



IEI

epitome

October 2016, Volume 1, Number 9

Contents



Members in the News



Dr Rutash Mittal, MIE

Department of Mechanical Engineering, In-charge Central Workshop/M Tech Regional Center, Malout Institute of Management & Information Technology Malout, Punjab

Obtained PhD in Mechanical Engineering on the topic "Study of Dissimilar Metal Weldments Exposed to Elevated Temperature" under the guidance of Dr Buta Singh Sidhu, Dean Academics, IKG Punjab Technical University, Jalandhar on July 14, 2016.

Received "Young Scientist Scholarship" from Science and Engineering Research Board (SERB), Department of Science and Technology, Government of India on April 08, 2016.

Mr Rakesh Kumar Malviya, AMIE

PhD Research Scholar, Department of Mechanical Engineering, S V National Institute of Technology, Surat

Obtained 3rd prize and a bronze medal in National Productivity Competition 2015 on the occasion of the 57th National Convention of Indian Institution of Industrial Engineering (IIIE), NHQ, Navi Mumbai organised during November 26-28, 2015 at S V National Institute of Technology, Surat, Gujarat.



Mr Aman Konark Modi, AMIE

Deputy Manager (Construction) , GAIL India Limited

Received Master of Business Law degree from National Law School of India University, Bengaluru during the 24th Annual Convocation held on August 28, 2016. The certificate was handed over to Mr Modi by the Chancellor & the Chief Justice of India in presence of President of India.

Mr K B Rajoria, FIE

Honoured with "Best Industry Expert Award" by Amity University, Noida, UP on the occasion of Domain Corporate Meet 2016 on September 02, 2016 in recognition of his contribution in reviewing the syllabus of Civil Engineering graduation course of Amity University.



Dr Tangellapalli Srinivas, AMIE

Professor, VIT University, Vellore, Tamil Nadu

Invited as Speaker by Vishnu Engineering College for Women, Bhimavaram to deliver lecture on the topic "Research Techniques in Mechanical Engineering" during

August 27-28, 2016.

Mr Avijit Mallick, AMIE

*Senior Manager, Operation Department, 6*660 MW Reliance Power Ltd., Sasan, MP*

Invited to present papers on the topics (a) "Combustion of Sub-Bituminous Coal" at 6th Coal Annual Power Asia Conference organised by Asian SBC

Users' Group at Kuala Lumpur, Malaysia on October 05, 2016 and

(b) "Carbon Capture and Sequestration (CCS)-Final Step for Clean Coal" at 7th Power and Electricity Indonesia held at Jakarta, Indonesia during October 18-20, 2016.



Mr Rupak Kumar Basak, FIE

Consulting Structural Engineer

Recognized as a nominee in four projects in the Category of "Innovation in Structures" amongst 18 categories in the worldwide "Be Inspired Awards, 2015" conducted by the global software giant Bentley Systems Inc, the organization behind the popularly used STAAD Pro software in which more than 360 organizations from 66 countries have participated.

Prof (Dr) C M Narayanan, MIE

Department of Chemical Engineering, National Institute of Technology, Durgapur, West Bengal

Felicitated as the Eminent Engineering Personality at the 32nd National Convention of Chemical Engineers on "Bioprocess Applications in Chemical Engineering: Opportunities and Challenges" organized by The Institution of Engineers (India) Kochi Local Centre during September 09-10, 2016 at Kochi, in recognition of his valuable contributions to the field of Chemical Engineering. He also delivered a plenary lecture on the topic "Biodiesel Synthesis using Algal Oil and Immobilised Lipase Nanosilica in Variable Area Inverse Fluidised Bed Bioreactor", during the Technical Session of the Convention.



Publications

by Members

Dr Rutash Mittal, MIE

Department of Mechanical Engineering, In-charge Central Workshop/M Tech Regional Center, Malout Institute of Management & Information Technology, Malout, Punjab



1. Title of Paper: "Mechanical and Microstructural Properties of Dissimilar Weldments of Austenitic and Ferritic Steels", *3rd International Congress and 21st Conference on 'Welding and Joining Technologies' organised by Cesol (Spanish Welding Association), ITMA and Fundacion*

Metal Spain during May 17-19, 2016 at Gijon, Asturias, Spain.

2. Title of Paper: "Oil-Ash Corrosion Resistance of Dissimilar T22/T91 Welded Joint of Super Heater Tubes", *Journal of Material Engineering and Performance, Vol. 24, No 2, February 2016, pp 670-680.*

3. Title of Paper: "Microstructures and Mechanical Properties of Dissimilar T91/347H Steel Weldments", *published in Journal of Material Processing Technology, Vol. 220, June 2015, pp 76-86.*

Dr Rupa Ch, AMIE

Professor, Department of Computer Science Engineers, VR Siddhartha Engineering College, Vijayawada

Title of Paper: "Squint Pixel Steganography: A Novel Approach to Detect Digital Crimes and Recovery of Medical Images", *International Journal of Digital Crime and Forensics, Vol. 34, No. 4, 2016.*



Mr Rakesh Kumar Malviya, AMIE

PhD Research Scholar, Department of Mechanical Engineering, S.V. National Institute of Technology, Surat



Title of Paper: "Hybrid Decision Making Approach to Predict and Measure the Success Possibility of Green Supply Chain Management Implementation", *Journal of Cleaner Production, Vol. 135, pp 387-409.*

Ms PBooma Devi, AMIE

Assistant Professor, R V S College of Engineering, Dindigul



1. Title of Paper: "A New Transformerless Inverter for Single-Phase Grid Connected Photovoltaic System with Low Leakage Current", *International Journal of Technical Research & Science, Vol. 1, Issue 3, June 2016, pp 22 – 30.*

2. Title of Paper: "Reactive Power Cost Assessment in Wind Farms using Monkey Tree Search Algorithm Based Load Tracing", *International Journal of Advanced Engineering Technology, Vol. VII, Issue I, January-March 2016, pp 642-649.*

Co-author: Dr A Shunmugalatha

3. Title of Paper: "High Performance Based Single Phase Interleaved Flyback Grid Tied Inverter for Solar Application", *International Journal of Computer & Mathematical Science, Vol. 4, Issue 12, December 2015, pp 19 – 28.*

Mr G Sudheer Kumar, AMIE

Research Scholar, Defence Institute of Advanced Technology, Pune

1. Title of Paper: "High Dielectric Permittivity and Improved Mechanical and Thermal Properties of Poly (Vinylidene Fluoride) Composites with Low Carbon Nanotube Content: Effect of Composite Processing on Phase Behavior and Dielectric Properties", *Nanotechnology, Vol. 27, No. 38, 2016, pp 385702.*



2. Title of Paper: "Electromagnetic Interference Shielding in 1–18 GHz Frequency and Electrical Property Correlations in Poly (Vinylidene Fluoride)–Multi-walled Carbon Nanotube Composites", *Physical Chemistry Chemical Physics, Vol. 17, No. 31, 2015, pp 20347-20360.*

3. Title of Paper: "Influence of MWNTs on Electrical and Hydrophobic Properties of Poly (Vinylidene Fluoride) Composites", *Materials Today: Proceedings, Vol. 2, No. 4-5, 2015, pp 2795-2800.*

Co-authors: Vishnupriya D, T U Patro

Publications by Members

Mr Saadat Ali Rizvi, AMIE

Workshop Superintendent,
University Polytechnic, JMI, New
Delhi

Title of Paper: "Some Study of
Machinability by Turning Process-A
Review", *International Journal of
Interdisciplinary Research Centre*,
Vol. II, Issue 6, June 2016.



Mr Vimalathithan DP, AMIE



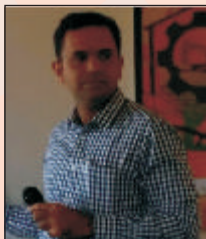
1. Title of Paper: "Impact of
Groundwater Contamination in
Cuddalore by Flood", *International
Journal of Innovative Studies in
Sciences and Engineering
Technology*, Vol. 2, Issue 4, 2016.

2. Title of Paper: "Impact of
Groundwater Contamination in
Cuddalore by Flood", *International Conference on
Energy, Environment and Engineering organised by the
Department of Mechanical Engineering and Chemistry,
Coimbatore Institute of Technology at Coimbatore
during February 29 – March 02, 2016.*

Mr Ajit Salunke, MIE

Head, Department of Mechanical
Engineering, Don Bosco College of
Engineering, Fatorda, Margao, Goa

Title of Paper: "Solar Powered
Ploughing Robot", *International
Conference on Recent Advances in
Engineering Sciences 2016
organised by M S Ramaiah Institute
of Technology, Bangalore during August 8-9, 2016.*



Mr Uphade Dinesh B, AMIE

Department of Mechanical Engineering, IIT Bombay



Title of Papers: "(a) Heat Pump for
Energy Efficient SCJ Freeze Pre-
Concentration" and (b)
"Thermoelectric Multi-Utility Water
Heater cum Air Conditioner", *2016
Purdue Conferences: 23rd
Compressor Engineering, 16th
Refrigeration and Air Conditioning,
4th High Performance Buildings organized by Purdue
Center for High Performance Buildings and Ray W
Herrick Laboratories of Purdue University at Stewart
Center, Purdue University, West Lafayette, Indiana, USA
during July 11-14, 2016.*

Prof Shyamsing V Thakur, AMIE

D Y Patil College of Engineering, Akurdi, Pune

Title of Paper: "Implementation of
the Comprehensive Technique of
Lean Manufacturing in Small Scale
Process Industries: A Case Study",
Discovery, Vol. 52, Issue 246, June
2016, pp 1340-1344.



Dr A Kumaravel, FIE

Professor and Head, Department of Mechanical
Engineering, K S Rangasamy College of Technology,
Tiruchengode



1. Title of Paper: "Characterization
of New Natural Cellulosic Fiber from
the Ipomoea staphylina Plant",
*International Journal of Polymer
Analysis and Characterization*, Vol.
21, Issue 3, January 2016, pp 267 –
274.

Co-authors: K Santhanam, S S
Saravanakumar, V P Arthanarieswaran

2. Title of Paper: "Tyre Pyrolysis Oil as an Alternative
Fuel for Diesel Engines - A Review", *Journal of
Renewable and Sustainable Energy Reviews*, Vol. 60,
July 2016, pp 1678 – 1685.

Co-authors: S T Kumaravel, A Murugesan

Publications

by Members

Mr Pinaki Chakraborty, AMIE

Department of Electrical Engineering, MCKV Institute of Engineering, Liluah



Title of Paper: "Assessment of Impedance And Transmission Parameters For Different Feeder Interconnections", *International Journal of Innovative Research in Science, Engineering & Technology*, Vol. 4, Special Issue 9, July 2015, pp 32-38.

Mr Aditya Tiwary, AMIE

Title of Paper: "Inspection Repair based availability Optimization of Distribution Systems using Teaching Learning based Optimization", *Journal of The Institution of Engineers (India): Series B*, Vol. 97, Issue 3, July-September 2016, pp 355-365.

Co-authors: L D Arya, Rajesh Arya, S C Choube



Dr Mahendra Pratap Choudhary, FIE

Associate Professor, Department of Civil Engineering, Rajasthan Technical University, Kota



1. Title of Paper: "Socio-Economic and Environmental Impacts of Harnessing Renewable Energy Sources", *Proceedings of All India Seminar on 'Sustainable Development and Renewable Energy'*, hosted by The Institution of Engineers (India), Kota Local Centre in collaboration with

Rajasthan Technical University, Kota, May 14-15, 2016, pp 107-113.

Co-author: Sanjay Kumar Tak

2. Title of Papers: (a) "Modern Trend of Photovoltaic Power Stations to Fulfill Future Needs of Energy in India" and (b) "Wind Power: A Worldwide Potential Source of Renewable Energy", *Proceedings of 6th International Conference on Advance Trend in Engineering, Technology and Research*, hosted by Bal Krishna Institute of Technology, Kota, June 30, 2016.

Co-author: Sanjay Kumar Tak

Mr Prashant M Menghal, MIE

Associate Professor, Military College of Electronics & Mechanical Engineering, Secunderabad, Telangana



1. Title of Paper: "Fuzzy Based Real Time Control of Induction Motor Drive", *Elsevier Procedia Computer Science, International Conference on Computational Modeling and Security*, Vol. 85, 2016, pp 228-235.

2. Title of Paper: "Modelling, Simulation & Analysis of Induction Motor Using Artificial Intelligent Controller", *International Journal of Modelling and Simulation*, Vol. 36, No. 4, 2016, pp 120-135.

Dr Sandeep G Fale, MIE

Dean (R&D) & Head, Department of Mechanical Engineering, P R Pote College of Engineering & Management, Kathora Road, Amravati



1. Title of Paper: "Compressive, Tensile and Wear Behavior of Ex-Situ Al/AlN Metal Matrix Nanocomposites", *Journal of Composite Materials*, Vol. 49, No 16, July 2015, pp 1917-1928.

2. Title of Paper: "Nanoindentation, Compressive and Tensile Deformation Study of In-Situ Al-AlN Metal Matrix Composites", *Transactions of The Indian Institute of Metals*, Vol. 68, Issue 2, April 2015, pp 291-297.

Mr Sanjay Kumar Sharma, AMIE

Assistant Professor, EC Department, University Institute of Technology Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal, MP



Title of Paper: "Design and Performance Analysis of Programmable Digital Delay Generator", *International Organization of Scientific Research-Journal of Electronics and Communication Engineering*, Vol. 11, Issue 4, Ver IV, July-August 2016, pp 28-36.

Publications

by Members

Prof Vijaykumar H K, MIE

Assistant Professor, Department Of Mechanical Engineering, Yenepoya Institute of Technology, Mangaluru, Karnataka



Title of Paper: "Employing The Artificial Neural Network to Envisage The Shore Hardness of Poly Tetra Fluoro Ethylene Tubes after Extrusion", *National Conference on the topic "Emerging Trends in Mechanical Engineering"*

organised by St. Joseph Engineering College Mangaluru, Karnataka on August 06, 2016.

Mr S Hariharasudhan, AMIE

Senior Software Engineer, 3i-Infotech Ltd

Title of Paper: "A Virtual Analysis on Effective Speckle Noise Removal Techniques in Medical Images by Various Filtering Methods", *International Journal of Computer Trend and Technology*, Vol. 38, No 3, August 2016.



Mr K K Singh Tomar, MIE



Title of Paper: "Energy Management and Control of Microgrid using Multi-Agent Systems", *Conference on Electrical, Computer and Electronics (UPCON)* organised by IEEE UP Section, December 4-6, 2015.

Co-author: S N Singh, FIE

Dr R Krishnan, MIE

Deputy Chief Engineer, WAPCOS Ltd, Chennai

Title of Paper: "Restoration of Storage Capacity in Water Bodies through Desilting – A Boon Not Mere Dream (A Case Study of Srivaikuntam Anicut in Tuticorin District, Tamil Nadu)", *WAPTECH Special Edition 2016, September 2016, WAPCOS Limited, New Delhi.*



Co-authors: D V S Murthy, N Raman



Dr R K Gnanamurthy, FIE

Professor & Director, PPG Institute of Technology, Coimbatore, Tamilnadu

Mr R Senthilkumar, AMIE

Assistant Professor, Department of Electronics and Communication Engineering, Institute of Road and Transport Technology, Erode, Tamilnadu



1. Title of Paper: "A Comparative Study of 2DPCA Face Recognition Method with Other Statistically Based Face Recognition Methods", *Journal of The Institution of Engineers (India): Series B*, Vol. 97, Issue 3, July-September 2016.

2. Title of Paper: "A New Approach in Face Recognition: Duplicating Facial Images Based on Correlation Study", *Proceedings of 11th International Conference KMO-LTEC 2016 hosted by University of Hagen, Hagen, Germany, July 25-28, 2016.*

Dr S Vijaya Mohan Rao, MIE

Principal, Siddhartha Institute of Engineering and Technology, Ibrahimpatnam, RR District, Telangana



1. Title of Paper: "Concrete in Hot Weather Conditions - Challenges - Precautions", *International Journal of Science and Research (IJSR)*, Vol. 5, Issue 1, January 2016.

2. Title of paper: "Traditional Irrigation Methods in Telangana State", *Annual Technical Volume, The Institution of Engineers (India), Civil Engineering Division Board, April 2016.*

Publications

by Members

Mr Ajay Kumar Kushwaha, AMIE

Research Scholar, Department of Electronics Engineering, Indian Institute of Technology (Indian School of Mines), Dhanbad



Title of Paper: "Chua's Oscillator Using Operational Transresistance Amplifier", *Revue Roumaine des Sciences Techniques, Serie Electrotechnique et Energetique* (Romanian Academy, Publishing House of the Romanian Academy), Vol. 61, Issue 3, 2016, pp 299-303.

Mr Badal Sarkar, MIE

Assistant Engineer (Electrical), Jadavpur University, Kolkata, West Bengal

Title of Paper: "Intensity Modulated Fiber Bragg Grating Sensor for Detection of Partial Discharges inside High Voltage Apparatus", *IEEE Sensors Journal*, Vol. 16, Issue 22, September 12, 2016, pp 7950-7957, DOI: 10.1109/JSEN.2016.2608743



Co-authors: Mr D K Mishra, Dr C Koley, Prof N K Roy, Mr P Biswas

Dr Trupti Ranjan Mahapatra, MIE

Assistant Professor (II), School of Mechanical Engineering, KIIT University, Bhubaneswar



Title of Paper: "Nonlinear Transient Analysis of Smart Laminated Composite Plate Integrated with PVDF Sensor and AFC Actuator", *Composite Structures*, Vol. 157, 2016 pp 121-130.

Mr Divyesh Kumar Dave, AMIE



1. Title of Paper: "Study of Tribological Behavior for Chromium based Coatings Deposited on Conventional Materials", *Elsevier Procedia Technology*, 3rd International Conference on Innovations in Automation and Mechatronics Engineering 2016 hosted by G H Patel College of Engineering & Technology, Vallabh Vidyanagar, Gujarat, Vol. 23, 2016, pp 91-97.

Co-authors: Kamlesh V Chauhan, Mahesh R Chavda and Sushant K Rawal

2. Title of Paper: "A Review Paper on Properties of TiN Coating Synthesized by Sputtering", *Proceeding of National Conference on Design, Analysis and Optimization in Mechanical Engineering 2016* hosted by MS University, Vadodara, Vol. I, pp 178-183.

Co-authors: Kamlesh V Chauhan, Mahesh R Chavda and Sushant K Rawal

Mr Dipankar Das, AMIE



Title of Paper: "Data Mining of Indian Stock Market from April, 2015 to March, 2016 using Curve Fitting Technique", *International Research Journal of Engineering and Technology*, Vol. 3, Issue 5, May 2016, pp 2564-2570.



Review

Prof R Ananda Natarajan, FIE

Academic Council Member, Department of Electronics and Instrumentation Engineering, Pondicherry Engineering College (Autonomous), (A Government of Puducherry Institution) Puducherry

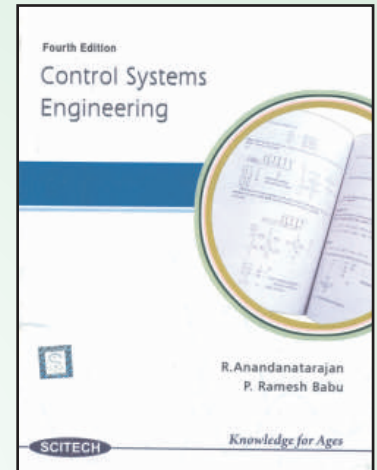
Publisher : Scitech Publications Pvt Ltd, Chennai

Control Systems Engineering

This book (4th edition) is designed for undergraduate students of all branches who study Control Systems Engineering as one of the subjects in their curriculum. It is also a reference book for PG students. The contents of the book are presented in lucid style, so that even an average student can grasp the subject. Many simple and complex problems are worked out to strengthen the theory.

Salient features:

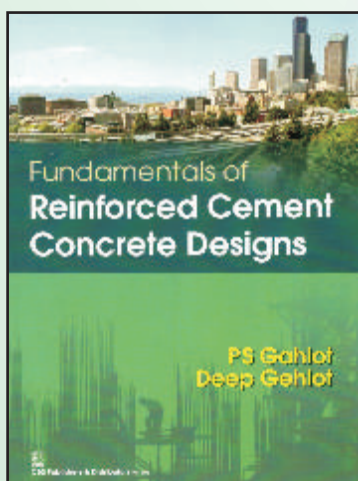
- Most of the topics are presented in lucid manner, so that the students belonging to various branches like Electrical, Communications, Instrumentation and Mechanical Engineering can easily understand the subject.
- More than 250 worked out examples, 120 practice problems and 150 short questions and answers are given.
- Covers the entire syllabus of most of the universities in India, with particular focus on syllabi of Anna University, JNTU, University of Kerala, CUSAT, MG University, BPTU, VTU, UPTU, WBTU and University of Bombay.
- Methods to draw Bode plots without much analytical calculations are given.
- Theory and problems on Nyquist criterion made simple.
- Methods of Compensator design (using root locus and frequency response) are presented in lucid manner.
- Solutions to University question papers are included in a separate annexure.



Prof PS Gahlot, FIE

Department of Civil Engineering, National Institute of Technical Teachers Training and Research, Chandigarh

Publisher : CBS Publishers & Distributors Pvt Ltd



Fundamentals of Reinforced Cement Concrete Designs

Reinforced Cement Concrete (RCC) is used in almost all structures and hence understanding of RCC designs of various structural elements is most essential for all civil engineers. Design of various elements play a vital role in the safety and stability of any structure. Thus, proper knowledge of fundamentals of RCC design is necessary for practising engineers for understanding and achieving quality, progress, economy and safety at the construction site. Proper knowledge of fundamentals of RCC design also helps in seeking good employment, fast professional growth and reputation. Most of the structures have many types of RCC elements and hence safe design of any structure requires thorough knowledge of design of various RCC elements.

The book has been developed keeping in mind the limitations of present-day students and basic principles of learning. Each chapter starts with statement of learning objectives to clarify the knowledge explained in the chapter. Provision of objective questions at the end

of each chapter facilitates the students for self-evaluation of their learning. This also helps the teacher for making teaching effective. Summary at the end of each chapter brings out key points for easy grasping of important basic knowledge and recall of such knowledge whenever required prior to examination or competitive examination for employment. Each design emphasises provision of IS codal specifications for safety, quality, durability and serviceability of all the structure. Proper design, quality and construction technique of RCC elements affect the strength, stability and life of the structure.

Book



Review

Mr Sudhansu Kumar Bhattacharjee, MIE

Chartered Engineer, Consulting Structural Engineer & Valuer

Publisher : Khanna Publishers

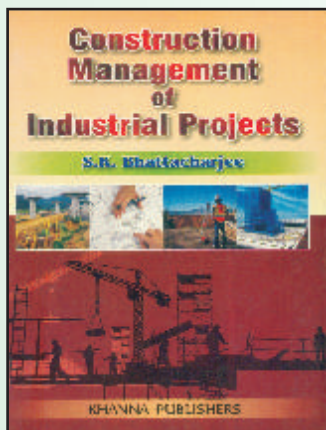
Fundamentals of PERT/CPM and Project Management

This book presents the fundamentals and basic concepts of project management with emphasis on the techniques of PERT and CPM, to suit the requirements of students of engineering, business management and architecture of Indian Universities. The chapters have been organised to elucidate different aspects for project management, right from the planning stage of the project to its commissioning, covering the intermediate stages of scheduling, implementation, monitoring, quality control and evaluation. In addition, separate chapters are there covering cost control, inventory control, field management, management with limited resources and safety. To cater to the needs of the management students, the techniques of optimization have also been dealt with giving importance to the search method, linear programming and dynamic programming because of their wide acceptance. The chapters on project economics deal with the basic macro-economic fundamentals, exploring the issues of capital investment, project profitability, inflation and financial appraisal of projects.



Construction Management of Industrial Projects

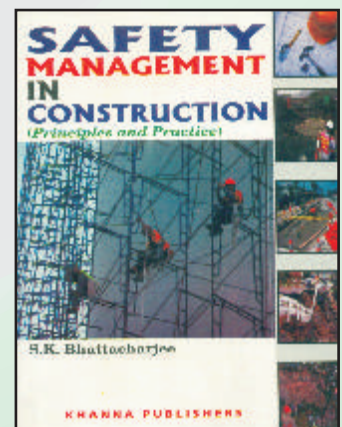
The book explains the different stages in the management of industrial projects, starting from its initial planning stage to scheduling, implementation, monitoring and control. As an aid to the decision-making process, the chapters on soil investigation, survey, infrastructure development, formwork design, conceptual planning, specifications and estimation are presented in such a way that the reader may get a practical idea about standard engineering practice, code provisions to be followed and material specifications. Following the recent advances in use of new varieties of materials in construction, detailed information has been given for different types of cement and steel used in construction and specifications of special-purpose emerging materials like Geo-synthetic products, epoxy compounds, glass and aluminium products and insulating materials, which have attractive material properties, durability and cost-effectiveness.



Features of contract documents, scheduling and review techniques and environmental aspects are also discussed for the benefit of the readers. The text also includes chapters on material management, field management, cost control methods and equipment management. In addition, topics on strengthening, rehabilitation of industrial structures and safety in construction have also been included. The information provided in the appendix is expected to serve as a ready reference for the construction engineers in the field.

Safety Management in Construction

In the planning and design stages of construction projects, structural safety can be assured from correct assessment of external loads, environmental stresses, soil-foundation interactions and adequate proportioning of the structural elements as per standard engineering practice and relevant code provisions. The book focuses the above safety aspects including safety norms to be followed to control earthquake, wind and flood related disasters. In addition, coverage has been given in the text to problems of safety of workmen at site, safety hazards due to lack of maintenance during the post-construction service period and unsafe work environment due to noise pollution. Safety problems faced during demolition work have also been given due coverage in the text. Guidelines have been given to augment reliability of structural systems. Examples of safety hazards and case reports drawn from a wide spectrum of projects like, buildings, industrial structures and bridges have been incorporated in the text with suggested safety measures. It is expected that the book will be useful to designers, field engineers and management personnel in charge of construction projects and also to the students specializing in safety management and preparing for professional examinations.





Review

Dr N Subramanian, FIE

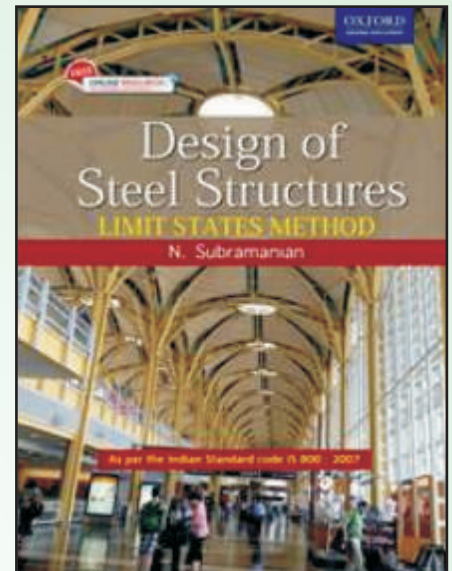
Publisher : Oxford University Press

Design of Steel Structures

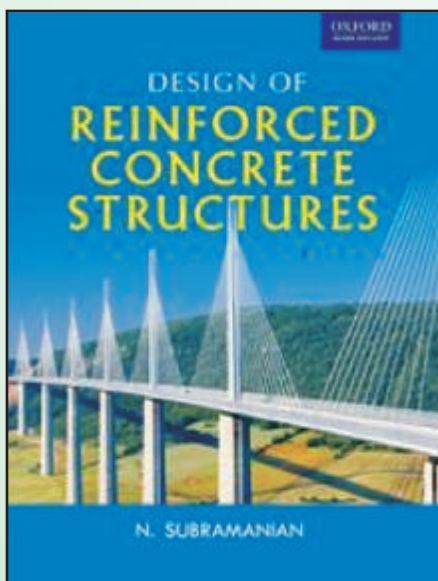
The textbook *Design of Steel Structures – Limit States Method* based on the Indian Steel Design code, provides Indian students and practising engineers more than an introduction to structural steel. At over 900 pages, it is a comprehensive presentation of the design methods and details relevant to steel structures (with material for the development of at least three semester-long courses). Its scope ranges from materials and specification, to design of seismic-resistant system, including coverage on structural analysis methods, loads, design of structural members and connections, and much more.

Most importantly, the textbook covers the important design requirements to prevent critical failure modes that are too often omitted in shorter-length steel design textbooks. For example, the issue of prying action in bolted connections, often overlooked by other authors, is covered here.

Catastrophic connection failures could occur if prying action is accidentally overlooked by practising engineers.



Design of Reinforced Concrete Structures



This book is designed to meet the requirements of undergraduate students of civil and structural engineering. This book will also be an invaluable reference to postgraduate students, practising engineers and researchers. This book is based on the latest Indian Standard code of practice for plain and reinforced concrete (IS 456:2000) released in July 2000 (reaffirmed 2005) and the three amendments released in June 2001, September 2005 and August 2007. Even though this fourth revision of the code gives greater emphasis to the limit states method of design, it also provides working stress method as an alternative method. SI units have been used throughout the book.

Focusing on the modern limit states design, the book covers topics such as the properties of concrete, structural forms, loadings, behaviour of various structural elements (compression and tension members, beams, slabs, foundations, walls and joints) and design and detailing for flexure, shear, torsion, bond, tension, compression and compression with uniaxial and

biaxial bending. It also discusses the design of flat plates, footing and pile caps, shear walls, staircases, RC joints and multi-storey buildings.

Members

Speak

Dr A Kumaravel, FIE

Professor and Head, Department of Mechanical Engineering, K S Rangasamy College of Technology, Tiruchengode

It is good to see the e-Newsletter titled IEI Epitome which is a platform for disseminating the information among the IEI members. Thanks to the team who have initiated and executed.

Mr Dipankar Das, AMIE

At the outset, I like to extend my thanks to the editorial team of the IEI Epitome for such an excellent endeavour and continuous effort for publishing the achievements and publication details of the members on a regular basis which has really become a window to share and inform the society at large about the efforts and accomplishments of the IEI members.



IEI – Springer Journal



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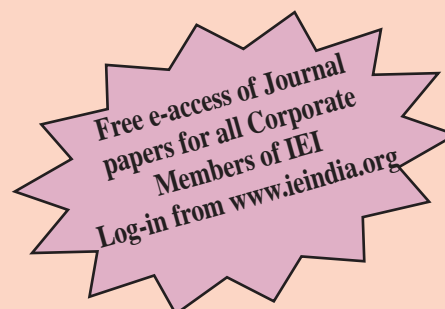
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 ISSN online : 2250-2491





31st INDIAN ENGINEERING CONGRESS

December 15-18, 2016

Theme:

**SMART Technologies for Natural Resource
Conservation and Sustainable Development**

Organized by:

The Institution of Engineers (India)

Hosted by: **West Bengal State Centre**

Venue :

Hotel J W Marriott

4A, J B S Haldane Avenue, Kolkata 700105, India

Contact : Organising Secretary, 31st Indian Engineering Congress,
The Institution of Engineers (India), West Bengal State Centre,
8 Gokhale Road, Kolkata 700020, Tel : 033-2223 8230/8914;
Fax : 033-22238345; email: ieckolkata@gmail.com

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IEI *epitome*

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Associate Editor: Ms A Dutta

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