



# The Indian Engineer

Instead of loving your enemies, treat your friends a little better – E.W.Howe  
Believe that life is worth living and your belief will help create the fact – William James

NEWSLETTER OF THE ENGINEERING COUNCIL OF INDIA

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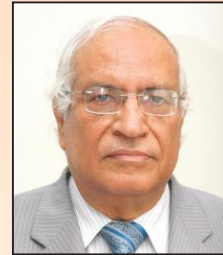
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**Shri P. N. Shali**  
Director

## Message from the Chairman

**Engineers Bill:** Following up with the Ministry of HRD for the Engineers Bill, I alongwith Shri Mahendra Raj and Shri P.N. Shali met Smt. Smriti Irani, Hon'ble Minister for HRD on October 16, 2014. We discussed with her the draft Bill, pending in the Ministry for a long time and impressed on her that it was an important legislation which will give a legal recognition to the profession of engineering, bring about accountability of engineers and enhance their image and provide them a level playing field vis-a-vis foreign engineers and it needed to be processed urgently. She sounded positive and asked the Additional Secretary, Ministry of HRD, who was present in the meeting, to process it further.



**12th National Conference of ECI:** It was organised on October 29, 2014 at New Delhi with the theme: Accelerating Economic Growth through Speedy Implementation of Projects- Challenge for Engineers & Technologists. The Conference was inaugurated by the Chief Guest Shri Suresh Prabhakar Prabhu, now Union Minister of Railways and his address was highly inspiring. Dr. S. S. Mantha, Chairman, All India Council for Technical Education was the Guest of Honour and he delivered a thought provoking address. About 200 delegates from the industry, academia and students attended the conference. The Keynote speakers included professionals from the government, the industry and academia. Details of the conference are covered elsewhere in this Newsletter. The proceedings of the Conference will be prepared and circulated to all member associations.

**Building Bye-laws for Delhi:** Responding to its role as the apex body of engineers in India, Engineering Council of India (ECI) nominated Shri Mahendra Raj, Vice Chairman, ECI to the Council on the Advisory Committee of the Delhi Urban Art Commission (DUAC). While Shri Mahendra Raj and Shri Subhash Mehrotra of IAStructE gave suggestions to the Building Bye Laws sub-committee, ECI also wrote to the Delhi Urban Art Commission (DUAC) that the Building Bye Laws should be as per the National Building Code-2005 and engineers from the other disciplines such as electrical and mechanical engineering, apart from civil engineering should also be included in the committee. ECI's suggestions were acknowledged by Chairman, DUAC.

  
(Uddesh Kohli)

### Engineering Council of India (ECI)

ECI is celebrating its 13th Foundation Day on April 8, 2015. Eminent Engineers Award will also be conferred on this day for which nominations have been called. ECI is also holding its 6th EDP programme on Project Management for Engineers during April 27-May 1, 2015. For details send a mail to [eci@ecindia.org](mailto:eci@ecindia.org), [pnshali@gmail.com](mailto:pnshali@gmail.com), [director@ecindia.org](mailto:director@ecindia.org).

### 49th Convention of the Indian Society for Agricultural Engineers -ISAE

ISAE is organising its "49th Annual Convention and Symposium on Engineering Solutions for Sustainable Agriculture and Food Processing" during February 23-25, 2015 at the College of Agricultural Engineering and Technology, Ludhiana. The event aims at bringing all stakeholders-policy makers, scientists and engineers- on a common platform to deliberate on contemporary and futuristic issues for providing advanced farming solutions for the Indian agriculture. For details visit website: <http://www.isae.in/node/7> or send a mail to [isae1960@gmail.com](mailto:isae1960@gmail.com), [isae2001@yahoo.co.in](mailto:isae2001@yahoo.co.in)

### Consulting Engineers Association of India-CEAI

CEAI plans to develop a list of experts who will be available to guide their members and contractors for dispute resolution. Members interested in this type of activity should write to CEAI, giving their profile for nomination in the Dispute Resolution Board of CEAI. They should also indicate previous experience, if any in arbitration or dispute resolution. For details send a mail to [info@ceai.org.in](mailto:info@ceai.org.in).

### Flash

Indian Institute of Urban Transport has become a permanent member of Engineering Council of India.

Engineering Council of India (ECI)

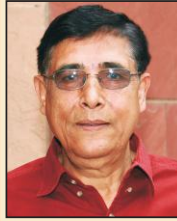
wishes engineers and their families a happy and prosperous

**New Year-2015.**

ECI hopes that the Engineers Bill will come on the statute as the Engineers Act during the year 2015.

**HAPPY★NEW★YEAR**

## From the Editor's Desk




**Engineering profession is regulated in developed and in many developing countries. Why it is not regulated in India?**

I have written on this subject in these columns earlier also, I am covering here the position on the regulation of engineering profession in some countries. As we will see, engineering profession is regulated in developed and in many developing countries including in our immediate neighbourhood. In **Japan**, the profession of engineering is regulated under the Professional Engineer Act, 1983. In the **USA**, it is regulated under the professional engineers Act, 2005. In the **US**, there are also state acts under which it is regulated. For example, in the state of Illinois, USA, the professional engineering practice is regulated under the Illinois Professional Engineering Act of 1976. In **Malaysia**, the engineering practice is governed by the Registration of Engineers Act 1967 (Revised 2002). In **New Zealand**, the engineering profession is regulated under the Chartered Professional Engineers of **New Zealand** Act 2002 which establishes Chartered Professional Engineer (CPEng) as the quality mark of current competence for professional engineers. In **Pakistan**, engineering profession is regulated under the PEC Act No. V of 1976 such that it shall inter alia function as the key driving force for achieving rapid and sustainable growth in all national, economic and social fields.

In Quebec, **Canada** the practice of engineering profession is regulated under the Engineers Act, 2008. In the state of Queens Land, **Australia**, the Professional Engineers Act, 2002 regulates the engineering profession mainly to protect the public by ensuring professional engineering services are provided by a registered professional engineer in a professional and competent way, etc. In the **Republic of South Africa**, engineering profession is regulated under the Engineering Profession Act, 2000. In **Singapore**, profession of engineering is regulated under the Professional Engineers Act 1991 (Revised in 1992). The Act provide for the registration of professional engineers, regulates the qualifications and conduct of professional engineers and corporations, partnerships and limited liability partnerships which supply professional engineering services in Singapore. In **South Korea**, the profession of engineering is regulated under the Professional Engineers Act, 2007. The continuing professional development of the registered professional engineers is also mandatory requirement under the Act. In **Tanzania**, registration of engineers is mandatory under the Engineers Registration Act, 1997.

Primarily, by and large, professional engineer, within the meaning and intent of these acts, refers to a person engaged in the professional practice of rendering service or creative work requiring education, training and experience in engineering sciences and the application of special knowledge of the mathematical, physical and engineering sciences in such professional or creative work as consultation, investigation, evaluation, planning or design of public or private utilities, structures, machines, processes, circuits, buildings, equipment or projects, and supervision of construction for the purpose of securing compliance with specifications and design for any such work. The regulation is, by and large, mandatory under law for graduate engineers, professional engineers and engineer consultants and consultancy organisations and professional engineering services. It is clear from the above that the engineering profession is regulated in order to ensure that practitioners follow the standards set for the profession. In **India**, engineering profession is not regulated. There is no Engineers Act, nor, is there a statutory council in position yet. Why engineering profession is not regulated in India? More so, when professions such as medical, legal, charter accountancy, nursing, etc., are regulated in **India**.

  
(P.N. Shali)

## Distinguished Engineer : Dr. Babasaheb Neelkanth Kalyani

Dr. Babasaheb Neelkanth Kalyani is the principal driving force behind the growth and success of the USD 2.5 Billion, Kalyani Group of Companies. As its Chairman, Dr. Kalyani takes pride in being at the forefront of a globalizing India and to contribute in making "Made in India" a global high tech brand in the manufacturing industry. An able entrepreneur and technocrat, which he is, Dr. Kalyani has enriched the group with his vision of sound business governance and value driven management practices. He is the driving force behind the group's spirit and commitment to deliver products and services of uncompromising quality and integrity consistent with the Kalyani brand and image. With a business experience of over three decades, Dr. Kalyani believes that the ability to innovate and change is critical to the ongoing success of any business. Anticipating what the future may bring and predicting the needs of customers in a fast changing marketplace can be extremely difficult; yet that really is the basis of any strategy. Dr. Baba Kalyani is also the Chairman and Managing Director of Bharat Forge, the flagship company of the Kalyani Group of Industries which is the world's second-largest forgings manufacturer after Thyssen Krupp of Germany. He joined Bharat Forge in 1972 when the company's annual turnover was about US \$1.3 million; it was then a global company with 11 manufacturing facilities spread across India, USA, Germany, Sweden, and China. He pioneered the export of automobile components from India to China in 2002. Bharat Forge was the country's largest exporter of automotive components for eight consecutive years, with exports contributing almost 50% to total sales. Every second heavy truck manufactured in USA runs on a "Made by Bharat Forge, India" front axle beam. Bharat Forge's global customer base comprises 38 automobile manufacturers besides several tier suppliers to the industry.



Dr. Babasaheb Neelkanth Kalyani

### Sustainability and Environment

Under the vision of Dr. Kalyani, the group is expanding and strengthening its position on the global stage, balancing commercial ambitions with environmental concern. Propelling the Group's dynamic evolution is "innovation." The Group's R&D team has been developing technologies to minimize the carbon footprint and produce light weight products that translate into lower energy consumption. Bharat Forge is developing a hybrid solution that would contribute in the country being able to meet its vehicular emission targets in a joint venture with KPIT Cummins.

### New Sustainable Development Initiatives

In pursuance of Dr. Kalyani's vision to contribute to a clean and emission free environment, the group has set up wind energy company—Kenersys Limited— to manufacture various energy efficient wind turbines for domestic and international markets. The company also has its own wind turbines in Maharashtra which generate "green energy" for the group's manufacturing

operations. Dr. Kalyani is also engaged in developing solar energy equipment for the non-conventional energy sector.

### New Growth Path

Dr. Baba Kalyani has set the Kalyani Group on its growth path and is credited with the extraordinary vision for its entry into the fast emerging infrastructure development arena in India. The group has tied up with Alstom, France to manufacture turbines and generators required for various super critical power plants. The Bangalore-Mysore Infrastructure Corridor is one of the largest and most ambitious self-contained infrastructure projects of its kind that is being set up in the country which will contribute in changing the economic face of Karnataka. In addition, the group is setting up the largest multi-product Special Economic Zone in Pune District of Maharashtra. The Kalyani Group is committed to the goal of being recognized globally as leaders through engineering excellence.

### Contribution to Education

He is the Founder Chairman of Pratham Pune Education Foundation, an NGO that is engaged in providing primary education to children belonging to under-privileged sections of the local community. Since its inception in 2000, Pratham Pune has made a difference in the lives of over 100,000 children in Pune society. Kalyani is also providing free technical and vocational training to rural youth at a government Industrial Training Institute [ITI] Taluka in Pune district that is being run as a Public-Private partnership, a model being replicated in other parts of the country. Kalyani also supports various other NGOs and charitable institutes engaged in education and assisting the disadvantaged and needy.

### Awards and Honours

Dr. Kalyani received Padma Bhushan award from the President of India for his contributions to trade and industry. He was made Commander First Class of the Royal Order of the Polar Star by the Swedish government in recognition of his contribution in furthering trade and business cooperation between Sweden and India. Other awards and honours that he has received include Global Economy Prize 2009 for Business by Kiel Institute, German Businessman of the Year-2006 by Business India Magazine, Entrepreneur of the Year 2005 for Manufacturing by the Ernst & Young, and CEO of the Year 2004 by the Business Standard Group. There are many more awards that he has received. The list is very large, indeed, limitation of space here is coming in the way to cover these.

Dr. Baba Kalyani was born on 7 January 1949 to Sulochana and Neelkanth Kalyani, a Pune based technocrat and maker of auto components. He completed his high school from Rastriya Military School, Belgaon formerly King George Royal Indian Military College. He attended BITS Pilani from where he earned a BE(Hons) in Mechanical Engineering in 1970. He did MS from the Massachusetts Institute of Technology.

## News Kiosk

### Quality Council of India signed an MOU with Russian AB, Federal Accreditation Service

A MoU has been signed with Russian AB, Federal Accreditation Service, on December 11, 2014 during the recent India-Russia Summit and documents exchanged in the presence of Prime Minister Shri Modi and President Shri Putin. The MoU was signed by Mr. Adil Zainulbhai, Chairman, Quality Council of India (QCI) jointly on behalf of National Accreditation Board for Certification Bodies (NABCB)/NABL. The MoU envisages among other things acceptance of India's conformity assessment by Russia and vice versa in a bid to minimize technical barriers to trade. This means that wherever the regulators are using accreditation as a means of accepting

testing/inspection/ certification, each country would accept the other's accreditation and conformity assessment. This would facilitate exports from India based on testing/inspection/ certification in India itself.

### Amaethon 2015

IIM, Ahmedabad is organising Amaethon 2015: The International Food, Agribusiness & Rural Summit on January 16-18, 2015 in the Institute campus at Ahmedabad. Initiated in 2005, Amaethon has established itself as an outstanding forum in the management of food, agribusiness and the rural sectors. It has also stimulated great interest in the student community and industry.

## Letters to the Editor

Dear Shri Shali ji

Many thanks for the Indian Engineer, June 2014. I find it full of latest information. I compliment you for being the torch bearer and making an excellent coverage especially about achievements of women engineers. With best regards

**Dr. (Mrs) Malti Goel**

Former Adviser, DST, CSIR Emeritus Scientist

Dear Mr. Shali

Your recent news letter is in my hands. I appreciate the attempt made by you to bring engineering fraternity on a common platform. ECI has effective aims and objectives, to which all member Institutions can contribute more, if ECI develops its campus providing office space to its members. There may be multiple halls in the campus for its members to hire to conduct their programmes, thus saving lot of cost being paid to hotels. We may initiate the move at IPE to participate, if the said proposal materializes.

With my warm regards

**R C Gupta**

Secretary General, IPE Corporate Centre & Vice President, Desein-Indure Group

Dear Sir,

I am really thankful to you for being pursuing the challenges with the respective governing authority. It has always been in

my mind since I passed out from IIT-KGP in 1984 that why engineers are not given legal recognition like other profession mainly legal & medical. Also it has been observed that gradually the quality of engineering education has gone down over the last 10 years in particular. Many a time, we debate among ourselves what could be the reasons or root cause; is it that the profession is not taken in its right spirits at the institute levels or students are not oriented to love the profession. Like this, many questions comes to our mind.

With warm regards

**Sushanta K Roy**

Chief Manager  
(TS & Speciality Business)

Dear Shri P N Shali,

I gratefully acknowledge the receipt of issues of 'The Indian Engineer'. Please accept my greetings and compliments for bringing out updated information useful for practising, academics and professional engineers through 'The Indian Engineer'. I appreciate the efforts Dr Uddesh Kohli, the Chairman, ECI, yourself and your team are putting up to focus on the importance of vital issues of the Engineers Bill, Engineer's Act and Statutory Regulatory Body.

With best regards

**Dr S V Vaishnav**

Honorary Fellow, ISTE

### Subject : Accelerating economic growth, challenges for engineers and technologist

Dear Mr Shali,

I am not sure of the recommendations which emerged from the conference of October 29, 2014, but the facts on ground are not encouraging such as Infrastructure projects in power, highways, mining, have come to a virtual standstill, because of non-availability of land, (resettlement of displaced persons) , hold ups in land acquisition or because of environment related conflicts or lack of clearances itself or challenges in courts to the clearances accorded, as for hydro projects. The special economic zones (SEZ) that the government of India was contemplating to set up have not come up. PPP concept seems to be is on hold or under stress. It is the service sector which is saving the day. The relevant skills shortage for meeting the upcoming technology demands are best analysed state wise, like mining in Jharkhand, Chhattisgarh, Karnataka , Orissa, or hydro

in Himalayan states like Uttrakhand, Himachal, Arunachal, or mechanical as in Tamil Nadu, Orissa , Karnataka, or power in eastern states of India and the like. The skills that ITI impart, diploma courses in the upcoming demand scenario are best addressed by the states who control these institutions. For 'make in India' graduate level courses in engineering need to be tailored to lead to developing entrepreneurs in manufacturing, including hardware for computers and cell phones, in chemical technologies for treatment of wastewater and processes, etc. States like UP must encourage growth of dairy farming, cheese, food processing. Civil engineering projects having potential for growth are ports, transport, navigation craft, railways, airlines and the like.

Best wishes,

**L V Kumar**

## News from the Member Associations

### **Association of Consulting Civil Engineers (India) - ACCE(I)**

ACCE(I) organised an international seminar and exhibition on Precast Concrete Technology- Recent Developments in Design and Construction during November 9-13, 2014 at Bangalore. The main topics of discussion included "Precast is the way for speedy construction and "Precast is the way forward". The event was attended by all the stakeholders.

### **Computer Society of India (CSI)**

CSI, Kolkata Chapter organised the 4th International Conference-2014 on Emerging Applications of Information Technology (EAIT 2014) during December 19-21, 2014 at the Indian Statistical Institute, Kolkata. All the stakeholders participated in the conference.

### **Consultancy Development Centre-CDC**

A Certificate Programme in Technical Consulting was held during December 10-12, 2014 at conference room of CDC, New Delhi. It was very well attended.

### **Consulting Engineers Association of India-CEAI**

It is an established fact of life that the safety, stability and speed for sustained growth of a country are dependent on its infrastructure. To spur its development, a country needs very good, high speed, reliable and secure connectivity - physical (roads, highways, airways, railways, inland waterways and seaways), telephone and IT services, assured quality electrical power and affordable habitats for all. For all these to fructify, the government policies and procedures must be shaped to promote participation from all the stakeholders and make the development truly inclusive. CEAI organised its annual seminar on "Role of Consulting Engineers, Contractors, Developers and Authorities in Infrastructure Development" on November 28-29, 2014 at the India International Centre, New Delhi. The main discussion was focused on the above stated major sectors of our economy. It was very well attended by all the stakeholders.

### **Construction Industry Development Council of India-CIDC**

The foundation day of CIDC will be celebrated on March 7, 2015 and as a part of the celebrations, 7th CIDC Vishwakarma Awards 2015 will be conferred on the winners who will be selected from out of the list of nominations received for the Awards.

### **Indian Association of Structural Engineers - IAStructE**

IAStructE organised a two - day International Seminar on "Mass Rapid Transit System (MRTS)" during November 4-5, 2014 at New Delhi with the objective of discussing the modalities and methodologies being adapted to plan, design and construct the ongoing projects and those planned for the future in different cities and towns. It was attended by all the stake holders who shared their experiences and deliberated on various issues. A Technical Lecture was delivered by Shri Mr. K. P. Abraham, Chief Engineer, CPWD & Chairman, Indian Concrete Institute - New Delhi Centre on an innovative method for water proofing of basements having pre stressed soil anchors on October 30, 2014 at New Delhi. It was very well attended.

### **Indian Institute of Chemical Engineers -IIChE**

The Northern Regional Chapter of IIChE along with the Oil Industry Safety Directorate, Ministry of Petroleum, Government of India organised a two-day programme on Process Safety during December 5-6, 2014 at New Delhi. The subjects that were

discussed included holistic safety management, safety control in process operations, LPG bulk storage and transportation, hazardous area classification, pipeline integrity management system, quantitative risk assessment, disaster management and emergency preparedness plan for chemical industry, etc. The programme was very well attended both by the industry and academia.

### **Indian Concrete Institute-ICI**

The 2nd International Congress on Durability of Concrete (ICDC) was organised jointly by the Indian Concrete Institute and the Norwegian Concrete Association during December 4-6, 2014 at New Delhi. The ICDC series serve as a forum for exchanging current research results, with the main objective of displaying how concrete will continue to ensure durable buildings and structures for sustainable development in both local and global context. As a part of the congress, an exhibition was also organised. The event was very well attended both by the industry, academia and the students.

### **Indian Geotechnical Society (IGS), IGS**

IGS organised a three-day conference and exhibition on the theme: Geotechnics for Inclusive Development of India during December 18-20, 2014 at Kakinada, AP. Many important subjects were discussed. The Ludhiana Chapter of IGS organised a three - day conference during October 10-20, 2014 at Ludhiana. To commemorate the Golden Jubilee Year (1964-2014) of the Chapter, the Bangalore Chapter of IGS in associating with the Department of Civil Engineering, Indian Institute of Science, organised a national conference on "Geo-Innovations" during October 30-31, 2014 at Bangalore. The subjects that were discussed included innovations in geo-characterisation, foundations and retaining structures, geo-environmental engineering, soil dynamics and earthquake engineering, tunneling and rock mechanics. All these programmes were very well attended by the industry, academia and the students.

### **Indian Institute of Industrial Engineering -IIIE**

IIIE organised 3rd International Conference on Best Practices in Supply Chain Management (BPSCM- 2014) during November 28-30, 2014 at Udaipur, Rajasthan. The conference was very well attended by all the stakeholders.

### **Indian Institution of Plant Engineers IIPE**

The AGM of the New Delhi Chapter of IIPE for the year 2013-14 was held recently and the Chapter elected its new executive committee for 2014-16 under the chairmanship of Shri T S Suresh, ED (P&BP), Steel Authority of India Ltd.

### **Indian Society for Non Destructive Testing (ISNT)**

The Pune Chapter of ISNT organised NDE seminar during December 4-6, 2014 at Pune. NDE is an important annual event of the ISNT and provides highly stimulating and interactive platform for all NDE professionals' right from students to experts, equipment manufacturers, third party inspection agencies and service providers to explore and exchange latest ideas and advancements in the field of NDE. Along with this, a pre-seminar workshop and exhibitions related to NDE was also held. The event was attended by all the stakeholders.

### **Indian Society of Agricultural Engineers (ISAE)**

The World Food Day is celebrated every year around the world on October 16 to mark the foundation day of Food and Agriculture



A Group Photo

Organization (FAO) of the United Nations. Like previous years, Agricultural University, Anand commemorated the World Food Day with a two-day National Tech- Fest on Food Processing, titled "ADROIT' 14", which is a platform for all budding food technocrats to show their innovations and prove their extraordinary talent and skills. The programme consisted of various competitions related to food processing including industry-academia-student interaction session. This year, a national seminar on 'Food Quality and Safety - New Technologies and Applications' was organised jointly with Food and Drugs Control Administration, Govt. of Gujarat and Association of Food Scientists and Technologists (India), V V Nagar Chapter at the College of Food Processing Technology and Bio Energy, Anand. A student rally was also organized on October 16, 2014 at Anand. All these programmes were very well attended by all the stakeholders.

#### Indian Society for Technical Education-ISTE

ISTE organised the 44th National Annual Convention-2014 during November 27-29, 2014 at College of Engineering Trivandrum, Thiruvananthapuram, Kerala with the theme Shaping Technical Education to Meet Challenges Beyond 2020.



Justice (Retd.) Sri P. Sathasivam inaugurating the convention

The convention was inaugurated by the Chief Guest Justice (Retd.) Sri P. Sathasivam, Governor of Kerala. He also released the convention souvenir and the first issue of the ISTE-SRM international journal of civil engineering. The inaugural function was attended by Dr.



Justice (Retd.) Sri P. Sathasivam giving Awards

K.P. Isaac, Vice Chancellor, Kerala Technological University, Trivandrum, Dr. J. Letha, Vice Chancellor, CUSAT, Cochin; Dr. K. Vijay Kumar, Director, Technical Education, Kerala. Various ISTE prestigious Awards were also presented to the winners. The technical session on accreditation awareness programme by the NBA was also conducted on November 27, 2014. The keynote speakers of the programme included Dr. Surendra Prasad, Chairman, NBA, Dr. Anil Kumar Nassa, Member Secretary, NBA and Dr. Avichal Kapur, Director (QA) & CEO, Meghe Group of Institutions, Nagpur. An AICTE sponsored panel discussion on the theme national skill qualification framework was also organised on November 28, 2014. The presidential address was delivered by Dr. R. Murugesan, President, ISTE on the topic Shaping Technical Education - Challenges and Opportunities. The event was very well addenda both by the industry, academia and students.

#### Institute of Urban Transport

IUT is organised a two-day national workshop on "Dissemination of Toolkit on Comprehensive Mobility Plan (Revised) and Parking Measures" during October 9-10, 2014 at New Delhi. The objective of the workshop was to enlighten professionals and city officials about the updated features of CMP (Comprehensive

Mobility Plan) Toolkit, for Sustainable Urban Transport and to deliberate on the policies, best practices and applications of innovative technologies for parking management in urban areas. It was very well attended by all the stakeholders.

#### The Mining Engineers' Association of India-MEAI



Shri A. Bagchi, delivering Welcome Address

MEAI organised a roundtable discussion on adopting international standards for mineral reserves reporting by India on December 18, 2014 at Hyderabad. It was very well attended by all the stakeholders. In the

countries with significant mineral resources like India, transparent public reporting of mineral resources makes it easier to invest in mining industry. In these countries guidelines for public reporting of mineral resources provide a path for clear communication and understanding between the mining companies, the regulators, investors and other stakeholders. These guidelines are also known as 'codes' or 'standards' depending on the way the regulators implement these in various countries. In India, the adopted code is known as UNFC code. For various reasons this code is often difficult to implement and not accepted for public reporting. Compared to this code, other readily recognized codes in the mineral industry are JORC (Australia), SME guidelines (USA), NI43-101 (Canada) and SAMREC (South Africa). These codes or guidelines are considered modern, are updated regularly with simpler language and provide more clarity and transparency to the public who are eventual investors in any mining project. For



Shri P.N. Sharma, inaugurating the Round Table Conference

these reasons, the countries adopting these modern codes are part of an international consortium of National Reporting Organizations (NROs) known as the CRIRSCO (Committee for Mineral Reserves International Reporting Standards). The CRIRSCO has developed the "International Minerals Reporting Code Template" for all solid minerals which assists countries to produce new code consistent with international best practices and the national codes are comparable with other international reporting systems. India has not yet joined CRIRSCO. The mineral industry in India has huge potential to attract investments and play a much bigger role in the international market by replacing the current UNFC code with a modern code that will allow India to be a part of CRIRSCO.

#### The Indian Institute of Metals-IIM

IIM organised the 52nd NMD-68th ATM 2014 on the theme, 'Redefining the Horizons of Metallurgy/Materials with focus on automotive, aerospace, defense and energy during November 12-15 at Pune. A special theme symposium was also held on integrated computational materials engineering (ICME) for the realization of materials and products, additive manufacturing (also known as 3D printing), materials for the automotive industry and IT enabled manufacturing. About 850 delegates from different parts of the country including students and some from abroad attended the event. A team of IIM-DC members visited 'Mahavir Die Casters, Faridabad - a leading manufacturer of High Pressure Aluminium Die Cast Components in India'- on November 8, 2014. Mahavir Die Casters are part of 'Oswal Group of industries' - a leading manufacturer of high pressure Aluminium die cast components in India.

## Students Corner



S. V. Tejaswi

### Effect of Boron Addition on Sliding Wear Characteristics of Titanium Alloys - S.V. Tejaswi, NIT, Warangal

Titanium alloys are extensively used in aerospace industry due to their high strength to weight ratio. Near alpha titanium alloys are gaining priority due to their improved creep strength, oxidation resistance and reasonably good ductility, excellent mechanical properties at cryogenic temperatures over alpha-beta and beta titanium alloys. The properties get altered in heat treatment conditions viz., as-cast plus aged and solution treated plus aging conditions. Present studies have been carried out to investigate dry sliding wear behaviour of near alpha Ti alloy IMI-685 with and without boron. The experiment is carried out on pin-on-disc wear testing

machine with varying loads (5Kg, 7.5Kg and 10Kg) and speeds (0.52-3.66m/s). The characterization of investigated materials was done by using optical microscopy, scanning electron microscope (SEM), X-ray diffraction (XRD) and micro hardness tests were carried out with a Vickers diamond pyramid indenter. Under the present experimental conditions it has been observed that maximum wear rate corresponds to a sliding velocity of 2.62 m/sec at all loads and minimum wear rate corresponds to a lower speed 0.52m/s even with increasing load. It has also been observed that IMI-685 alloy without boron presents better wear resistance in solution treated plus aged conditions at lower load and sliding velocity combination compared to as-cast plus aged alloys and boron combination alloys.

The Lecture delivered at NMD ATM Function held in November, 2014 at Pune

## Awards & Honours



C.S. Verma

Recognizing their significant and outstanding contribution to the metallurgical industry, The IIM-JRD Tata Award for Corporate Excellence in Metallurgical Industry was conferred on **Shri C.S. Verma**, Chairman, Steel Authority of India and **Dr. Babasaheb Neelkanth Kalyani**, Chairamn, Kalyani

Group and CMD, Bharat Forge Ltd at the NMD function of IIM held at Pune during November 12-15, 2014. Dr. Radhey Lal Kushwaha received the Bekker-Reece Radforth Award at the 18th international conference of ISTVS held at Seoul, Korea from the International Society for Terrain-Vehicle Systems' (ISTVS), the society's highest honors, on September 22-25, 2014. The Award is given to ISTVS members who have worked for at least three consecutive years and have accomplished outstanding research achievements that have led to major improvements in engineering practice in off-road vehicle, soil engaging equipment or related industries, and have contributed exceptional engineering achievements in product innovation or product development and design in off-road vehicles, soil engaging equipment, or related industries.



Dr. Baba Kalyani

*Our Congratulations*

## Think it Over

*Awards are so unnecessary because I think we get so much out of our work just by doing it. The work is a reward in itself.*

- **Nataiie Portman**

*Leadership at one time meant muscles; but today it means getting along with people.*

- **M.K. Gandhi**

## Appointments

Dr. K. K. Singh has been appointed Director of the Central Institute of Agricultural Engineering Bhopal. Dr. Patel after completion of his first term as Vice Chancellor of Junagadh Agricultural University, joined recently as Vice Chancellor at Anand Agricultural University, Anand. Dr. K. Alagusundaram (Alagu) has joined as Deputy Director General (Agricultural Engineering) at Indian Council of Agricultural Research, New Delhi on October 20, 2014.


*Our Congratulations*

## Letter from the Chairman, ECI

Dear Prof. Rao,

Engineering Council of India, which is an apex body of engineers in India with 32 engineering associations as its member, suggests that in the building Bye-laws being considered by DUAC, the role of engineers should be kept similar to architects, and that NBC 2005 should be the criteria for competence, experience and qualifications of all professionals.

With my best wishes

Yours sincerely  
  
(Uddesh Kohli)

## Letter to the Chairman, ECI

Dear Shri Kohli ji,

Thank you for taking active interest in our initiative to revise the Unified Building Bye Laws for Delhi. We shall certainly take full cognizance of your concerns.

With highest regards,

**Prof. (Dr.) P.S.N. Rao**  
Chairman, Delhi Urban Art Commission

## Obituary

The wife of Dr. N.S.L. Srivastava, Ex-ADG (Engg), ICAR, expired on December 4, 2014 at Delhi. Mrs. Srivastava was suffering from an illness for quite some time and had been in ICU for the last one month. Her last rites were performed on December 5, 2014 at in Delhi. ECI mourns her death and conveys deep condolence to bereaved Dr. N.S.L. Srivastava and the family with prayer to God to give peace to the departed noble soul.

## 12th National Conference

Engineering Council of India (ECI) organised 12 the national conference on the theme: Accelerating Economic Growth through Speedy Implementation of Projects-Challenge for Engineers and Technologists on October 29, 2014 at New Delhi. The background of this conference was that the new government is focusing on rapid economic growth.



Shri Suresh P. Prabhu delivering his inaugural address

According to the 2014-15 budget speech, the rate of growth of GDP is to be raised to 7-8% in 3 years. Earlier, the 12th Five-Year Plan had indicated the core theme as faster and more sustainable inclusive growth with likely investment of more than a trillion dollars in infrastructure alone. Around twelve strategy challenges, which refer to some core areas requiring new approaches to produce the desired results, were identified in the 12th Plan, which included, inter alia, securing the energy future for India, faster development of infrastructure including transport infrastructure, manufacturing, technological development and innovation, enhancing technical skills, improved access to quality technical education, development of agriculture and irrigation capacity. Apart from this, sustainability will also be important strategic challenge. The massive investment is required in projects and programmes to achieve rapid economic growth in sectors such as Agriculture & Irrigation, Infrastructure: energy, communication, airports, ports, road and highways, railways, mining and industry: coal, oil, steel, petrochemicals, fertilizers and other industries and social sectors: water, sanitation, health, education etc. All these projects and programmes will require engineering skills for formulation, design, implementation, project management, operations, etc. Many of our projects and programmes have in the past faced huge time and cost over-runs and the benefits have been considerably delayed. There may have been problems in formulation, design, technology, implementation, etc. The challenge before the engineering profession is to identify the problems and issues which may come in the way of meeting the requirements for accelerated economic growth and develop strategies to overcome these.



Dr S.S. Mantha addressing the conference

The main objective of the conference was to identify the challenges of accelerating economic development through effective implementation of project and programmes which the engineers and technologists will face and how to organize and develop the engineering profession to meet these challenges. The discussion in various sessions at the conference focused on identifying various issues in this regard, which included policy issues, legal issues, such as land acquisition, environmental and sustainability issues, organizational issues such as development of systems, training and skill building and effective communication, and profession-related issues such as

consultancy inputs. The main take - away from the conference was , therefore, that during the discussions issues and strategies to be adopted to tackle these issues were identified with special emphasis on using the quality engineering inputs and engineering profession to its fullest competency. The Chief Guest of the conference was Shri Suresh P. Prabhu, Head of Advisory Group for Integrated Development of Power, Coal and Renewable Energy, Government of India, Chairman, Council on Energy, Environment and Water (Presently Minister of Railways) and he inaugurated the conference. Dr S.S. Mantha, Chairman, All India Council for Technical Education was the Guest of Honour and he delivered thought provoking address. Technical Session-I was chaired by Dr. (Ms). Vinita Kumar, Senior Adviser (Transport), Planning Commission; and it was co chaired by Dr P.R. Swarup, Director General, Construction Industry Development Council.



A view of the Audience

Among the keynote speakers of this session included Shri Vimal Wakhlu, Chairman & Managing Director, Telecommunications Consultants India Ltd, Dr. Ram Upendra Das, Professor and Senior Fellow, Research and Information System for Developing Countries (RIS), Shri Amit Sharma, Executive Director, Tata Consulting Engineers Ltd., and Shri Krishna Moorthy, Group General Manager (Transport Infrastructure), Global Foot Prints OFRITES. Technical Session-II was chaired by Shri A.P. Mull, Director, Tata Consulting Engineers Ltd. and President, CEAI; and it was co chaired by Capt. G. S. Inda (IN), Senior Vice President, the Institution of Surveyors. Among the keynote speakers of this session included Shri S. Ratnavel, CEO, Seeba Consultancy Services, Prof. Prabhat Ranjan, Executive Director, Technology Information, Forecasting and Assessment Council (TIFAC), Major General N.K. Dhir, Director, Alphabet Teletec (P) Ltd., New Delhi, and Dr. Malti Goel, Former Advisor and Senior Consultant, Ministry of Science & Technology. Concluding session was a panel discussion which was chaired by Shri Mahendra Raj, Vice Chairman, ECI & Past President Indian Association of Structural Engineers, Chairman & Managing Director, Mahendra Raj Consultancy (P) Ltd.. Among the distinguished panelist included Shri V.N. Rai, former Chairman and Managing Director Fertilizer Corporation of India (FCI, former Managing Director, KRIBHCO, Shri Anand Kumar, Director, Petrotech, New Delhi, Shri N.A. Madhava, Principal Consultant (Maritime & Civil Works), New Delhi, Shri O.P. Gupta, VSM, Senior Advisor, Construction Industry Development Council - CIDC, and Shri A. K. Srivastava, Senior Vice President Intercontinental Consultants & Technocrats Private Limited, New Delhi. Proceedings of the conference are being compiled and will be forwarded to all concerned in due course.



A view of the Audience - Students

### ENGINEERING COUNCIL OF INDIA

3rd Floor, Jawahar Dhatu Bhawan, 39, Tughlakabad Institutional Area (Near Batra Hospital), M. B. Road, New Delhi-110062  
Tel: 65640356, 29963281, 29963282 Fax: 29963283 E-mail : [eci@ecindia.org](mailto:eci@ecindia.org), [director@ecindia.org](mailto:director@ecindia.org) Website: [www.ecindia.org](http://www.ecindia.org)

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