



# The Indian Engineer

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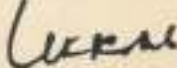
## From the Chairman's Desk

### National Conventions on Seamless Engineering Education:

Engineering Council of India has been organizing a series of National Conventions on Seamless Engineering Education for better employability of engineers, since August, 2006. The 5<sup>th</sup> National Convention, sponsored by the Planning Commission, was held on September 30, 2009 at New Delhi. It was inaugurated by Prof. P. B. Sharma, Vice Chancellor, Delhi Technological University and the eminent Chairs/Co-Chairs/ Speakers included Dr. Baldev Raj, Distinguished Scientist, & Director, Indira Gandhi Centre for Atomic Research, Kalpakkam, and Past President, Indian Institute of Metals and Indian Society for Non Destructive Testing (ISNDT) and Prof Y. P. Kathuria, Visiting Professor in Aichi Institute of Technology Toyota, Japan, Dr. L. Pugazhenthay, Executive Director, India Lead Zinc Development Association (ILZDA) and Immediate Past President, Indian Institute of Metals, Mr. S. K. Vij, President, Indian Buildings Congress, Dr. P. K. Sarkar, Hony. Secretary, Institute of Urban Transport (India), Mr. Dalip Singh, President, Society of Energy Engineers and Managers (SEEM), Dr. G. P. Karmakar, Professor in Petroleum Engineering, Rajiv Gandhi Institute of Petroleum Technology, Raebareilly, Mr. J. S. Saluja, MD, SCPL, and Senior Vice President, Indian Institution of Plant Engineers, and Mr. P. N. Shali, Director, ECI who made a presentation on the discussion paper based on the main points on this theme, from earlier four National Conventions, 6<sup>th</sup> National Conference and National Workshop. I am happy to note that this series of programmes on this theme has brought out many useful issues and suggestions. The main recommendations are being compiled and will be forwarded to the member associations, other concerned bodies and the government.



One of the important points that emerged was that while the reform in engineering education was called for, it may take some time to put it in place. Meanwhile, First Engineering Council of India (ECI) should develop and initiate a training programme on multi-skills, such as in project management, economics, finance, needed by the working engineers both in the public and private sector. Second, the member associations of ECI should develop their CPD programmes in such a manner as would reflect the current frontiers of technologies of their respective engineering domains. Third, the member associations should develop their training programmes in such a manner that may include subjects from the other branches of engineering than the branch that they represent. Such training programmes can be coordinated by the ECI for the benefit of its member associations. I feel that these are important suggestions on which action should be initiated by ECI and member associations as soon as possible.

  
(Uddesh Kohli)



### Facts relating to EMF Membership

1. In the context of registration of Professional Engineers, the Ministry of HRD has communicated that such registration will be legally valid only if it is done by a statutory body, set up under an Act of Parliament.
2. In the EMF meeting held in June 2009, IE(I), supported by ECI, was given the Full membership of EMF. This support was on clear understanding that this membership will be passed on to the statutory body when it is set up. This is in line with Ministry's view and also to ensure that registration of PEs in India has legal force behind it.
3. Full Membership of EMF does not automatically give mobility to engineers registered as International Professional Engineers (Int PE) in India, to operate in other countries. For that, bilateral agreements will have to be signed between the respective countries organizations for reciprocal recognition of educational qualifications and PE status. Such agreements do not exist at present for most countries, and to be legally valid, these have to be signed between governments/statutory bodies.
4. Therefore, till a statutory body is set up to which the EMF membership is passed on, it takes up registration of Int PEs in accordance with EMF procedures and signs bilateral agreements for mutual recognition, registration as Int PEs by any other body does not give any right to take up practice in other countries.

### 7th National Conference

**Theme: "Engineering Profession-Vision 2020" on November 30, 2009, at Main Auditorium, SCOPE Complex, Lodhi Road, New Delhi**

ECI is organising 7<sup>th</sup> National Conference to take a critical look at the requirements and expectations from the engineering profession for meeting the challenges India would face in 2020 and deliberate as to what needs to be done to develop the profession to meet these challenges. This would require profiling the skill sets of such engineers, who are prepared to shoulder the responsibilities arising out of the future requirements. The conference would discuss the strategies for developing world-class engineers and technologists who could help in realizing the Vision 2020 for the country. A summary action plan is expected to emerge for implementation by the stakeholders, which is the major objective of this event.

For brochure and registration form visit the website: [www.ecindia.org](http://www.ecindia.org).

### From Editor's Desk

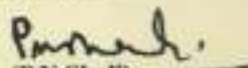


#### Trade in Engineering Services - Steps that India needs to take

In the WTO environment, engineering profession - both in the basic engineering education and professional skills - needs to develop in conformity with the international standards and requirements. More so for India to take part in trade in engineering services, which is round the corner, it will have to realize equivalence of professional competence of its engineers as per these standards. The present engineering education and the skills imparted by it are not considered adequate to meet the emerging challenges of international mobility and professional requirements as a result of the WTO environment, which is there to stay. The profession of engineering in India has no legal status as such because of there being no Engineers Act, unlike other professions such as Lawyers, Doctors, Architects, Accountants, etc. Engineers from abroad can simply walk into India and take up jobs here; while as Indian engineers cannot do so. Then we have to respond to the international agreements like Washington Accord and Engineers Mobility Forum, etc. India is not yet a Full member of Washington Accord - a world grouping mutually recognizing engineering degrees of its member countries; presently it is only a provisional member of the Accord. This is why our engineering qualifications are not being recognized by other countries; except degrees given by the IITs, which are, by and large, recognized by many countries being a brand in itself. There are a large number of engineering colleges in the country whose engineering degrees are not recognized abroad. In order that our engineering profession emerges in conformity with the international standards and requirements, we need to take some steps forth with.

**First step** that India should take is to bring up these colleges to the level of international standards. In case any college from out of this crop of colleges is not ready to upgrade its standards, it should better be closed down. **The second step** India should take is to speedily respond to the requirements of the Washington Accord, as are known now to the Ministry of HRD, Government of India, for becoming its Full member. **The third and the most important step that India should take is to bring on its statute Engineers Act and set up a Statutory Council of Engineers by virtue of this Act.** **The fourth step** that we need to take is to ensure that the continuing professional development (CPD) of engineers is as per the international standards. It is not that once an engineering degree is taken, it will work for all the time. We need continuing professional development of engineers to maintain and enhance their skill-levels. Even after setting up of the Statutory Council of Engineers, Indian professional institutions of engineers will also have a major role to play in ensuring this requirement. **The fifth step** that needs to be taken is to lay down the code of ethics and morality for engineers as per the international practice and ensure that it is followed in both line and spirit.

It is pertinent to mention here that the registration of engineers would have to be mandatory if we have to take part in trade in engineering services, which we should do. It may be mentioned here that in countries such as, Singapore, Canada, Australia, Tanzania, Bahrain, Korea, Malaysia, South Africa, USA (Texas), New Zealand, Japan, etc, PEs registration / license under the respective law of these countries is required for Professional Engineers. PEs registration / license is also required for those engineers who are providing professional engineers services in most of these countries.

  
(P.N.Shali)



## Eminent Indian Engineer : Dr. Elattuvalapil Sreedharan



Dr. E. Sreedharan was born on July 11, 1932 at Karukaputhoor, Palakkad district, Kerala. He is known as a technocrat for completing both the Konkan Railway and Delhi Metro projects within budget and ahead of schedule. He has served as the Managing Director of Delhi Metro Rail Corporation since its inception. He studied at the Victoria College in Palghat and then graduated as an engineer from the Government Engineering College, Kakinada (now JNTU). After a short tenure as a lecturer in Civil engineering at the Government Polytechnic, Kozhikode and a year at the Bombay Port Trust as an apprentice, he joined the Indian Railways in its Service of Engineers. He joined the Southern Railway in December 1954 as a probationary assistant engineer. In 1963, a huge tidal wave washed away parts of Pamban Bridge that connected Rameshwaram to mainland Tamil Nadu. The Railways set a target of six months for the bridge to be repaired while Sreedharan's boss, under whose jurisdiction the bridge came, reduced it to three months. Sreedharan was put in-charge of the execution and he restored the bridge in just 46 days. In 1970, as the deputy chief engineer, he was put in charge for implementation, planning and design of Calcutta Metro, the first ever metro in India. Cochin Shipyard launched *Rani Padmini*, the first ship it built, when he was its Chairman and Managing Director. In 1990, he retired from the Indian Railways as Member Engineering. In the same year he was recalled by the Government and appointed on contract to the post of Chairman and Managing Director of Konkan Railway. It was the first major project in India to be undertaken on Build-Operate-Transfer basis; the organisation structure was different from that of a typical Indian Railway set-up; the project had 93 tunnels along a length of 82 kms and involved tunneling through soft soil. The total project covered 760 kms and had over 150 bridges. The project was completed without significant cost and time overruns. He was appointed as the Managing Director of Delhi Metro Rail Corporation and by mid-2005, all the scheduled sections were completed by their target date or before and within their respective budgets. Dr. E. Sreedharan was given the sobriquet of Metro Man by the media. His tenure has been extended by another three years to oversee the completion of

the second phase of Delhi Metro. He was called in Pakistan for development of the Lahore Metro plan. In 2005, he was also called by the UAE government to Head the Dubai Metro Project, he however rejected their offer, because of his preoccupation with Delhi Metro Rail Corporation.

### Foundation for the Restoration of National Values

Dr. E. Sreedharan is also a member of the Advisory Board the Foundation for the Restoration of National Values. Business tycoon Ratan Tata and a former Chief Justice of India are also serving the foundation in the similar capacity. Reportedly, the foundation aims to "bring in good values in all areas of national life, to cleanse corruption in high places."

### Moral Responsibility

In July 2009, Dr E. Sreedharan resigned as the Managing Director, DMR taking moral responsibility for the collapse of an under-construction bridge (at Zamrudpur near Amar Colony) that killed five people. However, Delhi's Chief Minister Sheila Dikshit rejected Sreedharan's resignation, and he withdrew it a day later. Dr. E. Sreedharan stated after his withdrawal that he will ultimately be quitting from his position but only after the completion of the Phase II of the Delhi Metro Project. He stated that he withdrew his resignation as he was convinced by the Government that Phase II won't be completed in time without him.

### Awards

Dr. E. Sreedharan has won many awards for his distinguished services which include, Railway Minister's Award (1963), Padma Shri by the Government of India(2001), Man of the Year by The Times of India (2002), Shri Om Prakash Bhasin Award for professional excellence in engineering (2002), CII (Confederation of Indian Industry) Juror's Award for leadership in infrastructure development (2002-03), One of Asia's Heroes by TIME (2003), All India Management Association award for Public Service Excellence (2003), Degree of Doctor of Science (Honoris causa) from IIT Delhi, Bharat Shiromani award from the Shiromani Institute, Chandigarh (2005), Chevalier de la Légion d'Honneur (Knight of the Legion of Honour) by the government of France (2005), CNN-IBN Indian Of the Year 2007: Public Service (2008) and Padma Vibhushan by the Government of India (2008)

## News Corner

### Service Tax to Consultants / Contractors

According to the NHAI's administrative circular bearing No. 11041/ 217/ 2007-Admn. Dated October 6, 2009 issued by G.M. (Coordination) regarding "Guidelines for reimbursement of Service Tax to Consultants/Contractors in NHAI" in future Service Tax will be paid by NHAI along with the Invoice. This is a heartening development.

### Engineers' Day

The Institution of Engineers (India), Maharashtra State Centre celebrated the 42nd Engineers' Day on September 15, 2009. Rear Admiral K. O. Thakare, NM, President, IEI was the Chief

Guest for the occasion. Shri. A. K. Jain, Sr. Consultant, Ultra Tech Cement Limited was the Keynote Speaker on the theme "Engineering Solutions to Combat Climate Change". Shri. J. T. Nashikkar, Joint Managing Director, MSRDC who was instrumental in the Bandra-Worli Sea Link Project which was recently inaugurated was felicitated during the occasion.

Shri S. H. Jain, Chairman, IEI, MSC delivered the welcome address and the vote of thanks was delivered by Shri. Prashant N. Patil, Hony. Secretary, IEI, MSC, New Conference Room and Computer Centre was inaugurated by Rear Admiral K. O. Thakare, NM, President, IEI. He appreciated the hard work put in by all the members for starting this Conference Room and



Computer Centre. The function was followed by Fellowship Dinner. About 220 Members attended the function.

### **Engineers today have to do multi-tasking - Basab Chaudhuri, Honorary Secretary, Indian Institute of Chemical Engineers**

As a teacher of Chemical Engineering of Calcutta University, I would like to present the following:

1. Engineers today have to do multi-tasking and more and more project work-based education should be part of the curricula.
2. Industries have to take interest in the activities of the Academic Institutes. This involvement will help institutes design courses that are needed at present and will be required in future.
3. Selection of teachers for new Engineering Colleges has to be done carefully. The present picture is indeed dismal.
4. Institute - Institute interaction needs to be promoted. For example, a teacher from Osmania University will take courses in Calcutta University and vice versa. This is how strength of departments can be mutually shared.
5. ECI should take steps (discussion with institutes and industries) so that more and more talented engineers become interested in research. Industries have to invite doctorates to join them. By doctorate, I mean good doctorates that have shown initiatives and have developed some technology.

### **National Conference on "Public Private Partnership in Housing"**

National Real Estate Development Council (NAREDCO) organized its national conference on "Public Private Partnership in Housing" as part of its 9th National Convention on October 9, 2009 in Stein Auditorium at India Habitat Centre, Lodhi Road, New Delhi. The conference was supported by the Planning Commission and the Ministry of Urban Development and Poverty Alleviation, Government of India. Details about the conference are available with the National Real Estate Development Council, First Floor, 8 Community Centre, East of Kailash, New Delhi - 110065, Tel: 011-26225795, 41608570, Fax : 011-26225796, Email : [naredco@naredco.org](mailto:naredco@naredco.org).

### **Major Gen. R. K. Sanan**

After his superannuation on September 30, 2009, Major Gen. R. K. Sanan is joining The Institution of Engineers (India), Kolkata. Gen Sanan has rendered very valuable advice and support to the IIPE, Delhi and a seminar on the "Design for Maintainability" was held by the IIPE, Delhi under his overall control. ECI congratulates Major General R. K. Sanan for his appointment as the Director General and Secretary, IE(I). ECI will be looking forward to working with him for the benefit of the engineering profession in India.

### **Mindlogicx Creating a New Order in Higher Education**

#### **Jaykishore Bayadi**

Bangalore based technology development company, Mindlogicx, is aiding the Indian educational sector in its march to make India knowledge super power by 2020. Technology

could be effective in addressing such pain points in conducting examinations for any university by ensuring an efficient and foolproof conduct of their examinations. Malavika, a first semester MBA student at Anna University is one of the 75,000 happy and surprised students of Anna University, Coimbatore today. She never expected that the results would be announced in just 15 days from the day she had finished her exams. Malavika even got her mark sheets printed and delivered with her photograph and with an authentication code embedded that makes her certificate worthy among millions of such certificates. "Thanks to the university for announcing the results so soon. I can now plan my next semester with peace without worrying about exams results any more. Even for my seniors in the final semester this would be a boon, as it will enhance their prospects in the job market. Earlier, for many, the delay in announcing results meant losing a chance to apply for higher studies. Now the situation has changed," says elated Malavika. Indeed, there is a silent revolution under way. Today the novel software suite, 'intelliEXAMS', developed by the Bangalore headquartered Mindlogicx, a player in the knowledge management and delivery domain, handles the complete life cycle of Anna University's high-stake semester examinations. The system totally automates all the examination processes like electronic delivery of question papers in a secured network just few minutes before commencement of the examinations, enable digital evaluation of handwritten answer scripts, provides facility for result processing and publication, prints mark sheets and degree certificates with unique Global Access Code to eliminate faking of the certificates besides allowing college authorities to generate and print hall tickets online along with the photograph of students embedded, thus completely eliminating impersonation problems. In addition to this the system efficiently handles program management, fee and attendance uploading, distributed authoring of question bank etc. Dr. R.Radhakrishnan, Vice Chancellor of the Anna University believes, "This would herald a new digital trend that showcases the power of IT in the education space, virtually in a transparent, efficient, and foolproof manner." Suresh Elangovan, CEO of Mindlogicx has a strong reason to feel proud. He believes that the solution can rejuvenate the higher education system built over the past about two centuries. When Elangovan founded Mindlogicx in 2002, he intended to build a business, which should revolutionize the knowledge space. A successful IT consultant - who happens to be a die-hard admirer of Dr. APJ Abdul Kalam and Infosys founder NR Narayana Murthy - with a vision of delivering technology to a common man, is now all set to build a great company in knowledge domain. "If you see the evolution of any successful company, you see a great vision behind it. It might be the solving of an existing problem or addressing an untapped opportunity. In our case both are true," says a proud Elangovan.

### **Empanelment of Structural Engineers for Seismic Assessment & Retrofitting**

There is a demand of the Delhi Disaster Management Authority and other Development Authorities in Delhi/NCR for empanelment of competent Structural Engineers who have competency in Seismic Assessment of Masonry and/or Reinforced Concrete multi-storied buildings as well as Retrofitting of buildings deficient in earthquake safety

*Contd. on Page 7*



## News from the Member Associations

### Association of Consulting Civil Engineers (India) [ACCE(I)]

Association of Consulting Civil Engineers (India) has elected the new Office Bearers for the year 2009-2011 w.e.f. July 25, 2009. Shri Avinash D. Shirode has taken over as the President and Dr. M. U. Aswath as the Secretary General.

### Construction Industry Development Council (CIDC)

CIDC is an apex body established jointly by Planning Commission, Government of India and the Indian Construction Industry in 1996 to initiate activities for the benefit of the Indian Construction Industry. Since its inception CIDC has undertaken several activities for the benefit of the industry. A notable few include Standardization & Harmonization of Domestic Bidding Documents, Establishment of Construction Equipment Bank, Grading of Construction Entities, Computation of Construction Cost Indices & other economic parameters related to the construction industry, Financing of construction industry, Training of construction workers, Training of managers/engineers/etc in construction industry, Independent Quality Assurance Programmes, Dispute Resolution of Construction Contracts, Devise Mechanism for Workers Welfare, and many more. CIDC has joined hands with Municipal Council of Faridabad (MCF) for quality control of MCF construction works. While MCF undertakes several construction projects for the growth & development of Faridabad, it has joined hands with CIDC for quality control work. Under this association CIDC would provide Independent Quality Assurance Services (IQAC) to MCF for its various projects. To take the matter forward CIDC has established a laboratory at Tikona Park, Faridabad which will provide testing facility for all types of construction materials such as concrete, bricks, sand, stone aggregate, cement, steel etc. The space for establishing the laboratory has been provided by MCF and the testing equipment & manpower is of CIDC. The laboratory has started functioning from 4th September, 2009. CIDC has been providing IQAC services to several states as well as private & public sector organizations since 2007. It is hoped that this joint initiative will go a long way in improving the quality of construction works being undertaken by MCF. CIDC organized a National Conclave & Expo on Construction: Future Delectations for Capacity Development in Construction Industry on July 13, 2009 at New Delhi.



Shri K.K.Kapila, President, CEAI, Member BOG, ECI and Managing Director, ICT Pvt. Ltd. speaking at the FIDIC training Programme

Delhi to discuss the Plan for future seminars for the remaining period of the year 2009-10. During the course of deliberations, it was informed that the Project Management Institute, USA through its North India Chapter was negotiating with the CEAI for jointly organizing programmes on project management and construction management.

### Indian Association of Structural Engineers (IAStructE)

IAStructE organized a public lecture on How Safe is Your Building on August 22, 2009 at Noida, UP. The lecture was delivered by Padma Shri Dr. Anand Swaroop Arya, Eminent Earthquake Engineering Expert, Past Pro-vice Chancellor of Roorkee University and till recently, National Seismic Advisor to the Government of India. The objective of the lecture was to sensitize the public regarding safe construction of their buildings.

### Indian Geotechnical Society (IGS)

Executive Committee Meeting (180th) was held on September 19, 2009 at Pune, which was hosted by IGS-Pune Chapter. A major International Conference viz. 17th International Conference on Soil Mechanics and Geotechnical Engineering was held at Alexandria, Egypt during October 05-09, 2009. The IGS participated in the conference actively with large contingent of delegates including President, IGS. On July 25, 2009, Kochi Chapter of the IGS was inaugurated. Shri Mahavir Bidasaria, President, IGS presided over the function and inaugurated the Chapter.

### Indian Institution of Industrial Engineering (IIIE)

IIIE conducted the graduateship examination categorized as preliminary, section-A and Section-B, which is recognized equivalent to a Degree in Industrial Engineering by the Government of India during August 2-10, 2009 at 24 centers including Delhi. More than 1500 students took the examination.

### Indian Society for Trenchless Technology (IndSTT)

The Indian Society for Trenchless Technology is organizing No Dig India Show 2009 on November 17-19, 2009 At NSIC Exhibition Ground, Okhla Industrial Estate Phase-3, New Delhi (India). The details of this programme are available at Email : [indstt@indstt.org](mailto:indstt@indstt.org), Website : [www.indstt.com](http://www.indstt.com), [www.indstt.org](http://www.indstt.org), [www.indianodig.com](http://www.indianodig.com), [www.indstt.in](http://www.indstt.in).

### International Council of Consultants (ICC)

ICC held the 48<sup>th</sup> meeting of its Governing Council on September 30, 2009 at New Delhi. In the meeting progress made on the various activities including executive development programmes was reviewed. The annual General

### Consulting Engineers Association of India (CEAI)

CEAI is organising next FIDIC training seminar at New Delhi and Mumbai on the following dates on November 16-17, 2009 at Magnolia, India Habitat Centre, Lodi Road, New Delhi and on November 19-20, 2009 at VITS Hotel, Andheri, Kurla Road, International Airport Zone, Andheri East, Mumbai. The details of the programme are available at [www.ceaindia.org](http://www.ceaindia.org). The 3rd meeting of the Action Plan Committee of the CEAI headed by Brig. C. D. Puri was held on August 25, 2009 at New



meeting of the Council was also held on the same day at New Delhi.

### The Indian Institute of Metals (IIM)

IIM has brought out its promotional brochure for promoting inter alia the profession of metallurgy in India. The IIM, Hyderabad Chapter organized NFM-GMD 2009- National Seminar on Non-Ferrous Metals and Global Melt Down-India's Strategies during June 23- 24, 2009 at Hyderabad, AP. The seminar was well attended both by the Industry and academia. A National Seminar on Production and Processing Technologies of Alloy and Specialty Steels was organised by the IIM, Delhi Chapter during September 10-11, 2009 at New Delhi. IIM's, Bangalore Chapter organized two day seminar concurrent to the Metex, 2009 on September 16-17<sup>th</sup>, 2009 at Bangalore. IIM, Kalpakkam Chapter & Indira Gandhi Centre for Atomic Research, Kalpakkam and CII-LM Thapar-Centre for competitiveness for SMEs are jointly organizing 23<sup>rd</sup> International Conference on Surface Modification Technologies during November 2-5, 2009 at Chennai. Metals, Minerals and Manufacturing Expo - 2009 will be held as apart of the 47th National Metallurgist Day(NMD) - 63rd ATM and International Symposium 2009 during 14-17th November,

2009 at Science City Complex, Kolkata. Baroda Chapter of IIM is organizing International Conference MICMEP 2009 & Satellite Conference Environmentally Assisted Cracking (EAC) in December 2009 at Vadodara, Gujarat.

### The Institution of Electronics and Telecommunication Engineers

A two-day Zonal Seminar was organized on the subject "ICT for the Benefit of Common Man" during August 8-9, 2009 at Bhubaneswar, Orissa. A two-day National Conference was organized on the subject Recent Trends in Information Technology during September 4-5, 2009 at Mandya, Karnataka. A two-day National Conference / Zonal Seminar was organized on the subject Emerging Trends in Electronics & Information Technologies (NCETEIT - 2009) during September 19-20, 2009 at Jammu, J&K. IETE's 52<sup>nd</sup> Annual Technical Convention & Exhibition on "Technology & Terror-Role of ICT in War Against Terror" was organized during September 26-27, 2009 at Mumbai. The current issue of the IETE Journal of Research (May- June, 2009) has been published and circulated. It contains six articles which present the ongoing research and development in the broad areas of bio medical engineering, signal processing, communication, electro-magnetics and instrumentation.

## A View Point

### Necessity for Seamless Engineering and Employability of Engineers after Graduation - Nippani Rama Prasada Rao

After graduating from Air Force Technical College in 1953, various facets of life have lead me to the field of Engineering including Private Industries, Public Sector and Central Government Service. Drawing on my personal experiences with Graduate Engineers as colleagues, and later on in my career, interviewing a good number of graduate Engineers, I wish to pen down the following observations. Knowledge of the basics, or at very least where to find them, is an essential requirement which can not be guaranteed by young Engineering graduates of today. I was asked to interview a student who came in carrying a beautifully bound, colourful Electronics project and claimed to be the top of his year. Unfortunately, the question "What are the SI of charge?" proved to be a challenge for the young man. The difference is that years ago, we tried to continuously read and increase our basic knowledge, but today's Engineers seem to be content to read enough to pass the examination somehow, get a decent job, with less work, less responsibility and with high ambitions, get as much monetary benefit as possible (this may not be true in all cases, but certainly in the majority). I will always remember what my late father-in-law, an MD in General Medicine, used to say, "In course of time a specialist will be responsible only for right eye and not the left eye, the left leg and not the right leg and maybe even the left nose and not the right nose". This theory can be applied to Engineers. Earlier, a Civil Engineer was responsible for the duties of modern day Civil, Mechanical and Structural Engineers in all respects. Today, three people are required to fill the same role. So who is ultimately responsible for the completion, quality and reliability, time schedules and economics? This is where an IAS/IPS officer is taking over and the actual Engineering

faculty simply obeys or take the least course of responsibility, making someone a scape goat without applying their mind as to who exactly is responsible when something goes wrong. This leads us to the thought of *seamless* engineering where the Engineer is qualified to lead a team of Engineers, pool the resources and take ultimate responsibility. My visits to several Engineering Colleges gave me the impression that they are not a true Engineering Colleges, but institutions to train the students purely in theory alone, with no knowledge/experience of the machines that implement this theory. My personal feeling is that we have failed to deliver capable Engineers by denying them hands-on experience of their future roles. I recollect a project given to a current 1<sup>st</sup> year batch in an reputed UK university where pairs of students were asked to study the design of bridges, then design and construct a small bridge of their own which complied with certain requirements (span, minimum load etc). After the completion, they were asked to carry out a destructive test which highlighted the flaws, and then detail how they could make the bridge meet the specifications. I am sure that students will be wiser in every field of engineering if such practical tasks are given early in the course, irrespective of the ultimate specialty. Overall, our Engineering graduates are lacking the practical experience, the basic knowledge and the willingness to step out of their specialty into the real world of engineering. I personally feel that a houseman ship (as is for House Surgeons) at the end of their course is advisable to make our engineers learn about the various problems they may encounter in their jobs. The Engineers can be paid a stipend during this period, thus gaining valuable experience without losing too much time/money. The alternative could be a Graduate Apprentice scheme for a period of at least 18 months on their first appointment where they could be rotated every 3 months to learn practically and apply their engineering skills.



## Awards



Dr L. Pugazhenthly receiving the award.

Dr L. Pugazhenthly, Executive Director, ILZDA and immediate past President, Indian Institute of Metals was confirmed a prestigious award at the international conference held at Macau, China recently by the European and Asian Battery Conferences and the International Lead Zinc Research Organisation for exceptional Long-Standing Service to the lead industry, particularly in India. The award recognizes his personal achievement. **Engineering Council of India congratulates Dr L. Pugazhenthly for receiving this prestigious international award.**

### ACCE (I) Awards- 2009

ACCE Simplex Award for Innovative Design of Structures other than industrial structure was awarded to Junghare

*Contd. from Page 4*

requirements as specified in the IS:4326-1993, IS:1893-2002 and IS: 13920-1993. IAStructE would like to submit a list of competent Structural Engineers to the concerned authorities. They may, in turn, bring this to the notice of citizens of NCT/NCR of Delhi to enable them approach the empanelled members for assistance in seismic assessment and/or retrofitting of buildings.

**The National Institute of Advanced Studies, Bangalore** is organizing BUMA-VII, the Seventh International Conference on The Beginnings of the use of Metals and Alloys during September 13-17, 2009 at Bangalore. The conference is being supported by a number of national and international institutions including the Indian National Academy of Engineering, New Delhi – a Member Association of Engineering Council of India. The conference is being facilitated by the IIM, Bangalore Chapter.

**International Federation of Consulting Engineers Association for Consultancy and Engineering** is organizing FIDIC 2009 Conference on the subject: Global Challenges Sustainable Solutions during September 13-16 at London, UK.

### Media Lab Asia Set Up (MLAsia)

ML Asia has been set up by the Department of Information Technology and Government of India and MCIT as an R&D organization for bringing the benefits of ICT to the common people. Among the subjects that it will deal with include education. Details are available at [www.medialabasia.in](http://www.medialabasia.in).

Designers & Consultants, Nagpur for Innovative Design of Structures for Junipers Software Pvt. Ltd., Nagpur. ACCE L&T Endowment Award for Excellence in Construction of Industrial Structure was awarded to Shapoorji Pallonji & Co. Ltd., Bangalore for Indian Machine Tools Manufacturer's Association's Bangalore International Exhibition Centre. ACCE Billimoria Award for Excellence in Construction of High Rise Building was awarded to L & T, ECC Construction Group, Chennai for Construction of UB City at Vittal Mallya Road Bangalore. ACCE Som Datt Award for excellence in construction of transportation project was awarded to L & T, ECC Construction Group, Chennai for construction of Panipat elevated expressway project in Haryana. ACCE Sarvamangala Award for excellence in construction of civil engineering projects other than industrial plant and transportation projects was awarded to B. G. Shirke Construction Technology Pvt. Ltd., Bangalore for excellence in construction of Vidhana Soudha South Block (Vikasa Soudha) at Dr. B R Ambedkar Veedhi, Bangalore for Karnataka Public Works Department. ACCE Nagadi Award for best publication (book) in civil engineering was awarded to Dr. Nainan P Kurian, Coimbatore for Shell Foundations – Geometry, Analysis, Design and Construction. ACCE - CDC Award for best software package in civil engineering was awarded to AEC Logic Pvt. Ltd, Hyderabad for software package for proest + building. ACCE L&T Formwork Award for best use of formwork in civil engineering was awarded to Gammon India Ltd., Mumbai for Construction of kaiga domes at Karwar, Karnataka. ACCE Gammon Award for effective use of construction materials/systems in construction resulting in national savings was awarded to L & T, ECC Construction Group, Chennai for excellence in construction of Bangalore international airport at Devanahalli, Bangalore (Greenfield Project). ACCE Gourav Award for significant contributions to civil engineering consultancy was awarded to Dr. V. V. S. Rao, Delhi. The above awards were presented on July 25, 2009 at Davangere, Karnataka.

### Our Congratulations

## Appointments

**Shri S. K. Vij**, former Member of the Railway Board and Sr. Vice President, IBC has taken over as the President of the Indian Buildings Congress (IBC) at the 56th the Governing Council meeting held on July 17, 2009 at New Delhi.

### Our Congratulations

**Dr. K. K. Padmanabhan**, Member Board of Governors, Engineering Council of India has taken charge as Director, Vimal Jyothi Engineering College Chemperi, Kannur Dt., Kerala.

### Our Congratulations

**Prof. Mahesh Tandon** has been appointed Distinguished Visiting Professor at the Indian Institute of Technology, Kanpur and Roorkee, by the Indian National Academy of Engineering (INAE) and the All India Council for Technical Education (AICTE).

### Our Congratulations



## No Dig India Show-2009 during November 17-19, 2009

Indian Society for Trenchless Technology is organising "No Dig India Show 2009" during November 17-19, 2009 at NSIC Exhibition Ground, Okhla Industrial Estate Phase-3, New Delhi (India). The Principal Sponsor of the show is Rosewood Project Pvt. Ltd, the main Sponsor is DCI India Pvt. Ltd. Blue Whale Construction Technologies Pvt. Ltd. and the Sponsor is Akkerman Inc. Nandini Impex Private Ltd.

### What is it?

Trenchless construction methods are getting much of the attention in India on underground utility projects. Though, at one time, trenching was considered as the most cost efficient construction method, enormity of requirements & the huge urban density is changing this perception fast. The requirements & the urban settings are forcing the development & maintenance engineers to opt for Trenchless Technology is a major way. With a view to providing assistance to such technology demand and also for promotion of newer technologies Indian Society for Trenchless Technology (IndSTT), the apex organization to promote Trenchless Technology in this part of the globe, is organizing No-Dig India Show 2009 on November 17th to 19th 2009 at NSIC Exhibition Ground, Okhla Industrial Estate Phase-3, New Delhi where confluence of clients, Consultants, Service providers, Equipment supplier, Technology provider will meet to discuss the various issues including network meetings. Current Indian subsurface projects fall under two distinct genres, Urban Renewal & Petrochemical & Gas. Urban projects sources are Jawaharlal Nehru National Urban Renewal Mission (JnNURM) whereas Petro chemical and Gas projects are various producers & handlers developing cross country & city distribution networks. The current subsurface networks projects of JnNURM generally are based in densely populated regions of the 63 mission cities where techniques like Moling, Horizontal Directional Drilling, Pipe Ramming, Pipe Jacking, Auger Boring, Microtunnelling, Pipe Bursting, Steplining, GRP Lining, Cured in Place Pipe (CIPP) and other type of special linings and repairs and non-destructive testing services like GPR, CCTV and other related techniques can help the project owners to a great extent in completing the projects in time and to adopt the required technology to accomplish the project requirement. The Petrochemical & Gas sector require these services both in urban areas as well as difficult tracts where trenching is not possible wherein



Trenchless Technology can provide a cost effective solution to the subsurface challenge. The project execution agencies, who till now, were executing Trenchless Technology projects on a selective basis are facing complex situations where the project engineers are not completely sensitized about Trenchless Technology and the existing contracting & consulting agencies are not well equipped to handle the magnitude of such requirements. There is a mounting pressure to complete the projects quickly by adopting newer technologies whereas there are limited service providers leading to the need of enhancing execution capacities of Indian Trenchless Markets. No-Dig India Show 2009 which is structured to assist this capacity development through its various sub events. The show is going to have series of training classes, workshops, conference, live demonstration of equipments, release of books, networking meetings and display of trenchless technology equipments/products during the show. Contact for details:

### Prof. Niranjana Swarup Executive Director

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