



# I.E.I NEWS

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A CENTURY OF SERVICE TO THE NATION

Volume 29

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## WFEO Special Executive Council Meetings & International Conference, Madrid, Spain

### Engineering the Cities of the Future

The IEI delegation visited Madrid from 28<sup>th</sup> Feb to 04<sup>th</sup> March 2023, to attend the WFEO Special Executive Council Meetings & International Conference on **Engineering the Cities of the Future**. The delegation was nominated by the President IEI and comprised Mr Ashok Kumar Basa, Past President, IEI & Executive Vice President, WFEO; Mr Navinchandra Vasoya, Past President, IEI & National Member, Executive Council, WFEO and Mr S S Rathore, Past President, IEI & Chairman, WFEO-CIC.



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## Thirty-fifth National Convention of Metallurgical & Materials Engineers and National Conference

### Valuing Low-grade Ore and Waste: Challenges and Remedies (VLOW: CR - 2023)



**Durgapur Local Centre**, IEI organized the 35<sup>th</sup> National Convention of Metallurgical & Materials Engineers during 21-22 January 2023 under the aegis of Metallurgical & Materials Engineering Division Board [MMDB] in association with Metallurgical and Materials Engineering Department, NIT Durgapur at FOURIER Auditorium, NIT Durgapur. A National Conference was also concurrently organised on the theme **Valuing Low-grade Ore and Waste: Challenges and Remedies (VLOW: EF-2023)**. Prof Indrajit Basak, Director

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## From the President's Desk.....



In this column, I would like to express my deepest sympathies to the victims and their families who were affected by the recent earthquake in Syria and Turkey. As a community of engineers, we understand the devastating impact that natural disasters can have on individuals and societies. It is crucial to acknowledge the severity of such events and the lasting impact they can have on people's lives. As engineers, we play a critical role in mitigating the impact of natural disasters by designing and implementing structures that can withstand them.

Earthquakes are particularly challenging to prepare for because they can strike with little warning and can occur in any part of the world. While we cannot prevent earthquakes from happening, we can take steps to minimize the damage they cause. The key to achieving this is to ensure early prediction of earthquake and make sure that our buildings and infrastructure are designed to be earthquake-resistant.

Advanced engineering techniques and technologies are essential in achieving earthquake-resistant structures. Computer models can simulate how structures will behave during an earthquake, and engineers can make design modifications accordingly. Furthermore, engineers can use materials that are better able to withstand the forces generated by an earthquake, such as reinforced concrete or steel. By incorporating these advanced techniques into building design, we can ensure that our structures are more resilient to natural disasters.

The Institution of Engineers (India) has a wealth of technical expertise and resources that can be leveraged to support initiatives promoting earthquake-resistant infrastructure. Our members can contribute their expertise in structural design, materials science, and risk assessment to create safer and more resilient infrastructure. This can include designing earthquake-resistant buildings and bridges, as well as developing early warning systems to give people more time to evacuate before an earthquake strikes.

Education and awareness are also crucial components of natural disaster preparedness. The Institution of Engineers (India) is committed to promoting public awareness and

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## Valuing Low-grade Ore and Waste: Challenges and Remedies (VLOW: CR - 2023)

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(Officiating), NIT Durgapur graced the inaugural function as Chief Guest. Prof O P Sinha, IIT Patna graced the function as the Guest of Honour and Keynote speaker. Mr Sourav Chatterjee, SDM, Durgapur Sub Division was the Special Guest of the session. The inaugural function was presided over by Dr Bhagyadhar Bhoi, Chairman, Metallurgical & Materials Engineering Division Board [MMDB], IEI & Chief Scientist & Head, Advanced Materials Technology Department, CSIR-IMMT Bhubaneswar. The programme began with a welcome address from Mr Safikul Islam, Chairman, Durgapur Local Centre, IEI. Dr Arup Kumar Mandal, Convener of the National Convention and



Assistant Professor, Department of Metallurgical and Materials Engineering, NIT Durgapur highlighted about the theme of the National Conference and mentioned the increasing demand for metals and the deteriorating quality of ore. Chief Guest, Prof Indrajit Basak, in his address talked about the importance of ore, coal and also the increased flux consumption and slag volumes, which seriously hampers productivity and process economics. Prof O P Sinha, IIT Patna, talked about producing value-added products from waste. Special Guest, Mr Sourav Chatterjee highlighted the present scenario of different types of plant wastes including those from heavy industries and power sector. On the occasion, Dr Kali Sanjay, Chief Scientist and Head, Hydro & Electrometallurgy Department, Professor (Engineering Sciences, AcSIR), CSIR-Institute of Minerals & Materials Technology, Bhubaneswar; Dr Gour Gopal Roy, Professor & Former HOD, Department of Metallurgical & Materials Engineering, IIT Kharagpur and Mr Bibhu Prasad Mishra, President - Manufacturing Centre of Excellence, Hindalco Industries Limited, Aditya Birla Group were felicitated as eminent engineers for their commendable contribution in the field of Metallurgical and Materials Engineering. The IEI Young Engineers Award for the year 2022-23 were presented to Dr Achu Chandran, Scientist, Materials Science and Technology Division, CSIR-National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram; Dr Priyanka Rajput, Principal Scientist, Advanced Materials Technology Department, CSIR-Institute of Minerals and Materials Technology, Bhubaneswar and Dr P Sharath Kumar, Assistant Professor, Department of Mineral Processing, Vijayanagara Sri Krishnadevaraya University, PG Center, Nandihalli-Sandur, Karnataka for their notable achievements in the field of Metallurgical and Materials Engineering. The V Subramony Memorial Lecture was delivered by Dr Ramesh Chandra Gupta, Former Professor and Head, Centre of Advanced Study in Metallurgy, Department of Metallurgical Engineering, Indian Institute of Technology, Banaras Hindu University, Varanasi. Prof Gupta spoke about the importance of research on biomass and hydrogen to address the environmental issues. He also discussed the quality of human resources required for steel industries and analysed the demand-supply pattern of India. Prof Gupta in his address recommended introducing specialization in academic curriculum in

two streams; one in materials science and the other in extractive metallurgy to meet the requirement of the steel industry. The State of Art Lecture was presented by Mr Bibhu Prasad Mishra. Mr Mishra spoke about the challenges faced by the Aluminium Industries; particularly, in the form of red mud. He also talked about the importance of analysing the lifetime cost in dealing with the waste and discussed important aspect about reducing the sulphur content of coal by using red mud. The session was chaired by Mr Kishore Kumar Mehrotra, Member, MMDB and & Former CMD, MECON Limited. Dr Gour Gopal Roy presented lecture on the exergy analysis of RHF-EAF process route. He also spoke about how exergy analysis would help in recovering the sensible heat from the waste gas from different metallurgical processes with the use of a thermodynamic database. Thirty-five technical papers were reviewed and accepted by the Technical Committee. These papers are from researchers from academia, industries, as well as research Institutes of different parts of the country. The papers are related to a wide spectrum of fields from beneficiation of ores, agglomeration of fine like pelletization and sintering, reduction of iron oxides, coal, utilization of slag, flux preparation, preparing brick and pavement block from slag and fly ash etc. These papers were divided into five Technical Sessions. Each session started with an invited talk. The invited speakers of the sessions were Prof Projjal Basu, Professor, Kazi Nazrul University, Asansol, Dr Golap Md Chowdhury, RDCIS, Ranchi, Dr O P Sinha, IIT Patna, Dr Susanta Nath, CSIR-NML and Dr Arijit Sinha, Professor, Kazi Nazrul University, Asansol. Each presentation was evaluated by Session Chair and Session Co-Chair and awards were given to the best presenter in each session. Apart from these, another Technical Session was obtained specifically for professionals from industries to present their work and the challenges faced by them and also how to overcome the same. Tata Steel Kalingnagar, Tata Steel Long Product and Gagan Ferro Tech, Jamuria, SAIL-DSP, SAIL-ISP, DVC & DPL were participated in this session. The valedictory function was chaired by Mr Safikul Islam, Chairman, Durgapur Local Centre, IEI.

Recommendations emanated from the National Convention are as follows.

*More applications of Smart, Green, Lean raw materials for manufacturing is the need of the hour with the objective to minimize waste and the engineering curriculum and syllabi need to be modified accordingly; To fulfil the needs of iron and steel industries, specialization degrees should be offered in two streams; one in Materials Science and other in Extractive Metallurgy; Active research and development are necessary on biomass and hydrogen as clean and renewable sources to address the environmental issues; For proper and efficient utilization of low grade ore and waste, analysing the lifetime cost is necessary; To recover the waste heat from the industrial gas from different metallurgical processes, Exergy Analysis needs to be obtained using a thermodynamic database; To support smaller manufacturing industries, Skill Development Programs, regular interactions between industry-academia-research organizations etc may be organized on the subject and also to meet their needs, state-of-the-art testing facilities need to be created. with active collaboration between Institute-Industry-Gol; Innovations and quality awareness need to be embedded with the emerging production engineering practice.*

Mr Manas Mazumder, Honorary Secretary, Durgapur Local Centre, IEI was present in the function. Dr Satadal Ghorai, Joint Organizing Secretary and Co-Convenor of the Technical Committee proposed the vote of thanks.

### Empanelment as Advocate/ Attorneys & Chartered Accountant for Engineers

The Institution of Engineers (India) invites practicing Advocates/Attorneys and Chartered Accountants who are also Engineers to apply for empanelment to enhance their visibility in the public domain. Empanelment entails a nominal application fee of Rs. 5900/- (inclusive of GST) payable by Demand Draft/Multi-city Cheque made in favor of "The Institution of Engineers (India)" and payable at Kolkata.

Applicants are requested to send a hard copy of their application to the **Director (Membership)**, The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020. For further details, please visit our website at <https://www.ieindia.org/webui/iei-home.aspx>.

## Occupational Health Problem and Remedial Measures in Mining Operation

**Durgapur Local Centre** of The Institution of Engineers (India) organised the 32<sup>nd</sup> National Convention of Mining Engineers during 03-04 December 2022 under the aegis of Mining Engineering Division Board [MNDB], IEI. A National Conference was also concurrently organised on the theme **Occupational Health Problem and Remedial Measures in Mining Operation**. Mr S K Singh, Director Technical (Operation), Bharat Coking Coal Limited (BCCL), Coal India Limited graced the inaugural function as Chief Guest. Mr Goutam Biswas, Managing Director, The Durgapur Projects Limited (DPL) and Mr S Prasad, Chief Engineer and Project Head, DVC, Durgapur Steel Thermal Power Station (DSTPS) Andal graced the occasion as Guests of Honour. The inaugural session was presided over by Prof (Dr)



Netai Chandra Dey, Chairman, Mining Engineering Division Board, [MNDB], IEI. Mr Safikul Islam, Chairman, Durgapur Local Centre, IEI welcomed the august gathering and briefed about the theme of the National Convention. He pointed out that the persons employed in the mines are exposed to a number of hazards at work which adversely affect their health, such as dust, noise, toxic metals, heat, humidity and vibration etc. He mentioned about the increasing awareness among mining industry and the workers about occupational diseases such as Coal Worker's Pneumoconiosis, Silicosis, Manganese Poisoning, Hearing Impairment etc, caused by exposure to health hazards at work. Mr Sandip Kumar Deb, Vice President, IEI, [Session 2021-22] and Dr Nirmal Das, Chairman, West Bengal State Centre, IEI were also present on the dais. Mr Sandip Kumar Deb welcomed the gathering and appreciated the initiative taken by Durgapur Local Centre, IEI for organizing the National Convention. Chief Guest of the event, Mr S K Singh in his address mentioned that dust is generated by extraction, drilling, blasting, crushing, conveying and various other mining operations and prevention of generation of dust rather than damage control due to airborne dust is necessary, which include water spray arrangements for dust suppression, chemical additives mixed with water and other measures to control the dust pollution in the mining areas etc. As chemical additives mixed with water provides better efficiency and consumes less water, it should be used for water spraying at OC mines, he stated. Filtered water should be provided for fog cannon and mist type water sprinkling system; Clean water should be provided for water spraying system so that the spring nozzle does not get clogged, he opined. Guest of Honour, Mr Goutam Biswas in his address stated the importance of installing the Vertical Green Barrier for dust control in all residential colonies near open-cast mines to prevent propagation of dust to the colonies. He explained the use of NLC bucket-wheel excavator and conveyors instead of road transportation and subsequent control of dust generation by reducing spillage of coal from the trucks and dumpers. He further elaborated the application of Long Wall Technology in coal mines, where coal is being transported by belt conveyor to the power plants. Guest of Honour, Mr S Prasad expressed his views on the present scenario of the scarcity of fossil fuel and the impact of the same in modern world. Dr Netai Chandra Dey, Chairman, MNDB, IEI in his Presidential Address stated the importance of ergonomics in applied science as a whole and for Mining Engineering in particular. Prof Dey opined that ergonomics has extremely wide application for the betterment of efficiency of men and machines including restoring comfort level of the workers and has substantial pertinent points with potential benefits. Basic study which needs

to be undertaken for all man-machine interface based industries includes determination of job heaviness or workload of every unit operation both from UG and OC mining sector (coal and metal), work-rest scheduling of miners satisfying WHO prescribed provisions, ergonomic design of seat arrangement of operators cabin and stress reduction of miners to satisfy provisions of CMR126 and 215; Consequently, it will certainly help building good relationship amongst employees and employers through providing rational workload under acceptable work environment which would further increase human comfort, he added. On the occasion, Prof Arvind Kumar Mishra, Professor, IIT-ISM Dhanbad & Director, CSIR-Central Institute of Mining and Fuel Research, Dhanbad and Mr Tarun Kumar Ghosh, Chief Operating Officer, Anushandhan Mining LLP were felicitated as eminent Mining Engineering personalities for their commendable contributions in the field of Mining Engineering. The IEI Young Engineers Award in Mining Engineering Division for the year 2021-22 were presented to Dr Sunita Mishra, Assistant Professor, Department of Mining Engineering, Indian Institute of Technology Kharagpur and Dr Arkajyoti Das, Scientist, CSIR-Central Institute of Mining and Fuel Research, Dhanbad, Jharkhand for their notable achievements in the field of mining engineering. For the year 2022-23, the recipient

of the Award is Dr Vivek Kumar Himanshu, Scientist, Rock Excavation Engineering Research Group, CSIR-Central Institute of Mining and Fuel Research, Dhanbad, Jharkhand. A Souvenir with CD was released on the occasion in the august presence of the dignitaries on the dais. Earlier, Mr R Bhattacharya, Convenor of the National Convention highlighted the aims of the Convention to identify and discuss the gaps and remedies thereof in support of Academia, Industries, and business houses to facilitate the practicing Engineers and students in understanding recent technological breakthrough in mining sector. He also highlighted the objectives of the National Convention, which are: Optimizing interactive mine environment of man's right to health and machine's productivity; promoting the importance of remedial measure to control occupational diseases for long-term sustainability of machines used in mines; encouraging indigenous manufacturer to consider occupational diseases as an important aspect in design; detection and diagnosis of occupational diseases and its uniformity in mining scenario etc. A panel discussion was held on the topic 'Future of Mining Engineering' during the Convention. Prof Arvind Kumar Mishra, delivered State of Art Lecture on the topic 'Integrated Safety in Mines' and stated that continuous miners, road haulers, shearers and surface miners should be integrated with water spraying system with proper maintenance. He further focussed on contractual outsourced patches for safety as well as a dust control system. Prof Mishra, in his address, strongly advocated for framing of compliance of mine-wise Standard Operating Procedures (SOPs) for dust control; creation of dust control sales for monitoring enforcement; developing a culture for wearing dust masks where applicable; reduction of contribution of diesel particulate matter in underground mining projects; application of drone technology in air quality monitoring and so on. Mr Manas Majumder, Honorary Secretary, Durgapur Local Centre, IEI proposed the vote of thanks.

The Prof S K Bose Memorial Lecture was delivered by Prof (Dr) Netai Chandra Dey, Professor (HAG), Department of Mining Engineering, IEST Shibpur. on the topic 'Occupational Safety and Health Management of Coal Miners through Ergonomic Intervention'. The session was chaired by Dr Santosh Kumar Ray, Senior Principal Scientist, CSIR-CIMFR, Dhanbad. The Keynote address was delivered by Mr Goutam Biswas on the topic 'Vertical Green Barrier for Dust Control'.

The first Technical Session was held on the topic 'Determination of Barrier Pillars Stability of an Abandoned Underground Mine to an Open Cast Mine',

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## Sustainable Development of Mines – Role of Mining Technology

**Jharkhand State Centre** of the Institution organised All India Seminar on the theme **Sustainable Development of Mines – Role of Mining Technology** during 07-08 January 2023 at Ranchi under the aegis of Mining Engineering Division Board [MNDB], IEI. The Chief Guest of the event was Prof (Dr) Rajiv Shekhar, Director, IIT-ISM, Dhanbad. In his address to the esteemed audience, Prof Shekhar elaborated on how the mining industry is one of India's major sectors, and its expansion has a significant impact on the country's economy. He emphasized the need to enhance mining productivity without compromising on social and environmental responsibility. He also focused on the application of Artificial Intelligence (AI) in the mining sector, emphasizing the modernized use of explosives and the traffic system to minimize accidents. Furthermore, he highlighted the need for strengthening



research and development in the mining sector. Er Avijit Ghosh, Ex-CMD, Heavy Engineering Corporations Limited, Member EAC (NCM) MoEFCC while delivering the theme address, said that it is necessary to strengthen the research and development base of the mining industry and further advocated for removal of excavation work by means of scientific method.

During the All India Seminar, Er Pankaj Kumar Satija, Managing Director of Tata Steel Mining Limited, delivered the keynote address. He highlighted that only a small percentage of people in India are skilled in mining and stressed the need for more training, skill development, and the adoption of new technology in the mining sector. Er Vinay Dayal, Former Director Technical of Coal India Limited, emphasized that the company is focusing on increasing productivity through the use of emerging technology in mining. Er Ranjan Sahai, Former Controller General of IBM, shed light on the gradual progress of the mining industry. Earlier, during the event, Er M I Alam, Chairman of Jharkhand State Centre, IEI, extended a warm welcome to all dignitaries on the dais, members, and participants present at the Seminar.

A souvenir was released on the occasion in the august presence of dignitaries on the dais. At the end of the inaugural session, a vote of thanks was proposed by Er Jayant Chakraborty, the Organizing Secretary of the event. The inaugural session was followed by a Round Table Discussion, where Er A N Sahay, Ex-CMD, MCL, Er B R Reddy, Ex-CMD, SECL, Er P M Prasad, CMD, CCL, Er B K Jha, President, Hindalco, and Er R B Prasad, Director (Technical) CCL, thoroughly deliberated on the issues pertaining to the theme. In the first technical session, the keynote speaker and moderator of the session, Er Binay Dayal, Former Director (Technical), Coal India Limited, shared his views on the topic 'Key Thrust Areas for Sustainable Coal Mining' and explained the three pillars of sustainable development: Planet (Nature), People, and Profit (Economy). Further, he briefed the audience on the topic in the perspective of UN SDGs and the Intended Nationally Determined Contributions (INDC) goals to achieve sustainable mining. He also emphasized the key thrust areas and aspects such as Carbon Capture, Utilization, and Storage (CCUS) and the impact of thermal power efficiency on carbon emissions. Thereafter, Er A K Rana, Former Director (Technical), Central Mine Planning and Design Institute (CMPDI), presented a paper on the topic 'Comprehensive Approach to Sustainable Coal Mining' and talked about the utopian goals, a few facts, and the right perspective to approach sustainable practices in coal mining. He further deliberated on different technological solutions such as High Angle Conveyors, Technical Mine Closure, Social Mine Closure, Gravity Storage in Old shafts, and just transition, etc. Dr Siddhartha Roy, CMPDI, delivered his presentation on the highwall mining panel design using 3D modeling in Flac3D. He briefed the

audience on the basics of highwall mining and its use in the present scenario when the opencast coal mines are exhausting, and a lot of coal is trapped below the highwall or in between the mine boundaries of adjacent opencast coal mines. He briefly explained the process adopted to prepare the 3D model and how it can be used to analyze the Factor of Safety and displacement in the highwall panel along with the stability of rib and barrier pillars. Er Praveen Kumar, SAIL, presented a case study on the Catchment Area Treatment (CAT) plan at Saranda forest concerning the Kiriburu-Meghahatubm Iron ore mine of SAIL. He briefed the audience on various components and activities of CAT, different steps taken to control soil erosion, and the subsequent financial implications of such a study. Er Rijubrata Das, Komatsu, deliberated on the topic 'Underground Mechanization - Way Forward' and briefed the audience on various underground technologies of Komatsu, along with their applications and planning. He further presented a brief introduction to Battery Haulers and the cable-less multi-utility vehicle developed by the company, which can provide more mobility in the underground mining environment. He also emphasized the super section panel designs enabling continuous deployment of Continuous Miner (CM) and increasing the productivity of underground CM panels.

In the second Technical Session, the Keynote address was delivered by Er K V Reddy, Vice- President, Ultratech on the topic 'Environment, Social and Governance Practicing in Mining'. Dr Siddharth Agarwal, Assistant Professor, IIT-ISM Dhanbad, delivered lecture on Digitalization Model (Input –Output Model based approach) for improving productivity of open-pit coal mines vis-à-vis IoT based monitoring of energy consumption. Dr Deepa Taneja, MD, JM EnviroLab Private Limited, presented a paper on the topic of 'AI-based Air Quality Monitoring System'. The speaker explained that during mining, vegetation and soil are displaced and environment is polluted with sulphur dioxide, nitric oxide, carbon dioxide etc. Therefore, measuring and controlling all these contaminants is of paramount importance for sustaining the air quality, the speaker added. Er Sidhartha Jain, Thriveni Sainik Mining Private Limited, presented a paper on 'A MDO Founded on Innovation Works with a Principle of Integrating Community in its Operation'. Er Mithilesh Kumar Mishra, ICFAI University, Ranchi, presented paper on 'Performance of Different Aspect of Mining Practice for Sustainable Mining and elaborated that for mining industry, measuring, observing, monitoring and improvement of various environmental concert metrics are essential for sustainable frame work. Dr Manoranjan Hota, from JM EnviroLab Private Limited, presented a paper on the topic 'Mining Industries: Present and Future Environmental Challenges by 2025'. He emphasized that the mining industry needs to develop innovative technologies to meet increasingly complex challenges for environmentally sustainable mining. Er Prateek Kumar, Senior VP-Mines Operations at JH & CG, Hindalco, presented a paper on 'Mining at Bagru - Humming in Harmony with Nature'. He mentioned Bagru Hill Bauxite mines in Jharkhand as a benchmark site for eco-friendly and self-sustainable mining operations.

In the third technical session, the Keynote speaker, Er Ranjan Sahay, Former Controller General of IBM, delivered a lecture on the topic 'Roadway for Attaining Global Superiority in Metal Mining'. Dr B Paluchamy, from the Department of Mining Engineering at IIT-ISM, Dhanbad, presented a paper on 'Measurement and Analysis of Airborne Dust in Mechanized Underground Metalliferous Mine Working'. Er Sanjay Dutta, Senior Manager at Mining, MECON Limited, presented a paper on 'Sustainable Mining & the Role of New Technology'. Shri Anurag Ojha, Regional Manager at Odisha Mining Corporation (OMC) Limited, presented a paper on Digital Mining. Er S K Bharadwaj & Mamta Murmu – Meghatmuru Iron Ore Mines, SAIL-BSL, presented paper on 'A Sustainable Mining in Saranda Forest Division - Ecological Restoration and Land Reclamation of Mined out Area'.

During the fourth technical session, Professor Biswajit Paul, from the Department of Environmental Science and Engineering at IIT-ISM Dhanbad, delivered the theme address on the topic of "Regulatory & Legal Framework

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## Occupational Health Problem and Remedial Measures in Mining Operation

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which was chaired by Mr Anupam Bagchi, Head SHE, Hindalco Industries Limited. The second Technical Session was held on the topic 'Occupational Health Hazard due to Dust in Mining Operations and Remedial Measures', which was chaired by Prof Pratik Dutta, Department of Mining Engineering, IEST, Shibpur. The third technical session focused on the topic of dust pollution in the mining industry and its associated health effects. It was chaired by Dr Niroj Kumar Mohalik, Senior Principal Scientist at CSIR-CIMFR, Dhanbad. Dr Sunita Mishra, a Young Engineer Awardee, presented a paper on 'A Fault Diagnostic Approach to Identify Hidden Cracks in the Immediate Roof of Underground Coal Mines - An Overview'. Dr Arkajyoti Das, another Young Engineer Awardee, delivered a presentation on the topic 'Review of the Decline in Life Expectancy of Miners due to Dust and its Preventive Measures'.



In addition, several papers were presented during the technical sessions on emerging topics, including CFD modelling of coal dust explosion studies in a 20L explosion chamber, safely recovering mineral resources by optimizing stopping methods (a case study), mechanization involved in mines, the effect of abiotic stress factors on occupational stress and fatigue sustainability in underground coal mines, the role of geology in augmenting safety and health of mines and miners, dust pollution in the mining industry and its associated health effects, occupational health and hazards, and the role of occupational health services. One paper even discussed the treatment of sudden sensorineural hearing loss through a systematic review.

During the valedictory Function, Dr Santosh Kumar Ray, Senior Principal Scientist, CSIR-CIMFR, Dhanbad graced the occasion as Chief Guest. The session was presided by Mr Safikul Islam, Chairman, Durgapur Local Centre, IEI. Mr Gajanan Harihar Karkare, Member, MNDB, IEI briefed the proceedings of technical sessions. Mr Niroj Kumar Mohalik, Senior Principal Scientist, CSIR-CIMFR, Dhanbad delivered the concluding remarks.

The recommendations emanated from the two-day deliberations are as follows.

*Elimination of hazard at source should be of prime importance; If elimination is not possible, then minimizing it is crucial; Effective control of occupational health hazard in mines is strongly required; All records should be digitized for efficient record-keeping; Implementing engineering controls in design aspects is another essential aspect to consider; Administrative controls, monitoring and measures, safety awareness campaigns, participation management are other important focal points that need to be emphasized and concentrated.*

Mr M K Biswal, Organizing Secretary of the National Convention proposed the vote of thanks.

## Engineering the Cities of the Future

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On 28<sup>th</sup> February, different Board appointed Committees such as Governance Committee, Nominations Committee, WFEO U N Relationships Committee (WURC), President Advisor's Group Meetings took place. Mr Navinchandra Vasoya attended the Governance Committee Meeting & President Advisor's Committee Meeting as its Member; Mr S S Rathore attended the Nomination Committee Meeting as its Member and Mr Ashok Kumar Basa attended the WURC Committee Meeting as its member. Besides, Mr Ashok Kumar Basa also attended the Finance Committee Meeting & Executive Board Meeting as a Member of Board, WFEO.

On 1<sup>st</sup> March, the Strategic Planning Committee (SPC) Meeting was chaired by Mr Ashok Kumar Basa, who presented the Strategic Plan along with updated data up to February 2023. Various suggestions were put forth by members of the committee, and Mr S S Rathore and Mr Navinchandra Vasoya attended the meeting as observers. Mr S S Rathore also attended the STC Chairs Committee as a Member, where the Indian Delegation actively participated in discussions related to the work of their Committee, future plans, interaction with UNESCO groups, and WEC '23' in Prague. Additionally, the WFEO-CIC, hosted by IEI and chaired by Mr S S Rathore, was commended for its outstanding performance.

On 1<sup>st</sup> March, following lunch, the WFEO Executive Council Meeting was convened and continued throughout the day until evening. Mr Navinchandra Vasoya and Mr S S Rathore actively participated in various discussions. Mr Ashok Basa presented the strategic plan of WFEO in the meeting, incorporating the suggestions provided by different members earlier in the day, which was well received by the Council.

On 2<sup>nd</sup> March, the International Conference on "Engineering the Cities of the Future" was inaugurated with a keynote address delivered by the Assistant Director-General for Natural Sciences at UNESCO. Subsequently, distinguished personalities and experts delivered presentations on various themes including: (a) Energy and raw material dependencies of urban centers, (b) Major urban challenges and disaster prevention, (c) Infrastructure and demographic challenges, (d) Mobility and communication: Challenges for sustainable urban environments, and (e) The role of women engineers in Asia, Africa, and LATAM.

On 3<sup>rd</sup> March, the Conference continued with presentations from about 16 individuals on the following topics: (a) The cities of the future, (b) Urbanism: Engineering, Architecture, Sustainability & new green spaces in cities, and (c) Water in future cities. The event was concluded with a round table discussion, which included representatives from various international organizations. The Indian delegation actively participated in the discussion.

On 4<sup>th</sup> March, the World Engineering Day for Sustainable Development was celebrated with an opening remark by Prof. José Vieira, President of WFEO. Ten keynote speakers, selected from different areas of specializations, delivered informative talks. The event concluded with closing remarks from Mustafa B Shehu, President-Elect of WFEO.

During their visit, the Indian delegation had an opportunity to present a hard copy of the January 2023 issue of IEI News to Prof. José Vieira, President, WFEO. The issue contained a brief report of the WFEO-CIC session that took place on 17<sup>th</sup> December 2022. This session was organized concurrently with the 37<sup>th</sup> Indian Engineering Congress, which was held in Chennai, India.

## An Application and Performance Analysis of Refractories in Process and Thermal Power Plant

The All India Seminar on the theme of **Application and Performance Analysis of Refractories in Process and Thermal Power Plant** was held on 17-18 December 2023 at **Bokaro Steel City Local Centre, IEI** under the aegis of the Mechanical Engineering Division Board [MCDB], IEI. The Chief Guest of the event was Shri Amrendu Prakash, Director In-charge, SAIL, Bokaro Steel Plant, who inaugurated the function by lighting the lamp. In his address, he emphasized the importance of brainstorming and exchanging ideas for the availability of indigenous refractories for use in steel making and other industries to ensure their uninterrupted supply. He also stressed the use of good knowledge management practices to resolve the challenges



in the refractory sector. The Guest of Honour of the event was Shri B K Tiwari, Executive Director (Works) SAIL, Bokaro Steel Plant, who stressed the need for optimization and re-utilization of refractory usage in steel making. He emphasized the need to increase the refractory lining life and revisit the same in the present context. Shri N P Srivastava, Chairman, Bokaro Steel City Local Centre, IEI, welcomed the dignitaries and participants and deliberated on the challenges and opportunities for the refractory industry in India. He reiterated that the steel fraternity and refractory professionals need to work together to create synergy in handling the challenges of the sector, i.e. to reduce dependence on imports and cut production costs, to achieve the National target of 300 MT of steel by 2030.

The Organising Secretary of the event, Shri V P Upadhyay, Former Chief General Manager at SAIL's Bokaro Steel Plant, spoke about the need for raw material security in refractory production in his keynote address. He mentioned that since most of our raw materials for refractories are outsourced, the inflow of raw materials has been disrupted due to several restrictions, which has affected the raw material security for refractory

manufacturing. A Souvenir was released on the occasion by the Chief Guest and dignitaries. The seminar featured several technical papers on the theme and various sub-themes. A total of 23 papers were presented and published in the souvenir. Over 70 delegates attended the seminar, and a range of topics were covered, including: The importance of spinel bricks in steel ladle processes; Replacing module area with high alumina refractory bricks in recuperative zones of reheating furnaces; The procurement process of refractories at Bokaro Steel Plant; Development and application of alumina zirconia castable for tuyere stock assembly of blast furnace; Development of A-Z free flow castable suitable for compensator and tuyere stock of blast furnace of BSL to increase the hot blast temperature; Taphole clay for blast furnaces – an overview of raw material, process, and troubleshooting; Designing aspects and use of monolithic refractory in blast furnaces; Improving lining life of 300 T converter in BSL/SAIL; Reducing heat loss through modified blast furnace tuyeres and the role of refractory in improving energy efficiency and reducing carbon footprint; The refractory industry in the Indian perspective. Overall, the seminar provided valuable insights into refractory production, with a diverse range of topics covered in the technical sessions.

The deliberations at the Seminar resulted in several recommendations, including:

*Switching from MCB bricks to indigenously developed alumina-spinel bricks in ladle sets to achieve self-reliance and reduce India's dependence on China for raw materials. These bricks offer higher performance than MCB bricks in ladle sets. Using high alumina bricks (62% alumina) in the recuperative zone of reheating furnaces, which yields positive results. Developing castables containing zirconia to replace conventional castables in tuyere stock assembly, which results in higher abrasion resistance, increased life of tuyere stock, and better temperature control, resulting in higher yield and productivity. Applying nickel-chromium alloy coating at the nose of tuyere stock assembly to prevent erosion and enhance life efficiency, thereby reducing downtime of the blast furnace. Utilizing waste refractory and generating wealth from recovery and selling of used refractory material to reduce carbon footprint and conserve energy. Overall, these recommendations aim to improve the efficiency and sustainability of refractory production in India.*


## From the President's Desk.....

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education around natural disaster preparedness. By educating people about the risks and how to prepare for them, we can help prevent the loss of life and reduce the impact of natural disasters.

In conclusion, natural disasters such as earthquakes can cause significant damage and loss of life. As engineers, we have a responsibility to use

our expertise to mitigate their impact. By utilizing advanced engineering techniques and technologies, promoting education and awareness, and working collaboratively, we can build a safer and more resilient future. Let us stand together in solidarity with the victims and their families, and continue to work towards building a safer and more sustainable world.



### IEI - Springer Journal

 <p>ISSN Print: 2250-2149 ISSN Online: 2250-2157 SCOPUS Indexed <b>Series A</b> CiteScore 2021: 1.6 Google Scholar h5 Index 2021: 16</p>	 <p>ISSN Print: 2250-2106 ISSN Online: 2250-2114 SCOPUS Indexed <b>Series B</b> CiteScore 2021: 1.6 Google Scholar h5 Index 2021: 17</p>	<p><b>Free e-access of Journal papers for all Corporate Members of IEI log-in from <a href="http://www.ieindia.org">www.ieindia.org</a></b></p>	 <p>ISSN Print: 2250-0545 ISSN Online: 2250-0553 SCOPUS Indexed <b>Series C</b> CiteScore 2021: 2.3 Google Scholar h5 Index 2021: 20</p>	 <p>ISSN Print: 2250-2122 ISSN Online: 2250-2130 SCOPUS Indexed <b>Series D</b> CiteScore 2021: 1.6 Google Scholar h5 Index 2021: 13</p>	 <p>ISSN Print: 2250-2483 ISSN Online: 2250-2491 SCOPUS Indexed <b>Series E</b> CiteScore 2021: 1.3 Google Scholar h5 Index 2021: 11</p>
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## Energy Efficiency in Core Industries

**Jharkhand State Centre, IEI** organized All India Seminar on the theme **Energy Efficiency in Core Industries** during 14-15 January 2023 in association with ISHRAE, Ranchi Chapter under the aegis of Mechanical Engineering Division Board [MCDB], IEI. The All India Seminar aimed to cover different aspects of present and future developments and the latest emerging technologies, providing an excellent opportunity and a common platform for mutual sharing of knowledge, expertise and experience amongst all the



stakeholders such as, designers & suppliers, academicians, researchers, engineers, consultants, architects, students and builders associated with the long term improvements in the energy efficiency of HVAC & R Systems. The program aimed to understand and evaluate the importance of energy savings in the HVAC & R industry. The objective of the program was to educate the engineers on the latest developments in the HVAC & R industry. Some of the significant fields addressed in the two day seminar were Energy Efficiency in HVAC & R Systems; Challenges for HVAC & R Industries; Use of Alternative Energy sources for HVAC & R Processes; Automation benefits in Industrial AC Systems for Optimizations and; Field Experiences/Case studies. Er J K Jha, Chief General Manager (Civil & Architecture), MECON Limited, Ranchi graced the occasion as Chief Guest and Er S Ganesh, Former Senior General Manager (FSPD), MECON Limited, Ranchi was the Guest of Honour. Er S.P Sharma, Former General Manager, NTPC was the Keynote speaker. Er M R Kumar, Past Honorary Secretary, Jharkhand State Centre, IEI; Er Prakash Kumar, President, ISHRAE, Ranchi Chapter & Shri Anand Trivedi, RD (East) ISHRAE were also present on the occasion. The programme was attended by more than 100 eminent engineers from various disciplines and organizations namely MECON, CCL, CMPDIL, SAIL, HEC and Jharkhand State Government. Several Past Chairmen, Past Honorary Secretaries, members of Executive Committee of the host Centre also attended the event.

The programme started with the welcome address delivered by Er M I Alam, Chairman, Jharkhand State Centre, IEI. He briefed the august gathering about the importance of energy efficiency in HVAC & R Industries and opined that every citizen of the India must aware of how to use energy efficiently how to save the energy for their own future safety and many more ways while using AC in their homes. This was followed by the speech delivered by Er Prakash Kumar, President ISHRAE Ranchi Chapter and Shri Anand Trivedi RD (East) ISHRAE. The Keynote speaker, Er S P Sharma, Former General Manager, NTPC delivered a presentation on the recycling of household wastes and emphasized other areas of household wastes that can be recycled by employing modern technologies. The Chief Guest, Er J K Jha, addressed the gathering and gave insight into Green Buildings and the design of buildings to reduce the use of air conditioners. He further stated the various initiatives he had taken in designing of buildings to reduce energy consumption, based on his practical experience in the field. Er S Ganesh discussed about the role of controlling equipment of air pollutions and shared his practical experience by adopting the methodology used in different projects in steel plants. At the end, Er M R Kumar, Past Honorary Secretary, IEI, JSC proposed the vote of thanks.

Several technical sessions were held, during which multiple presentations and lectures were delivered by various experts in their respective fields. Among these were Er D K Mishra, DGM (I&PC), MECON Limited, Ranchi, who gave a presentation on the 'Application of intelligent MCC(i-MCC) in HVAC System and Power & Blowing Station'; Er Anand Trivedi, DGM (U&S), SAIL-CET, Ranchi, who delivered a lecture on 'Increasing Energy Efficiency of Iron Making Process by Employing TRT'; and XIPT students who presented a paper on 'Global Warming and Climate Change'. Additionally, Er S P Sharma, Former GM, NTPC, gave a lecture on 'Recycling House Waste for a Clean Environment', while Er Suresh Kumar, AGM (Architecture), MECON, Ranchi, delivered a lecture on 'Energy Efficiency in the Development of Infrastructures'. Armacell also delivered a presentation on 'Passive Fireproofing Solutions for Buildings'. Dr Kirti Avishek, Faculty, BIT MESRA, presented on 'Municipal Solid Waste Management using GIS for Ranchi City', and Er Pramoda Kumar Behera, General Manager, HEC, spoke on 'Solar Energy Initiatives for Agricultural Purposes'. Dr V V S Pinakapani, Senior GM (Environment), MECON Limited, Ranchi, gave a presentation on 'Healing Ozone', while Dr Anwar Shahab, Surgeon (Ispat Hospital), Ranchi, spoke about 'Ozone Layer Ultraviolet Radiation and its Ill Effect'. Lastly, Harun Ansari, Senior Manager, MECON Limited, Ranchi, delivered a presentation on 'Coke Oven Emissions'.

## Sustainable Development of Mines – Role of Mining Technology

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Reforms." The Seminar also featured presentations from several other distinguished professionals. Er Jayant Chakroborty, Regional Director of CMPDI Ranchi and Organizing Secretary of the Seminar, presented a paper on "Technology Upgradation Trend in Higher Capacity Rear Dumper for Mega Open Cast Coal Mining Projects." Dr Manoj Kumar, Senior Manager of Mining at BCCL, Dhanbad, presented a paper on "GHG Emission Factor for Cutting Machines in Opencast Mines." Er S K Nag, AGM (Mines) HCL, presented a paper on "Urban Mining: A Way Forward for Sustainability in Copper Mining." Additionally, Md Saifullah Ansari, Director of Mines at DGMS, Dhanbad, discussed the latest rules and regulations regarding mine safety.

The valedictory session featured several notable attendees, including Er A N Sahay, Former CMD, MCL, Er Ranjan Sahai, Ex. Controller General, IBM, Er A K Saxena, BOG, SDF, IEA, and Mr M R Kumar, Past Honorary Secretary, IEI, JSC. The concluding remarks were given by Er A K Saxena, and the welcome address was delivered by Er M I Alam, Chairman of JSC, IEI. Finally, Er M R Kumar proposed the vote of thanks.

The Seminar produced several key recommendations aimed at improving the sector's contribution to the country's GDP growth.

*The first recommendation was to attract investment in exploration in order to increase mining activities. The second recommendation focused on operationalizing the auctioned blocks, which could help ensure efficient use of resources. Applied R&D in the mining sector was identified as a pressing need, and the development of beneficiation technology and eco-friendly equipment was also highlighted as a significant issue. The Seminar emphasized the importance of supporting the steel industry and suggested several steps in this regard, including exploring deep-seated coking coal reserves, developing advanced technology for coal washers to improve the beneficiation of coking coal, and managing the Jharia Fire. In addition, incentivized use of low-grade iron ore, facilitation of single window statutory clearances, and the promotion of urban mining were also recommended. Finally, the Seminar suggested that the mining industry explore the use of AI and automation to increase efficiency and productivity while minimizing environmental impact. The experts also recommended obviating the need for land acquisition to carry out underground mining. In conclusion, the Seminar provided valuable insights and recommendations for the mining industry to enhance its contribution to the country's GDP growth, promote sustainable development.*



# The Institution of Engineers (India)

## IEI YOUNG ENGINEERS AWARD 2023-2024

### Notification

The Institution of Engineers (India) is a multi-disciplinary professional body of engineers with 15 engineering disciplines and over 9,00,000 members in India and abroad. The Institution was established in 1920 and was incorporated by Royal Charter in 1935. It has been in the forefront of engineering profession addressing the socio engineering problems for progress of the country. IEI functions among professional engineers, academicians, research workers to update their professional knowledge through continuous professional development. With its large international linkages and a network of 125 Centres in India and Six Overseas Chapters, the Institution has built up wide reach and large infrastructure to meet its objectives of promoting engineering in all aspects.

With a view to promote the pursuit of excellence in the field of engineering, IEI has instituted 'IEI Young Engineers Award'. The Award consists of a Plaque and a Certificate. The purpose of the Award is to recognize outstanding achievements/contributions made by young engineers in engineering research, excellence in engineering technology development, technology transfer, etc. Any engineer citizen of India not older than 35 years of age as on March 31, 2023 is eligible for the Award. The IEI Young Engineers Award is presented to awardees for all the 15 Engineering Divisions of the IEI during the respective National Conventions. The awardees attending the National Convention will be provided with free accommodation & their traveling expenses (AC-3 Tier train fare by shortest route) will be reimbursed on production of original documents.

**The last date of receipt of applications for IEI Young Engineers Award 2023-24 has been extended. The cut-off date will be intimated in the next issue.**

The Application Proforma may be downloaded from IEI website (<https://www.ieindia.org>). Soft copy of the filled-in application proforma should be forwarded to [award@ieindia.org](mailto:award@ieindia.org). Further, six copies of the duly filled application form, along with all supporting documents, endorsed by appropriate authority should be sent to the below mentioned address:

#### Director (Technical)

The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700020

The envelope containing the application should be superscribed at the top as 'IEI Young Engineers Award 2023-2024' and name of the engineering division under which the applicant desires to be considered for the Award.

### FORM IV

(See Rule 8 of The Registration of Newspapers (Central) Rules, 1956)

Statement about ownership and other particulars about IEI News of The Institution of Engineers (India) to be published in the first issue every year after the last day of February

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I, Maj Gen MJS Syali, VSM (Retd), Secretary and Director General of The Institution of Engineers (India), hereby declare that the particulars given above are true to the best of my knowledge and belief.

Dated : March 01, 2023

Sd/-  
Maj Gen MJS Syali, VSM (Retd)  
Signature of Publisher



# IEI Celebrates Energy Conservation Day

The Energy Conservation Day was celebrated by the Institution on 14 December 2022. Brief accounts of celebration as received from various Centres are reported hereunder.

## STATE CENTRES

### Goa

The Goa State Centre of The Institution of Engineers India (IEI) observed the Energy Conservation Day 2022 on 14 December 2022, in Goa. Mr Gajanan Harihar Karkare, Chairman of the Goa State Centre, IEI, extended a warm welcome to the attendees and highlighted the significance of energy conservation. Distinguished guest speakers Mr Lincoln Araujo, a BEE Certified Engineer, and Mr Hemant Karmali of Practical Solutions, Novergy Energy Solutions, Udaipur, graced the event. Mr Araujo expounded on energy conservation projects and sustainable buildings while Mr Karmali elaborated on various solar photovoltaic units that generate electricity. The event was attended by 41 members, and Mr Austin Socorro Rodrigues, Honorary Secretary of the Goa State Centre, IEI, delivered the vote of thanks, concluding the event on a high note.



### Kerala

The Kerala State Centre of The Institution of Engineers (India) (IEI) observed Energy Conservation Day 2022 on 14 December 2022, in Thiruvananthapuram. Mr N Rajkumar, Past Chairman of the Kerala State Centre, IEI, extended a warm welcome to all the attendees. The keynote speaker for the event, Prof V K Damodaran, IEEE (NY) and Founder Director of Energy Management Centre, Kerala, delivered a lecture on the topic "Moving Towards Carbon Neutrality: The Need to Redefine Conservation." The event concluded with a vote of thanks from Mr Roy Mathew, Honorary Secretary of the Kerala State Centre, IEI.



### Madhya Pradesh

Madhya Pradesh State Centre, IEI observed Energy Conservation Day 2022 on 14 December 2022 through online mode. Convener of Programme, Mr Rajesh Bisaria, Chairman, Madhya Pradesh State Centre, IEI welcomed the Guest Speakers of the session Mr Gyanendra Saxena, Certified Energy Auditor, BEE, Government of India; Mr Prashant Chaturvedi, Former Secretary, Madhya Pradesh Electricity Regulatory Commission and Former OSD, Energy Department, Government of Madhya Pradesh and the virtual audience. Mr Saxena elaborated the role of Energy Audit in Energy Conservation. Mr Chaturvedi briefed about the challenges and opportunities in energy conservation in India.

### Meghalaya

On 14 December 2022, the Meghalaya State Centre, IEI observed Energy Conservation Day 2022 at Shillong. Mr Ezekiel Lyngdoh, Chairman of Meghalaya State Centre, IEI, extended a warm welcome to the dignitaries present at the event and engaged them in a discussion about various aspects of energy conservation, highlighting the benefits of using energy-efficient devices for sustainable development. The Keynote speaker of the

event, Mr J B Poon, Past Chairman of Meghalaya State Centre, IEI, spoke on various aspects of energy conservation and energy efficiency, emphasizing the need for the sustainable use of energy resources. He described energy conservation as a design and practice that adopts the use of less energy and encouraged budding engineers to design smart products and services to reduce energy consumption in the future. In conclusion, Mr Mcfurrson Mawlieh, Honorary Secretary of Meghalaya State Centre, IEI, proposed a vote of thanks.

### West Bengal

The West Bengal State Centre of The Institution of Engineers (India) celebrated Energy Conservation Day 2022 on 14 December 2022, in Kolkata. Prof (Dr) Sadhan Chandra Roy, a council member of IEI, greeted the delegates and participants.



Dr Subimal Roy Barman, Convener of the Electrical Engineering Divisional Sub-Committee, West Bengal State Centre, IEI, introduced the keynote speaker, Prof (Dr) Bishaljit Paul, Head, Department of Electrical Engineering, Narula Institute of Technology. Dr Paul gave a lecture on energy conservation, highlighting that it involves adopting energy-efficient behaviours and habits to reduce the usage of energy, which is critical to mitigating climate change. He also emphasized the importance of energy conservation in creating a sustainable future. Finally, the event concluded with Prof (Dr) Raju Basak, Honorary Secretary of the West Bengal State Centre, IEI, delivering a vote of thanks.

## LOCAL CENTRES

### Chandrapur

On 14 December 2022, the Local Centre of IEI in Chandrapur observed Energy Conservation Day 2022. The event's speaker, Professor Shrikant Kulkarni from RCERT, Chandrapur, focused on the importance of energy conservation in protecting the environment from various pollutants. He emphasized the role of energy conservation in building design and the significance of energy audits in buildings. Mr Chetan Karekar, Assistant Professor at RCERT, Chandrapur, highlighted the role of energy conservation in daily life, while Mr M K Shende, Associate Professor in the Department of Civil Engineering at RCERT, Chandrapur, discussed various methods for saving energy and reducing consumption costs, water, and natural resources. Mr Madhukar Krushnaji Shende, Chairman of the Chandrapur Local Centre, IEI, welcomed all the participants earlier in the event, while Mr Yogendrasingh D Parihar, Honorary Secretary of the Chandrapur Local Centre, IEI, proposed the vote of thanks at the end.

### Kochi

The Kochi Local Centre of IEI commemorated Energy Conservation Day 2022 on 14 December 2022 in partnership with the Centre for Environmental Efficiency, with a webinar held on this occasion. The event's speaker was Dr M P Sukumaran Nair, former Council Member of IEI. Mr Salahudheen P A, Chairman of Kochi Local Centre, IEI, delivered the welcome address. Dr M P Sukumaran Nair explained the differences between Green Hydrogen and conventional Hydrogen production methods used for various industrial

applications. He also elaborated on different categories of hydrogen such as Blue Hydrogen, Brown Hydrogen, etc. The speaker emphasized the need to reduce carbon emissions by eliminating carbon generation during the production of Green Hydrogen. This can be done by electrolyzing water into hydrogen and oxygen using electrical power from non-conventional energy sources. At the end of the event, Mr Babu K S, Honorary Secretary of Kochi Local Centre, IEI proposed the vote of thanks. The webinar session led to a recommendation for the gradual implementation of Green Hydrogen in the industrial sector and a suggestion for further research on its potential use as an alternative fuel for automobiles in the future.

### Kozhikode

The Kozhikode Local Centre, IEI, commemorated Energy Conservation Day 2022 on 18 January 2023 in Kozhikode. A Technical Talk was organized on this occasion. The gathering was welcomed by Mr K Shaju, Honorary Secretary of the Kozhikode Local Centre, IEI. The event's keynote speaker, Mr Sunilkumar V K, Former Deputy Chief Engineer (Electrical) of the Kerala State Electricity Board Limited (KSEBL), delivered a lecture on the topic of 'Global Warming Mitigation through Energy Conservation Measures'. He emphasized global warming mitigation and adaptation, climate change mitigation, the numerous benefits of energy efficiency, and the increasing concentration of greenhouse gases. Mr C Jayaram, Immediate Past Honorary Secretary of the Kozhikode Local Centre, IEI, offered the vote of thanks at the end of the event.



### Mangalore

Mangalore Local Centre, IEI commemorated Energy Conservation Day 2022 on 20 December 2022, in Mangalore. Dr Manu B, Honorary Secretary of the Mangalore Local Centre, IEI, welcomed the attendees and introduced the Chief Guest, Mr Aruna Poojary, Technical and Training Head of Advait Hyundai in Karnataka. The event was presided over by Mr K Balakrishna, Past Chairman of the Mangalore Local Centre, IEI. During the event, Mr Aruna Poojary delivered a presentation on various topics such as the emission system, BS VI norms, eco-friendly vehicles, and EV charging technology.



### Munirabad

Munirabad Local Centre, IEI, in collaboration with Proudhadevaraya Institute of Technology (PDIT), Hosapete, celebrated Energy Conservation Day 2022 on 15 December 2022. Dr H Ramesh, Executive Engineer at KPTCL, Bellar, graced the occasion as the Chief Guest. Prof Madhvaraj K, Assistant Professor in the Department of Electrical and Electronics Engineering at PDIT, Hosapete, delivered the keynote address and emphasized the importance of energy conservation. He stated that energy conservation is a crucial aspect of human existence. Mr K Nanjappa, Honorary Secretary of Munirabad Local Centre, IEI, also delivered a lecture on the topic.



### Nagpur

Nagpur Local Centre of the IEI observed Energy Conservation Day 2022 on 20 December 2022, with



a workshop that aimed to raise awareness on the issues of the energy crisis and its solution through energy conservation. Delegates from MOIL, PGCIL, BSNIL, MSEDCL, NEERI, MEDA, PKV, Akola, Nagpur, and students from different engineering colleges actively participated in the workshop. The event was inaugurated by Hon'ble Shri V S Sirpurkar, Retired Justice, Supreme Court, who expressed his views on power saving and the quality of power to consumers. Dr V K Khare, Former Director of PGCIL, Nagpur & Former Director, Personal Management, Administration Department of Uttar Pradesh Government, was the Chief Guest. He emphasized the importance of using more solar power to fill the gap between demand and supply, reduce energy costs, air pollution, and create a clean environment. The workshop also included a case study on energy conservation presented by NEERI, Nagpur, PKV, Akola, MOIL, BSNL, and others. Dr Jugalkishor F Agrawal, Honorary Secretary of Nagpur Local Centre, IEI, proposed the vote of thanks at the end of the event.

### Pune

Pune Local Centre, IEI marked Energy Conservation Day on 14 December 2022, by organizing a webinar. Dr Sanjay Bhaskar Zope, Chairman of Pune Local Centre, IEI, welcomed all attendees to the online event. Mr Munot Vipin Vasantlal, Honorary Secretary of Pune Local Centre, IEI, introduced the Keynote speaker, Mr Mohan Satpute, Deputy General Manager of SKF India. During his lecture, Mr Satpute highlighted the key objective of optimal energy utilization by individuals and stressed the importance of following the rules and regulations implemented by factories, organizations, and the Government of India to support energy efficiency.

### Salem

The Salem Local Centre of The Institution of Engineers India IEI in association with the School of Energy & Environmental Sciences, Periyar University, observed Energy Conservation Week from 8 December 2022 to 14 December 2022. The week-long event aimed to raise awareness about energy conservation practices and their importance. Dr D V Krishna Rao, Assistant Professor, Department of Energy and Environment, National Institute of Technology Tiruchirapalli, delivered a technical talk on 'Innovative Practices in Energy Management.' The Guest Speaker of the event, Mr R Neelamegan, a BEE Certified Energy Manager & Energy Auditor, Consultant, Quality Quest Engineers, delivered a lecture on 'Importance of Energy, Its Conservation, and Efficiency.' Prof (Dr) R Jagannathan, Vice-Chancellor of Periyar University, Salem, explained that energy conservation allows the technique for using lesser energy by way of disposal of wastage and advancement of productivity. Earlier, Mr N Senthil Kumar, Honorary Secretary of Salem Local Centre, IEI, welcomed the gathering. At the end of the event, Dr K Murugesan, Organizing Secretary, and Professor and Head, Department of Environmental Science, Periyar University, Salem, proposed the vote of thanks.



### Thanjavur

On 14 December 2022, the Thanjavur Local Centre of The Institution of Engineers (India) celebrated Energy Conservation Day 2022 with a virtual event on the topic of 'Energy Conservation Day - Reconstructed Energy Market'. The event featured Dr A Ragavendiran, Assistant Professor (SI Grd) at AVC College of Engineering in Mayiladuthurai, as the guest speaker. During his presentation, Dr Ragavendiran emphasized the need for restructuring the electricity industry, with a focus on finding a balance between vertical integration and direct liberalization of wholesale and retail markets. This approach, he argued, would be crucial for achieving sustainable and efficient energy systems in the long term. The event began with a welcome address from Mr E Jayakumar, Chairman of the Thanjavur Local Centre, IEI, who also introduced the guest speaker. At the end of the event, Dr J

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# News-in-Brief

The following are the brief account of Technical Activities organised by various Centres

## STATE CENTRES

### Andaman and Nicobar

Observed World Habitat Day 2022 on 7 October 2022, at Port Blair. with the theme 'Mind the Gap, Leave No One and Place Behind'. Mr Thomas Varghese, the Divisional Forest Officer (DFO) of the Department of Environment & Forest, was invited as the Guest Speaker to deliver a lecture on the theme. The event was moderated by Mr Arun Bepari, from Shapoorji Pallonji Private Limited, who introduced Mr Varghese, sharing his exceptional accomplishments.

Observed World Standards Day 2022 with the topic 'Protecting the Planet with Standards' on 18 October 2022, at Port Blair. The event was graced by the presence of Mr Biji George, Former GM of Suryachakra Power Plant, Bambooflat, South Andaman, who delivered an insightful lecture. Mr Arun Bepari, from Shapoorji Pallonji Private Limited, moderated the event and introduced the Guest Speaker, highlighting his impressive achievements.

### Kerala

In association with IEEE, CSI, INSARM, ASI, SSI, ISTD, SAME, IITArb, PMI, and IETE, a technical talk was organized on 7 December, 2022, on the topic 'Sustainable Transportation System.' The event featured a lecture by Prof. Samson Mathew, Director of NATPAC, who delivered an informative talk on the subject.

Another technical talk was held on 28 December 2022, in collaboration with the same organizations, this time on the topic of 'Printing Technology.' The speaker for this event was Mr Saji S Nair, the owner of Sujilee Printers, located in Chathannor, Kollam.

Furthermore, a technical talk on 'HAM Radio – The Hobby of 21<sup>st</sup> Century' was organized in association with the aforementioned organizations on 21 December 2022. Mr. D Joseph, Patron of the Radio Amateur Society of Ananthapuri (RASA), was the featured speaker who gave a lecture on this topic.

### Punjab & Chandigarh

B A M Khalsa College in Garhshankar, in association with the Department of Computer Science and Applications and Innovation Cell, celebrated World Standards Day 2022 on 14 October 2022. The event, held online, was themed 'A Shared Vision for a Better World'. Dr Sanjay Bahal, the Vice Chancellor of Indus International University, Bathu, District UNA, Himachal Pradesh, was the Chief Guest at the event. In his speech, he elaborated the significance of standards in our daily lives and how they can assist in overcoming challenges. He said that standardized ideas and methods can help in conserving energy, enhancing water and air quality, and creating a better living environment. Dr Kajal Rai, Assistant Professor at G L Bajaj Institute of Technology and Management in Greater Noida, was the Keynote Speaker of the event.

### Telangana

World Habitat Day 2022 was observed on 3 October 2022, through online mode. Mr M Devanand, Chief Engineer of GHMC, Hyderabad, was the Chief Guest of the event and delivered a lecture on the theme of the day "Mind the Gap, Leave No One and Place Behind."

Organized Dr John Amruthraj Murray, First Endowment Lecture on 16 October 2022 through online mode. Chief Guest of the event, Prof Dr D Babu Rao, Former Professor and Head, Department of Civil Engineering, University College of Engineering, Osmania University delivered lecture on the theme 'Band Drain Technology for on-share Gas Terminal Near Kakinada'.

Organized Er R L Raju 8<sup>th</sup> Endowment Lecture on 10 October 2022 through online mode. Dr I Satyanarayana Raju, Council Member, IEI and Chairman,

RDC, IEI delivered lecture on the topic 'Application of Geo-Synthetics in Irrigation Projects'.

World Food Day was organized on October 16, 2022, through online mode. Dr G Bhanuprakash Reddy, Director Grade Scientist at ICMR - National Institute of Nutrition, was the Chief Guest of the event and delivered a lecture on the topic "Balanced Diet for Health and Nutrition Security." Prof (Dr) T V Hymavathi, Senior Professor (Retd) from the Department of Food and Nutrition at Professor Jayashankar Telangana State Agricultural University (PJTSAU), was the Guest of Honour and delivered a lecture on the topic "Safer Food Better Health."

Organized Dr N V R L N Rao 5<sup>th</sup> Endowment Lecture on 26 October 2022 through online mode. Dr Anil Joseph, President Elect, IGS, Council Member, IEI and Managing Director, GEO Structural Private Limited delivered Endowment Lecture on the theme 'Engineering Challenges Behind Demolition of Supertech Twin Tower, Noida'.

### Uttarakhand

Hosted the National level Safety and Quality Convention-2022 and Quality Innovation Award-2022 on 24-25 September 2022. The Convention, jointly organized by Safety Quality Forum, IEI and Disaster Awareness and Management Forum, IEI, focused on the topic 'Enhancing Productivity through Quality Improvements, Safety Intervention & Cost Reduction'. Esteemed guests who attended the event included Chief Guests Mata Mangla ji and Bhole Maharaj ji, Hans Foundation Dehradun, Guest of Honour Shri Ganesh Joshi, Hon'ble Minister of Agriculture & Dairy Development, Soldier Welfare, Government of Uttarakhand, Special Guest Mr Narendra Singh, Past President IEI, Mr R K Vishnoi, CMD THDC India, Dr Hemant O Thakare, Immediate Past President, IEI, Mr Sandeep Singhal, MD, UJVNL, Mr Anil Kumar, MD, UPCL, Mr V B Singh, Former Vice President, IEI, Mr S C Nautiyal, MD, Directorate of Industries, Uttarakhand, and Mr Pankaj Garg, NHA, among other dignitaries.

## LOCAL CENTRES

### Gwalior

On 14 October 2022 hosted World Standards Day 2022 on the theme 'Shared Vision for a Better World'. The event was organized with the aim of highlighting the importance of standards in various fields and their role in improving the quality of life. The Chief Guest of the event, Dr C S Malvi, Professor, Department of Mechanical Engineering, Madhav Institute of Technology & Science (MITS), Gwalior, delivered a lecture on various topics including tolerances, fits, bilateral trade, and internet working protocols. The event featured several distinguished speakers who provided insights into different aspects of standards. Col. A S Bais (Retd), a speaker at the event, elaborated on the importance of standards in ensuring ease of working and explained the methodology of formulating new standards. Mr Ranveer Singh, PWD Engineer, discussed the star rating system, its classification, and power consumption in various electrical equipment. He also explained about the Bureau of Energy Efficiency Standards and Energy Meters. Mr Surendra Chourasia, MITS, highlighted the significance and practical importance of standards by citing examples such as the universal size of ATM cards and delivery-based needs of standards to satisfy both suppliers and buyers.

Gwalior Local Centre, IEI also hosted World Habitat Day 2022 on 3 October 2022, with the theme 'Mind the Gap. Leave No One and Place Behind'. The event was aimed at creating awareness about the importance of access to safe and affordable housing and addressing issues related to urbanization and sustainable development. The Chief Guest of the event was Col A S Bais (Retd). Dr P K Singhal, MITS, Gwalior, Dr Rajendra Singh Kushwah, and Mr Vikas Mahore were the speakers at the event.

## Kanchepuram

Organized Guest Lecture in association with Department of Civil Engineering, School of Infrastructure, B S Abdur Rahman Crescent Institution of Science and Technology, Vandalur, Chennai on the topic 'Importance of Geotechnical Engineering – Need for Learning' on 24 November 2022 at Chennai. Chief Guest of the event, Dr V Balakumar, Senior Geotechnical Engineering Consultant, Chennai delivered lecture on the topic and explained geotechnical properties of soil and design of suitable foundation. During his presentation, Dr Balakumar shared case studies that demonstrated the consequences of improper geotechnical investigations, which can lead to structural failures.

## Nagpur

Organized Royal Charter Day 2022 on 10 September 2022 at Nagpur. The event was graced by the esteemed presence of Mr Sanjay Jadhao, the Managing Director of Jadhao Gears Limited, Amravati, who delivered the Keynote address at the event. In his speech, Mr Jadhao emphasized the importance of entrepreneurship and provided insights into the nitty-gritty of business. He elaborated on the necessity of analyzing and keeping track of business requirements, highlighting the critical role played by entrepreneurship in driving economic growth and development.

## Udaipur

On 7 January 2023, a technical talk on the topic of "5G and Beyond" was organized at Udaipur. The event was attended by professionals from the telecommunications sector, academia, and the general public. The event's Chief Guest and Keynote Speaker was Mr Chandra Bihari, DGM BSNL Udaipur, who delivered an insightful speech on the future of 5G technology and its potential impact on the telecom industry. The Guest of Honour was Col (Dr) Sanjiv Tomar, Former Pro Vice Chancellor, Sir Padampat Singhania University, Udaipur, who graced the occasion with his presence and shared his valuable insights on the topic. The event also featured Mr Purushottam Paliwal,

Honorary Secretary, Udaipur Local Centre, IEI, who gave an informative presentation on the advancements in 5G technology and its potential to increase internet speed manifold, thus benefiting the general public. Mr Paliwal elaborated on the design and implementation of 5G technology and discussed the associated challenges.

## Varanasi

The 55<sup>th</sup> Engineer's Day was observed on 15 September 2022, which featured a webinar on the theme of "Smart Engineering for a Better World." The event was graced by the presence of Mr. Amitabh, Principal Chief Mechanical Engineer of Banaras Locomotive Works in Varanasi, Uttar Pradesh, who served as the Chief Guest. Mr Amitabh delivered a lecture on smart engineering, which emphasized the systematic approach to describing, designing, and dimensioning smart products using advanced design methodologies. During his address, Mr Amitabh highlighted the importance of Industry 4.0, which can improve the efficient use of resources and information and unlock new opportunities in product development. The Guest of Honour, Mr S N Sharma, Superintending Engineer of Irrigation Construction Circle in Sigra, Varanasi, delivered a lecture on monitoring and recording changes in soil moisture using moisture sensors embedded in the soil. He explained the use of Arduino Mega Microcontroller equipped with Light Dependent Resistor sensors, moisture sensors, and temperature sensors to measure temperature accurately.

## Warangal

Celebrated the World Students' Day in association with SR Degree and PG College for Women, Hanamkonda on 15 October 2022 to honor the 91st birthday of Bharat Ratna Dr A P J Abdul Kalam, former President of India. The Chief Guest of the event was Mr Pokala Chander, (Retd) S E, Irrigation Department, who delivered a lecture on the occasion. Mr M Sambaiah, Chairman, Warangal Local Centre, IEI, also delivered lectures on the life and achievements of Dr A P J Abdul Kalam and the topic "Effective Study Techniques for Students."

# IEI Celebrates Energy Conservation Day

Contd. from page 10

Sumathi, Former Chairperson of the Thanjavur Local Centre, IEI, proposed the vote of thanks.

## Tirunelveli

On 29 December, 2022, the Tirunelveli Local Centre of IEI observed Energy Conservation Day 2022 in Tirunelveli. The event was presided over by Prof (Dr) R Velayutham M, Chairman of the Tirunelveli Local Centre, IEI, who delivered

the welcome address. The event featured Mr K Mariappan, Head of the Department of Electrical and Electronics Engineering (EEE) at Einstein College of Engineering in Tirunelveli, Tamil Nadu, as the guest speaker. Mr Mariappan discussed a range of topics related to energy conservation and energy-saving challenges, including alternate energy resources.

## Tuticorin

Tuticorin Local Centre, IEI in association with Grace College of Engineering (GCE), Tuticorin observed National Energy Conservation Day 2022 on 15 December 2022 at Tuticorin. Dr Richards, Principal, GCE & Committee Member, Tuticorin Local Centre welcomed the participants and emphasized the need of conservation energy. Chief Guest



of the function, Mr M Nagarajan, Senior Executive Engineer, Tuticorin Thermal Power Station. Elaborated on India's contribution to energy conservation and steps taken towards becoming an energy efficient nation. He further elaborated the Energy Conservation Act, amendments of the Act, objectives of Energy Conservation Day etc.

## Vadodara

Vadodara Local Centre of The Institution of Engineers (India) commemorated Energy Conservation Day on 14 December 2022, in partnership with the Society of Power Engineers (India) Vadodara Chapter. The event focused on the topic of 'Refrigerator & Air-conditioner Appliances Test Methods and Energy Efficiency Compliance in India'. Mr S K Nayak, Director of 3S Energy Care & Consulting Services, was the keynote speaker at the event. In his lecture, he elaborated on the various star ratings for electronic appliances, their respective annual energy consumption, the difference between DC and FF model of AC, the temperature reference of different compartments of the refrigerator, measuring instruments and test methods, the performance of five-star appliances in peak summer, and testing facilities for AC & refrigerator. The speaker also provided a list of appliances covered in the S&L programme in India and Energy Standard and Label in India. The event was graced by Mr Ambikesh Natvarlal Padhya, Chairman of Vadodara Local Centre, IEI, who delivered the welcome address. At the end of the event, Mr Keyurkant Manibhai Thakkar, Honorary Secretary of Vadodara Local Centre, IEI, proposed the vote of thanks.





# Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)  
(IMS [ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018],  
ISO/IEC 17025:2017 Certified, AICTE & CEA Recognized Institution)

## Continuing Professional Development Programmes (CPDPs) for the Month of April 2023

Sl. No.	Name of the Course	Scheduled Dates
1.	Bio Medical Waste Management – Handling & Safe Disposal Options with New Rules 2016	04 – 06 Apr 23
2.	Mechanization & Technology in Underground and Opencast Mining for Improved Productivity and Safety	04 – 06 Apr 23
3.	Advances in Design & Optimization of UAV's for Industrial Applications (Defence, Mining & Construction)	10 – 13 Apr 23
4.	Urban Planning, Green Cover and Biodiversity	11 – 13 Apr 23
5.	General Safety in Mining - Risk Assessment, Accident Prevention, Safety Management Plan, Safety Audit, Legislation, ISO-31000	17 – 21 Apr 23
6.	Dam Safety Guidelines - Monitoring and Protection Measures and Emergency Action Plan	17 – 21 Apr 23
7.	Power System Protection - Principles, Protection Relays and Fault Analysis	18 – 21 Apr 23
8.	Advanced technologies-based Water and Waste Water Treatment for Zero Discharge Compliance	19 – 21 Apr 23
9.	Cyber Security Best Practices for Managers & Executives	19 – 21 Apr 23
10.	Modern Methods used Demolition of Buildings	24 – 28 Apr 23
11.	Advanced Welding Processes, NDT Techniques and their defect Analysis (Theory and Practical Orientation)	24 – 28 Apr 23
12.	Power Plant Cooling Towers, Compressors- Performance Optimization	24 – 26 Apr 23
13.	Coating & Paint Technology	25 – 27 Apr 23
14.	Implementing the Net Zero	26 – 27 Apr 23
15.	Project Management using MS Project 2019	26 – 28 Apr 23
16.	General Network Access (GNA) and Power Trading - ABT Scenario (Online)	26 – 28 Apr 23

For detail information please contact:

**Engineering Staff College of India**

Old Bombay Road, Gachibowli, Hyderabad – 500 032

Landline : 040-66304100 & Mobile: +91 7337319038 / Email : mis@escihyd.org / URL : https://escihyd.org



## Project Management Associates Weekend Programme



### International Project Management Association

IPMA is a federation of about 72 Member Associations (MAs) who develop project management competences in their geographic areas of influence. Through IPMA, project management practitioners from all parts of the world can network, share ideas through effective collaboration and cooperation.

### Who / Why to Attend

Professionals across all levels who want to understand the intricacies of Project Management and want to excel in managing projects to advance their career.

### Discounted Program Registration Fee for IEI Members (15% discount from the published fee)

Participation Fee for Level C: Rs. 47,090 per person plus GST @ 18%

Participation Fee for Level D: Rs. 24,650/- per person plus GST @ 18%

- Registration fee is non refundable. However, alternate persons can be nominated.
- Cheque / draft or NEFT is payable to “Project Management Associates” at Delhi.
- The registration fee does not include travel and hotel accommodation.

Next batch of on-line learning sessions on Project Management Competence Building (PMCB) based on ICB Version 4, knowledge base for IPMA Level C and Level D by our Learning partner PMA is from **7, 8, 14, 15 April 2023**. The relevant material is available in the link <https://www.pma-india.org/brochures>.

**Exam Dates for Level C:** 22, 28, 29 April 2023

**Exam Dates for Level D:** 22 April 2023

**Exam Venue:** Secure and Seamless Online Exam & Assessment

### For more details, please contact:

Arvind Agarwal, Head, PMA Cert (Certification Body)

Project Management Associates

FC-33, Plot No. 1 & 2, Periyar Centre, 3rd Floor, Institutional Area, Jasola, New Delhi – 110025

Tel: 011 41421511 Mob: +91 9711631534-35/39, 9840432229, Website: [www.pma-india.org](http://www.pma-india.org), Email: [info@pma-india.org](mailto:info@pma-india.org) /

# Hundred-and-third Annual General Meeting of The Institution of Engineers (India)

## PROCEEDINGS

The 103<sup>rd</sup> Annual General Meeting (AGM) of The Institution of Engineers (India) was held at 1330 hrs on 18 Dec 2022 at Hotel Le Royal Méridien Chennai, 1 GST Road, St Thomas Mount, Chennai, Tamil Nadu, India, 600016.

Attended by 149 Corporate Members, the meeting was chaired by Dr Hemant O Thakare, FIE, President, IEI. The President welcomed the Past Presidents, President-elect and Corporate members of IEI present at the meeting.

On being invited by the President, the Secretary and Director General read out the Notice of the meeting published in November 2022 issue of IEI News.

### ITEM 1 Confirmation of Minutes of the 102<sup>nd</sup> Annual General Meeting held on 27 December 2021 at New Delhi

The Minutes of the 102<sup>nd</sup> Annual General Meeting held on 27 December 2021 at New Delhi have been circulated in the March 2022 issue of IEI News, [Vol. 28, No. 12]. President invited comments on the Minutes from the members present.

The Corporate Members present unanimously Resolved that the Minutes of the 102<sup>nd</sup> Annual General Meeting of The Institution of Engineers (India) held on 27 December 2021 at New Delhi be confirmed.

### ITEM 2 To receive the Annual Report of the Council and the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2022

#### (a) Annual Report

President invited comments from the members present on the Annual Report of the Council for the year 2021-2022 as circulated.

The Corporate Members present unanimously Resolved that the Annual Report of the Council for the year 2021-2022 be received.

#### (b) Audited Accounts

President then invited comments on the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2022.

The Corporate Members present unanimously Resolved that the Audited Accounts of The Institution of Engineers (India) for the year ended on 31 March 2022 be received.

### ITEM 3 To receive the report on the composition of the Council for the Session 2022-2023

On being requested by the President, the Secretary and Director General reported the following composition of the Council for the Session 2022-2023:

Er C Debnath, President.

#### (1) Under provisions of Bye-Law 4(a)(ii) (02)

The following, by virtue of their being the two Immediate Past Presidents, shall become Members of the Council for the Session 2022-2023:

Dr Hemant O Thakare

Er Narendra Singh

#### (2) Under provisions of Bye-Law 4(a)(iii) (17)

The Corporate Members elected to the Council from the following State Centres for sessions 2022-2023 to 2025-2026 shall be Members of the Council for its Session 2022-2023:

#### Elected for the Sessions 2022-2023 to 2025-2026:

Kerala :: Prof (Dr) G Madhu

Election from Andhra Pradesh State Centre to the Council could not be conducted under this Bye-Law.

The Corporate Members elected to the Council from the following State Centres shall continue as Members of the Council for the Session 2022-2023:

#### Elected for the Sessions 2021-2022 to 2024-2025:

Gujarat :: Er Sandeep B Vasava

Karnataka :: Prof (Dr) M Chowde Gowda

Maharashtra :: Er Manish Mahendra Kothari

Odisha :: Dr Nutan Kumar Dash

Tamilnadu :: Dr G Ranganath

Telangana :: Er M Shyamprasad Reddy

Uttar Pradesh :: Er V B Singh

#### Elected for the Sessions 2019-2020 to 2022-2023 and with term extended upto 2023-2024:

Haryana :: Er Ashwani Kumar Sharma

Punjab & Chandigarh :: Er Sukhvir Singh Mundi

#### Elected for the Sessions 2018-2019 to 2021-2022 and with term extended upto 2022-2023:

Bihar :: Dr Arun Kumar Shrivastava

Jharkhand :: Er Shivanand Roy

Madhya Pradesh :: Er Rakesh Kumar Rathore

Rajasthan :: Prof (Dr) Sudhir Kumar Calla

West Bengal :: Er S K Banerji

#### (3) Under provisions of Bye-Law 4(a)(iv) (31)

The following elected members from 15 Engineering Divisions for the Sessions 2021-2025 shall become members of the Council for the Session 2022-2023 :

Aerospace (1) :: Dr Venkitakrisnan P V

Agricultural (1) :: Prof (Dr) Nemichandrappa M

Architectural (1) :: Er Sandip Kumar Deb

Chemical (2) :: Dr Raghupatruni Bhima Rao

Prof (Dr) Ms Shilpa Tripathi

Civil (5) :: Er M Nagaraj

Dr I Satyanarayana Raju

Er P Surya Prakash

Dr S M Goel

Dr Anil Joseph

Computer (2) :: Dr Amit Kumar Das

Prof (Dr) Chandrashekara S N

Electrical (4) :: Er R R Tanwar

Dr S Dharmalingam

		Er A Sekar	
		Er K K Gopalakrishnan Nair	
Electronics & Telecommunication (4)	::	Dr (Ms) G Padmavathi	
		Prof (Dr) G S Mundada	
		Dr Aloknath De	
		Er S S Mutha	
Environmental (1)	::	Er J C Singhal	
Marine (1)	::	Cdr (Dr) B M Bhandarkar	
Mechanical (5)	::	Dr Enti Ranga Reddy	
		Prof (Dr) K Venkatasubbaiah	
		Prof (Dr) Brahma Raju K	
		Er Sajjan Singh Yadav	
		Dr R Venkatesan	
Metallurgical & Materials (1)	::	Er K K Mehrotra	
Mining (1)	::	Prof (Dr) Netai Chandra Dey	
Production (1)	::	Dr Seeram Satyanarayana	
Textile (1)	::	Prof (Dr) Sadhan Chandra Ray	

**(4) Under provisions of Bye-Law 4(b)(i) (32)**

By virtue of being Chairmen of the following State Centres for the Sessions 2022-2023 and 2023-2024, following persons have become ex-officio members of the Council for its Session 2022-2023:

Haryana	::	Er Rajeev Vasudeva
Himachal Pradesh	::	Er Vishwa Mohan Joshi
Madhya Pradesh	::	Er Rajesh Bisaria
Tripura	::	Dr Subhadeep Bhattacharjee
Punjab & Chandigarh	::	Dr Labh Singh Bhari
Sikkim	::	Dr Narvendra Singh Chauhan

The Chairmen of the Andhra Pradesh State Centre and Nagaland State Centre after being elected/ nominated and assuming charge for the sessions 2022-2024 shall become ex-officio members of the Council for its Session 2022-2023.

By virtue of being Chairmen of the following State Centres for the Sessions 2021-2022 and 2022-2023, following persons shall continue to be ex-officio members of the Council for its Session 2022-2023:

Andaman & Nicobar	::	Er M Sivaramasubramanian
Arunachal Pradesh	::	Er Toli Basar
Assam	::	Er Nripendra Nath Patwari
Bihar	::	Er Bhupendra Nath Singh
Chhattisgarh	::	Prof (Dr) V K Pandey
Delhi	::	Dr S K Singh
Goa	::	Er G H Karkare
Gujarat	::	Er P M Chaudhari
Jammu & Kashmir	::	Dr R A Khan
Jharkhand	::	Er M I Alam
Karnataka	::	Er M Lakshmana
Kerala	::	Prof (Dr) M Jayaraju
Maharashtra	::	Er Mahendra Ratanlal Kothari

Manipur	::	Er W Homendra Singh
Meghalaya	::	Er E Lyngdoh
Mizoram	::	Er K Lalsawmvela
Odisha	::	Dr Bhagyadhar Bhoi
Puducherry	::	Prof (Dr) B Radjaram
Rajasthan	::	Er Gunjan Saxena
Tamilnadu	::	Er S Kannan
Telangana	::	Er B Brahma Reddy
Uttarakhand	::	Er Dharm Chandra
Uttar Pradesh	::	Er Masarrat Noor Khan
West Bengal	::	Dr Nirmal Das

**(5) Under provisions of Bye-Law 4(b)(ii) (18)**

By virtue of being elected as the Chairmen of the following Local Centres for the Sessions 2022-2023 and 2023-2024, the following persons shall become ex-officio members of the Council for its Session 2022-2023:

Nashik	::	Er Chopda Mahavir B
Visakhapatnam	::	Er Venkata Satya G Pakki

By virtue of being the Chairmen of the following Local Centres for the Sessions 2021-2022 and 2022-2023, the following persons shall continue to be members of the Council for its Session 2022-2023:

Coimbatore	::	Prof (Dr) S Shanmugam
Durgapur	::	Er Safikul Islam
Ghaziabad	::	Er R P Sharma
Kanchepuram	::	Prof (Dr) D Elango
Kochi	::	Er Salahudheen P A
Ludhiana	::	Er Daljit Singh
Madurai	::	Dr N Sivasubramanian
Mysore	::	Er B S Prabhakara
Nagpur	::	Er M A Pathak
Navi Mumbai	::	Er K M Godbole
Neyveli	::	Er Shaji John
Pune	::	Dr S B Zope
South Gujarat	::	Dr Jignesh G Vaghasia
Tiruchirappalli	::	Er B Balasubramanian
Vadodara	::	Er Ambikesh Natvarlal Padhya

The Corporate Membership strength of the Salem Local Centre exceeding one percent of the total strength of Corporate Members on the Roll as on 31 Mar 2022, the Chairman of Salem Local Centre Er S R Saravanan has become ex-officio member of the Council for its session 2022-2023.

**ITEM 4 To appoint Auditors for the year 2022-2023 and to fix their remuneration**

President proposed that Auditors M/s G Basu & Co., Chartered Accountants be appointed as Auditors of The Institution of Engineers (India) for the year 2022-2023 at a remuneration of Rs.3,30,000 + Taxes as applicable.

It was then Resolved that M/s G Basu & Co., Chartered Accountants, be appointed as Auditors of The Institution of Engineers (India) for the year 2022-2023 at a remuneration of Rs.3,30,000 + Taxes as applicable.

The meeting was declared closed at 1430 hrs.

## Meeting of IEI delegation led by Er C Debnath, President, IEI with Prof T G Sitaram, Chairman, All India Council for Technical Education (AICTE)



A delegation led by Er C Debnath, President, IEI met with Prof T G Sitaram, Chairman, All India Council for Technical Education (AICTE) on 29 Mar 2023 at AICTE Headquarters, New Delhi.

Maj Gen MJS Syali, VSM (Retd), Secretary & Director General, IEI requested AICTE to resolve the issue of Section A & B Examinations as also to consider recognition to students who enrolled after 01.06.2013. Areas of cooperation between IEI & AICTE under NEP and skill development were also discussed.

Prof (Dr) T S Kamal, Chairman, AMIE Task Force also elucidated the fine points of recognition of Section A & B Examinations. Chairman AICTE agreed to examine areas of synergy between IEI & AICTE.

## Meeting of IEI delegation with Shri Ved Mani Tiwari, CEO, National Skill Development Corporation (NSDC) & MD, NSDC International

A delegation led by Er C Debnath, President, IEI met Shri Ved Mani Tiwari, CEO, National Skill Development Corporation (NSDC) & MD, National Skill Development Corporation International at NSDC Office, Aerocity, New Delhi on 29 Mar 2023.

President IEI requested Shri Tiwari for exploring areas of collaboration between IEI and NSDC leveraging IEI nationwide infrastructure and corporate member resource to promote and deliver skill development programme. MD NSDC expressed interest to sign an MoU with IEI to identify synergies and collaborate in the field of Skill Development Mission of Govt of India.



## Meeting of IEI delegation led by Er C Debnath, President, IEI with Shri Shailendra Sharma, Director General (CPWD)



A delegation led by Er. C Debnath, President, IEI visited office of Shri Shailendra Sharma, Director General, CPWD at Nirman Bhawan, New Delhi on 29 Mar 2023. Area of mutual cooperation between IEI & CPWD were discussed. The President, IEI requested DG CPWD to issue Circular for all Regional Offices of CPWD to motivate engineers of CPWD for Membership of IEI. DG CPWD advised to sign an MoU between IEI & CPWD to ensure long term cooperation between IEI & CPWD.

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The Institution of Engineers (India) as a body accepts no responsibility for the statements made by individuals. Reprints of any portion of the publication may be made provided reference thereto is quoted.

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