Cities in India • T14- Outdoor Air Requirements for Different Occupations • T15-Indoor Design Conditions for Summer • T16-Infiltration Load • T17-Storage Condition for Perishable Products • T18-Heat **Emission from Commodities** 

ISBN: 978-81-224-1829-3 Publication Year: 2009 Edition: 2nd Reprint: 2008 Pages: 44 Price: 44.00 Paperback



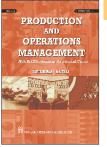
### 23 PROCESS CONTROL

### Second Edition

Krishnaswamy, K., Vice-Principal, Kongu Engineering College, Perundurai, Erode, Tamil Nadu

Contents: Process Control introduction • Control Characteristics and Tuning • Control systems with multiple loops • Final Control elements • Process Control systems—Selected Unit operations Signal Conditioning • Digital Controllers -Computer-Based Control

ISBN: 978-81-224-2736-3 Publication Year: 2009 Edition: 2nd Pages: 492 Price: 280.00 Paperback



### **24 PRODUCTION AND OPERATIONS MANAGEMENT**

Second Edition

Kumar, S. Anil, Professor & Head, Deptt. of Commerce, N.M.K.R.V. College of Women, Bangalore, Karnataka.

N. Suresh, Associate Professor & HOD of Industrial Engineering & Management, MVJ College of Engg., Bangalore.

Contents: Introduction to Production and Operation

Management • Plant Location and Layout • Material Handling • Materials Management • Production Planning and Control • Quality Control • Work Study (Time and Motion Study) • Maintenance Management • Waste Management Automation



### 25 ORGANIZATIONAL **EXCELLENCE THROUGH** TOTAL QUALITY **MANAGEMENT - A** PRACTICAL APPROACH

Lal, H., Director General, FICCI Quality Forum, Federation of Indian Chambers of Commerce & Industry, Federat

Contents: Part-I: Product Quality and its Control. Creating Quality by Design • Quality Control of the Purchased Product • Quality Control of Manufacturing Processes • Sales and Product Quality • Organising Effective Quality Management • Economics of Quality • The Human Factor in Quality • Management of Service Quality • Part-II: Concept and Philosophy • ISO-9000 Standards • The Customer-Focused Organization • Leadership and Team Building • Lean Production System • Total Productive Maintenance (TPM) • Customer Relationship Management (CRM) • Six-Sigma • Corporate Social Responsibility • Balanced Score Card • Quality Awards • Implementation of TQM • Part-III: Frequency Distribution • Normal Distribution • Theory of Probability • Control Charts • Control Chart of Attributes • Theory of Sampling Inspection • Standard Sampling Tables • Test of Significance • Statistical Tolerancing • ABC Analysis • Value Analysis • Defect Diagnosis and Prevention • Reliability Design, Evaluation and Control • Maintainability • 5 'S' Practices • Quality Ci

ISBN: 978-81-224-2289-4 Publication Year: 2008 Edition: 1st Pages: 484 Price: 250.00 Paperback

Buy Books Online at: www.newagepublishers.com



### **26 INTRODUCTION TO** MACHINING SCIENCE

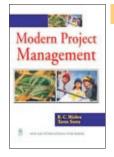
### Third Edition

Lal, G.K., AICTE Emeritus Fellow, Deptt. of Mechanical Engg., Indian Institute of Technology, Kanpur, U.P.

Contents: Deformation of Metals • Machining Processes • Tool Geometry • Mechanics of Metal Cutting • Mechanics of Oblique Cutting • Measurement of Cutting Forces • Thermal Aspects

of Machining • Tool Wear and Tool-life • Economics of Machining • Practical Machining Operations • Grinding of Metals • Vibrations in Machining

ISBN: 978-81-224-2104-0 Publication Year: 2007 Edition: 3rd Pages: 232



### **27 MODERN PROJECT** MANAGEMENT

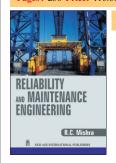
Mishra, R.C., Professor, Deptt. of Mechanical Engg., Northern India Engineering College, Lucknow, U.P.

Soota, Tarun, Lecturer, Department of Mechanical Engineering, A.I.E.T., Lucknow, Uttar Pradesh.

Contents: Project Management Overview • Concepts of Project Management • Project Selection and

Initiation • Project Planning: A System Approach • Organizing Human Resources • Project Direction, Co-ordination and Control • Contracts Management • Project Management Performance and Close Out • Network Techniques • Material Resource Planning • Internet and E-Commerce • Total Quality Management • Information Technology and Future of Project Management.

978-81-224-1616-9 **Publication Year:** 2005 **Edition:** Ist **Reprint:** 2008 Pages: 236 Price: 110.00 Paperback



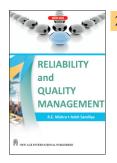
### 28 RELIABILITY AND **MAINTENANCE ENGINEERING**

Mishra, R.C., Professor, Deptt. of Mechanical Engg., Northern India Engineering College, Lucknow, U.P.

Contents: Principles of Reliability • Statistics for Reliability • Reliability of Systems • Failure Functions for Reliability • Design for Reliability • Quality and Reliability • Reliability and Simulation • Reliability Improvement • Reliability Assessment

Reliability Testing • Maintenance Information Systems • Maintenance Concepts Maintenance Practices • Condition based Maintenance • Computers in Maintenance • Organizational Structure for Maintenance • Economic Aspects of Maintenance • Maintenance and Environment • Maintenance Material Planning and Control • Manpower in Maintenance • Maintenance Equipment and Facilities

ISBN: 978-81-224-1741-8 Publication Year: 2006 Edition: Ist Reprint: 2008 Pages: 216 Price: 120.00 Paperback



### 29 RELIABILITY AND QUALITY MANAGEMENT

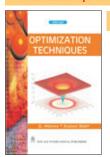
Mishra, R.C., Professor, Deptt. of Mechanical Engg., Northern India Engineering College, Lucknow, U.P.

Ankit Sandilya, B. Tech., UPTU, Luknow

Contents: Principles of Reliability Statistics for Reliability • Reliability of Systems • Failure Functions for Reliability Design for Reliability • Quality and Reliability • Reliability and

Simulation • Reliability Information Systems • Maintenance Concepts • Maintenance Practices • Condition based Maintenance • Computers in Maintenance • Organizational Structure for Maintenance • Economic Aspects of Maintenance.

ISBN: 978-81-224-2688-5 Publication Year: 2009 Edition: Ist Pages: 174 Price: 100.00 Paperback



# 30 OPTIMIZATION TECHNIQUES



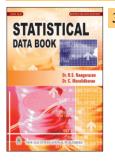
Mohan, Chander, Professor, Deptt. of CSE, Ambala College of Engg. & Applied Research, Ambala Cantt., Haryana.

**Deep, Kusum,** Associate Professor Department of Mathematics, Indian Institute of Technology, Roorkee, India.

**Contents:** Introduction • Classical Optimization Techniques • Linear Programming • Duality Theory and Post Optimality Analysis • Transportation

Problem and Its Variants • Network Models • Sequencing and Scheduling Problems • Nonlinear programming: Kuhn-Tucker Theory • Special Classes of Nonlinear Optimization Problems • Solution of Unconstrained Nonlinear Optimization Problems • Solution of Constrained Nonlinear Optimization Problems • Integer Programming • Dynamic Programming • Decision Theory • Theory of Games • Multiobjective and Goal Programming • Heuristics Based Optimization Techniques.

ISBN: 978-81-224-2385-3 Publication Year: 2009 Edition: 1st Pages: 628 Price: 350.00 Paperback



### 31 STATISTICAL DATA BOOK

### **Revised Second Edition**

Nagarazan, R.S., Principal, Arunai Engineering College, Tiruannamalai, T.N.

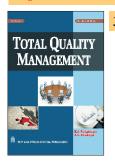
Muralidharan, C., Professor, Deptt. of Manufacturing Engg., Annamalai University, Annamalai Nagar, Tamil Nadu

Contents: PART I: PARAMETRIC TABLES

• Area Under Normal Curve • Individual Binomial
Distribution • Summation of Terms of Poisson,
Exponential and Binomial Limits • Values of

Gamma Functions • The t-Distribution • Percentage Points of the f-Distribution • Percentage Points of  $x^2$  Distribution • Critical Values for the Sign Test **PART II: NON-PARAMETRIC TABLES** • Critical Values for Wilcoxon Signed Rank Test • Critical Values for the Wilcoxon Rank Sum Test • Values for Spearman's Rank Correlation (RS) for Combined Areas • Kendall's Rank Correlation Coefficient • Percentage Points of D in the One-sample Kolmogorov-Smirnov Distribution • Critical Values for the Durbin-Watson Statistic **PART III: SQC TABLES** • Factors for Computing Control Limits • Relative Precision Index • Factors for Computing Modified Control Limits • Sample Size Code Letters • Master Table for Normal Inspection Single Sampling • Significant Ranges for Duncan's Multiple Range Test • Orthogonal Arrays and Linear Graphs

ISBN: 978-81-224-1778-4 Publication Year: 2006 Edition: 2nd Reprint: 2007 Pages: 60 Price: 45.00 Paperback



# 32 TOTAL QUALITY MANAGEMENT

### **Second Edition**

**Nagarazan, R.S.**, *Prof. & Director, Arunai Engineering College, Tiruvannamalai, T.N.* 

Arivalagar, A.A., Prof. & Head of Deptt. of Mechanical Engg., Arunai Engineering College, Tiruvannamalai, Tamil Nadu.

Contents: Introduction • TQM Principles
• Statistical Process Control • TQM Tools

 $\bullet \ Quality \ Systems \ \bullet \ Additional \ Topics \ \bullet \ Additional \ Case \ Studies.$ 

ISBN: 978-81-224-2478-2 Publication Year: 2008 Reprint: 2009 Edition: 2nd Pages: 254 Price: 160.00 Paperback



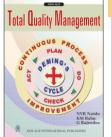
### 33 PROJECT MANAGEMENT

Nagarajan, K., Branch Manager, Tamil Nadu Industrial Investment Corp. Ltd., Coimbatore, Tamil Nadu.

Contents: Project: Characteristics and Types
• Project Identification Formulation and Implementation • Project Appraisal • Project Cost Estimation • Project Financing • Financial Appraisal-I (Financial Analysis of Projects) • Financial Appraisal-II (Financial Projections) • Project Planning and Scheduling • Project Cost Control • Rehabilitation

of Sick Units • Project Organization • Project Contracts • Project Evaluation and Post Project Evaluation (Post Audit) • Computer Aided Project Management and Future of Project Management • Options in Projects • Risk Analysis • Effect of Inflation on Financial Appraisal of Projects • Capital Rationing among Multiple Projects • Topics of Interest on Project Management • Case Studies.

ISBN: 978-81-224-2687-8 Publication Year: 2009 Edition: 4th Pages: 682 Price: 300.00 Paperback



# 34 TOTAL QUALITY MANAGEMENT

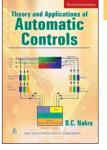
**Naidu, N.V.R.,** Professor, Deptt. of Industrial Engg., M.S. Ramaiah Institute of Technology, Bangalore, Karnataka.

**Babu, K.M.,** Professor & Head, Deptt. of Industrial Engg. & Mgmt., B.M.S. College of Engg., Bangalore, Karnataka.

Rajendra, G., Asst. Prof., Deptt. of Industrial Engg. & Mgmt., Dr. Ambedkar Instt. of Tech., Bangalore, Karnataka.

**Contents:** Quality and Quality Control • Probability Distributions • An Overview of Total Quality Management • Leadership • Tool and Techniques of TQM • Statistical Process Control • Control Charts For Attributes • Acceptance Sampling • Reliability • Experimental Design • SQC Tables.

ISBN: 978-81-224-1799-9 Publication Year: 2006 Edition: Ist Reprint: 2008 Pages: 266 Price: 125.00 Paperback



# 35 THEORY & APPLICATIONS OF AUTOMATIC CONTROL

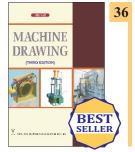
### **Second Edition**

Nakra,B.C., Professor, Deptt. of Mechanical Engg., Institute of Tech and Mgmt., Gurgaon, Haryana.

Contents: • Introduction • Representation of Processes and Control Elements • Representation of Feedback Control Systems • Types of Controllers • Transient and Steady State Response • Frequency Response Analysis • Stability of Control Systems

- Root Locus Method Control Systems Design Digital Control System State Space Analysis of Control Systems Control Applications Sequence Control Solution of Differential Equations Laplace Transforms of Some Functions
- z-Transforms

ISBN: 978-81-224-1686-2 Publication Year: 2005 Edition: 2nd Reprint: 2008 Pages: 336 Price: 195.00 Paperback



### **36 MACHINE DRAWING**

### **Third Edition**

Narayana, K.L., Director, Madanapalle Institute of Tech. & Science, Madanapalle, Andhra Pradesh

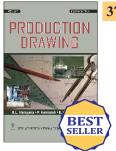
**Kannaiah, P.,** Retired Professor, Mechanical Engg., S.V.U. College of Engg., Tirupati, A.P.

Reddy, Venketa K. Head, Dept. of Mech. Eng. Chadawada Ramanamma College of Eng. Tirupati, A.P.

### MECHANICAL ENGINEERING

Contents: Introduction • Principles of Drawing • Orthographic Projections • Sectional Views • Screwed Fasteners • Keys, Cotters and Pin Joints • Shaft Couplings • Pipe Joints • Pulleys • Riveted Joints • Welded Joints • Bearings • Chains and Gears • Jigs and Fixtures • Limits, Tolerances, and Fits • Surface Roughness • Blueprint Reading • Assembly Drawings • Part Drawings • Production Drawings • Computer-Aided Draughting

ISBN: 978-81-224-1917-7 Publication Year: 2006 Edition: 3rd Reprint: 2009 Pages: 476 Price: 250.00 Paperback



### 37 PRODUCTION DRAWING

### Second Edition

Narayana, K.L., Director, Madanapalle Institute of Tech. & Science, Madanapalle, Andhra Pradesh

Kannaiah, P., Retired Professor, Mechanical Engg., S.V.U. College of Engg., Tirupati, Andhra Pradesh.

Reddy, K. Venkata , Head, Deptt. of Mech. Engg. Chadawada Ramanamma College of Engg., Tirupati, Andhra Pradesh

Contents: Introduction • Principles of Dimensioning • Specification of Materials • Standard Mechanical Components-Specifications • Limits, Tolerances and Fits • Surface Roughness • Production Drawings and Process Sheets• Production Drawings of Mating Components • Production Drawing of Assemblies • Tool Drawings • Jigs and Fixtures • Inspection and Gauging Tool Drawings. • Conventional Representation

ISBN: 978-81-224-2288-7 Publication Year: 2008 Edition: 2nd Pages: 352



### 38 CNC MACHINES

### **Second Edition**

**Pabla, B.S.,** Professor in ME at National Instt. of Tech. Teachers` Training and Res. (NITTTR), Chandigarh.

Adithan, M., Professor in Mechanical Engg. and Dean, VIT University, Vellore, Tamil Nadu.

**Contents:** Introduction to Numerical Control of Machines • Components of Numerical Control

System • Classification of Numerical Control Machines • Constructional Details of CNC Machines • Fundamentals of Part Programming • Part Programming Using Subroutines, Do Loops and Canned Cycles • Computer-aided Part Programming • Tooling for CNC Machines • Maintenance of CNC Machine Tools

ISBN: 978-81-224-2019-7 Publication Year: 2007 Edition: 2nd Reprint: 2008 Pages: 140 Price: 150.00 Paperback



### 39 CAD/CAM/CIM

### **Third Edition**

Radhakrishnan, P., Vice Chancellor, Vellore Institute of Technology, (Deemed University), Vellore, Tamil Nadu

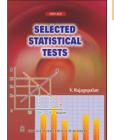
**Subramanyam, S.,** Former Principal of P.S.G College of Tech., Coimbatore.

Raju, V., Dean, School of Engg. Tech., Farmingdale State University of New York, New York, U.S.A

Contents: Computer Integrated Manufacturing • Product Development Through CIM • Principles of Computer Graphics • Computer Hardware • Operating Systems and Environments • Geometric Modeling Techniques • Finite Element Modeling and Analysis in CIM • CIM Database and Database Management Systems • Computer Aided Process Planning • Planning of Resources for Manufacturing Through Information Systems • Manufacturing Automation • CNC Machine Tools • Robots in Computer Integrated Manufacturing • Computer Aided Quality Control

• Fundamentals of Networking • Collaborative Engineering • Graphic Standards • CIM Models • Flexible Manufacturing Systems • Shop Floor Data Collection Systems • Simulation in Manufacturing

ISBN: 978-81-224-2236-8 Publication Year: 2007 Edition: 3rd Reprint: 2009 Pages: 692 Price: 295.00 Paperback



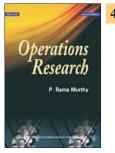
# 40 SELECTED STATISTICAL TESTS

Rajagopalan, V., Reader, Deptt. of Statistics, Annamalai University, Annamalai Nagar, Tamil Nadu.

 $\textbf{Contents:} \ \, \textbf{Introduction \bullet Parametric Tests}$ 

- Analysis of Variance Tests Multivariate Tests
- · Non-parametric Tests · Sequential Tests.

ISBN: 978-81-224-1840-8 Publication Year: 2006 Edition: 1st Pages: 260 Price: 145.00 Paperback



### 41 OPERATIONS RESEARCH

Ramamurthy, P. Principal Intell Engineering College, Anantapur, Andhra Pradesh.

Contents: Historical Development • Linear Programming Models (Resource Allocation Models) • Linear Programming Models (Solution by Simplex Method) • Linear Programming-II (Transportation Problem) • Linear Programming-III (Assignment Model • Sequencing Model • Replacement Model • Inventory Control • Waiting Line theory or Queuing Model • Theory of Games of Competitive Strategies • Dynamic Programming

Decision Theory
 Simulation
 Introduction Non-Linear Programming
 Programme Evaluation and Review Technique and Critical Path Method (PERT and CPM).

ISBN: 978-81-224-2069-2 Publication Year: 2007 Edition: 2nd Reprint: 2008
Pages: 726 Price: 295.00 Pagerhack



and CPM Scheduling Techniques.

# **42** PRODUCTION & OPERATIONS MANAGEMENT

Ramamurthy, P. Principal, Intell Engineering College, Anantapur, Andhra Pradesh

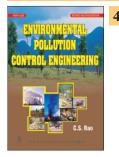
Contents: Production & Operations Management
• Pre-Planning Stage or Product Design Stage
• Forecasting • Production Planning • Scheduling,

• Forecasting • Production Planning • Scheduling, Loading, Despatching and Expediting • Capacity Management • Plant Location and Plant Layout

• Materials Handling • Statistical Quality Control • Plant Maintenance and Maintenance Management

• Value Engineering and Value Analysis • Materials Management and Inventory Control • Work Study • Use of Computers in Production Operations Management • Productivity Engineering and Management • PERT

ISBN: 978-81-224-1558-2 Publication Year: 2005 Edition: 2nd Reprint: 2008 Pages: 448 Price: 195.00 Paperback



# 43 ENVIRONMENTAL POLLUTION CONTROL ENGINEERING

### **Second Edition**

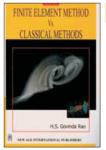
**Rao, C.S.,** Director, Sardar Patel Renewable Energy Research Institute, Anand, Gujarat

**Contents:** Impact of Man on the Environment: An Overview • Pollution Sources and Effects • Meteorological Aspects of Air Pollutant Dispersion • Air Pollution Sampling and Measurement • Air Pollution

### MECHANICAL ENGINEERING

Control Methods and Equipment • Control of Specific Gaseous Pollutants • Air Pollution Control Methods and Equipment • Control of Specific Gaseous Pollutants • Waste Water Treatment • Solid Waste Management • Hazardous Waste Management.

ISBN: 978-81-224-1835-4 Publication Year: 2006 Edition: 2nd Reprint: 2009 Pages: 440 Price: 225.00 Paperback



# 44 FINITE ELEMENT METHOD VS. CLASSICAL METHODS

Rao, Govinda H.S., Asst. Professor & Head, Deptt. of Mathematics, Ambedkar Instt. of Technology, Bangalore, Karnataka.

Contents: Fundamental Concepts • Matrix Algebra and Gaussian Elimination • One-dimensional Problems • Trusses • Two-Dimensional Problems Using Constant Strain Triangles • Three-dimensional Finite Elements • Isoparametric Elements, Numerical Integration & Higher Order Elements • Dynamics

Analysis • Axi-Symmetric Elements

ISBN: 978-81-224-2050-0 Publication Year: 2007 Edition: 1st Reprint: 2008 Pages: 436 Price: 195.00 Paperback



# 45 MANUFACTURING SCIENCE & TECHNOLOGY: Manufacturing Processess and Machine Tools

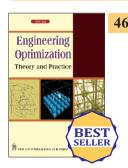
**Second Edition** 

Rao, K. Vara Prasad, Principal, Loyola Institute of Tech. & Mgmt., Guntur, Andhra Pradesh.

Contents: Foundry • Plastic Reformation Processes
• Welding • Powder Metallurgy • Plastics • Presses
• Fundamentals of Metal Cutting • Lathe• Capstan

and Turret Lathes • Drilling Machines • Milling Machines • Shaper, Slotter and Planer • Grinding and Grinding Machines • Jigs and Fixtures • Broaching • Super Finishing Processes.

ISBN: 978-81-224-2675-5 Publication Year: 2009 Edition: 2nd Pages: 398 Price: 250.00 Paperback



# 46 ENGINEERING OPTIMIZATION: THEORY AND PRACTICE

### Third Enlarged Edition

**Rao, Singireshel S.** Professor, School of Mechanical Engineering, Purdue University.

Contents: Introduction to Optimization • Classical Optimization Techniques • Linear Programming I: Simplex Method • Linear Programming II: Additional Topics and Extensions • Nonlinear

Programming I: One Dimensional Minimization Methods • Nonlinear Programming II: Unconstrained Optimization Techniques • Nonlinear Programming III: Constrained Optimization Techniques • Geometric Programming • Dynamic Programming • Integer Programming • Stochastic Programming • Further Topics in Optimization • Practical Aspects of Optimization • Appendices.

ISBN: 978-81-224-2723-3 Publication Year: 2009 Edition: 3rd Pages: 776 Price: 350.00 Paperback

Visit us at: www.newagepublishers.com



# 47 INTRODUCTION TO MATERIALS HANDLING

Ray, Siddhartha, Director-in-Charge, National Instt. of Tech. Teacher's Training & Research., Kolkata, W.B.

Contents: Introduction to Materials Handling
• Principles of Materials Handling
• Unit Load
Concept
• Classification of Materials Handling
Equipment
• Industrial Vehicles/Trucks
• Conveyors
• Pneumatic and Hydraulic Conveyors
• Hoisting

Equipment Bulk Handling Equipment and Systems • Robotic Handling • Auxiliary Equipment • Organisation, Maintenance and Safety

ISBN: 978-81-224-2099-9 Publication Year: 2007 Edition: 1st Pages: 244 Price: 195.00 Paperback



### 48 PRINCIPLES OF ENGINEERING METALLURGY

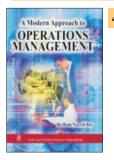
### **Second Edition**

**Reddy, L.Krishna,** Former Professor, Deptt. of Mech. Engg., K S R M College of Engg., Kadapa, Andhra Pradesh.

Contents: Introduction • Extraction of Non-Ferrous Metals • Production of Iron and Steel • Crystal Structure • Solid Solutions • Phase

Diagrams • Heat Treatment of Metals • Alloy Steels • Non-Ferrous Alloys • Plastic Deformation of Metals • Crystal Structure • Oxidation and Corrosion • Pyrometry • Strengthening Mechanics • Cast Irons • Composite Materials • Electron Theory of Metals • Magnetic Materials • Dielectric Materials

ISBN: 978-81-224-2202-3 Publication Year: 2009 Edition: 2nd Pages: 320 Price: 195.00 Paperback



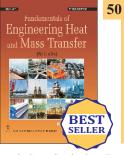
# 49 A MODERN APPROACH TO OPERATIONS MANAGEMENT

Roy, Ram Naresh, Prof., Addis Ababa University, Ministry of Education, Ethopia

Contents: Production Systems and Operations Management • Location of Production and Service Facilities • Layout Planning • Purchasing Systems and Vendor Rating • Operations Planning and Control • Inventory Control • Materials Requirement Planning • Just-In-Time Approach • Project Management • Quality Control • Total Quality Management and

ISO-9000 • Linear Programming • Methods Engineering • Mechanization, Automation and Productivity • Value Analysis and Value Engineering

ISBN: 978-81-224-1627-5 Publication Year: 2005 Edition: 1st Reprint: 2007 Pages: 344 Price: 150.00 Paperback



### 50 FUNDAMENTALS OF ENGINEERING HEAT & MASS TRANSFER



Third Edition

Sachdeva, R.C., Director, HMR Institute of Technology and Management, Delhi.



Contents: Basic Concepts • Fundamental Equations of Conduction • One-Dimensional Steady State Heat Conduction • Multi-Dimensional

Steady State Conduction • Transient Heat Conduction • Fundamentals of Convective Heat Transfer • Forced Convection Systems • Natural Convection • Thermal

Radiation? Basic Relations • Radiative Heat Exchange Between Surfaces • Boiling and Condensation • Heat Exchangers • Diffusion Mass Transfer • Convective Mass Transfer • Experiments in Engineering Heat and Mass Transfer.

ISBN: 978-81-224-2138-5 Publication Year: 2007 Edition: 3rd Reprint: 2008 Pages: 684 Price: 295.00 Paperback



# 51 FLEXIBLE MANUFACTURING SYSTEM

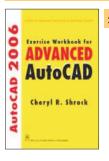
**Shivanand, H.K.,** Department of Mechanical Engg., UVCE, Bangalore, Karnataka

### Benal, M.M., Koti, V.

Contents: FMS Introduction and Description
• Manufacturing Cell • JIT and KANBAN System
• Group Technology • Machining Centers • Deburring
and Wash Stations • Coordinate Measuring
Machines • Automated Material Movement and
Storage System • Cutting Tools and Tool
Management • System Hardware and General

Functionality • FMS Software Structure, Functions and Description • Case Studies.

ISBN: 978-81-224-1870-5 Publication Year: 2006 Edition: 1st Pages: 164



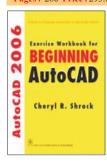
# 52 EXERCISE WORKBOOK FOR ADVANCED AUTOCAD

Shrock, Cheryl R., Prof., Computer Aided Design, Orange Coast College, Costa Mesa, California, USA.

Contents: Display Multiple Drawings • Customizing your Workspace • Decimal Setups • Feet and Inches Setups • Multiline • Isometric Drawings • Dimensioning an isometric drawing (oblique) • Block • Attributes • Design Centre • External Referenced Drawings (XREF) • Ordinate Dimensioning • Introduction to 3D • Constructing

Solid Primitives • Understanding the UCS • Extrude • 3D Operations • Solid Edit • Revolve, Slice and Section • Plotting Multiple views • Create Table.

ISBN: 978-81-224-1806-4 Publication Year: 2006 Edition: Ist Reprint: 2008 Pages: 280 Price: 295.00 Paperback



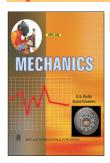
# 53 EXERCISE WORKBOOK FOR BEGINNING AUTOCAD

Shrock, Cheryl R., Prof., Computer Aided Design, Orange Coast College, Costa Mesa, California, USA.

Contents: Introduction • Lesson 1• Lesson 2 • Lesson 3 • Lesson 4 • Lesson 5• Lesson 6 • Lesson 7 • Lesson 8 • Lesson 9• Lesson 10 • Lesson 11• Lesson 12 • Lesson 13• Lesson 14 • Lesson 15 • Lesson 16 • Lesson 17• Lesson 18 • Lesson 19 • Lesson 20 • Lesson 21 • Lesson 22 • Lesson 23 • Lesson 24 • Lesson 25 • Lesson 26

• Lesson 27 • Lesson 28 • Lesson 29 • Lesson 30 • Appendix.

ISBN: 978-81-224-1805-7 Publication Year: 2006 Edition: Ist Reprint: 2008 Pages: 280 Price: 295.00 Paperback



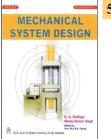
### **54** MECHANICS

**Shukla, R.K.,** Reader, Deptt. of Physics, Lucknow University, Lucknow, U.P.

**Srivastava, Anchal,** Reader, Deptt. of Physics, Lucknow University, Lucknow, U.P.

Contents: Measurement • Force and Motion • Dynamics of Circular Motion and the Gravitational Field • Work, Energy and Momentum • Linear and Angular Momentum • Collision • Rotational Kinematics • Moment of Inertia • Mechanical Properties of Matter • Fluids • Harmonic Motion • Wave Motion • Stationary Waves (Waves in a Linear-Bounded Medium • Damped and Forced Harmonic Oscillation • Relativity.

ISBN: 978-81-224-1875-0 Publication Year: 2006 Edition: 1st Reprint: 2006 Pages: 730 Price: 350.00 Paperback



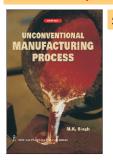
# 55 MECHANICAL SYSTEM DESIGN

Siddiqui, K.U., Singh, Manoj Kumar, Lecturer, Deptt. of Mechanical Engineering, Azad Instt. of Engg. and Tech.,

**Contents:** Introduction to Design of Systems • Engineering Processes and the System Approach

- Engineering Processes and the System Approach
   Design and Problem Formulation System Theories
- System Modelling Linear Graph Analysis
- Optimization Concepts System Evaluation
- Calculus Methods for Optimization Decision Analysis • System Simulation • Application of
- Mechanical System Design to Control System The Product Design Process Computer System Concept Bond Graph.

ISBN: 978-81-224-2683-0 Publication Year: 2009 Edition: 2nd Pages: 392 Price: 200.00 Paperback



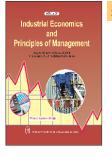
# 56 UNCONVENTIONAL MANUFACTURING PROCESS

**Singh, M.K.,** Professor & HOD of Mechanical Engg. in Hindustan College of Science & Technology, Farah, Mathura.

**Contents:** Introduction of Unconventional Manufacturing Processes • Abrasive Jet Machining

- Ultrasonic Machining (USM) Ultrasonic Welding
- Water Jet Machining Chemical Machining
- Electrochemical Machining (ECM) Electrochemical Grinding Electrical Discharge Machining (EDM)
- Electron Beam Welding Laser Beam Processing Plasma Arc Cutting Metallizing Process High Energy Rate Forming Supplementary Topics.

ISBN: 978-81-224-2244-3 Publication Year: 2007 Edition: 1st Reprint: 2008 Pages: 222 Price: 200.00 Paperback



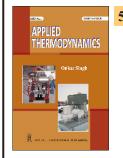
### 57 INDUSTRIAL ECONOMICS AND PRINCIPLES OF MANAGEMENT

Singh, Manoj Kumar, Lecturer, Deptt. of Mechanical Engineering, Azad Instt. of Engg. and Tech., Lucknow, U.P.

Contents: Unit-I: Industrial Economics • Unit-II
Basic Concept of Demand Basic Concept of
Supply • Unit-III: Money and Banking Functions
of Banking System • Unit-IV: Principles of
Management Contribution of Max Weber (April, 21,

1864-June 14, 1920) • Unit-V: Human Behavior Personality Development.

ISBN: 978-81-224-2582-6 **Publication Year:** 2009 **Edition:** 1st **Pages:** 112 **Price:** 75.00 **Paperback** 



### **58 APPLIED THERMODYNAMICS**

### **Third Edition**

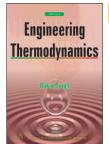
Singh, Onkar, Professor, Deptt. of Mechanical Engg., Harcourt Bulter Technological Inst., Kanpur, U.P.

Contents: Fundamental Concepts and Definitions
• Zeroth Law of Thermodynamics • First Law of
Thermodynamics • Second Law of Thermodynamics
• Entropy • Availability and General Thermodynamic
Relations • Thermodynamic Properties of Pure
Substance • Fuels and Combustion • Boilers and

### MECHANICAL ENGINEERING

Boiler Calculations • Vapour Power Cycles • Gas Power Cycles • Steam Engine • Nozzles • Steam Turbines • Steam Condenser • Reciprocating and Rotary Compressor • Introduction to Internal Combustion Engines • Introduction to Refrigeration and Air Conditioning.

ISBN: 978-81-224-2583-3 Publication Year: 2009 Edition: 3rd Pages: 964 Price: 395.00 Paperback



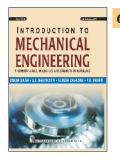
### 59 ENGINEERING THERMODYNAMICS

Singh, Onkar, Professor, Deptt. of Mechanical Engg., Harcourt Bulter Technological Inst., Kanpur, U.P.

Contents: Fundamental Concepts and Definitions • Zeroth law of Thermodynamics • First Law of Thermodynamics • Second Law of Thermodynamics • Entropy • Thermodynamic Properties of Pure Substance • Availability and General Thermodynamic Relations • Vapour Power

Cycles • Gas Power Cycles • Introduction to Internal Combustion Engines • Introduction to Refrigeration and Air Conditioning • Introduction of Heat Transfer • One Dimensional Compressible Fluid Flow.

ISBN: 978-81-224-1750-0 Publication Year: 2006 Edition: Ist Reprint: 2007 Pages: 576 Price: 250.00 Paperback



# 60 INTRODUCTION TO MECHANICAL ENGINEERING

Fifth Edition

**Singh, Onkar,** *Professor, Deptt. of Mechanical Engg., Harcourt Bulter Technological Inst., Kanpur, U.P.* 

**Bhavikatti, S.S.,** Principal, Vijayanagar Engineering College, Bellary, Karnataka

Chandra, Suresh, Retd. Professor Emeritus,

Mechanical Engg., Institute of Engg. & Tech., Lucknow, U.P.

Bharti, P.K., Senior Lecturer, Integral University.

Contents: Part A: Thermodynamics • Fundamental Concepts and Definitions
• Ideal and Real Gases • Zeroth Law of Thermodynamics • First Law of Thermodynamics
• Second Law of Thermodynamics • Entropy • Thermodynamic Properties of Pure
Substance • Thermodynamic Cycles and Introduction to I.C. Engines Part B:
Mechanics • Force System and Analysis • Friction • Analysis of Beams • Analysis
of Trusses Part C: Strength of Materials • Simple Stresses and Strains
• Compound Stresses and Strains • Bending Stresses in Beams • Torsion.

ISBN: 978-81-224-2178-1 Publication Year: 2007 Edition: 5th Pages: 660 Price: 295.00 Paperback



### 61 PROBLEMS AND SOLUTIONS IN MECHANICAL ENGINEERING

Singh, U.K., Asst. Prof., Deptt. of Mechanical Engineering, Kamla Nehru Instt. of Tech. Sultanpur, Uttar Pradesh.

**Dwivedi, Manish,** *Dy. Director in Aryavart Institute of Technology and Management, Lucknow, U.P.* 

Contents: Part A: Thermodynamics • Part B: Engineering Mechanics • Part C: Strength of Materials.

ISBN: 978-81-224-2100-2 Publication Year: 2007 Edition: 1st Reprint: 2008 Pages: 530 Price: 250.00 Paperback



### **62** Mechanics

### **Second Edition**

**Srivastava, P.K.,** Reader, Department of Physics, D.A.V. College, Kanpur, Uttar Pradesh.

Contents: Space-Time Structure, Newton's Laws and Galilean Transformation • Non-Inertial Frames and Inertial Forces • Motion in Electric and Magnetic Fields • Conservation of Energy • Conservation of Momentum • Angular Momentum and Rigid Body Dynamics • Motion in Central Forces: The Universal Gravitation • Harmonic Oscillations • Damped and Forced Harmonic

Oscillations • Vibrations of a Continuous System (Stationary Waves) • Wave Motion (Progressive Waves) • Special Theory of Relativity.

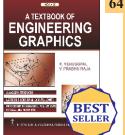
ISBN: 978-81-224-1905-4 Publication Year: 2007 Edition: 2nd Pages: 472 Price: 250.00 Reprint: 2009 Paperback



# PROCEEDINGS OF ALL INDIA SEMINAR ON ADVANCES IN PRODUCT DEVELOPMENT

**Srivastava, R.K.**, Professor, Deptt. of ME, Motilal Nehru National Instt. of Technology, Allahabad, Uttar Pradesh. **Gupta, Y.K. Bhatt, A.D.** 

ISBN: 978-81-224-1851-4 Publication Year: 2006 Edition: 1st Price: 225.00 Paperback



### 64 A TEXTBOOK OF ENGINEERING GRAPHICS

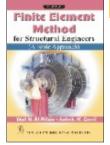
**Venugopal, K.,** Retired Professor of Mechanical Engineering, Government College of Technology, Coimbatore.

**Prabhu Raja, V.,** Asst. Professor of Mechanical Engineering, PSG College of Technology, Coimbatore

Contents: Drawing Instruments • BIS Codes-Lines, Lettering and Dimensioning • Geometrical

Constructions • Engineering Scales • Curves Used in Engineering Practice-Conic Sections • Cycloids, Involutes, Spirals and Helices • Orthographic Projection • Projections of Points • Projections of Straight Lines • Projections on Auxiliary Planes • Projections of Plane Surfaces • Projections of Solids • Auxiliary Projections of Solids • Sections of Solids • Development of Surfaces of Solids • Development of Surfaces of Solids • Development of Surfaces of Solids • Development of Lateral Surfaces of Two Intersection of Solids • Isometric Projection • Conversion of Isometric Views to Orthographic Views • Freehand Sketching Techniques • Freehand Sketching of Orthographic Views From Isometric Views • Freehand Sketching of Isometric Views From Orthographic Views • Perspective Projection

ISBN: 978-81-224-2457-7 **Publication Year:** 2008 **Edition:** 1st **Reprint:** 2008 **Pages:** 516 **Price:** 280.00 **Paperback** 



# 65 FINITE ELEMENT METHODS (for Structural Engineers)

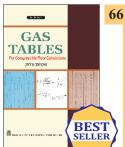
Wail N. Al-Rifaie, Professor of Civil Engineer-ing at the University of Technology, Baghdad, Iraq.

**Govil, Ashok K.,** *Prof. of Applied Mechanics, Motilal Nehru Regional Engg. College, Allahabad, Uttar Pradesh.* 

Contents: Introduction to Finite Element Method
• Basic Equations from Linear Elasticity Theory

Stiffness Properties and its Transformation • Derivation of Stiffness Properties for One-Dimensional Elements • Derivation of Stiffness Properties for Two-Dimensional Elements • Formulation of Finite Element Method • Application of Finite Element Method

ISBN: 978-81-224-2410-2 Publication Year: 2008 Edition: 1st Pages: 208 Price: 160.00 Paperbac



### **66** GAS TABLES FOR COMPRESSIBLE FLOW Colou **CALCULATIONS**



EDITION

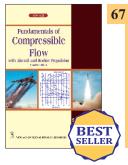
### **Fifth Edition**

Yahya, S.M., Formerly Professor & Head of Mechanical Engg., I.I.T., New Delhi.

Contents: Part:I Definitions and Basic Relations • The Energy Equation • Rate Equations for a Control Volume • Isentropic Flow with Variable Area • Wave Motion • Flow with Normal Shock

Waves • Flow with Oblique Shock Waves • Flow in Constant Area Ducts with Friction • Flow in Constant Area Ducts with Heat Transfer • Part II: Multidimensional Flow • Methods of Measurement Part III: Aircraft Propulsion • Rocket Propulsion • Miscellaneous Problems in Compressible Flow

ISBN: 978-81-224-1913-9 Publication Year: 2006 Edition: 5th Reprint: 2008 Pages: 158 Price: 100.00 Paperback



### **67 FUNDAMENTAL OF COMPRESSIBLE FLOW**

### **Fourth Edition**

Yahya, S.M., Formerly Professor & Head of Mechanical Engg., I.I.T., New Delhi.

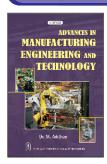
Contents: Part:I Definitions and Basic Relations • The Energy Equation • Rate Equations for a Control Volume • Isentropic Flow with Variable Area • Wave Motion • Flow with Normal Shock Waves • Flow with Oblique Shock Waves • Flow in Constant Area Ducts with Friction • Flow in Constant Area Ducts with Heat Transfer • Part II:

Multi-dimensional Flow • Methods of Measurement Part III: Aircraft Propulsion • Rocket Propulsion • Miscellaneous Problems in Compressible Flow

ISBN: 978-81-224-2668-7 Publication Year: 2009 Edition: 4th Pages: 550

### REFERENCE BOOK

### **NEW EDITIONS**



### 68 ADVANCES IN **MANUFACTURING ENGINEERING AND TECHNOLOGY**

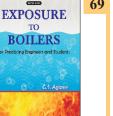
Adithan, M., Professor in Mechanical Engg. and Dean, VIT University, Vellore,

Contents: Global Manufacturing and Competitiveness • Manufacturing Strategies • Robotics for Hostile Environments • Virtual Reality Systems

• Neural Network • Water Jet Manufacturing and Machining • Thermo-Chemical heat Treatment Processes • Surface Engineering and Surface Coatings • Materials Planning and Logistics • Manufacturing Engineering Education and Practices • Information Technology in Manufacturing • Robotic Systems • Photo Elasticity Techniques • Software Reliability • Trobology in Product Design and Manufacture • Computer Aided Manufacturing • Casting Process Selection • Analytic Hierarchy Process (AHP) and Fuzzy Logic • Machining of Advanced Ceramics • Concurrent Engineering Design.

ISBN: 978-81-224-2674-8 Publication Year: 2009 Edition: 1st Pages: 210 Price: 495.00 Hardboun

### **69** EXPOSURE TO BOILERS

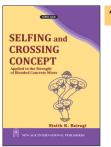


Aglave, G.S. Former Member of Boilers Board of Examination for Proficiency Engineers. Govt. of Maharashtra

Contents: Introduction • Fuels • Combustion Chemistry of Water • Various Equipment

- · Various Systems Provided for Operation of Boilers • Boilers General • Boilers Description
- Power Boiler Boiler Operation and Maintenance
- Mathematical Examples Key Technical Data
- Important Tables Important Graphs

ISBN: 978-81-224-2670-0 Publication Year: 2009 Edition: 1st Pages: 446 Price: 495.00 Hardbound

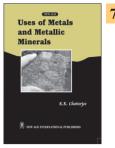


### 70 SELFING AND CROSSING **CONCEPT**

Bairagi, Nishith K., Retired, Professor of Structral Engineering.

Contents: Any Concrete Viewed as Blended Partially Set Concrete • Selfing and Crossing Concept • Selfing Equation, its Representation and Application • Analytical Solution of Selfing and Crossing Problems • Spring Function and its Application.

ISBN: 978-81-224-2581-9 **Publication Year:** 2009 **Edition:** 1st **Pages:** 154 Price: 495.00 Hardbound



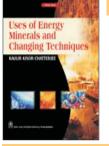
### 71 USES OF METALS AND **METALLIC MINERALS**

Chatterjee, K. K., Retd. Chief Economist, Indian Bureau of Mines, Katol Road, Nagpur, Maharashtra.

Contents: Section I: Metallic Minerals? Bauxite and Aluminium • Chromite • Ilmenite and Titanium • Iron ore: Hematite • Iron ore: Magnetite • Iron ore: Siderite • Iron ore: Taconite Iron ore: Others • Lithium minerals and metal • Manganese ore. Section II: Metals: Beryllium

- $\bullet \ \text{Cadmium} \bullet \ \text{Calcium} \bullet \ \text{Cesium} \bullet \ \text{Cobalt} \bullet \ \text{Copper} \bullet \ \text{Gallium} \bullet \ \text{Germanium} \bullet \ \text{Gold}$ • Indium • Lead • Magnesium • Mercury • Molybdenum • Nickel • Niobium (Columbium) • Platinum Group Metals • Potassium • Rare earth metals • Rhenium
- Rubidium Silver Sodium Tantalum Thallium Tin Tungsten Vanadium
- Zinc. Section III: Metalloids: Antimony Arsenic Bismuth Boron Selenium

ISBN: 978-81-224-2040-1 Publication Year: 2007 Edition: 1st Pages: 332



### 72 USES OF ENERGY, MINERALS AND CHANGING **TECHNIQUES**

Chatterjee, K. K., Retd. Chief Economist, Indian Bureau of Mines, Katol Road, Nagpur, Maharashtra.

Contents: Introduction • Coal • Petroleum • Natural Gas • Uranium Ore and Metal • Lignite • Monazite and Thorium • Peat • Anthracite

ISBN: 978-81-224-1803-3 Publication Year: 2006 Edition: Ist Pages: 134

**No Complimentary Copies Available** for Reference Books



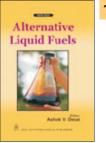
### 73 CHALLENGES & STRATEGIES FOR SUSTAINABLE ENERGY DEFICIENCY & ENVIRONMENT

Singh, Onkar, Professor, Deptt. of Mechanical Engg., Harcourt Bulter Technological Inst., Kanpur, U.P.

Pandey, J.P.,

Chauhan, D.S., Vice Chancellor, U.P. Technical University, Institute of Engg. & Technology, Lucknow, U.P.

ISBN: 978-81-224-1910-8 Publication Year: 2006 Edition: 1st Pages: 530 Price: 665.00 Hardbound

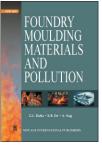


### 74 ALTERNATIVE LIQUID FUELS

**Desai, A. V.,** Consultant Editor, ABP (P) Ltd., New Delhi

**Contents:** Introduction • Alternative Fuels : A Brazilian Outlook • Alternative Transport Fuels: Supply, Consumption and Conservation

ISBN: 978-81-224-2455-3 Publication Year: 2008 Edition: 1st Pages: 168 Price: 295.00 Hardbound

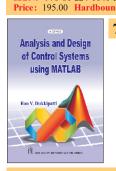


# 75 FOUNDRY MOULDING MATERIALS & POLLUTION

Datta,G.L.,De, K.B., Nag, A., Department of Chemistry, I.I.T., Kharagpur, West Bengal Contents: Organic Chemistry • Oils And Fats

 Polymers • Foundry Sand Binders • Foundry Sands For Moulding • Foundry Clay Minerals
 • Foundry Environment

ISBN: 978-81-224-1841-5 Publication Year: 2006 Edition: 1st Pages: 128



# 76 ANALYSIS AND DESIGN OF CONTROL SYSTEMS USING MATLAB

**Second Edition** 

**Dukkipati, R.V.,** Prof. & Chair, Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A.

EDITION

Contents: Introduction to Control Systems

• MATLAB Basics • MATLAB Tutorials

ISBN: 978-81-224-2409-5 **Publication Year:** 2009 **Edition:** 2nd **Pages:** 464



# 77 SOLVING ENGINEERING MECHANICS PROBLEMS WITH MATLAB

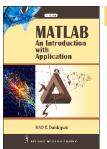
Dukkipati, R.V., Prof. & Chair,

Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A

**Srinivas, J.,** Prof. in the Deptt. of Mechanical Engg., Chaitanya Engg. College., Visakhapatnam., Andhra Pradesh.

Contents: Engineering Mechanics • MATLAB Basics • MATLAB Tutorial for Mechanics • MATLAB for Engineering Applications • MATLAB-A Computational Tool for Mechanics.

ISBN: 978-81-224-2601-4 Publication Year: 2009 Edition: 1st Pages: 408 Price: 695.00 Hardbound



# 78 MATLAB AN INTRODUCTION WITH APPLICATION

**Dukkipati, R.V.,** *Prof. & Chair, Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A.* 

Contents: MATLAB Basic • Electrical Circuits
• Control Systems • Numerical Methods

 Optimization Direct Numerical Integration Methods Engineering Mechanics Mechanical Vibrations

ISBN: 978-81-224-2698-4 Publication Year: 2009 Edition: 1st Pages: 680



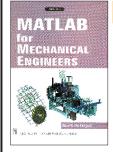
# 79 COMPUTER AIDED ANALYSIS AND DESIGN OF MACHINE ELEMENTS

**Dukkipati, R.V.,** Prof. & Chair, Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A.

Ananda, M. Rao., Bhat, R.

Contents: Computer Aided Aspects of Mechanical
Design • Theories of Failure • Optimization of the Design • Static Analysis
• Transient Analysis • Dynamic Analysis • Finite Element Analysis • Cyclic
Symmetric Structures • Stress Analysis of Structural Members and Machine
Components.

ISBN: 978-81-224-1256-7 Publication Year: 2000 Edition: 1st Reprint: 2007 Pages: 480 Price: 450.00 Hardbound

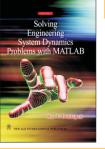


# MATLAB FOR MECHANICAL ENGINEERS

Dukkipati, R.V., Prof. & Chair, PUBLISHE Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A.

**Contents:** Introduction • Matlab Basics • Matlab Tutorial • Direct Numerical Integration Methods

ISBN: 978-81-224-2270-2 Publication Year: 2007 Edition: 1st Pages: 624 Price: 495.00 Hardbound



### 81 SOLVING ENGINEERING SYSTEM DYNAMICS PROBLEMS WITH MATLAB

**Dukkipati, R.V.,** Prof. & Chair, Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A.

Contents: Introduction to Engineering System Dynamics • Control Systems • MATLAB Basics • MATLAB Tutorial.

ISBN: 978-81-224-1993-1 Publication Year: 2007 Edition: 1st Reprint: 2009 Pages: 358 Price: 425.00 Hardbound



# 82 SOLVING VIBRATION ANALYSIS PROBLEMS USING MATLAB

**Dukkipati, R.V.,** Prof. & Chair, Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A

Contents: Introduction to Mechanical Vibrations
• MATLAB Basics • MATLAB Tutorial

ISBN: 978-81-224-2064-7 Publication Year: 2007 Edition: 1st Pages: 236 Price: 495.00 Hardbound



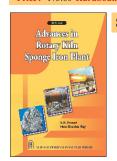
# 83 HYDRAULIC DESIGN TABLES FOR PIPELINES, SEWERS & DRAINAGE LINES

**Joshi, J.N.**, Retired Professor of Environmental Engg., L.D. College of Engg., Ahmedabad, Gujarat (India).

Contents: Section I Pipes Flowing Under Pressure, Tables for Discharge and Loss of Head and Power • Section II Pipes Flowing Full Under Gravity, Tables for Discharge and Gradients Required

• Section III Hydraulic Parameters of Pipes Flowing Partially Full

ISBN: 978-81-224-1867-5 Publication Year: 2006 Edition: 1st Pages: 96 Price: 175.00 Hardbound



# Advances in Rotary Kiln Sponge Iron Plant

**Prasad, Krishna Kant,** Formerly Dy. General Manager, R & D Center for Iron & Steel, S.A.I. Ltd., Doranda, Ranchi.

Ray, Hem Shankar, Emeritus Scientist, The Central Glass and Ceramic Research Institute, Kolkata.

Contents: Introduction • Rotary Kiln Process of Making Sponge Iron • Thermodynamic Considerations: Feasibility of Reaction

• Aerodynamics inside a Sponge Iron Rotary Kiln • Mathematical Modelling in Rotary Kiln Sponge Iron Making • Physical Movement of Solids inside a Rotary Kiln: Charge Movement and Coal Throwing/Slinging • Requirement, Generation and Transfer of Heat in a Sponge Iron Rotary Kiln • Reaction Kinetics • Raw Materials for Sponge Iron Making • Accretion or Ring Formation inside a Rotary Kiln • Sponge Iron Properties: Re-oxidation and Auto-Ignition of Sponge Iron • Uses of Sponge Iron • Process Design, Engineering & Operational Aspects of an RK-DR Plant • Other Uses of Rotary Kiln for Reduction Purposes • Environmental Aspects of Sponge Iron Making in Rotary Kiln and Future Prospects.

ISBN: 978-81-224-2401-0 Publication Year: 2008 Edition: 2nd Pages: 188 Price: 495.00 Hardbound



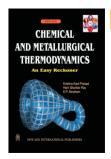
# 85 NONDESTRUCTIVE TESTING TECHNIQUES

**Second Edition** 

**Prakash, Ravi,** *Professor* & *Dean, Research* and Consultancy Division, Birla Instt. of Tech. & Sc., Pilani, Rajasthan.

Contents: Ultrasonic Testing • Eddy-current Testing • Magnetic Particle Flaw Detection • Liquid Penetrant Inspection • X-Radiography • Acoustic Emission Testing and Acousto-Ultrasonic Testing • Miscellaneous NDT Methods.

ISBN: 978-81-224-2101-9 Publication Year: 2009 Edition: 2nd Pages: 140 Price: 395.00 Hardbound



# 86 CHEMICAL AND METALLURGICAL THERMODYNAMICS

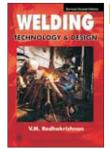
**Prasad, Krishna Kant, Ray, H.S.,** Professor, Emeritus Scientist, Central Gass & Ceramic Research Institute, Kolkata, West Bengal

Abraham, K. P.

Contents: Historical Perspective of Thermodynamics • Thermodynamics and Feasibility • Basic Concepts • Zeroeth Law, First Law an Thermodynamics • Second Law • Entropy, Third

Law and Feasibility • Solution Thermodynamics • Measurement of Thermodynamics Properties • Statistical Thermodynamics? An Introduction • Reaction Kinetics.

ISBN: 978-81-224-1978-8 **Publication Year: 2006 Edition: 1st Pages: 110 Price: 295.00 Hardbound** 



### 87 WELDING TECHNOLOGY AND DESIGN

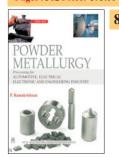
**Second Edition** 

Radhakrishnan, V.M., Indian Institute of Technology, Chennai, Tamil Nadu.

Contents: Welding Processes • Welding of Materials and Metallurgical Aspects • Strength and Toughness of Welded Joints • Residual Stresses and Distortion • Fatigue of Welded Joints • High Temperature Properties and Creep of Welded Joints • Design of Tubular Joints, Pipes and Pressure Vessels • Weld Defects, Failure and Welding Codes • Weld

Testing and Qualification • Analysis and Design of Welded Joints

ISBN: 978-81-224-1672-5 **Publication Year**: 2005 **Edition**: 2nd **Reprint**: 2008 **Pages**: 362 **Price**: 595.00 **Hardbound** 

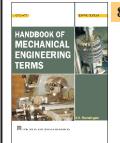


### **88 POWDER METALLURGY**

Ramakrishnan,P., Professor Emeritus, I.I.T., Mumbai

Contents: Trends in Powder Metallurgy • Powder Metallurgy for Automotive Industry • Properties of Powder Metallurgical Products • Powder Metallurgy for Electrical/Electronic Industry • Powders, Processing and Applications.

ISBN: 978-81-224-2030-2 Publication Year: 2007 Edition: 1st Reprint: 2008 Pages: 396 Price: 495.00 Hardbound



# 89 HANDBOOK OF MECHANICAL ENGINEERING TERMS

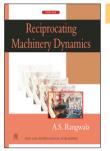
**Second Edition** 

Ramalingam, K.K., Retd. Prof. & Head of Automobile Engg., Anna University, Chennai, Tamil Nadu

Contents: General • Materials • Material Properties • Processes • Machines and Devices • Machine Components and Attachments • Tools and Cutters • Instruments and Gauges • Casting • Welding • Heat and Surface Treatments • Mechanics of

Machines • Material • Handling • Friction • Lubrication and Bearings • Thermodynamics and Heat Transfer • Fuels and Combustion • Steam Boilers • Steam Engine Parts and Steam Turbines • Gas Turbines • Internal Combustion Engine Parts • Spark Ignition Engines • Compression Ignition Engines • Two Wheelers • Automotive Vehicles • Air Compressors • Refrigeration and Air Conditioning.

ISBN: 978-81-224-2608-3 Publication Year: 2009 Edition: 2nd Pages: 368 Price: 695.00 Hardbound



# 90 RECIPROCATING MACHINERY DYNAMICS

Rangwala, A.S., Technical Director of Machinery Dynamics Group of the Center for Engg. Tech., Orlando, Fl.

Contents: Vibration Theory Fundamentals
• Classification and Construction of Reciprocating
Machines • The Crankshaft and Associated
Components • Crank Mechanism Dynamics
• Balancing of Periodic Inertia and Gas Pressure
Loads • Torsional Vibrations • Flexural Vibrations
• Advanced Analytical Methods • Vibration

Measurement and Balancing • Applications from Computational Fluid Dynamics • Pressure Pulsations in Compressors and Pumps • Reciprocating Machinery Dynamics and Noise • Design Optimization

ISBN: 978-81-224-1813-2 Publication Year: 2006 Edition: Ist Pages: 546

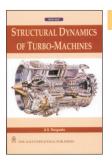


# 91 TRENDS IN AUTOMOBILE ENGINEERING

Rangwala, A.S., Technical Director of Machinery Dynamics Group of the Center for Engg. Tech., Orlando, Fl.

Contents: Combustion in the engine for peak power and efficiency while reducing emissions • Fuel injection, ignition and timing • Brakes, traction and control system • Automatic transmission and continuously variable transmission • Suspension system for smooth ride and handling • Electronic control and on board diagnostics.

ISBN: 978-81-224-1994-8 Publication Year: 2006 Edition: 1st Pages: 452

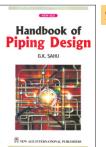


# 92 STRUCTURAL DYNAMICS OF TURBO-MACHINES

Rangwala, A.S., Technical Director of Machinery Dynamics Group of the Center for Engg. Tech., Orlando. Fl.

Contents: Vibration Theory Fundamentals • Fan and Compressor Airfoils • Turbine and Combustor Parts • Bearing and Seal Characteristics • Shaft Torsional Vibration • Flexural Rotor Dynamics • Experimental and Test Measurement • Balancing of Rotors • Turbo-Machinery Noise.

ISBN: 978-81-224-2230-6 Publication Year: 2008 Edition: 1st Pages: 448 Price: 650.00 Hardbound



### 93 HANDBOOK OF PIPING DESIGN

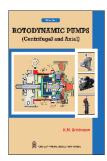
### **Second Edition**

**Sahu, G.K.,** Ex. AGM, Project Engg. Deptt., Rourkela Steel Plant, Rourkela, Orissa.

Contents: Fundamentals of Fluid Mechanics
• Hydraulic Design Considerations • Metallurgy of
Piping Materials • Pipes and Pipe Fittings
• Pipe Supports • Valves and Allied Fittings
• Piping Fabrication • Expansion Effects and
Compensating Methods • Flexibility Analysis of

Piping Systems • Thermal Insulation • Design of Tubular Components of Water Tube Boilers • Water Supply Piping • Corrosion-erosion in Pipelines • CPVC Piping (An Anti-corrosive Piping System) • Pipework Maintenance.

ISBN: 978-81-224-2456-0 Publication Year: 2008 Edition: 2nd Pages: 492



### 94 ROTODYNAMIC PUMPS (CENTRIFUGAL AND AXIAL)

**Srinivasan, K.M.,** *Dean (R&D), Mechanical Sciences at Kumaraguru College of Technology, Coimbatore* 

Contents: • Introduction • Pump Parameters • Theory of Rotodynamic Pumps • Theory and Calculation of Blade Systems in Centrifugal Pump • Spiral Casings (Volume Casings) • Losses in Pumps • Axial and Radial Thrusts • Model Analysis • Cavitation in Pumps • Axial Flow Pump • Testing, Performance Evaluation and Regulation of Pumps

• Pump Construction and Application • Design of Pump Components.

ISBN: 978-81-224-2278-8 Publication Year: 2008 Edition: 1st Pages: 536 Price: 695.00 Hardbound

### **TEXTBOOKS**

### **BACK LIST**



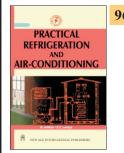
### 95 MANUFACTURING TECHNOLOGY

Adithan, M., Professor in Mechanical Engg. and Dean, VIT University, Vellore, Tamil Nadu. Gupta, A. B.

Contents: Welding Techniques • Measuring Devices (Metrology) • Surface Roughness and Its Measurement • Boring • Broaching • Grinding • Jigs and Fixtures • Micro finishing Processes • Surface Preparation and Coating Techniques, Modern Machining Methods, Presses and Press Working • Metal Forming Processes Modern

Forming Techniques • Numerical Control of Machine Tools • Advanced Manufacturing Technologies.

ISBN: 978-81-224-0817-1 Publication Year: 1996 Edition: 1st Reprint: 2007 Pages: 384 Price: 200.00 Paperback



# 96 PRACTICAL REFRIGERATION AND AIRCONDITIONING

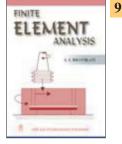
**Adithan, M.,** Professor in Mechanical Engg. and Dean, VIT University, Vellore, T.N.

**Laroiya, S.C.,** Faculty, Mehr Chand Polytechnic, Jalandhar, Punjab.

Contents: Basic Concepts for Learning Refrigeration Systems • Basic Mechanical Refrigeration System • Practical Tasks in Refrigeration and Air Conditioning • Refrigeration Trainer for Knowledge and Skill Development in Refrigeration

and Air Conditioning • Trouble Shooting in Refrigeration and Air Conditioning • Objective Type Questions.

ISBN: 978-81-224-0309-1 Publication Year: 1991 Edition: 1st Reprint: 2008



### FINITE ELEMENT ANALYSIS

**Bhavikatti, S.S.,** Principal, Vijayanagar Engineering College, Bellary, Karnataka

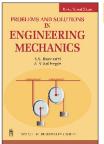
Contents: Introduction • Basic Equations in Elasticity• Matrix Displacement Formulation • Elements Shapes, Nodes, Nodal Unknowns and Coordinate Systems • Shape Functions • Strain Displacement Matrix • Assembling Stiffness Equations-Direct Approach • Assembling Stiffness Equation-Galerkins Method, Virtual Work Method • Assembling Stiffness Equation-Variational

Method • Discritization of a Structure • Finite Element Analysis-Brass and Trusses • Finite Element Analysis-Plane Stress and Plane Strain Problems • Isoparametric

### MECHANICAL ENGINEERING

Formulation • Analysis of Beams and Rigid Frames • Bending of Thin Plates • Analysis of Shells • Nonlinear Analysis • Standard Packages and Their Features.

ISBN: 978-81-224-1589-6 Publication Year: 2004 Edition: 1st Reprint: 2007 Pages: 334 Price: 150.00 Paperback



# 98 PROBLEMS AND SOLUTIONS IN ENGINEERING MECHANICS

Bhavikatti, S.S., Principal, Vijayanagar Engineering College, Bellary, Karnataka Hegde, A Vittal, Professor and Head, Department of Applied Mechanics, N.I.T.K., Surathkal, Mangalore, Karnataka.

Contents: Coplanar Concurrent Force Systems

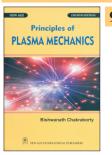
Oplanar Non-concurrent Force Systems

Analysis of Pin-jointed Plane Frames

Friction

- Centroid of Areas Area Moment of Inertia
   Introduction to Dynamics and Linear Motion Projectiles D' Alembert's Principle
- Work Energy Principle Impulse Momentum Principle Impact of Elastic Bodies
- Circular Motion of Rigid Bodies Virtual Work Vector Approach.

ISBN: 978-81-224-1601-5 Publication Year: 2005 Edition: 2nd Reprint: 2008 Pages: 208 Price: 125.00 Paperback



### 99 PRINCIPLES OF PLASMA MECHANICS

### **Fourth Edition**

Chakraborty, Biswasnath, Professor, Department of Mathematics, Jadavpur University, Kolkata, West Bengal.

Contents: Basic Electricity and Magnetism
• Dynamics of Charged Particles • Basic Plasma
Properties • Magnetohydrodynamics • Applications
of MHD and Plasma Processes • Collision Processes
in Plasmas • Ionospheric Cross-Modulation and

Other Related Effects • Kinetic Theory • Distribution Functions in Six Dimensional Phase Space • Plasma Kinetic Theory • Small Amplitude Waves in Plasma • Nonlinear Effects of Waves in Plasma • Laser Plasma Interactions • Appendices.

ISBN: 978-81-224-1446-2 Publication Year: 2003 Edition: 4th Reprint: 2007 Pages: 504 Price: 275.00 Paperback



### **100 FLUID MECHANICS**

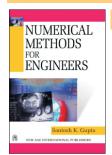
### **Second Edition**

Garde, R. J., Visiting Prof. Emeritus, Deptt. of Civil Engg., Bharati Vidyapeeth, Pune, Maharashtra.

Contents: Properties of Fluids • Kinematics of Fluid Flow • Equations of Motion and Energy Theorem • Fluid Statics • Applications of Bernoullis Equation • Momentum Equation and its Applications • Dimensional Analysis and Similitude • Laminar Flow • Boundary Layer Theory • Turbulent Flow

• Problems in Pipe Flow • Forces on Immersed Bodies • Ópen Channel Flow • Compressible Flow • Pumps • Turbines • Unsteady Flows .

ISBN: 978-81-224-1131-7 Publication Year: 1997 Edition: 2nd Reprint: 2008 Pages: 648 Price: 250.00 Paperback



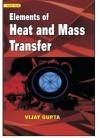
# 101 NUMERICAL METHODS FOR ENGINEERS

**Gupta, Santosh Kumar**, Lecturer, Deptt. of Electronics & Tele Communication Engg., National Institute of Technology, Silcha

Contents: Linear Algebraic Equation • Eigenvalues and Eigenvectors of Matrices • Nonlinear Algebraic Equations • Function Evaluation • Ordinary Differential Equations : Initial Value Problems (ODE-IVPs) • Ordinary Differential

Equations Boundary Value Problems (ODE-BVPs) • Partial differential Equations (PDFs)

ISBN: 978-81-224-0651-1 Publication Year: 1995 Edition: 1st Reprint: 2007 Pages: 424 Price: 195.00 Paperback



# 102 ELEMENTS OF HEAT AND MASS TRANSFER

**Gupta, Vijay,** *Director, Punjab Engineering College, (Deemed University), Chandigarh* 

Contents: Transfer Process • Conduction : Heat Transfer in Stationary Medium • Examples in Conduction • Numerical Solution of Conduction Problems • Convection : Heat Transfer in Fluids • Examples in Heat Convection • Mass Transfer • Convective Mass Transfer • Radioactive Transfer • Heat and Mass Exchangers.

ISBN: 978-81-224-0800-3 Publication Year: 1995 Edition: 1st Reprint: 2008 Pages: 474 Price: 200.00 Paperback



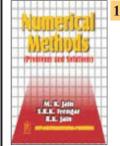
# 103 FLUID MECHANICS AND ITS APPLICATIONS

Gupta, Vijay, Director, Punjab EngineeringCollege, (Deemed University), Chandigarh, Gupta, Santosh Kumar, Lecturer, Deptt. of Electronics & Tele Communication Engg., National Institute of Technology, Silcha

Contents: Introduction to Fluid Flows • Forces in Stationary Fluids • Description and Analysis of Fluid Motion • Conservation of Mass Momentum Theorems • Equation of Motion • Energy Equation

• Some Engineering Applications-I • Similitude and Modelling • Some Engineering Applications-II • Approximations in Fluid Mechanics • Inviscid Flows • Boundary Layers • Some Engineering Applications-III • Effects of Compressibility • Introduction to Turbulent Flows • Epilogue.

ISBN: 978-0-85226-342-6 Publication Year: 1984 Edition: Ist Reprint: 2007 Pages: 548 Price: 195.00 Paperback



# 104 NUMERICAL METHODS: PROBLEMS & SOLUTIONS

### **Second Edition**

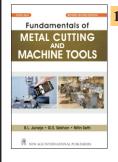
Jain, Mahinder Kumar, Post-doctoral fellow, Institute for Applied Mathematics, University of Hamburg, West Germany.

Iyengar, S.R.K., Professor of Mathematics, Indian Institute of Technology, Delhi.

Jain, R.K., Professor of Mathematics, Indian Institute of Technology, Delhi.

Contents: Transcendental and Polynomial Equations • Linear Algebraic Equations and Eigenvalue Problems • Interpolation and Approximation • Differentiation and Integration • Numerical Solution of Ordinary Differential Equations • Sample Programs in C • Index.

ISBN: 978-81-224-1534-6 **Publication Year:** 2004 **Edition:** 2nd **Reprint:** 2008 **Pages:** 430 **Price:** 200.00 **Paperback** 



# FUNDAMENTALS OF METAL CUTTING AND MACHINE TOOLS

### **Second Edition**

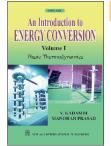
**Juneja, B.L.,** Department of Mechanical Engg., Indian Institute of Technology, Hauz Khas, New Delhi.

Seth, Nitin, Sekhon, G.S.

**Contents:** Machining Processes and Machine Tools • An Introduction • Materials and Geometry

of Cutting Tools • Mechanics of Machining Processes • Thermal Aspects and Cutting Fluids • Tool Wear, Tool Life and Machinability • Machining with Controlled • Contact • Grinding and Other Abrasive Machining Processes • Non-Conventional Machining Processes • Surface Finish and Surface Integrity • Economics of Machining Processes • Design Features of Machine Tools • Numerical Control and Computer Aided Manufacture • Machine Tools Vibration • Design Principles of Cutting Tools, Jigs and Fixtures.

ISBN: 978-81-224-1467-7 Publication Year: 2003 Edition: 2nd Reprint: 2009



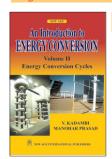
### **106** AN INTRODUCTION TO **ENERGY CONVERSION: BASIC THERMODYNAMICS**

Kadambi, V., Formerly Prof. & Head, I.I.T., Kanpur, Uttar Pradesh.

Prasad, Manohar, Director, Kalicharan Nigam Instt. of Technology, Banda, Uttar Pradesh

Contents: Introduction: First Law: State Postulates and Applications • Properties of Pure Substances • Second Law of Thermodynamics: Entropy • Applications of Second Law: Thermodynamic Relations • Availability and Irreversibility • Thermodynamic Relations • Availability and Irreversibility • Thermodynamic Cycles • Statistical Principles and Entropy • Kinetic Theory and Statistics • Appendix.

ISBN: 978-0-85226-451-5 **Publication Year:** 1976 **Edition:** 1st **Reprint:** 2008 Pages: 250 Price: 160.00 Paperback



### **107 AN INTRODUCTION TO ENERGY CONVERSION: ENERGY CONVERSION** CYCLES VOL. II

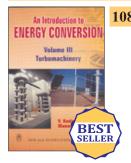
Kadambi, V., Formerly Prof. & Head, I.I.T., Kanpur, Uttar Pradesh.

Prasad, Manohar, Director, Kalicharan Nigam Instt. of Technology, Banda, Uttar Pradesh

Contents: Sources of Energy • Principles of Thermal Energy Release • Principles of Thermal

Energy to Work Conversion Devices • The Internal Combustion Engine • Phase Change Cycles • Reciprocating Compressors • Refrigeration.

ISBN: 978-0-85226-452-2 **Publication Year:** 1974 **Edition:** 1st **Reprint:** 2008 Pages: 320 Price: 160.00 Paperback



### **108 AN INTRODUCTION TO ENERGY CONVERSION: TURBOMACHINERY**

VOL. III

Kadambi, V., Formerly Prof. & Head, I.I.T., Kanpur, Uttar Pradesh.

Prasad, Manohar, Director, Kalicharan Nigam Instt. of Technology, Banda, Uttar Pradesh.

Contents: Principles of Turbomachinery • Energy Exchange in Turbomachines • Flow Through Nozzles and Blade Passages • Steam and Gas Turbines • Rotary Fans, Blowers and Compressors • Hydraulic Turbines • Centrifugal and Axial-Flow Pumps • Characteristics of Hydraulic Turbomachines • Power Transmitting Turbomachines

ISBN: 978-0-85226-453-9 **Publication Year:** 1977 **Edition:** 1st **Reprint:** 2008 Pages: 292 Price: 160.00 Paperback



### 109 FLUID MECHANICS

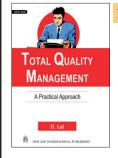
### **Second Edition**

Kapoor, Baljeet S., Principal, Chandigarh College of Engg. & Tech., Chandigarh

Contents: Fluid Properties • Fluid Statics · Kinematics of Fluid Flow · Fluid Dynamics • Dimensional Considerations • Flow Through Pipes and Reservoir Problems (one and two) • Three Reservoir Problem, Transmission Through Pipe Lines, Siphons and Nozzles • Flow Measurement • Basic Equations • Laminar Flow

· Boundary Layer Analysis · Turbulent Flow.

ISBN: 978-81-224-1163-8 Publication Year: 1998 Edition: 2nd Reprint: 2007 Pages: 660 Price: 275.00 Paperback



### 110 TOTAL QUALITY MANAGEMENT Recommended In AICTE



# : A PRACTICAL APPROACH

Lal, H., Director General, FICCI Quality Forum, Federation of Indian Chambers of Commerce & Industry, Federal

Contents: Management of Product Quality • Creating Quality by Design • Quality Control of the Purchased Product • Quality Control of Manufacturing Processes • Sales and Product

Quality • Organising for Effective Quality Management • Economics of Quality • The Human Factor in Quality Management • Frequency Distribution • Normal Distribution • Theory of Probability • Control Charts • Control Chart of Attributes • Theory of Sampling Inspection • Standard Tolerancing ABC Analysis • Value Analysis • Defect Diagnosis and Prevention • Reliability Design • Evaluation and Control Manageability • Zero Defect-A Quality Motivation Techniques Quality Circles Applying Total Quality Management in a Company.

ISBN: 978-81-224-0242-1A Publication Year: 1990 Edition: Ist Reprint: 2009 Pages: 252 Price: 195.00 Paperback

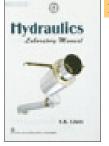


### 111 HYDRAULIC DATA BOOK FOR ENGINEERS

Likhi, S.K., Sharma, S.K.

Contents: Physical Properties of Fluids • Pressure and Its Measurements • Hydrostatic Pressure • Floating Bodies • Fundamentals of Fluid Flow • Flow Through Orifices • Flow Through Pipes • Flow Through Open Channels • Flow Measurements • Hydraulic Machines

ISBN: 978-81-224-0514-9 Publication Year: 1998 Edition: Ist Pages: 220 Price: 120.00 Paperback



### 112 HYDRAULICS LABORATORY **MANUAL**

Likhi, S.K.

Contents: Measurement Techniques • Floating Bodies • Fundamentals of Fluid Flow • Orifice and Mouthpiece • Flow Through Pipes • Flow Measurements • Hydraulic Machines • References

ISBN: 978-81-224-0516-3 Publication Year: 1995 Edition: 1st Reprint: 2006 Pages: 108 Price: 100.00 Paperback



# 113 TEXTBOOK IN APPLIED MECHANICS

Malhotra, M.M.

Subramanian, R., Department of Mechanical Engineering, J.J. College of Engg. & Tech., Trichy, Tamil Nadu.

Gahlot, P.S. • Rathore, B.S.

Contents: Introduction • Force • Equilibrium • Centre of Gravity • Friction • Kinematics • Kinetics • Work, Energy and Power • Machines

ISBN: 978-81-224-0645-0 Publication Year: 1994 Edition: Ist Reprint: 2007 Pages: 586 Price: 200.00 Paperback



### 114 OPTIMIZATION METHODS IN OPERATIONS RESEARCH AND SYSTEM ANALYSIS

**Third Edition** 

Mital, K.V., Retd. Professor of Mathematics, University of Roorkee, Roorkee, Uttaranchal. Mohan, Chander, Professor, Deptt. of CSE, Ambala College of Engg. & Applied Research, Ambala Cantt., Haryana.

Contents: Mathematical Preliminaries Euclidean Space • Linear Algebraic Equations • Convex Sets • Quadratic Forms • Extrema of Functions • Linear Programming • Transportation and Assignment Problems • Flow and Potential in Networks • Integer Programming • Additional Topics in Linear Programming • Kuhn-Tucker Theory and Nonlinear Programming • Geometric Programming • Dynamic Programming • Direct Search and Gradient Methods One-dimensional Search • Multi-dimensional Search • Theory of Games.

ISBN: 978-81-224-0873-7 Publication Year: 1976 Edition: Ist Reprint: 2008 Pages: 404 Price: 195.00 Paperback



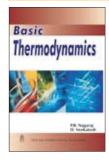
# 115 OPERATIONS RESEARCH METHODS AND PRACTICE

**Third Edition** 

Mustafi, C.K.

Contents: Introduction • Linear Programming-I • Linear Programming-II • Network Analysis in Project Planning • Inventory Control • Waiting Line Problem • Simulation • Replacement • Reliability • Non-Linear Programming.

ISBN: 978-81-224-0882-9 Publication Year: 1998 Edition: 3rd Reprint: 2007 Pages: 436 Price:185.00 Paperback



### 116 BASIC THERMODYNAMICS

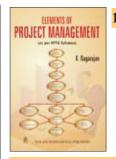
Nagaraj, P.B., Senior Lecturer, Deptt. of Mechanical Engineering, Bangalore, Karanataka.

**Venkatesh, D.**, Senior Lecturer, Deptt. of Mechanical Engineering, M.S.R.I.T., Bangalore, Karnataka

Contents: Basic Concepts and Definitions • Work and Heat • First Law of Thermodynamics • Second Law of Thermodynamics • Entropy • Ideal Gases

and Mixtures of Ideal Gases • Real Gases.

ISBN: 978-81-224-1613-8 Publication Year: 2005 Edition: 1st Reprint: 2008 Pages: 344 Price: 150.00 Paperback



# 117 ELEMENTS OF PROJECT MANAGEMENT

As per UPTU Syllabus

Nagarajan, K., Branch Manager, Tamil Nadu Industrial Investment Corp. Ltd., Coimbatore, Tamil Nadu.

**Contents:** Project Management Concepts • Project Information Systems • Development of Project Network • Miscellaneous Topics • Case Studies • Review Questions.

ISBN: 978-81-224-1665-7 Publication Year: 2005 Edition: Ist Pages: 452 Price: 175.00 Paperback

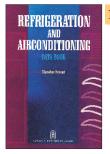


### 118 BIOGAS TECHNOLOGY

**Nijaguna, B.T.,** Principal, ISS Academy of Technical Education, Bangalore, Karnataka

Contents: Introduction • Materials for Biomethanation and Products of Methanation • Kinetics and Physico-Chemical Factors Affecting Biogasification • Bio-reactors • Design, Selection, Construction and operation of Biogas Plants • Purification, Scrubbing, Compression and Storage of Biogas • Utilisation Systems of Biogas • Ethanol

ISBN: 978-81-224-1380-9 Publication Year: 2002 Edition: 1st Reprint: 2006 Pages: 300 Price: 250.00 Paperback



### 119 REFRIGERATION AND AIRCONDITIONING DATA BOOK

**Prasad, Manohar,** Director, Kalicharan Nigam Instt. of Technology, Banda, Uttar Pradesh

Contents: SI Units • Refrigerants • Physical Properties • Psychrometric Properties • Infiltration Air • Ventilation • Design Conditions • Storage Conditions • Air Velocities and Losses in Ducts and Fittings • Evaporative Cooling Systems

• Miscellaneous • Charts and Diagrams.

ISBN: 978-81-224-0104-2 Publication Year: 1989 Edition: 1st Reprint: 2007 Pages: 312 Price: 175.00 Paperback



# 120 REFRIGERATION AND AIR CONDITIONING

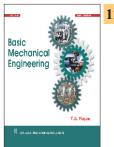
**Second Edition** 

**Prasad, Manohar,** Director, Kalicharan Nigam Instt. of Technology, Banda, Uttar Pradesh

Contents: Part I: Introduction and Recapitulation of Thermodynamics: Introduction • Recapitulation of Thermodynamics • Part II: Thermodynamic Analysis of Refrigeration Cycles and Refrigerants: Cannot, Brayton and Aircraft Refrigeration

Systems • Vapour-Compression Systems • Water Refrigeration • Vortex and Pulse Tube Refrigeration Systems • Vapour-Absorption Systems • Thermoelectric Refrigeration Systems • Refrigerants • Part III: Psychrometircs, Cooling and Heating Load Calculations, Design and Balancing of System Components: Psychrometrics Cooling and Heating Load Calculations • Design of Refrigeration Equipments • Balancing of Components of Refrigeration Systems, Control and Protection Devices

ISBN: 978-81-224-1429-5 Publication Year: 2002 Edition: 2nd Reprint: 2009 Pages: 672 Price: 235.00 Paperback



# 121 BASIC MECHANICAL ENGINEERING

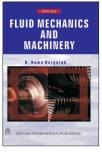
### **Third Edition**

**Rajan, T.S.,** Retd. Professor of Mechanical Engg., National Institute of Technology, Trichy.

Contents: Part I: Power Plants • Energy and Its Sources • Utilization of Conventional Energy: Steam Power Plant • Hydro-Electric Power Plant Classification of Hydraulic Turbines • Nuclear Power Plant • Diesel Power Plant • Refrigeration

and Air-Conditioning • Question Bank • Glossary Part II: Production Processes • Casting • Forging • Metal Joining • Machining.

ISBN: 978-81-224-1172-0 Publication Year: 1998 Edition: 3rd Reprint: 2009 Pages: 237 Price: 180.00 Paperback

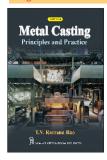


# 122 FLUID MECHANICS AND MACHINERY

### Rama, Durgaiah D.

Contents: Properties of Fluids • Fluid Statics • Fluid Kinematics • Fluid Dynamics • Flow Measurement • Flow through Pipes • Viscous Flows • Boundary Layer Flows • Turbulent Flows • Compressible Fluid Flows • Flow Through Open Channels • Dimensional and Model Analysis • Hydraulic Turbines • Pumps • Hydraulic Systems

ISBN: 978-81-224-1386-1 Publication Year: 2002 Edition: Ist Reprint: 2008 Pages: 912 Price: 295.00 Paperback



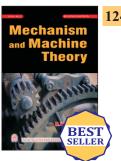
### 123 METAL CASTING: PRINCIPLES AND PRACTICE

Ramana Rao, T.V., Professor & Faculty, ICFAI Business School, Hyderabad, Andhra Pradesh

Contents: Introduction • Sand Molding Process Molding Processes Using Metal Molds, Melting Furnaces and Techniques • Solidification • Gating Risering and Casting Design • Finishing Operations • Planning and Management Foundry • New Developments in Metal Casting.

ISBN: 978-81-224-0843-0 Publication Year: 1996 Edition: Ist Reprint: 2007

Pages: 304 Price: 200.00 Paperback



# 124 MECHANISM AND MACHINE THEORY Recommended in

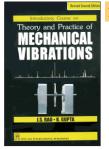
THEORY
Rao, J.S., Dukkipati, R.V.,

Prof. & Chair, Grad. Prog. Director of Mech. Engg., School of Engg., (Fairfield University) U.S.A.

Contents: Introduction • Planar Mechanisms • Kinematic Analysis of Mechanisms• Kinematic Sysnthesis of Mechanisms • Simple Mechanisms and Coupler Curves • Cams • Spur Gears • Helical, Spiral, Worm and Bevel Gears • Gear Trains

• Hydrodynamics Lubrication • Static Force Analysis • Intria Force Analysis • Combined State and Inertia Force Analysis • Turning Moment Diagram and Flywheel • Balancing of Rotating Components • Balancing of Linkages • Gear Force • Mechanism for Control • Governors and Gyroscopes • Vibration • Mechanism for Control • Governors and Gyroscopes • Vibration Characteristics of Simple Systems • Critical Speeds.

ISBN: 978-81-224-0426-5 Publication Year: 1992 Edition: 2nd Reprint: 2008 Pages: 624 Price: 225.00 Binding: Paperback



### 125 INTRODUCTORY COURSE ON THEORY & PRACTICE OF MECHANICAL VIBRATIONS

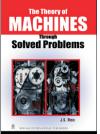
### **Revised Second Edition**

Rao, J.S., Gupta, K.

Contents: Fundamentals of Vibration • Single Degree of Freedom Systems Free Vibrations • Single Degree of Freedom System Damped Vibrations • Single Degree of Freedom System Forced Vibrations • Two Degrees of Freedom Systems • Multi Degree of Freedom Systems

• Numerical Methods • Continuous Systems • Experimental Methods in Vibration Analysis • Random Vibrations.

ISBN: 978-81-224-1215-4 Publication Year: 1999 Edition: 2nd Reprint: 2008 Pages: 552 Price: 225.00 Paperback



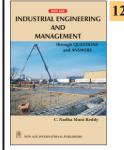
# THE THEORY OF MACHINES THROUGH SOLVED PROBLEMS

Rao, J.S.

Contents: Introduction • Planar Mechanisms • Kinematic Analysis of Mechanisms • Kinematic Synthesis of Mechanisms • Simple Mechanisms and Coupler Curves • Cams • Spur Gears • Helical, Spiral, Worm and Bevel Gears • Gear Trains • Hydrodynamic Lubrication • Static Force Analysis • Intertia Force Analysis • Combined

Static and Inertia Force Analysis • Turning Moment Diagram and Flywheel • Balancing of Rotating Components • Balancing of Linkages • Gear and Cam Forces • Mechanisms for Control: Governors and Gyroscopes • Vibration Characteristics of Simple Systems: Critical Speeds.

ISBN: 978-81-224-1041-9 Publication Year: 1996 Edition: Ist Reprint: 2007 Pages: 404 Price: 250.00 Binding: Paperback



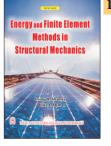
### 127 INDUSTRIAL ENGINEERING AND MANAGEMENT

Reddy, C. Natha Muhi, Principal, Sri Venkatesa Perumal College of Engg. & Tech. Chittoor. Andhra Pradesh

Contents: Productivity Engineering • Work Method Design • Job- Evaluation and Merit Rating • Basics of Optimization and Linear Programming Techniques • Classical Optimization • Forecasting • Plant Location • Inventory Management • Material Requirements Planning • Manufacturing Resources

Planning (MRP-II) • Operations Scheduling • Shipment Scheduling • Assignment Scheduling • Reliability Engineering • Basic and Redundancy Optimization • Quality Engineering • Replacement Model safed Re-engineering • Production Economics and Financial Management • Project Management.

ISBN: 978-81-224-1362-5 Publication Year: 2002 Edition: Ist Reprint: 2007 Pages: 462 Price: 200.00 Paperback



# 128 ENERGY AND FINITE ELEMENT METHODS IN STRUCTURAL MECHANICS

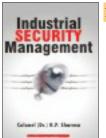
Shames, Irving H., Dym, C.I.

Contents: Foundations of Solid Mechanics and Variational Methods: Theory of Linear Elasticity
• Introduction to the Calculus of Variations
• Variational Principles of Elasticity • Structural Mechanics: Beams • Torsion • Classical Theory of Plates • Dynamics of Beams and Plates
• Elastic Stability • Finite Elements: Introduction

to Finite • Elements • Finite Elements for Beams • Elements and Interpolation Functions • Plane Stress • Finite Elements for Plates • Torsion • Finite Elements for

Elastic Stability Finite Elements for Dynamics • Broader Aspects of Finite Elements.

ISBN: 978-81-224-0749-5 Publication Year: 1991 Edition: Ist Reprint: 2009
Pages: 780 Price: 265 00 Pageshack



# 129 INDUSTRIAL SECURITY MANAGEMENT

**Sharma, R.P.,** Director, Distance Learning, Indian Institute of Modern Management, Pune, Maharashtra.

Contents: Violence: Historical Background
• Violence in Society • Industrial Security-General
• Perspective of Security and Safety in Society
• Progressive Path of Commercial and Personnel
Security • Security Management in Commercial
Organisations • Functions and Parameters of
Commercial Security • Induction of Modern

Equipments in Industrial and Corporate Security • Industrial Crime Management • Investigation and Reporting of Offences • Labour Problems and Industrial Legislations • Fire Protection and Safety in Industries and Corporate Houses • Disaster Planning and Management • Security and Safety of Airports and Aircrafts • Bomb Threats and Disposal• Security and Safety Management in Hotels • Organizing Security and Safety Management in Hospitals • Security in Banking Operations • Civil Defence Management • Security Services as-Profession.

ISBN: 978-81-224-1519-3 Publication Year: 2004 Edition: 1st Reprint: 2005 Pages: 260 Price: 110.00 Paperback



# 130 LINEAR PROGRAMMING METHODS & APPLICATIONS

Shenoy, G.V.

Contents: Formulation of the Problem and Solution by Graphical Method • The Simplex Method • Duality and Sensitivity Analysis • The Transportation Models • The Assignment Models • Integer Programming • Appendices.

ISBN: 978-81-224-1034-1 Publication Year: 1998 Edition: 2nd Reprint: 2008 Pages: 236 Price: 195.00 Paperback



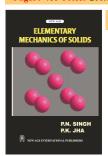
### OPERATIONS RESEARCH FOR MANAGEMENT

Shenoy, G.V. • Srivastava, U.K., Sharma, S.C.

Contents: Linear Programming • The Transportation Problem • Theory of Games • Network Analysis • PERT/CPM Waiting Lines • Inventory Control Models • Replacement Decisions • Integer Dynamic and Goal • Programming Simulation of Management Systems • Appendices Include Classical Optimization

Techniques, Vectors, Matrices and Determinants, Mathematics of Finance.

ISBN: 978-0-85226-917-6 Publication Year: 1986 Edition: 2nd Reprint: 2007 Pages: 410 Price: 200.00 Paperback



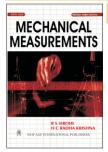
# 132 ELEMENTARY MECHANICS OF SOLIDS

Singh, P.N. • Jha, P.K.

Contents: Introduction and Fundamental Concepts • Simple Stress and Strain • Torsion 4 Shearing Force and Bending Moment • Stresses Due to Bending • Deflection of Beams Stress and Strain Analysis • Part A:Two-Dimensional Cases • Part B: General State of Stress and Strain • Combined Loading and Theories of Elastic Failure • Elastic

Stability Columns • Elastic Strain Energy and Its Applications • Part A:Strain Energy Concept • Part B: Energy Methods • Part C: Energy Theories of Elastic Failure.

ISBN: 978-0-85226-819-3 Publication Year: 1980 Edition: 1st Reprint: 2007 Pages: 616 Price: Rs. 175 Paperback



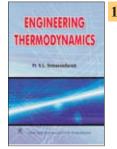
### 133 MECHANICAL MEASUREMENTS

Sirohi, R.S., Radhakrishnan, H.C.

Contents: Basic Concepts of Measurements
• Performance Characteristics of Measuring
Instruments • Inaccuracy of Measurement and Its
Analysis • Measurement of Force and Torque
• Measurement of Strain and Stress • Measurement
of Pressure • Flow Measurement and Flow Visualisation
• Measurement of Temperature • Optical Methods of

Measurements • Fibre-Optics in Measurement.

ISBN: 978-81-224-0383-1 Publication Year: 1991 Edition: 3rd Reprint: 2008 Pages: 306 Price: 165.00 Paperback

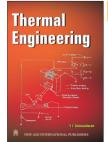


### 134 ENGINEERING THERMODYNAMICS

Somasundaram, S.L.

Contents: Fundamental Concepts • First Law of Thermodynamics • Second Law of Thermodynamics • Properties of Thermodynamic Substances • Laws of Thermodynamics and Non-Flow System • Laws of Thermodynamics and Flow System • Gas and Gas-Vapour Mixture • Availability and Availability Analysis

ISBN: 978-81-224-0984-0 Publication Year: 1996 Edition: Ist Reprint: 2008 Pages: 302 Price:175.00 Paperback

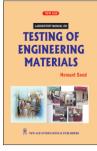


### 135 THERMAL ENGINEERING

Somasundaram, S.L.

Contents: Thermodynamic Cycles for Gas Engines
• Internal Combustion Engines
• Testing of I.C.
Engines • Vapour Power Cycles • Flow Through
Nozzles and Diffusers
• Steam Turbines
• Psychrometrics • Refrigeration • Air Compressors.

ISBN: 978-81-224-0979-6 Publication Year: 1996 Edition: 1st Reprint: 2006 Pages: 466 Price: 195.00 Paperback



### 136 LABORATORY MANUAL ON TESTING OF ENGINEERING MATERIALS

Sood, Hamant

Contents: Unit-I: Bricks • Unit-II: Building Stones • Unit-III: Metals • Unit-IV: Timber • Unit-V: Lime.

ISBN: 978-81-224-0757-0 Publication Year: 1996 Edition: 1st Reprint: 2007 Pages: 88 Price: 125.00 Paperback

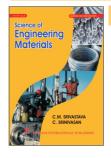


# 137 NONLINEAR MECHANICAL VIBRATIONS

Srinivasan, P.

Contents: Undamped Free Vibrations • Forced Vibrations • Damped Free Vibrations • Damped Forced Vibrations • Self Excited Oscillations • Analysis of Singular Points • Stability of Nonlinear Systems • Special Methods • Transient Analysis of Nonlinear • Nonconservative Systems • Two and Three Degree Freedom Systems.

ISBN: 978-81-224-0720-4 Publication Year : 1995 Edition : Ist Reprint: 2007 Pages: 300 Price:195.00 Paperback



# 138 SCIENCE OF ENGINERRING MATERIALS

**Srivastava, C.M.,** *Professor Emeritus, Deptt.* of Physics, Indian Institute of Technology, Mumbai, Maharashtra.

**Srinivasan, C.**, *Retd. Professor of Physics, I.I.T., Powai, Mumbai.* 

Contents: Introduction • Bonding in Solids • Crystal Structure • Chemical Equilibria, Reaction Rates and Diffusion • Equilibrium Diagrams and Phase

 $Transformation \bullet Imperfection \ in \ Solids \bullet \ Mechanical \ Properties \bullet \ Thermal \ Properties$ 

- Electrochemical Reactions Electronic Conduction in Solids Superconductivity
   Semiconductors Magnetic Materials Dielectric Materials Wave Phenomena,
  Acoustic and Optical Properties of Solids Polymers Materials for Nuclear
- Acoustic and Optical Properties of Solids Polymers Materials for Nuclear Engineering Materials for Space Applications Amorphous Materials Modern Techniques for Materials Studies.

ISBN: 978-81-224-0871-3 Publication Year: 1994 Edition: 2nd Reprint: 2008 Pages: 508 Price: 220.00 Paperback



# 139 ENGINEERING DRAWING AND GRAPHICS

**Venugopal, K.,** Retired Professor of Mechanical Engineering, Government College of Technology, Coimbatore.

Contents: Importance of Engineering Drawing

- Engineering Drawing Instruments and Uses
   B.I.S. and I.S.O. Conventions
   Geometrical Constructions
   Scales
   Conic Sections
   Special
- Curves Orthographic Projection Projections

of Points • Projections of Straight Lines • Projections of Planes • Projections of Solids • Auxiliary Projections of Solids • Sections of Solids • Intersection of Surfaces • Development of Surfaces • Isometric Projections • Oblique Projection • Perspective Projection • Free Hand Sketching • Conversion of Pictorial Views to Orthographic Views • Nomography.

ISBN: 978-81-224-1545-2 Publication Year: 2004 Edition: 5th Reprint: 2009 Pages: 410 Price: 180.00 Paperback



### 140 ENGINEERING DRAWING AND GRAPHICS + AUTOCAD

**Venugopal, K.,** Retired Professor of Mechanical Engineering, Government College of Technology, Coimbatore.

Contents: Importance of Engineering Drawing

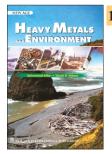
• Engineering Drawing Instruments and Uses

- B.I.S. and I.S.O. Conventions Plane Geometry Geometrical Constructions
- Scales Conic Sections Special Curves Solid Geomertry Orthographic Projection Projections of Points• Projections of Straight Lines Projections of Planes Projection of Solids• Auxiliary Projection of Solids Section of Solids
- Intersection of Surfaces Development of Surfaces Isometric Projection
- Oblique Projection Perspective Projection Free Hand Sketching
- Concession of Pictorial Views to Orthographic Views Building Drawing
- Computer-Aided Drafting AutoCAD Commands Nomography Objective and Short Answer Questions.

ISBN: 978-81-224-1312-0 Publication Year: 1992 Edition: 4th Reprint : 2008 Pages: 658 Price: 235.00 Paperback

### **REFERENCE BOOKS**

**BACK LIST** 



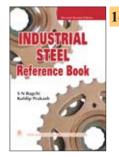
# HEAVY METALS AND ENVIRONMENT

Athar, Mohammad, Head, Deptt. of Medical Elementology & Toxilogy, Hamdard University, Hamdard Nagar, New Delhi

**Vohra, Shashi B.,** Retd. Prof. & Head, Medical Elementology & Toxiology, Hamdard University, New Delhi

**Contents:** Introduction • Heavy Metals in the Biosphere • Environmental Pollution • Health effects • Future Trends • Suggested Readings

ISBN: 978-81-224-0769-3 Publication Year: 1995 Edition: Ist Reprint: 2006 Pages: 224 Price: 450.00 Hardbound



### 142 INDUSTRIAL STEEL REFERENCE BOOK

Bagchi, S.N., Retd. Director, Central Scientific Instruments Organisation, Chandigarh.

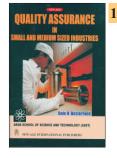
**Prakash, K.,** Retd. Scientist, C.S.I.O., Chandigarh, Haryana.

Contents: Carbon Steels • Case Hardening Steels• Alloy Steels • Corrosion Resistant Steels

• Tool Steel • Steel & Specified Only By Tensile Strength • Special Purpose Alloys • Hardenability

Curves • Hardness & Conversion • Curves • Stress Conversion Tables.

ISBN: 978-0-85226-089-0 Publication Year: 1986 Edition: 2nd Reprint: 2008 Pages: 208 Price: 350.00 Hardbound



# 143 QUALITY ASSURANCE IN SMALL AND MEDIUM SIZED INDUSTRIES

**Bester field, H.Dale,** *Principal of Bester field & Associates at Carbondale, Illinois, U.S.A.* 

Contents: Basic Concepts of Quality Management in Small and Medium-Sized Industries and Job Shop Manufacture • Quality Management • Organization for Quality • Human Resources Development and Management • Team Work in

Quality Improvements • Customer Focus and Satisfaction • Incoming Materials Control and Supplier Management • Planning for Quality with QFD • Statistical Process Control • Short Run Statistical Process Control • Quality Management Systems and Meeting ISO 9000 Requirements • Taguchis Quality Engineering.

ISBN: 978-81-224-1205-5 Publication Year: 2000 Edition: Ist Reprint: 2006 Pages: 314 Price: 750.00 Hardbound



# 144 COMPUTER AIDED ENGINEERING & DESIGN

**Browne, Jim,** *Director, CIM Research Unit, University College, Galway, Ireland.* 

**Contents:** The Extended Enterprise : A Context for Product Development and Production • Product Design in Concurrent Engineering Environment

- Computer Aided Design Modeling Approaches
- Data Exchange Standards for Computer Aided Engineering CAD/CAM Integration and Related Topics From CAD/CAM to CIM.

ISBN: 978-81-224-1208-6 Publication Year: 2000 Edition: 1st Reprint: 2008 Pages: 460 Price: 975.00 Hardbound



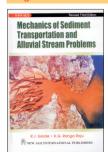
# 145 HANDBOOK OF GEAR TECHNOLOGY

**Chawathe, D. D.,** Director, Gear Technology Enterprise, Mumbai, Maharashtra

Contents: Part I: Theory of Gears • Introduction • Gear Types and Meshing Requirements • Spur Gears • Addendum Modified Spur Gears and Other Tooth Modifications • Helical Gears • Bevel and Hypoid Gears • Worm Gears Part II: Practice of Gears: Gear Materials and Material Treatment

- Gear Lubrication and Gear Failures Gear Manufacture Gear Inspection Gear Cutting Tools **Part III: Design of Gears:** Gear Forces and Bearing Reactions • Load Capacity of Spur Gears • Gears Load Capacity of Helical Gears • Load Capacity of Bevel and Hypoid Gears • Load Capacity of Worm Gear Drives
- Gear Efficiency and Gear Classification• Gear Trains and Design of Gear Boxes

ISBN: 978-81-224-1255-0 Publication Year: 2001 Edition: Ist Reprint: 2008 Pages: 964 Price: 795.00 Hardbound



### 146 MECHANICS OF SEDIMENT TRANSPORTATION AND ALLUVIAL STREAM PROBLEMS

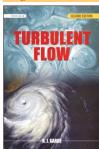
**Garde, R. J.,** Visiting Prof. Emeritus, Deptt. of Civil Engg., Bharati Vidyapeeth, Pune, Maharashtra.

Ranga Raju, K.K., Former Deputy Director, I.I.T., Roorkee.

Contents: Introduction • Origin and Properties of Sediments • Incipient Motion of Sediment Particles • Regimes of Flow • Resistance to Flow and Velocity Distribution in Alluvial Streams • Bed Load Transport and Saltation • Suspended Load Transport-Total Load Transportation • Sediment Samples and Sampling

- Design of Stable Channels Alluvial Streams and their Hydraulic Geometry
- Bed Level Variation in Alluvial Streams Variation in Plan Form of Streams
- Sediment Control in Canals River Training and Bank Protection Alluvial River Models, Debris Flows and Density Currents Sediment Transport Through Pipes.

ISBN: 978-81-224-1270-3 Publication Year : 2000 Edition : 3rd Reprint : 2008 Pages: 712 Price: 795.00 Hardbound



### **147 TURBULENT FLOW**

### **Second Edition**

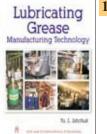
**Garde, R. J.,** Visiting Prof. Emeritus, Deptt. of Civil Engg., Bharati Vidyapeeth, Pune, Maharashtra.

Contents: Laminar Flow • Transition From Laminar to Turbulent Flow • Nature of Turbulence • Equations of Motion • Statistical Theory of Turbulence • Turbulence Models • Measurement of Turbulance

- Description of Tradeology Element of Turbulant
- $\bullet \ Description \ of \ Turbulent \ Flows \ I: Wall \ Turbulent$

Shear Flows • Description of Turbulent Flows II: Free Surface Flows • Description of Turbulent Flows III: Free Turbulently Shear Flows.

ISBN: 978-81-224-1269-7 Publication Year: 2000 Edition: 2nd Reprint: 2009 Pages: 344 Price: 495.00 Hardbound



# 148 LUBRICATING GREASE MANUFACTURING TECHNOLOGY

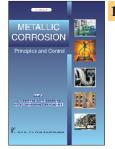
Ishchuk, Yu.L., Deputy Director, MASMA.

Contents: • Overview of Lubricating Greases• Dispersion Medium of Lubricating Greases

- Dispersed Phase of Lubricating Grease
   Additives and Fillers
   Characteristics of Lubricating Grease Production Technology. Its
- Main Stages and their Significance in Formation of Structure and Properties of Greases Processing Conditions and Layouts of Grease Manufacturing Plants. Determination of their

Capacity • Selection of Equipment for Individual Stages of Lubricating Grease Manufacturing Process • Automation of Manufacturing Processes, In-Process Inspection of Quality of Intermediate and of Finished Greases

ISBN: 978-81-224-1668-8 Publication Year: 2005 Edition: 1st Reprint: 2006 Pages: 236 Price: 300.00 Hardbound



# 149 METALLIC CORROSION PRINCIPLES AND CONTROL

Khanna, A.K., Malhotra, S.N., Santhanam, K.V.S., Totlani, M.K.

Contents: Section I: General Corrosion • Section II: High Temperature Corrosion • Section III: Corrosion Prevention • Section IV: Corrosion Evaluation

ISBN: 978-81-224-0638-2 Publication Year: 1994 Edition: Ist Reprint: 2007 Pages: 326 Price: 450.00 Hardbound

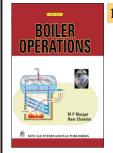


# 150 PRACTICAL ENGINEERING DRAWING

Maitra, G.M.

Contents: Fundamentals of Engineering Drawing
• Geometrical Constructions • Methods of Projection
and Views • Various Aspects of Engineering
Drawing • Surface Development and Intersection
• Structural, Piping and Other Drawings • Fits
and Tolerances • Common Standards and
Machine Elements • Common Transmission
Elements & Accessories • Miscellaneous Topics.

ISBN: 978-81-224-1176-8 Publication Year: 2000 Edition: Ist Pages: 452 Reprint: 2009 Price: 395.00 Paperback



### 151 BOILER OPERATIONS

Murgai, M.P., Visiting Prof., Centre for Energy Studies, Indian Institute of Technology, Hauz Khas, New Delhi.

### Ram Chandra

Contents: Energy Audit for Conservation • Boiler As a Source of Steam or Hot Water • Combustion of Fuels Used in Boilers • End Use of Steam • Identification of Energy Conservation Measures Through Energy Audit of Boiler Assisted Industries • Case Studies on the Energy Audit of Boiler Related Industries.

ISBN: 978-81-224-0285-8 Publication Year: 1990 Edition: 1st Reprint: 2008 Pages: 352 Price: 350.00 Hardbound



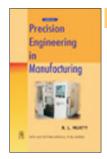
# 152 CONCURRENT ENGINEERING IN PRODUCT DESIGN AND DEVELOPMENT

### Moustapha, I.

Contents: Section One: Lecture Note • The Concurrent Engineering Organization • Concurrent Engineering: The Essential Ingredients for Achieving Business Success • The Enabling Tools & Techniques for Successful Concurrent Engineering Implementation • Quality Engineering: The Tools and Techniques

Available to the Engineer • Manufacturing Strategy Decision Support Tools: Linking Corporate Vision to Measures of Manufacturing Performance in Concurrent Engineering • Developing Measures of Manufacturing Performance for Concurrent Engineering Implementation • Design for Manufacture (DFM) of Electronic Products • Product Realization Process in Global Environment • Economic Justification in a Concurrent Engineering Environment • Product Data Requirements in Concurrent Engineering • Concurrent Product Planning and Development Using Quality Function Deployment (QFD): A Case Study • Section Two: Short Papers • Design Frameworks and Tool Interoperability in Modern EDA Systems • Computer Aided Design for Life-cycle • Concept Evaluation Methods Associated with Virtual Prototyping Techniques as Means-for Reducing Lead Time in Product Development • A New Concept for Manipulating Machine Tools Through A CNC System • The Concurrent Engineering Development of the Electric Motors and Drives Industry in Egypt • A Novel Arabic Trainer: An Example of a Concurrent Continuous Design, Production and Development System.

ISBN: 978-81-224-1309-0 Publication Year: 2001 Edition : Ist Reprint: 2006 Pages: 304 Price: 495.00 Hardbound



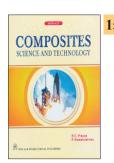
# 153 PRECISION ENGINEERING IN MANUFACTURING

**Murty, R.L.,** Retd. Principal (Late), N.I.T., Warangal

Contents: Concept of Accuracy • Accuracy of NC Systems • Tolerances and Fits • Acceptance Tests for Machine Tools • Static Stiffness and Its Influence on Machining Accuracy • Inaccuracies Due to Thermal Effects • Influence of Forced Vibrations on Accuracy • Dimensional Wear of

Cutting Tools and Its Influences on Accuracy • Surface Roughness and Microfinishing Processes • Dimensioning and Dimensional Chains • Methods of Improving Accuracy and Surface Finish.

ISBN: 978-81-224-0750-1 Publication Year: 1996 Edition: 1st Reprint: 2009 Pages: 264



# 154 COMPOSITES: SCIENCE AND TECHNOLOGY

Prasad, R.C. Ramkrishnan, P.

**Contents:** General • Fabrication, Development and Analysis • Structure and Properties • Environmental • Effects.

ISBN: 978-81-224-1251-2 Publication Year: 2000 Edition: 1st Reprint: 2009 Pages: 220



# 155 TURBOMACHINE BLADE VIBRATION

### Rao, J.S.

Contents:Introduction • Single Blade Vibrations • Discrete Analysis of Blades • Small Aspects Ratio Blades • Blade Group Frequencies and Mode Shapes • Excitation • Damping • Forced Vibrations • Transient Vibrations • Coupled Blade Disc Vibrations • Some thoughts on Fatigue Life Estimation • Some Reflections.

ISBN: 978-81-224-0304-6 Publication Year: 1994 Edition: Ist Reprint: 2007 Pages: 460 Price: 750.00 Hardbound



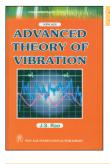
# 156 TURBOMACHINE UNSTEADY AERODYNAMICS

### Rao, J.S.

Contents: Introduction • Basic Principles of Inviscid Incompressible Flows • Elementary Incompressible Flows • Airfoil Theory by Mapping arid Using Flow Field over a Circular Cylinder • Two-Dimensional Thin Airfoil Theory • Airfoil in Unsteady Flow • Unsteady Aerodynamics of a Thin 2-0 Blade Stage in Incompressible Flow

• Inviscid Compressible Flow • Subsonic Compressible Flow in 2-0 Thin Airfoil Stage • Hydraulic Analogy • Introduction to Viscous Flow and Boundary Layers • Unsteady Lift and Moment Due to Viscons Weaks.

ISBN: 978-81-224-0653-5 Publication Year: 1994 Edition: Ist Reprint: 2006 Pages: 532 Price: 750.00 Hardbound

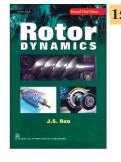


# 157 ADVANCED THEORY OF VIBRATION

### Rao, J.S.

Contents: Introduction • Nonlinear Vibration of Simple Systems• Stability Considerations • Forced Oscillations of Nonlinear Systems • Variational Principles • Longitudinal Vibration of Bars • Torsional Vibration of Rods • Lateral Vibration of Beams

ISBN: 978-81-224-0442-5 Publication Year: 1992 Edition: 1st Reprint: 2008 Pages: 442 Price: 450.00 Hardbound



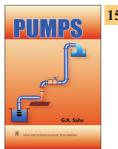
### **158 ROTOR DYNAMICS**

### Rao, J.S.

Contents: Introduction • Torsional Vibration in Rotating Machinery • Torsional Vibrations in Reciprocating Machinery • Bending Critical Speeds of Simple Shafts • Out of Balance Response of Rotors in Rigid Supports • Gyroscopic Effects • Hydrodynamic Bearing • Rotor Mounted on Fluid Film Bearings • Shafts with Dissimilar Moments of Area • Instability in Torsional Vibration • Balancing of Rotors • Condition Instability in

Torsional Vibration • Balancing of Rotors • Condition Monitoring Using Vibration Measurements

ISBN: 978-81-224-0977-2 Publication Year: 1996 Edition: 3rd Reprint: 2007 Pages: 448 Price: 700.00 Hardbound



# 159 PUMPS: THEORY, DESIGN AND APPLICATIONS

**Sahu, G.K.,** Ex. AGM, Project Engg. Deptt., Rourkela Steel Plant, Rourkela, Orissa.

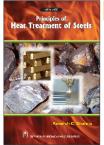
**Contents: Part I**: General Information on Fluid Flow and Pumps: Fundamentals of Fluid Felow

- Pumps Basic Theories of Centrifugal Pumps
- Factors Affecting Pump Operation Part II: Design and Construction: Design of Radial Flow Pumps • Design of Francis Type and Mixed Flow

Impellers • Design of Axial Flow Impellers • Other Aspects of Centrifugal Pump Design • Pumps Drives • Positive Displacement Pumps • Special Purpose Part III : Selection, Installation and Operation : Basic Requirement of Pumping Units Part IV: Miscellaneous.

 ISBN:
 978-81-224-1224-6
 Publication Year:
 2000
 Edition:
 Ist
 Reprint:
 2008

 Pages:
 304 Price:
 495.00
 Hardbound



# 160 PRINCIPLES OF HEAT TREATMENT OF STEEL

**Sharma, R.C.,** Hon. Director/Acharya, Jnana Pravaha- Centre for Cultural Studies, Varanasi, U.P.

Contents: Transformations in Plain Carbon Steels • Alloying Elements in Steels-I (Effect on Phase Equilibria) • Alloying Elements in Steels?II (Effect on Phase Transformations)• Structure? Property Relationships • Tempering of Martensite • Continuous Cooling Transformation (CCT) Diagrams • Formation of Austenite • Annealing

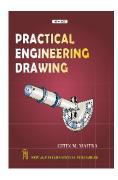
and Normalizing • Hardenability of Steels-I (Concepts and Characterization) Hardenability of Steels-II (Correlation With Composition) • Carburizing and Carbonitriding • Nitriding of Steels • Induction and Flame Hardening • Miscellaneous Thermal and Thermo-Mechanical Treatments • Tool Steels and Their Heat Treatment • Cast Irons and Their Heat Treatment • Appendices.

ISBN: 978-81-224-0869-0 Publication Year: 1996 Edition: Ist Reprint: 2007 Pages: 340 Price: 595.00 Binding: Hardbound

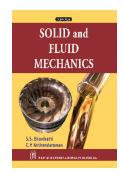
### **JUST RELEASED**



ISBN: 978-81-224-2587-1 • Price: 175.00



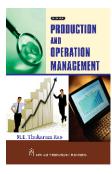
ISBN: 978-81-224-2690-8 • Price: 250.00



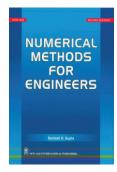
ISBN: 978-81-224-2692-2 • Price: 250.00



ISBN: 978-81-224-2666-3 • Price: 795.00



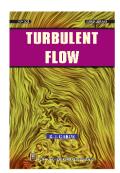
ISBN: 978-81-224-2740-0 • Price: 250.00



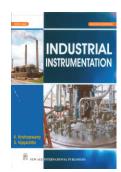
ISBN: 978-81-224-2695-3 • Price: 250.00



ISBN: 978-81-224-2694-6 • Price: 200.00



ISBN: 978-81-224-2662-2 • Price: 595.00



ISBN: 978-81-224-2750-9 • Price: 275.00

# Attention Authors!

### We have

- 1. A team of dedicated editors and production specialists to ensure that your book has the features which are essential for maximum sale of your book.
- 2. An infrastructure for marketing to reach every nook and corner of the world.
- 3. Dedicated team of marketing executives to constantly remain in touch with educational and research institutions as well as the book trade.
- 4. Twelve branch offices throughout the country to ensure that New Age Publications are available with booksellers and institutional libraries at every possible place.
- 5. Up-to-date website <a href="www.newagepublishers.com">www.newagepublishers.com</a> to provide details of New Age publications and its in-built feature to record e-mail and instantly provide information of our new publications on the subject of one's choice. Thus, facilitating penetration of the world market.

Proposals may be sent to:

**Academic Director** 



# NEW AGE INTERNATIONAL (P) LIMITED, PUBLISHERS

4835/24, Ansari Road, Darya Ganj, New Delhi-110 002 (INDIA), Fax: 91-11-23267437, Visit us at www.newagepublishers.com Phones: Production: 23278189, Marketing: 23276802, Publishing: 23261487 E-mail: proposals@newagepublishers.com

Branches: New Delhi • Bangalore • Chennai • Cochin • Guwahati Hyderabad • Kolkata • Lucknow • Mumbai

# **NEW AGE INTERNATIONAL (P) LTD., PUBLISHERS**

### HEAD OFFICE

4835/24, Ansari Road, Daryaganj, New Delhi-110 002 (INDIA)
Tel.: (011) 23276802, 23258865 • Fax: 23267437
E-mail: contactus@newagepublishers.com

**GUWAHA** 16-A, Jopling Road, Lucknow- 226 001 Tel.: (0522) 2209578, Telefax: 2204098 Hemsen Complex, Mohd. Shah Road Paltan Bazar, Near Starline Hotel E-mail: lucknow@newagepublishers.com Guwahati-781008 Tel.: (0361) 2543669, 2513881 E-mail: guwahati@newagepublishers.com MUMBAI **HYDERABAD** PRDB Chambers (Formerly Lotus Cinema)106A, 1st Floor, S.N. Banerjee Road, Kolkata-700 014 Tel.: (033) 22275247, Telefax: 22273773 142C, Victor House, Ground Floor, N.M. Joshi Marg,Lower Parel, Mumbai- 400013 Tel.: (022) 24927869 E-mail: mumbai@newagepublishers.com E-mail: kolkata@newagepublishers.com BANGAL 36, Malikarjuna Temple Street, Opp. ICWA Basavanagudi, Bangalore- 560004 Tel.: (080) 26677815, Telefax: 26615247 No. 105, 1st Floor, Madhiray Kaveri Tower 3-2-19, Azam Jahi Road, Nimboliadda, Hyderabad - 500 027 E-mail: bangalore@newagepublishers.com Tél.: (040) 24652456 E-mail: hyderabad@newagepublishers.com CE-39/1016, Carrier Station Road, Near Paulson Park Hotel, Ernakulam South, 26, Damodaran Street, T. Nagar, Chennai- 600 017 Tel.: (044) 24353401, 24359507, Telefax : 24344726 Cochin, Tel.: (0484) 4051303 E-mail:cochin@newagepublishers.com E-mail: chennai@newagepublishers.com