



# The Indian Engineer

"We spend January 1, walking through our lives room by room, drawing up a list of work to be done, cracks to be patched. May be this year, to balance the list, we ought to walk through the rooms of our lives...not looking for flaws, but for potential." Ellen Goodman

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Director

## From the Chairman's Desk

At the outset, I wish a very Happy and Prosperous New Year to all office bearers and Members of our Member Associations and Members of the Board of Governors, ECI.

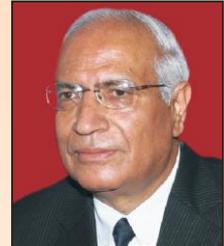
We have recently come to know, that in the new Companies Bill, 2011, only Chartered Accountants and Cost & Works Accountants have been mentioned as eligible to register as Valuers and Engineers have been left out from the list. This issue was also discussed at the 29th BOG meeting of ECI held on November 28, 2011 at New Delhi where it was agreed that ECI should take up this issue with the concerned authorities so that Engineers are also included in the list of Valuers in the Companies Bill, 2011.

A proposal on the National Proficiency Evaluation Test (NPET), which is an independent assessment of proficiencies of young engineering graduates, diploma holders, supervisors and engineer technicians used for employment purpose, was submitted to the Member Associations of ECI after approval by the BOG at its 28th meeting held on June 27, 2011 at New Delhi for developing it for all the branches of engineering. I would request ECI members to consider the matter positively so that the proposed NPET could be started at the earliest.

While the ECI has been spearheading campaign for Engineers' Bill, it was interesting to note that eminent engineer and outgoing head of Delhi Metro, Mr. E. Sreedharan has stated in an interview published in the Times of India on December 9, 2011 that *'The main reason why the engineering profession has not been able to reach international levels is because of a lack of a regulatory body, like the ones that are there in other professions like medicine. .... We have raised this issue with the authorities but the government is going very slow.'* ECI is continuing follow up with the Ministry of HRD. I had a meeting with Mr. Ashok Thakur, Special Secretary, the Ministry of HRD on October 12, 2011 in this regard.

The 9th National Conference organized on November 28, 2011 at New Delhi with the theme: *Challenges of the 12th Five-year Plan-Role of Engineers and Technologists* was a great success, with about 300 participants from the industry and academia along with some engineering students. The Chief Guest Dr Ashwini Kumar, Minister of State for Planning, Science & Technology and Earth Sciences could not join due to some last minute problem. But two Guests of Honour, Dr. Pronab Sen, Pr. Adviser, Planning Commission who delivered the theme address and Dr. T.C.A. Anant, Secretary & CSO, Ministry of Statistics & Programme Implementation also addressed the Conference, highlighted the important role of engineers will play in the 12th Five Year Plan. The proceedings of the conference will be compiled and circulated in due course.

Continuing with its focus on industry-related engineering education, ECI organized the 6th National Convention with the theme "Industry-Specific Engineering Education for Better Employability of Engineers - Contours of Reform" jointly with the Indian Institute of Chemical Engineers on September 19, 2011 at Kolkata. The 7th National Convention on the subject is proposed to be held jointly with the ITM Universe, Vadodara and IIM, Vadodara Chapter on January 28, 2012 at Vadodara to get a consensus on the final contours of reform of the engineering education system. The 3rd Executive Development Programme on Project Management is being organized during February 21-25, 2012 at New Delhi.



*(Uddesh Kohli)*

### 7th National Convention

7th National Convention on Industry - Specific Engineering Education for Better Employability of Engineers is being organized on January 28, 2012 at ITM Universe Campus, Dhanora Tank Road, Village Paldi, Halol Highway, Taluka Waghodia, Vadodara, Gujarat. For details visit : [www.ecindia.org](http://www.ecindia.org) or send an email to [eci@ecindia.org](mailto:eci@ecindia.org), [director@ecindia.org](mailto:director@ecindia.org)

### 3rd Executive Development Programme (EDP)

The 3rd EDP on Project Management is scheduled to be held during February 21 to 25, 2012 at Tagore Hall, SCOPE Convention Centre SCOPE Complex, 7, Lodhi Road, New Delhi. For details visit : [www.ecindia.org](http://www.ecindia.org), or send an email to [eci@ecindia.org](mailto:eci@ecindia.org), [director@ecindia.org](mailto:director@ecindia.org)

### Foundation Day of Engineers Council of India (ECI)

ECI will complete ten years of its service to the engineering profession on April 4, 2012. ECI was incorporated on April 4, 2002 as an apex body of engineers at the national level to promote a world class engineering profession in the country. The day will be celebrated as the Foundation Day of ECI. A suitable programme is being drawn up.

### EXPO 2012- Broadcasting Through Multiple Platforms

Broadcast Engineering Society (India) is organizing EXPO 2012 during February 11-13, 2012 at Pragati Maidan, New Delhi. For details send an E-mail to: [bes@besindia.com](mailto:bes@besindia.com) or visit website: [www.besindia.com](http://www.besindia.com).

### BES Awards 2011-12

Broadcast Engineering Society (India) has called for nominations for its awards for the year 2011-12. For details send an E-mail to [bes@besindia.com](mailto:bes@besindia.com) or visit: [www.besindia.com](http://www.besindia.com)

### 4th CIDC Vishkarma Awards 2012

The last date for submission of nominations for the awards has been extended up to 31st January 2012 on popular request. For details visit: [www.cidc.in](http://www.cidc.in) or send an E-mail to [cidcvks@gmail.com](mailto:cidcvks@gmail.com), [cidc@cidc.in](mailto:cidc@cidc.in)

### International Conference on Control of Industrial Gaseous Emission by ISTE

The conference is slated for February 9-10, 2012 at Annamalai University, Department of Chemical Engineering, Annamalai Nagar. For details contact: Prof. R. Dhanasekar, Chairman-CIGE-2012 Phone: 09443956560. Email: [rdhanasekar286@rediffmail.com](mailto:rdhanasekar286@rediffmail.com). Website: [cige2012au.com](http://cige2012au.com).

### Greetings

Engineering Council of India wishes all engineers and their families a Happy and Prosperous New Year - 2012.

## From Editor's Desk

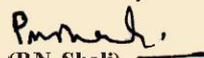


**Pressing concern for the growing mining sector today is shortage of mining engineers and mining engineer technicians, which needs to be addressed**

Mining industry is contributing around 2.5 to 3 percent to the gross domestic product; it is expected to increase to about five percent in the coming years. According to a study conducted by the Confederation of Indian Industry (CII), the industry is the largest employer. More than 9,00,000 persons are employed in the exploration and mining of coal, metallic & non metallic, minor and other minerals; the share of coal and lignite sector, out of the total employment in mining sector, is 75 percent. Engineers employed in the industry include mining engineers (mine operations, mine planning, etc.) as, well as mechanical, electrical, civil and instrumentation engineers (maintenance, etc). There is also what we call statutory workforce which includes first and second class mine managers, certified as such. Then there are engineer technicians such as, mine surveyors, mine foremen, mining mates, blasters, etc. According to a report prepared jointly by the Ministry of Mines & CII, the projected figure of employment in mining sector by the year 2017 will be more than 10.60 lakhs; and it will increase to a little more than 12.10 lakhs by the year 2025. Coal & Lignite segment is expected to continue to be a major employer in mining sector till 2025.

According to a CII study on mapping of human resources and skills for mining industry in India 'lack of skilled workers is set to hit the industry. In the mining engineers category, demand - supply gap of about 3,000 is anticipated in the short term (2009-2017) and about 8,500 over the longer term (2009-2025). The 12th Plan working group of the Planning Commission on mining sector, in its draft report, has stated that shortage of mining engineers, mines managers, trained mining engineer technicians such as, mine surveyors, mine foremen, mining mates, blasters, short firers, drillers, heavy machine operators, etc, is pressing concern for the growing mining sector. It has also stated that the infrastructure to train people for these jobs in mining sector is inadequate and not of quality. The working group has suggested that "the shortage of formal training systems for candidates at the operator level also needs to be addressed by introducing relevant courses in technical institutes located close to mining centres; and to synchronize the efforts of the industry, government and educational institutions, an industry skills centre be set up on the lines of Australia's Mining Industry Skills Centre.

Given the tough job scenario of mining sector, mining engineering is not a preferred branch for our young boys and girls who want to join engineering profession. Many of these talented students are going for non-mining jobs because of more attractive emoluments and perks. Some of the students go for management study and hardly few go for mining engineering. This is the basic issue here. We need to tackle this issue. A way forward could be, as has been suggested by the working group, making mining engineering attractive by awarding scholarships to the students in educational institutes providing education in mining. Not many institutes run diploma courses in mining engineering. We also need to deal with this issue. We also need to strengthen not-for-profit' ITI like institutions that are there and provide vocational training. Regulatory bodies like DGMS / IBM, etc., need to ensure that the accreditation process of skill imparting institutions is of requisite quality; and only persons with requisite diploma are employed with them. Mining Institutions should also formalize the train-the-trainer initiatives to ensure that the current practices and technological advancements in the industry percolate into the education system. As has been pointed out by the working group, the Ministry of Mines should initiate a dialogue between these institutions and mining industry for promoting skill development as part of CSR actively of the industry. We also need to enhance emoluments and perks to make mining sector jobs more attractive. Further, apart from attracting students to mining engineering, mining engineering courses for non-mining engineers can also be started - as the mining sector will employ a very large number of mechanical, electrical and civil engineers. For this, academic institutions imparting mining education and mining industry can join hands for taking up appropriate undergraduate and post graduate mining engineering courses for non-mining engineers and give a way forward to mining engineering diploma holders employed in the industry to pursue higher education in mining engineering. The other major area of concern, as has been pointed out by the working group, is the lack of mineral-specific professionals such as lawyers, financial analysts and economists. We should also start courses for mining lawyers and mineral economists and financial analysts.

  
(P.N. Shali)

## Eminent Indian Engineer : Dr Baldev Raj



Dr Baldev Raj - a distinguished nuclear engineer and scientist of India - has rendered yeoman's service to the Department of Atomic Energy over a forty two year period until 2011. As Director, Indira Gandhi Centre of Atomic Research, Kalpakkam, he galvanized a whole community of staff, engineers and scientists for advancing several challenging technologies, especially those related to the

fast breeder test reactor (FBTR) and the prototype fast breeder reactor (PFBR). Dr. Baldev Raj has nurtured and grown excellent schools in nuclear materials and mechanics, non-destructive evaluation, corrosion, welding, separation sciences & technology and robotics & automation. These schools have delivered science-based technological solutions to strategic sectors, industries and have created strong groups in leading educational institutions. Specifically speaking, he has played a pioneering role in mastering the technology of complex post-irradiation examination (PIE) to achieve a burn up of 165 GWd/tonne of Pu-rich carbide, application of Non Destructive Engineering (NDE) for basic research using acoustic and electromagnetic techniques in a variety of materials and components, sodium science, materials development for fast spectrum and fusion reactors, structural mechanics and integrity of high performance components, safety of sodium cooled fast reactors, reprocessing of unique Pu-rich carbide fuel, building a high level of expertise and facilities in the domain of fast reactor sciences & technology and associated fuel cycle facilities in India, synergizing the Indian competence with collaborations worldwide, addressing technology-intensive problems in aerospace and defence, meeting the challenges related to the construction of a 500 MWe Prototype Fast Breeder Reactor at Kalpakkam, etc.

### Professional Positions Held

He is currently President-Research PSG Institutions, Coimbatore, President, International Institute of Welding, President, Indian National Academy of Engineering, Member Editorial Board of more than ten eminent journals from India and abroad, Examiner of PhD theses from most eminent institutes and the research proposals from eminent bodies in India, Europe, South America, South Africa, etc. The previous professional positions that he has held include President of International Committee on NDT in 1992, President of The Indian Institution of Metals, Indian Institution of Welding and Indian Society of NDT, President Quality through Non-destructive Science & Technology Trust, Vice President Academia NDT International, and Vice president Materials Research Society of India etc. He has also served on the BOG, Engineering Council of India for the term 2008-10.

### Membership of Academies and Societies

Dr Baldev Raj is a distinguished Member and Fellow of many prestigious international academies and societies. While the list is very large indeed, some of these include member International Nuclear Energy Academy and German National Academy of Sciences, Fellow of Third World of Academy of Sciences, Fellow of Indian National Academy of Engineering, Fellow, Indian National Science Academy, Fellow, International Institute of Quality Assurance, UK, Fellow, ASM International, USA, Honorary Member of the International Committee on NDT, Honorary Member, Hellenic Society of NDT, Greece, Honorary Member of the Australian Institute of Energetic Materials, Honorary Fellow of the British Institute of NDT, President of the International Committee on NDT (1992-96), President, 14th World Conference on NDT (December 1996, India), Founder Member, Asia Pacific Academy of Materials, and many more.

### National and International Distinctions

Dr Baldev Raj has received national and international distinctions which include Adjunct Professor, University Institute of Chemical Technology, University of Mumbai, Adjunct Professor, Department of Electrical and Computer Engineering, Michigan State University, USA, Honorary Professor, Sichuan University, Chengdu, China, Chairman, Board of Governors, National Institute of Technology, Puducherry (2011-2015), Member, Steering Committee on S&T for the Twelfth Five Year Plan, Planning Commission of India, Hon. Scientific Consultant (Advanced Materials and Sensors), Office of the Principal Scientific Advisor to Govt. of India (2011....), Adviser Advanced Ultra Super Critical Technology, Office of the Principal Scientific Advisor to Govt. of India, Member, Advisory Committee on Promotion of Research in Science & Technology in Universities and other Academic, Scientific and Engineering Institutions, Ministry of Human Resource Development, Hon. J.C. Bose National Professor, Department of Science & Technology, Distinguished Visiting Professor, Indian Institute of Kharagpur, Distinguished Visiting Professor, Dept. of Electrical Engineering, Indian Institute of Technology Bombay, Mumbai and many more.

### Awards & Honours

Dr Baldev Raj has received many distinguished awards, honours and recognitions not only from Indian Institutions of eminence, but also from the various prestigious international institutions and bodies. The list is very large indeed, some of the important ones include: Director's Colloquia -Los Alamos National Laboratory, USA (2007), the first International Committee on NDE Research Award (2000-2004) - the best researcher internationally award among the 40 countries given once in four years, Presidential honour Padma Shri, Distinguished Alumnus, Award of the Indian Institute of Science, Distinguished Materials Scientist Award of Materials Research Society of India, National Metallurgist Award of the Ministry of Steel, Government of India, Homi J Bhabha Gold Medal Award received from the Prime Minister of India during the 99th Indian Science Congress (2012), Federation of Indian Chamber of Commerce & Industry Annual Award for Outstanding Research in Materials Science (2007-08), Pandit Jawaharlal Nehru National Award in the field of Engineering & Technological Sciences, Indian National Science Academy (2010) Award - Highest in the category of Materials Sciences, National Metallurgist Award (Research & Academia), Ministry of Steel & Indian Institute of Metals (2007) - Highest award bestowed by the Ministry of Steel, Govt. of India for individual contributions in domains of materials, education and research, IIM Platinum Medal, Indian Institute of Metals (2010)- highest award by the Indian Institute of Metals for contribution to metallurgy, etc. - and many more.

### Publications and Patents

Dr Baldev Raj has authored more than 800 publications in refereed journals & books, 60 books, including special journal volumes, contributions to encyclopedia and handbooks, as well as owner of 21 patents, he has been recognized by way of awards, honours, plenary and keynote talks, editorial positions and assignments in esteemed national and international fora in more than 30 countries. He is editor-in-chief of three series of books.

Dr Baldev Raj was born in April, 1947 in the city of Jammu, J&K. He received his basic school education in Jammu, J&K. He obtained Bachelor of Engineering in Metallurgy in 1969 from Ravishankar University, then in Madhya Pradesh and now in Chattisgarh securing Gold Medal in all branches of sciences and engineering. He obtained his Ph.D from the Faculty of Engineering, Indian Institute of Science, Bangalore in 1986.

## News Corner

### MoU to Operate a Voluntary Certification Programme for Ready Mixed Concrete Signed

The Quality Council of India (QCI), India's apex quality facilitation and national accreditation body- and the Ready Mixed Concrete Manufacturers Association (RMCMA) signed an MoU on December 22, 2011 at New Delhi to operate a voluntary certification programme for Ready Mixed Concrete Plants. Mr. Ajay Shankar, IAS, Member Secretary, National Manufacturing Competitiveness Council (NMCC) was the Chief Guest. Shri P.N. Shali, Director, Engineering Council of India also attended the MoU signing ceremony. It will promote the use of quality concrete in all constructions from certified plants. While QCI and RMCMA shall be the joint Scheme owners, the governing structure of the Scheme shall be under a multi stakeholder Steering Committee and the Scheme would be operated on a non profit but self sustaining basis. It would have a defined consensus based technical criteria laid down for the ready mixed concrete plants who would be evaluated by competent third party certification bodies, who in turn would be accredited by the National Accreditation Board for Certification Bodies (NABCB), which is part of the international system of equivalence of accreditation's and certifications, as per appropriate international standards.

### First National Manufacturing Policy Announced

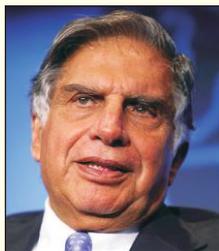
The policy aims at increasing share of manufacturing in GDP

from 16% to 25% and to create job opportunities for 100 millions who are going to join workforce by 2022. It is expected to boost activities in manufacturing sector in India and consequently create employment opportunities for young Indians.

### India Com – 2012

Encouraged by the resounding success met with the previous editions of India Coms since its inception in 2007, India Com – 2012: is being organised. The main component of the event is the 6th National Conference on "Computing For Nation Development, which is being organised jointly with the Guru Gobind Singh Indraprastha University, Delhi, ISTE Delhi Section, IETE Delhi Centre, Computer Society of India (CSI), Region-I, JJ Tibrewala University, Rajasthan and Sridhar University, Pilani during 23rd-24th February, 2012 under technical co-sponsorship of IEEE Computer Society (CS) Chapter and IEEE Computational Intelligence Society (CIS) Chapter of IEEE Delhi Section. It will be followed by the 5th National Students' Convention on 25th February, 2012, on the same theme. Detailed guidelines and registration procedure are available at website <http://www.bvicam.ac.in/indiacom>. Soft copies of the information brochure and registration forms can be downloaded from website <http://www.bvicam.ac.in/indiacom/Downloads.asp>. For further details send an E-mail to [conference@bvicam.ac.in](mailto:conference@bvicam.ac.in).

## Ratan Tata and the Flat Tyre - Lessons in Leadership!!



One of Mr. Ratan N Tata's first assignments was the stewardship of the ailing electronics company in the Tata portfolio - Nelco. Story goes that a team of senior managers from Nelco was driving to Nasik along with RNT. Halfway into the journey, the car had a flat tyre, and as the driver pulled up, the occupants - including Mr. Tata - got off for a comfort break, leaving the driver to replace the tyre. Some of the managers welcomed the forced break, as it allowed them a much-needed chance to light up a cigarette. Some used the opportunity to stretch, and smile, and share a joke. And then, one of them suddenly noticed that Mr. Tata was not to be seen, and wondered aloud where Ratan Tata might have vanished. Was he behind some bush? Had he wandered off inside the roadside dhaba for a quick cup of tea? Or was he mingling with some passer-bys, listening to their stories? None of these, in fact while his colleagues were taking a break, Ratan Tata was busy helping the driver change

tyres. Sleeves rolled up, tie swatted away over the shoulder, the hands expertly working the jack and the spanner, bouncing the spare tyre to check if the tyre pressure was ok. Droplets of sweat on the brow, and a smile on the face. In that moment, the managers accompanying Ratan Tata got a master class in leadership they haven't forgotten. And that's a moment that the driver of that car probably hasn't forgotten either. Questions to ask: When was the last time I rolled up my sleeves to do a task much below my hierarchy? Do I wait for the big opportunity to showcase my leadership? Is that big opportunity ever going to come? Am I trying to manage upwards so much that I lost the feel of the field? Ideas for action: Humility is the essence of success. Be humble and even teach your children to be so. To reach the top and remain there, always start from the bottom, else your days at the top will not last long. Practice leadership in small things instead of waiting for the big crisis or a major product launch. Seek to find opportunities to lead in everyday moments. Build your leadership skills one baby step at a time. Good day!! "It is not how much you do, but how much love you put in the doing."

## Awards



Shri K. K. Kapila, Chairman and Managing Director of the Intercontinental Consultants and Technocrats Pvt. Ltd., New Delhi-110016, has the honour of receiving a unique award, a medal and a certificate, in Moscow on 22nd November 2011 for his contribution to the road sector in the world. The award is dedicated to the 20th anniversary of Commonwealth of Independent States, post grouping of CIS countries.

The Madurai Chapter of Association of Consulting Civil Engineers (India) conferred the Visveswaraya Eminent Engineer Award on Sanna. Ratnavel, a Member of the Board of Governors of Engineering Council of India and an Eminent Engineer Consultant, in recognition of his contribution to the field of

engineering consultancy. Padma Bhushan awardee and president of Nridyodaya, Chennai, Padma Subrahmanyam, presented the award to Shri Ratnavel at a function which was held in the city of Madurai.

Prof. P. Ravindra Babu, Professor of Mechanical Engineering & Dean of Student Affairs Gudlavalluru Engineering College, Gudlavalluru, Andhra Pradesh & Dr. S. Gowri Professor & Registrar Anna University of Technology, Chennai, were awarded jointly under the national awards category Anna University National Award for the Outstanding Academic at the ISTE Annual Convention held in December 2011.



*Our Congratulations*

## News from the Member Associations

### Association of Consulting Civil Engineers (India), ACCE(I)

The Bangalore Centre of ACCE(I), in its constant endeavor to server the civil engineering fraternity, is organizing REDECON 2012 - the 5th National Seminar on current topics of interest and need during February 22-24, 2012 at the NIMHANS Convention Centre, NIMHANS Campus, Hosur Road, Bangalore, Karnataka. The seminar is intended to bring together practising engineers, scientists, researchers, and others from around the country to share their knowledge and experience on current developments in repair, rehabilitation and retrofitting. A review of the performance of structures and their material durability with a view to extending their life for maximizing economic return shall be in focus. The event has developed a tradition of combining research and development aspects with practical case studies aimed at identifying and communicating both tomorrow's technology and today's construction solutions.

### Broadcast Engineering Society (India) (BSI)

BSI was established in 1987. It is the largest society of broadcast professionals in India. The Society aims at promoting the cause of radio and TV broadcasting in India through lectures, seminars, conferences and exhibitions. BES EXPO, an International Conference & Exhibition on Terrestrial and Satellite Broadcasting organised by the society every year, is a step in this direction. The Society has ten local chapters located in Ahmedabad, Bangalore, Bhubaneswar, Chennai, Hyderabad, Kolkata, Mumbai, Jaipur, Thanjavur and Thiruvananthapuram. At the time of going to the press, the Society had more than 2,000 individual and 40 corporate members on its rolls. BSI is organizing the 8th International conference and exhibition on Terrestrial and Satellite Broadcasting (EXPO 2012) during February 11-13 at the Pragati Maidan, New Delhi. For details send an E-mail to: [bes@besindia.com](mailto:bes@besindia.com) or visit website: [www.besindia.com](http://www.besindia.com).



### Computer Society of India (CSI)

CSI (Div IV) and Hyderabad Chapter along with Guru Nanak Institutions are organizing a conference on Emerging Trends in Information and Communication Technologies during February 3-4, 2012 at Hyderabad. For details contact Dr. D.D. Sarma, [csignis@gmail.com](mailto:csignis@gmail.com). The 5th India Software Engineering Conference is being organized during February 22-25, 2012 at IIT Kanpur. For details visit: <http://www.csi-sigse.org/isec2012/>. The 7th National Conference on "Advancement of Technologies – Information Systems & Computer Networks" is being organized during March 3-4, 2012 at Mathura, U.P. by the Dept. of Computer Engineering & Applications, IET, GLA University with CSI – Div IV & Region-I. For details contact : Mr. Dilip Kumar Sharma [iscon12.cea@gla.ac.in](mailto:iscon12.cea@gla.ac.in) or visit : [www.gla.ac.in/iscon12](http://www.gla.ac.in/iscon12).

### Consultancy Development Centre (CDC)

CDC has announced a certification programme in Management Consulting to be held during January 22, 2012 to March 25, 2012 at CDC office, core IV, India Habitat Centre, Lodhi Road, New Delhi. CDC has also announced various other programmes including for the government officers. The TCDPAP Annual Conference on "Technology & Knowledge Transfer and collaboration among Consultants in the Asia Pacific Region" will be held at Colombo, Sri Lanka from 2-3 March, 2012. For details of all the programmes of CDC visit: [www.cdc.org.in](http://www.cdc.org.in) or send an E-mail to: [pooja@cdc.org.in](mailto:pooja@cdc.org.in).

### Consulting Engineers Association of India (CEAI)

Consulting Engineers Association of India (CEAI) is an apex body of Consulting Engineers having a strength of over 400 eminent members representing individual consulting engineers as well as consulting firms operating in India. CEAI is organizing a National Seminar on "Rural Infrastructure - Need & Issues" on March 17, 2012 at India Islamic Cultural Centre, Lodhi Road, New Delhi. For details send an E-mail to Lt Col Arun Sharma, Retd. Director, CEAI on : [ceai.ceai@gmail.com](mailto:ceai.ceai@gmail.com) or visit website: [www.ceaindia.org](http://www.ceaindia.org).

### Construction Industry Development Council (CIDC)

Construction Industry Development Council organized the prestigious 17th Asia Construct International Conference and Exhibition during 13-15th December 2011 at India Habitat Centre, Lodhi Road, New Delhi. The event was supported by the Planning Commission, Government of India, and Construction Industry Development Board (CIDB). Malaysia, Korea Research Institute Human Settlement (KRIGS) South Korea, The Hongkong Polytechnic University, Hongkong, Building & Construction Authority, Singapore, Research Institute of Construction & Economy (RICE), Japan and several other bodies. Country representatives and delegates from 17 Asian Nations and host of leading Indian construction companies, material manufacturers and suppliers, service providers, government bodies, developers, architects, consultants, industry practitioners, members of academia participated in the event. The Conference had parallel tracks on various themes like Infrastructure Construction, Housing & Real Estate, Steel in Construction, Non-Ferrous metals in Construction, Hydro-Power, Construction Equipment and Materials, Consultancy and Panel Discussion on the 12th Plan Chapter on Construction. **Dr Sanak Mishra, and Shri A.C. Wadhawan, Past Presidents, the Indian Institute of Metals Chaired the Steel and Non Ferrous Steering Committees of the 17th Asia Construct respectively.**

### Indian Association of Structural Engineers (IAStructE)

IAStructE, a professional body of a very leading structural engineers spanning all parts of India, organized a two - day national seminar on "Metro Rail Projects: Indian Scenario" during 18-19 November 2011 at New Delhi. Many professionals involved in metro rail projects throughout India attended the seminar and made it quite objective and a success. Drawing upon the experience of already executed metro rail projects in many cities in India, the seminar focused on enhancing capacity building in all aspects of the metro rail projects to meet future challenges. Shri P.N. Shali, Director Engineering Council of India attended the seminar.

### Indian Concrete Institute (ICI)

ICI, New Delhi Centre in association with the Fib organized a workshop on 'Service Life Design of Concrete Structures' during 14-15th November, 2011 at the India Habitat Centre, New Delhi. The workshop was conducted by Mr. Stewart Mathews , Chief Engineer, BRE, UK, Past Chairman of the Fib Commission on Service Life Design and Mr Steinar Helland form Skanska, Norway, Chairman of the ISO Technical Committee on Service Life Design of Concrete Structures. Both of them are involved in drafting the codes in the field of service Life Design from ISO and Fib. It covered a wide range of issues associated with the design of durable concrete structures and matters concerned with Service Life Design of Concrete Structures through 12 lecture sessions. Indian Codes are yet to bring in this concept. The proposed revisions by BIS will have these concepts incorporated. To that extent, this was an excellent opportunity for the Indian designers to familiarize themselves with the concepts of durability to practical design of concrete structures.

### Indian Geotechnical Society (IGS)

IGS organized the first Indo-Japan Workshop on Advances in Earthquake Geotechnical Engineering on December 14, 2011 at Kochi. A Geotechnical Conference -2011 was also organized during December 15-17, 2011 at the same venue. These programmes were very well attended both by the industry and academia. A number of international conference are slated for the year 2012 to be held at various venues across the world. For details visit website: [www.igs.org.in](http://www.igs.org.in) or send an email to [igs@mantraonline.com](mailto:igs@mantraonline.com), [igsmain@vsnl.net](mailto:igsmain@vsnl.net).

### Indian Institute of Industrial Engineering (IIIE)

A workshop on Project Report Writing, Resume Writing and Interview Techniques for IIIE engineering and management students is being organized by the IIIE Belapur Chapter on January 29, 2012 at the NHQ of IIIE in Navi Mumbai. The workshop is co-hosted by the Lokmanya Tilak College of Engineering, Navi Mumbai. For details visit: [www.IIIE-India.com](http://www.IIIE-India.com) or send an email to [iiiebelapur@gmail.com](mailto:iiiebelapur@gmail.com)

### Indian Institute of Marine Engineers(I) (IIMEI)

IIMEI organized a number of seminars, conferences during the period from October-December, 2011 on different subjects related to the marine engineering. These included a seminar on PASSAT-3 Stage Air Cooled Marine Air Compressor organized on November 11, 2011 by the IIMEI Mumbai Branch at Mumbai, a seminar on Comarsem - 2011 organised by the Cochin Branch of IIMEI during November 18-19, 2011 at Kochi and a seminar on Glass Reinforced Epoxy (GRE) PIPES organized by the Delhi Branch of the IIMEI on November 30, 2011 at Delhi.

### Indian Institution of Plant Engineers (IIPE)

IIPE, Karnatka Chapter organized a two-day workshop on Electrical Safety Management during November 10-11, 2011 at the Atria Hotel, No 1, Palace Road, Bangalore. It was very well attended by both the industry and academia.

### Indian Society of Agricultural Engineers (ISAE)

With the sustained and continuous efforts of ISAE, the following journals of Agricultural Engineering have been included in the list of NAAS rated Journals with the indicated improved ratings, Agricultural Mechanization in Asia, Africa and Latin America (AMA) published by Farm Machinery Industrial Corporation & The Shin - Norinsha Company Limited (Tokyo, Japan), International Agricultural Engineering Journal published by, Asian Association for Agricultural Engineering (Beijing, China), Journal of The Institution of Engineers (India) (Agricultural Engineering) published by The Institution of Engineers (India) Agricultural Engineering Today, ISAE (India). The revision of Journal of Agricultural Engineering (JAE) will be taken up during 2012. The 46th Annual ISAE Convention and International Symposium on "Grain Storage" will be held at Pantnagar during 27-29 February 2012. For detail, please visit : [www.isae.in](http://www.isae.in) or sent an E-mail to : [isae1960@gmail.com](mailto:isae1960@gmail.com).

### Indian Society for Technical Education (ISTE)



The 41st ISTE Annual National Convention 2011 was organized by Baba Banda Singh Bahadur Engineering College (BBSBEC) in collaboration with the Punjab Technical University (PTU), Jalandhar during December 16-18th, 2011 at Fatehgarh Sahib, Punjab. The main theme of the convention was "Role and Relevance of Regulatory Bodies in Higher Education". The convention brought together Vice Chancellors of Technical Universities, prominent personalities, eminent academicians,

professionals, R&D persons and technical educators from across the country. The convention provided a common platform for promoting and unfolding new dimensions in the field of technical education. This programme included presentations, discussions of technical papers, awarding of honorary fellowships, prizes and awards to distinguished statesmen and prominent institutions of technical education. Many thought provoking subjects were discussed. Primarily, these were all related to the reform of higher technical education in the country. The new chapters of the society including student chapters were created during the year 2011 at Chennai, Trichy, Coimbatore, Madurai, Erode, etc.



### Institute of Urban Transport (India)

Geo-Infra, an Indian Geospatial Industry Event, is organising a dedicated two-days' conference, 2012 at Epicenter, Gurgaon. For further details visit <http://www.indiageospatialforum.org>.

### The Automobile Society (India)

The society, which has joined ECI as its 30th member, is a registered society in Bangalore pioneering the cause of improving the career opportunities for the automotive engineers in India. The society consists of renowned academicians, members from the automotive industry & various faculty members of different Automobile Engineering institutions. It's a professional organization looking after the interest of the Automotive Engineers who are engaged in the Automobile field.

### The Aeronautical Society of India (ASI)

ASI, Mumbai Branch in association with the Indian Women Pilots Association organized an international conference for women on civil aviation 100 years and beyond on December 16-17, 2011 at Mumbai. It was very well attended. Dr. Nasim Zaidi, Secretary, Ministry of Civil Aviation was the Chief Guest.

### The Indian Institute of Metals (IIM)



The 49th National Metallurgists' Day (NMD) and the 65th Annual Technical Meeting (ATM) was organized by the Hyderabad Chapter of IIM in association with the student chapters at NIT Warangal, MGIT Hyderabad and

JNTU Hyderabad at Hyderabad during November 14-16, 2011. It was attended by more than 800 delegates both from the Industry and academia including from the leading civil and defence R&D establishments, BARC, ISRO, etc. IIM, Delhi Chapter organized a Seminar-cum-Clinic on Computer-Aided Design and Automation in Die Casting on 7th November 2011. Around 40 delegates participated in this technical programme. The keynote address titled "Die Casting Markets - Global and India" was delivered by Shri L Pugazhenthay, Past President IIM and Executive Director, ILZDA. A Special Address was delivered by Shri Rahul Khanna, Managing Director, M/s Mahavir Die Casting Industries, Faridabad (Haryana). A technical Programme on Energy Efficiency of Re-heating Furnaces in Rolling Mills was also organized by the IIM, Delhi Chapter in collaboration with Project Management Cell of UNDP of Ministry of Steel, Government of India on 21st November 2011. Around 50 persons participated in the technical programme. The keynote address was delivered by Shri A C R Das, Industrial Advisor, Ministry of Steel (Govt. of India) and National Project Coordinator of UNDP Project of Ministry of Steel. Shri Das spoke about the future of steel industry in India. He expressed his concern on the decline of



steel consumption in India. He laid stress on the importance of energy efficiency in rolling mills as 70% of the steel is being produced through re-rolling route. He stated that the energy consumption is high as per international standards and measures needed to be taken to reduce energy consumption. He also spoke about the need of quality steel for manufacturing. He also informed that the quality policy on steel is on the anvil. Recently Trichy and Bangalore chapters

joined hands and organized a Foundry Meet at Coimbatore - an excellent example for inter chapter collaboration. Rourkela chapter organizes Metals Quiz separately for spouses of members also. Kolkata chapter holds annual meets for young students, young scientists etc., to popularize metals and metallurgy.

#### The Institute of Marine Engineers (India) (IMEI)

IMEI organized a Seminar on PASSAT-3 Stage Air Cooled Marine Air Compressor on Nov 11, 2011 at Mumbai. IMEI, Kochi Branch organised a seminar on, Comarsem - 2011 during November 18-19, 2011 at Kochi. The Delhi Branch of the IMEI organized a seminar on Glass Reinforced Epoxy (GRE) PIPES on November 30, 2011 at New Delhi. All these seminars were very attended both by the industry and academia.

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## Letters to the Editor

Dear Sir

I am a member of The Institution of Engineer (India) having engineering degree in metallurgy. I have an experience of 25 yrs of automobile industry as a works manager. I had applied for government approved valuer, but concerning department rejected my application saying that I am not entitled for that only mechanical, electrical, civil and architect engineers are entitled. Sir I request you to support me in the above matter. I have a certificate of chartered engineer also.

Thanking you

Yours  
S.P. Singh

on the 28th of this month. It is a very critical issue that engineering education should be altered to suit the needs of the day. I have been teaching the in service engineers on Project Management and Contract Management since a few years and find that engineers lack a multidisciplinary understanding. The present curriculum lacks in making the engineering graduates ready to face larger issues at the project planning, financing and monitoring aspects. The present education system is producing a kind of myopic viewed engineers who feel breathless at the higher echelons of management and administration as they lack the larger and multidisciplinary.

Yours  
G.C. Tallur  
Former Secretary PWD  
Government of Karnataka

Dear Shri Shali,

Thanks for the information on the 7th National Convention on Specific Education for Better Employment of Engineers at Baroda

## View Point

### Engineering Education System in India needs urgent reform- Dr Gp Capt Atul Jain

There cannot be two opinions that engineering education, whether at skill level, diploma level or graduation level plays vital role in development of any country. This in no way means that M.Tech/ PhD and research programs in engineering field have less significance. This technical education has to constantly evolve in term of quality, currency and relevance so as to match the needs of industry, which is primary consumer of technology education products that is skilled workers, supervisors and engineers. There are other various issues which need to be addressed at all times. Following recommendations will take care of almost all issues related to engineering education in India, leaving little for specific action. All training education and development, (I.T.I/Diploma/ B.Tech/M.Tech) should be directly linked with industry. All states should have at least one central institute on the line of IIT for B.Tech and M.Tech programme fully funded and managed by

government as centre of excellence. Each state should have at least one engineering institute and one diploma institute for each district fully funded and managed by state government. All other engineering institutes ITI/Diploma/B.Tech/M.Tech should be owned and managed by private industries. All such managed private engineering institute should be monitored and governed by a autonomous body (AICTE/UGC) to ensure NFP status & quality edu. It should be mandatory for participating/ owner industry to absorb at least 50% students coming out of there institutes. In order to provide impetus and motivation all industry must compulsory invest 5% of their profit towards such technical educational institute. This investment under CSR should be tax exempted. All IITs and state institutes should focus on producing engineering professionals of high caliber so as to support high end requirement of industries and R&D. Private industries should be encouraged to partly fund R&D programs of IIT/ State institute directly linked with their needs (via email-meriazadi@gmail.com).

### Think it Over

We have two ears and only one tongue in order that we may hear more and speak less.

— Diogenes Laertius

### Word Power

**Skelton:** A bunch of bones with the person scraped off.

**Toothache:** The pain that drives you to extraction.

**Tomorrow:** One of the greatest labour saving devices of today.

**Yawn:** An honest opinion openly expressed.

### Food for Thought

The most important piece of news yesterday, this week, this month, and this year was a new set of statistics released yesterday by the Global Carbon Project. It showed that carbon emissions from our planet had increased 5.9 percent between 2009 and 2010.

— Rajat Narain  
rajat.narain@gmail.com

## Studies done in college are not at par with industry requirement : Vikram Bhatt

Life is a roller coaster ride moving from one stage to another from the inception with new dreams and aspiration at each stage. Student life starts with sparkle and vigor but soon he finds himself in a system where "Competition" is the only defining word. Parents push their child to brink where mind swings from one direction to another. The only thing that remains with him is a sheet containing numerical figures of his achievement in last one decade of scholastic period. No one thinks how his mind has changed or evolved during this period. I also was part of this very system and passed through all these stages set by great academicians. The numerical digits that I achieved put me to the doorstep of another stage: College. Being a science student, I had option of choosing from Engineering and Medical. As my numerical digits did not support my movement to latter, I thought of choosing engineering (technology space). Confusion came in forefront of my eyes regarding branch/field of specialization. Which Field should be chosen among so many available ones? I was not sure about what is stored in each branch except mechanical dealing with machines and computer with the coding and hardware to extent. So to sort out this confusion, I began to do introspection with myself and also carried out discussion with my seniors and subject matter experts. This discussion led me into choosing electronics and communication which most of my peers having better numerical digits were doing. Hoping to work with some well-known communication company in future, I began another journey which will eventually take me to end destination-corporate world.

This journey was not much different in terms of word "competition" where each was vying for better digits instead of their intellectuality. The subjects changed but the mindset did not. Knowledge used to take backseat when compared to result and number. This gave me answer to question. Why did people like Steve Jobs and Bill Gates drop out of college and still went to become greatest techie. They changed the way we think and do our work. Academics puts in a channel which has entry and the mind set in college was to get numbers and move to white collared Jobs and earn bucks. No one thought of dreaming out of box as the gentlemen mentioned above did. Ranges of reasons were there for doing that which includes family pressure, educational system, uncertainty about future etc. As the days passed on, it was time for the period which student like me waited for 3 yrs-Placement. Thinking of getting placed in companies which were relevant to my field was every one's dream. As placement commenced, the

companies vying for the top slots were all IT services/consultancy related to IT/computer fields. *The worst, these companies were allowing individuals from all the fields irrespective of whether he/she came from mechanical or chemical or water management to participate in the drive. The companies had answers/reasons for taking all field individuals on board. Their training would change any guy from any field to a Software Engineer and they were quite good at doing that. This trend was across all segments of the colleges.*

*The truth began to sink-in that there is no company which will take you because you belong to Electronics and Communication or Telecommunications or Water management. As I was heading placement committee of my college, I got an opportunity to interact with people of my field. I tried to invite companies of my field to my college to carry out placement. Companies replied back stating that recruitment usually happens for more specialized individuals who have done master or post-graduation in the field of communication/electronics. A little more was required than the usual graduation that I had at that point of time if I wanted to continue in my field. If you want a job, shift it to Computer related field my mind told me. That is what I did. I got selected in one of the top tier IT services company of the world, leaving behind what I learnt all four years and getting into raw field. I don't know what my friends from chemical and water management were thinking while getting into IT related Services Company. Lot of my friends who were not quite lucky as I term them (I had job in my hand) at that time went abroad for further studies to do specialization. So these people were able to utilize what they had learnt in further enhancing their skill. Eventually they got what they wanted-a job in company of their field. Don't know whether I was lucky or they were luckier for not bagging a job at that time? Somewhere down the corporate road, I began to ponder whether selecting the field I did was a wrong decision in first place. *Should I have stuck with IT/computer which would have helped me immensely in my current work? Also do we have curriculum which would cater to current needs of the industry or we are still slugging with books written based on research done years ago. To a certain extent, I think studies done in engineering colleges are not at par with what the industry requires. A void is there which needs to be fulfilled quickly so that people like me don't have to shift to a new area in order to get a job. A discussion between academicians and industry body should happen at certain period of time to fill this void. When and How? People concerned have to think.*(via email)*



### Obituary

Shri S S Dasgupta, Hon. Member and former Hon. Secretary, Hon. Treasurer, Jt Hon Secy & Hon. Treasurer of the Indian Institute of Metals (IIM) and also Chairman, IIM-Library Committee left us for heavenly abode on Saturday, October 15th, 2011. He contributed very significantly to the engineering profession, particularly engineering consultancy. ECI mourns his death and conveys its condolence to the bereaved family and pray to the God to allow the noble departed soul to rest in peace.

### Think it Over Engineers

As per the Planning Commission, India plans to spend up to \$1 trillion between 2012 and 2017 on fixing infrastructure, which economists estimate shaves two percentage points from annual economic growth. Successful project delivery and spend efficiency, by the Government and Private sector alike, are imperative to realise the desired growth and consequent benefits. While modest strides have been made in enhancing project delivery, projects are still burdened by serious time and cost overruns, misconduct, wastage, all within an inflationary environment. As per the report by KPMG and PMI, out of 1035 infrastructure sector projects completed during April 1992-March 2009, 41 percent faced cost over-runs and 82 percent witnessed time over-runs (Marcus Evans-London, via e-mail).

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