



ESCI

COMMUNICATIONS



Volume XXXIII

Issue 9

December 2024

DIRECTOR'S DESK



EMPOWERING INNOVATION- SHAPING THE FUTURE

The 39th Indian Engineering Congress with a theme Irresistible India as a Global Engineering Powerhouse.

The 39th Indian Engineering Congress, held from December 20th to 22nd, 2024, in Kolkata, is organized by The Institution of Engineers (India). This year's theme, Irresistible India - A Global Engineering Powerhouse, underscores India's expanding influence on the global engineering landscape.

India's engineering sector plays a pivotal role in both domestic and international markets. Engineering exports, encompassing high-quality goods and services significantly contribute to the nation's economy by generating foreign exchange and creating employment opportunities. India's engineering portfolio spans a diverse range of products and services including mechanical, electrical, process and transportation equipment, ICT software, and various industrial goods. These exports serve a wide array of global sectors, such as automotive, aerospace, construction, electronics, and more. In addition, numerous multinational corporations have established Global Engineering Centers in India, further cementing the country's significance in the global engineering ecosystem.

The primary objective of the Indian Engineering Congress is to explore advancements across various engineering

disciplines and to equip engineers with the knowledge and skills needed to address the challenges of the future. Key aims of the Congress include promoting awareness and fostering innovation across engineering fields by providing a platform for engineers to exchange knowledge, develop skills, and deepen their professional responsibility.

The Congress has invited papers from professionals in industries, academic institutions, research and development organizations, government departments, as well as UG, PG, Ph.D. students, and entrepreneurs and presented the same in the areas such as Infrastructure, Power & Energy, Metals and Minerals, Environment & Sustainability, Information and Communications Technology, Chemicals and Hydrocarbons, Biomedical Sciences and Technology to share experiences, innovative ideas, concepts, and research findings that will shape the future of engineering. The deliberations during the three days summit have inspired meaningful, sustainable development for India, reinforcing the role of engineers, technologists, and stakeholders in ensuring a safe, secure, and prosperous future for the nation.

With best regards,
Dr. G. Rameshwar Rao, FIE



Everyone can rise above their circumstances and achieve success if they are dedicated to and passionate about what they do.

– Nelson Mandela

Events at ESCI

Exploring the ESCI Stall at the 39th Indian Engineering Congress at Kolkata.

Shri Arup Biswas, the Minister for Sports, Youth Services, Electricity, and Housing Department of West Bengal accompanied by Dr. G. Ranganath, President of the Institution of Engineers (India) and Shri V.B. Singh, the President-elect and the member of IEI inaugurated the Engineering Staff College of India (ESCI) stall On 20th December, 2024 erected during the 39th Indian Engineering Congress held in Kolkata. The three-day event held from December 20-22, 2024, was organized by the Institution of Engineers (India), bringing together engineering professionals from across the nation.

The ESCI stall featured a range of informative displays including posters, pamphlets, and photographs highlighting the School of Post Graduate Studies and its diverse courses. The stall also showcased the newly constructed Centenary Convention Center and offered information on various ESCI programs. Dr. G. Rameshwar Rao, Director of ESCI, provided an insightful explanation of the institution's offerings including the details about the IEI Centenary Convention Centre established in the ESCI campus. The ESCI stall contributed to the vibrant exchange of ideas and knowledge during the congress.



Events at ESCI

Centre for Climate Change Division



A 3-Day Programme on **Urban Flash Flood Mitigation: Strategies for Disaster Risk Reduction and Management** conducted by **Centre for Climate Change Division** held from 11 -13th December 2024 aims to address the growing challenges posed by urban flash floods due to rapid urbanization and climate change.

The programme has covered the critical topics such as flood risk management, high-resolution remote sensing data applications, real-time flood forecasting, and blue-green infrastructure solutions. It has also explored the advanced hydrological modeling, spatial engineering, and the development of urban flood information systems.

Renowned experts and industry professionals have shared the insights, strategies, and case studies and equipped the participants attended in the cadre of AEE's, DEE's of SNDP division from Greater Hyderabad Municipal Corporation and enhanced urban flood resilience.

This programme is designed for urban planners, engineers, policymakers, and disaster management professionals. It offers a platform for knowledge exchange and innovative approaches to mitigating urban flood risks. Dr.K.Chandrakala and Dr.Aadhi Naresh both the faculties for CCC are monitored the overall three day event

Civil & Transportation Engineering Division

The Civil & Transportation Engineering Division organized a 5-day training program on **"Design, Construction, and Quality Control of Flexible and Rigid Pavements"** from **2nd to 6th December 2024**, sponsored by the National Rural Infrastructure Development Agency (NRIDA), Ministry of Rural Development, Government of India, New Delhi.

A **total of 36 engineers** from various 22 states across the country participated in this training program including from

Northern Eastern States Arunachal Pradesh, Assam, Ladakh, Meghalaya, Mizoram, Nagaland were attended. The participants were primarily Engineers **associated with PMGSY (Pradhan Mantri Gram Sadak Yojana) projects.**



On the final day of the program, **Shri Pradeep Agarwal, Director (Project-1), NRIDA, New Delhi**, conducted engaging full-day session for the PMGSY engineers focused on "Construction Technologies & New Materials, Quality Control and Quality Assurance for Flexible and Rigid Pavements, and Testing Procedures for Road Aggregates and Bitumen."

Dr. G. Rameshwar Rao, Director of ESCI, joined the **valedictory session** and highlighted the importance of implementing new technologies in road construction and their significant benefits for society.



2) The C&TE Division also organized In house programme on **"Automated Fitness Testing"** on **16 – 20 December, 2024** sponsored by Ministry of Road Transport and Highways (Transport Section), Govt. of India, New Delhi at ESCI campus, Hyderabad with 17 participants attended from Transport Departments, Motor Vehicle Department, State Road Transport Corporation & Police Department from all over India.

Events at ESCI



Transportation Sector for Smart and Sustainable Development" on 24th December, 2024 sponsored by Ministry of Road Transport and Highways (Transport Section), Govt. of India, New Delhi at ESCI campus, Hyderabad with 30 participants attended from Transport Departments, Motor Vehicle Department, State Road Transport Corporation & Police Department from all over India.

4) The C&TE Division organized **"INDUCTION TRAINING PROGRAMME FOR NEWLY RECRUITED GROUP 'A' OFFICERS (PROBATIONERS) OF MILITARY ENGINEER SERVICES (MES) - BATCH-07"** From 16th Dec 2024 - 04th Jan 2025 at ESCI campus, Hyderabad with 55 officers.



DPC & Mechanical Division

The DPC&M Division conducted a CPDP on **"Computer Numerical Control (CNC) Machining and Machine Tools - Programming and Selection of Lubricants"** from December 16 to 19, 2024. The program aimed to provide an in-depth Understanding of CNC technology & machine

tool operation, CNC programming best practices and safety protocols and Selection and application of lubricants for CNC machines.

Engineers from DRDO units, DMRL and R&DE(E) participated in the program and found it highly beneficial.



Mining Division

Er K J Amarnath, Head, Mining Division had a discussion with Sri Mr Amit Saha, Mr HarshaVardhan, Engineers, Core EL Technologies, Mr Rahul Pinnamaneni, Founder & CEO, Polygon Geospatial (Clock-wise) on 18th December, 2024 to organize various training programmes in mutual collaboration with Mining Division, ESCI

Dr Rajesh Krishnan, CEO & KhushbuJha, VP- Corporate Affairs visited the Mining Division on 5th & 31st December, 2024 to seek association of ESCI in consultancy services regards to Intelligent Transport Systems in Mining Projects



Mr L Krishna, Faculty, Mining Division, was appointed as External Examiner for M.E (Dissertation)-Department of Mining Engineering, OUCE on 30th December, 2024



Information & Technology Division

- 1) The IT Division has conducted an STP on GEM Procurement Procedures- Gem Account operation from Basic to expertise (Buyer module from 02 - 03 December 2024 at Naval Dockyard Visakhapatnam.

The Objective of the program is to understand the different GeM for Procurement procedures and to understand the benefits and challenges of Government e market place

This Training program is conducted to Officials of Naval Dockyard, Visakhapatnam

- 2) The IT Division has conducted CPDP on **Cyber Forensic Tools & Investigation Process(Offline)** from 09 - 12 December 2024. The objective of the programme is to impart in-depth knowledge of new techniques and tools used in Cyber defense and forensic investigation processes to meet the toughest challenges in fighting cybercrime.

The Participants from Directorate General of Quality Assurance (DGQA) Units, SBC & GESCOM were attended the training programme



- 3) The I&T Division has also conducted a 5 day Management Development Program (MDP) on **"Big Data Analysis, Information Management & Documentation"** for NHM, Odisha(BATCH- I) from 16 - 20 December 2024 at ESCI Campus.

The Objective of the program is to enhance skills on Excel based Data Analysis and its use for managerial decisions. The Training program is conducted to Block Data Manager (BDM) of National Health Mission, Odisha at ESCI Campus.



Power & Energy Division

- 1) The P& E Division has conducted a 5-Day STP on **Transmission Line Construction (Survey, Design of Line & Construction Practices & Power Cables at ESCI from 09-13 December, 2024** in which 24 participants from MSETCL were participated.

Various Survey techniques, Design of EHV Towers, Monopole Towers, Testing & Commissioning of Transmission lines, Standards & Specifications for the materials used for Transmission Lines & Earth wires standards, Power Cables have been discussed in this program.

The faculty addressed the sessions are Sri TRC Murty, Ex.GM, PGCIL, Sri KMuralikrishna, DE, TSTRANSCO, S.Ramaprasath, Krishna Mohan Singh, DE, TS Transco and Shri. T. Jagath Reddy, Director (Transmission System) TG TRANSCO has addressed the participants about the Overview of Transmission System of TGTRANSCO.



Events at ESCI

As a part this training program a field visit to GIS Substation (400KV/ 220KV/ 132KV/33KV) Rayadurgam has been conducted apart from another field visit to Monopole Transmission Towers near ORR has been conducted.

- The P& E Division has also conducted another 5-Day STP on **Gas Insulated Substation-Components, Design features, Construction, Testing, Operation & Maintenance, Relays Cables for MSETCL Engineers** at ESCI from 16-20 December, 2024 in which 21 participants were attended from MSETCL. The faculties attended are Dr.M.Mohana Rao, GM (R&D), Mrutunjaya Kumar, Sr.Manager (R&D), Smt. Shyamala Venkataraman, GM, HS Kalsi, Ex.GM, all from BHEL along with Ch.Chakrapani, CE and EM Chakravarthy, DE, TGSPDCL were delivered the lecture sessions in this trg.program.

As a part this trg. program field visit to GIS Substation (400KV/ 220KV/ 132KV/33KV) Rayadurgam has been conducted.



- The Management & Technology Division had conducted the 5 day CPDP on **"NDT Level – II Certification on Visual Testing from 09 – 13 December 2024** at ESCI Campus. Seven participants were attended from QAE, Pune, Kochi, New delhi, Kolkata and also DQA New Delhi, NTPC Bhilai,

The faculties attended are Mr. MN Viswanath, Mr. LV Ramarao, Dr. KGK Murti & Mr. P. Mallesh

- The M&T Division had also conducted the 5 day training programme on **"Enhancing Techno-Managerial Skills of DRTO Officers"** from 12 – 14 August 2024 at ESCI Campus, sponsored by CEPTAM, DRDO, New Delhi. 19 participants have attended from different DRDO labs across India.

The Expert Speakers Mr. Ashish Singh from New Delhi along with Dr. AP Natarajan, Mr. Harjeet Singh Kalsi, , Mr. P. Mohan, Dr. A. Patrick and Dr. Abdul Nayeem were handled the programme successfully.



- The M&T Division had conducted another 4 day CPDP on **"Advanced Project Management with MS Project"** from 17 - 20 December 2024 at ESCI Campus, wherein 08 participants were attended from SAIL Bhilai, GIPCL Vadodara, GSECL Vadodara & DQA (N) New Delhi etc.

The faculties were attended are Dr. Atul Sen, Mr. Harjeet Singh Kalsi, Smt. Satya Priya & Mr. P. Mohans



Management & Technology Division



Quality & Productivity Division

- 1) The Q&P division has conducted 5 days CPDP Training Program on **Six Sigma Green Belt** from 04–08 December, 2024. The objectives of the Programme is to appreciate the power of data driven methodology of Quality Improvement through applying the principles of the Six Sigma DMAIC road map. The programme was attended by 3 Participants of Executives cadre of different locations from TPCL(Tripura) &DGQA.
- 2) A 4 days Certification Programme on **Laboratory Management System Awareness & Internal Auditing** (As per ISO/IEC 17025:2017 & NABL Requirements) was conducted from 09 – 12 Dec'24. It was attended 07 Participants from TGPCB, DGQA, Bangalore. The Objective of the Programme is to Understand the need for validation of test results. Enable to interpret ISO/IEC 17025:2005 requirements. The programme was conducted by Dr. C S Krishna Prasad Rao, as faculty and Course Director.
- 3) A 3 days CPDP Training Program on **Quality & Reliability Management** was also conducted from 16 – 18 December, 2024. The objectives of the Programme are to Design the process that leads to reliable systems with built-in quality. Fewer warranty-period failures for better operational reliability in the field, better image of organization and lower repaid costs. It was attended 4 Participants of Executives cadre of different locations from DGQA Organization from Kolkata, Mumbai, Bengaluru Programme was conducted by Dr. C S Krishna Prasad Rao, as faculty and Course Director, and Guest faculty
- 4) A 4 days Inhouse Training Programme on Design for Manufacturing was conducted by Q&P Division from 17 – 20 Dec'24. Wherein 18 Participants attended from Indian Navy at DMDE Secunderabad.. The objective of the programme was to introduce Design Concepts, Product Design, Tool Design, Case Studies, Storage of Documents, Documentation, Standardization, Modification of documents, Modification committee, Procedure, Introduce to FEA, ANSYS, FEA Case Studies, The programme was conducted by Dr. C S Krishna Prasad Rao, as faculty and Course Director, and Guest faculty Er. V K Sridhar.



Water Resources Development Division

The WRD division has conducted a 3 days training programme project in **Water Conservation, Augmentation and Preservation & Digital Land Surveying & Mapping from 18th to 20th December, 2024**. The objective of the training is to provide an opportunity to the Engineers and Scientists involved with design, construction, maintenance and analysis of Water Conservation Structures and latest surveying methods and techniques to enhance their knowledge on Instrumentation and Applications of Water Conservation, Augmentation and Preservation. The Engineers attended from Tamilnadu Housing Board, Chennai. As Part of exposure visit, the participants were taken to HMWS&SB Rain Water Harvesting Theme Park and observed the best practices of effective maintenance of the Water Conservation Structures



Faculty Development Programme



Skill Development Training under Prime Minister Koushal Vikas Yojana 4.0 under taken by ESCI running through Faculty Development programme Cell. Job Roles1. Software Programmer 2.AI-Machine Learning Engineer 3.AI-Data Quality Analyst.

Glimpses of 39th Indian Engineering Congress

Kolkata 20-22 Dec. 2024



Contact:

The Director, **Engineering Staff College of India**
Old Mumbai Road, Gachibowli,
Hyderabad 500 032, Telangana State
Tel: 040-66304102 Visit: www.escihyd.org | www.esci.edu.in
Email: director@escihyd.org | ic@escihyd.org