

# The Institution of Engineers (India)

.....ENGINEER'S

VOICE.....

## FARIDABAD LOCAL CENTRE

### "A Century of Service to the Nation"

Estd 1920

Issue – January 2023



Dear Engineers,

### CHAIRMAN'S MESSAGE

I convey my greetings and best wishes to IEI members and office staff on publication of 4th Edition IEI News Letter. "All destinations come with different hurdles which we should overcome with positive attitude and continue hard work"  
Wishing you blessings and prosperity in 2024.

With Best Wishes – Er. K.R Gupta, FIE, Chairman

### FROM HONORARY SECRETARY'S DESK



Technical Activities Conducted by Faridabad Local Centre during the 3<sup>rd</sup> Quarter  
October to December 2023-24 :-

1. World Habitat Day on 2<sup>nd</sup> October 2023
2. World Standards Day 15<sup>th</sup> October 2023 (Morning Session)
3. 14th Annual General Meeting of IE(I) Faridabad Local Centre held on 15th October 2023 (Afternoon Session)
4. Technical Lecture Meeting held on the topic of HIRA (hazard identification & Risk assessment) process to reduce construction fatalities" on 18<sup>th</sup> November 2023
5. Energy Conservation Day on 14<sup>th</sup> December 2023

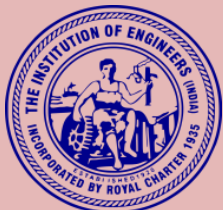
Technical Activities to be held in 4<sup>th</sup> Quarter January to March 2023-24 :-

1. Technical Lecture Meeting on 20<sup>th</sup> January 2024
2. Technical Lecture Meeting on 17<sup>th</sup> February 2024
3. World Engineering Day on 4<sup>th</sup> March 2024
4. World Water Day on 22<sup>nd</sup> March 2024

Corporate Members are requested for their Contribution towards the Institution of Engineers (India) by way of Articles, Advertisements and Donation etc.

Bank Details : The Institution of Engineers (India), SB A/c No. 146601000016741  
Indian Overseas Bank, Sector-6 Faridabad, (IFSC Code : IOBA001466)

Er. Inderdeep Singh Oberoi, FIE  
Honorary Secretary



# The Institution of Engineers (India)

## FARIDABAD LOCAL CENTRE

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# Technical Activities Conducted by IE (I) Faridabad Local Centre

## World Habitat Day on 2<sup>nd</sup> October 2023



The Institution of Engineers (India), Faridabad Local Centre organized a Webinar on “World Habitat Day “ on the topic of “Resilient Urban economies. Cities as drivers of growth and recovery” on 2nd Oct 2023 through digital medium- Google Meet. The event started by -

lighting the lamp of knowledge digitally and IE(I) Anthem was played.

**Chairman, Er. Kuldip Raj Gupta, FIE** welcomed all FLCC Members and all the participants. He explained the importance of World Habitat Day in our life and made aware the gathering about need of the topic for discussion and highlighted importance of the topic “Resilient Urban economies. Cities as drivers of growth and recovery”

### Excerpts of deliberation: Er. I.S Chauhan :- CURRENT ECONOMIC CHALLENGES:

2023 has been a particularly challenging year for Urban Economies. The global economy growth itself is declining to about 2.5% and, apart from the initial COVID-19 crisis in 2020 and the global financial crisis in 2009, this is the weakest growth experienced since 2001.

**Economic Activity:** Cities are economic powerhouses, hosting a large concentration of businesses, industries, and commercial activities. This concentration creates opportunities for businesses to access a larger customer base, skilled labor, and a network of suppliers and service providers. As economic engines, cities contribute significantly to the GDP of a Country.

**Sustainability:** Cities are increasingly focusing on sustainability and environmental initiatives. Green infrastructure, renewable energy projects, and sustainable urban planning can not only drive economic growth but also mitigate environmental challenges.

**Honorary Secretary, Er. I.S Oberoi, FIE** concluded the session with vote of thanks and expressed his gratitude to speaker to Er. I.S Chauhan, and all the participants. The event was then punctuated with National Anthem. Attended by 16 participants the event was a success.

## World Standards Day on 15<sup>th</sup> October 2023



The Institution of Engineers (India), Faridabad Local Centre organized a Technical Activity World Standards Day on the topic of “Shared Vision for a Better World: Incorporation SDG 3” on 15<sup>th</sup> October 2023 (Sunday) at Aggrafe Lounge Sector -12 Faridabad. The event started at 10.45 AM. The Expert speaker for the event was Mr. Akshay Garg, Area Sales Manager, Tiscon Retail. The event started by lighting of the lamp of knowledge.

**Chairman Er. Kuldip Raj Gupta, FIE** delivered welcome address and made aware the gathering about need of the topic for discussion and highlighted importance of World Standards Day. Every year, on October 14th, we celebrate World Standards Day, a day that signifies the collaborative efforts of the world’s leading International Standards Organizations: IEC, ISO, and ITU.

**Excerpts of deliberation: Mr. Akshay Garg:** It gives me immense pleasure to be here today for celebration of World Standards Day 2023 on the theme shared vision for better world. Indeed, I feel my self-honored to be amongst you today for celebration of World Standards Day. I am very much excited to see eminent shining faces and the immense potential that I see gathered here today. **Honorary Secretary, Er. I.S Oberoi, FIE** delivered vote of thanks and expressed his gratitude to Moderator, Er. Ankur Mittal, FIE, DGM, NCB Faridabad, Expert Speaker, Mr. Akshay Garg, Area Sales Manager, Tiscon Retails. My sincere thanks to Respected Chairman, Er. Kuldip Raj Gupta Ji.; Chairperson, Finance Committee, Er. Sandeep Handa Ji; Chairperson, Award Committee, Er. J.P Singh Ji.; my fellow FLCC Committee members and all the Audience present. On behalf of The Institution of Engineers (India), Faridabad Local Centre, I take this opportunity to propose vote of thanks and showing gratitude because we do know that all things in life are a result of some collaborative effort The event was then punctuated with National Anthem. Attended by 40 participants the event was a success.

# FLCC Members Birthday Coming Soon

*May each day in your life be full of health, wealth & happiness*



7<sup>th</sup> January 2024

Er. S. K. Choudhary  
FLCC Member 2022-24



10<sup>th</sup> January 2024

Er. Pradeep Mallah  
Jt. Hon' Secretary 2022-24



25<sup>th</sup> January 2024

Dr. Manu Bindra  
Vice- Chairman 2022-24



1<sup>st</sup> March 2024

Er. Sushil Bajaj  
FLCC Member 2022-24



8<sup>th</sup> March 2024

Dr. Shivraj Singh Kasana  
FLCC Member 2022-24



19<sup>th</sup> March 2024

Er. J.P Malhotra  
Ex. Chairman 2013-15

## Technical Activities Conducted by IE (I) Faridabad Local Centre



**THE INSTITUTION OF ENGINEERS (INDIA)**  
Faridabad Local Centre  
Organizes  
**Technical Lecture Meeting**  
on the topic of  
**HIRA (hazard identification & Risk assessment)**  
process to reduce construction fatalities.



Expert Speaker  
Er. Shivam Sharma, MIE  
Asst. General Manager  
Birla Estates Pvt. Ltd.



Welcome Address by  
Er. K.R Gupta, FIE  
Chairman, IEI FBD LC



Vote of Thanks by  
Er. I.S Oberoi, FIE  
Hon' Secretary, IEI FBD LC



**Date- 18th Nov. 2023,**  
**Day - Saturday**  
**Time - 5.30 P.M**

**Venue :- Digital Medium**  
<https://meet.google.com/uct-dfna-fdf>

### Technical Lecture Meeting on 18<sup>th</sup> November 2023

The Institution of Engineers (India), Faridabad Local Centre organized a Technical Lecture Meeting on the topic of "HIRA (hazard identification & Risk assessment) process to reduce construction fatalities" on 18<sup>th</sup> November 2023 (Saturday) through Virtually. The event started at 5.30 PM Onwards. The Expert speaker for the event was Er. Shivam Sharma, Asst. General Manager, Birla Estate Pvt. Ltd. Gurugram. The event started by lighting of the lamp of knowledge digitally.

**Chairman Er. Kuldip Raj Gupta, FIE** delivered welcome address and made aware the gathering about need of the topic for discussion and highlighted importance of "HIRA (hazard identification & Risk assessment) process to reduce construction fatalities"

#### Excerpts of deliberation: Er. Shivam Sharma

##### What is HIRA?

Hazard identification and risk assessment (HIRA) is a systematic - process of identifying potential hazards in the workplace, assessing the risks associated with those hazards, and developing appropriate controls to eliminate or minimize those risks.

##### What is HAZARD ?

The presence of a hazard does not necessarily mean that harm will occur. Hazard is an inherent property of a substance, mixture, or process that has the potential to cause harm. This means that the hazard is always present, regardless of the circumstances of exposure. For example, the hazard of a flammable substance is always present, even if the substance is not exposed to a source of ignition.

# Technical Activities Conducted by IE (I) Faridabad Local Centre

## Report of “ Energy Conservation Day on 14<sup>th</sup> December 2023



Lamp Lighting

The Institution of Engineers (India), Faridabad Local Centre organized a Technical Activity Energy Conservation Day in association with J.C Bose University of Science & Technology (YMCA) Faridabad on 14<sup>th</sup> December 2023 (Thursday). The event started at 3.30 PM. The Welcome address was delivered by Er. Sandeep Handa, FIE Immediate Past Chairman, IEI FBD LC. The event started by lighting of the lamp of knowledge.

**Immediate Past Chairman Er. Sandeep Handa, FIE** delivered welcome address and made aware the gathering about need of the topic for discussion and highlighted importance of Energy Conservation Day.



Dr. R.K Yadav, Expert Speaker, felicitated by Hon' Secretary & Past Chairman

### Excerpts of deliberation: Dr. Arvind Gupta, FIE Discussion of Energy Conservation Day

- Every year, India observes National Energy Conservation on December 14.
- The day is organized by the Bureau of Energy Efficiency (BEE) – which operates under the Ministry of Power, aiming to present India's stellar achievements in cost-efficient energy production and resource conservation.
- Further plans for the future are also discussed on this day, targeting holistic development as the main goal towards mitigation of climate change.
- Include yourself in more informative ways to spread awareness on climate change and conserving energy

### Excerpts of deliberation: Dr. R.K Yadav, FIE Energy Conservation:-

Energy conservation is the practice of decreasing the quantity of energy used. It may be achieved through efficient energy use, in which case energy use is decreased while achieving a similar outcome, or by reduced consumption of energy services. Energy conservation may result in increase of Environmental value, National security, Personal security, and Human comfort etc.

### Venture Capital Fund for Energy Efficiency (VCFEE):-

The Venture Capital Fund for Energy Efficiency (VCFEE) is a fund to provide equity capital for energy efficiency projects. A single investment by the fund shall not exceed INR 2 Crores. The Fund shall provide last mile equity support to specific energy efficiency projects, limited to a maximum of 15% of total equity required, through Special Purpose Vehicle (SPV) or INR 2 Crores, whichever is less. The support under VCFEE is limited to Government buildings and municipalities. Rules for operationalization of Venture Capital Fund for Energy Efficiency (VCFEE) were approved in April 2012, subsequent to which Board of Trustees has been constituted for VCFEE Trust.

**Honorary Secretary, Er. I.S Oberoi, FIE** delivered vote of thanks and expressed his gratitude to Prof. Sandeep Grover, Dean, J.C Bose University of Science & Technology (YMCA) Faridabad, Expert Speaker Dr. Arvind Gupta, Dr. R.K Yadav, faculty member and all the participants at the end with FLCC commitment to serve the Engineering fraternity continually and consistently. The event was then punctuated with National Anthem. Attended by 28 participants the event was a success.

## 14<sup>TH</sup> ANNUAL GENERAL MEETING HELD ON 15<sup>TH</sup> OCTOBER 2023



## Technical Visit at Cosmos Pumps P Ltd. Of IEI officials



Cosmos Pumps Pvt. Ltd. has over +10 years of industry expertise serving a vast array of businesses. In the heart of India, Cosmos Pumps, a leading dewatering organization, has achieved a ground breaking feat with the creation of the Godzilla Pump - a 600 HP engineering marvel.

The Cosmos Pumps team invited IEI Officials at cosmos pump for inauguration ceremony of their new product launch "Godzilla Pump". Behind this innovation there are two visionary engineers, Er. Ankit Jain, the CEO, and Mr. Nihant Baranwal, the COO. Er. Ankit Jain is also a MIE member of The Institution of engineers (India) Faridabad Centre.

The Making of Godzilla Pump is not just a story of innovation; it's a saga of determination, collaboration, and the relentless pursuit of excellence.

Er. JP Singh past chairman and Er. IS Oberoi present Honorary secretary inaugurated and appreciated this engineering innovation with IEI Team on 20<sup>th</sup> November 2023.

Er. Ankit Jain explained and shared information about all the manufacturing process of Cosmos pumps to IEI Team with details of existing projects. Er. JP Sing and Er. IS Oberoi also tested the pump functioning with all required parameter. They also Congratulated to team Cosmos and further motivated to do more in the field of Engineering.

## IE(I) Faridabad Local Centre Members Achievements



Er. J.P Malhotra was felicitated with the special service award for the year 2022-23 by the outgoing District Governor Shri Ashok Kantoor in the event organised by Rotary - 3011.

This award has given for his exemplary services to rotary club of Faridabad Midtown for various projects such as breast cancer examination and awareness campaign, Distributing 140 bicycles to the girl students for commuting to school, blood donation camps and successfully planting 1500 saplings using Miyawaki technique.



# DLF Industries Association

Awareness Workshop - Zero Defect Zero Effect(ZED)

Wednesday, the 6th December 2023 @2.30pm

Faculty- Dr. Rajender Kumar PhD

Manav Rachna International University, QCI

@ TAP-DC, Conference Hall,

I-18, Industrial Area, Sector-32, Faridabad

**JP Malhotra**  
President  
9810012999

**Bhupinder Singh**  
Gen. Secretary  
9810068223

**CA Mahesh Goel**  
Treasurer  
9810018017



### Er. Pankaj participated in one of the biggest Industrial Exhibition in Faridabad.

He managed registration management for visitor and exhibitors. The software used for management was also designed by him. The database integration and QR made process smooth. He also managed Media coverage with volunteer's students and all videos of Exhibitor stall available on YouTube. He also handled the role of academic coordinator. Coordination done with more than 10 colleges. The 6 colleges provided 300+ volunteer. He actively coordinated with all volunteer and managed various activity like Registration counter, Media coverage, Coupons and more. All members appreciated activity done by him. Earlier also he was felicitated by Industry Members.

## Technical News

### **Training launch of Short-Range Ballistic Missile 'Agni-1'**



Training launch of Short-Range Ballistic Missile 'Agni-1' was carried out successfully from APJ Abdul Kalam Island, Odisha on December 07, 2023. Agni-1 is a proven very high precision missile system

#### ▪ About:-

○ The Agni-1 is a Short-Range Ballistic Missile (SRBM) developed by India as part of its Agni series of missiles. It is the first missile in the Agni series and is designed to be a strategic weapon capable of carrying a nuclear payload.

○ The Agni-1 is primarily intended for use as a deterrent against potential adversaries and is known for its quick response time.

#### ▪ Technical Specifications:-

○ The Agni-1 is a single-stage, solid-fueled missile with a range of around 700 to around 1200 kilometers and can carry a payload of 1,000 kg, making it a short-range ballistic missile. It has the capability to carry both conventional and nuclear warheads.

○ The solid-fuel propulsion system enhances its operational flexibility and reduces launch preparation time.

#### ▪ Development and Testing:-

○ The Agni-1 was developed by the Defence Research and Development Organisation (DRDO) in India. The missile has undergone several successful test launches to validate its performance and reliability.

○ Agni-1 was first tested at the Interim Test Range in Chandipur in 1989. The Indian army accepted Agni-1 in service in 2007..

### **Green Flag to Amrit Bharat Express with innovative 'push-pull technology'**



Recently on 30 December, inaugural Amrit Bharat train featuring innovative push-pull technology, was launched by Prime Minister Narendra Modi in Ayodhya.

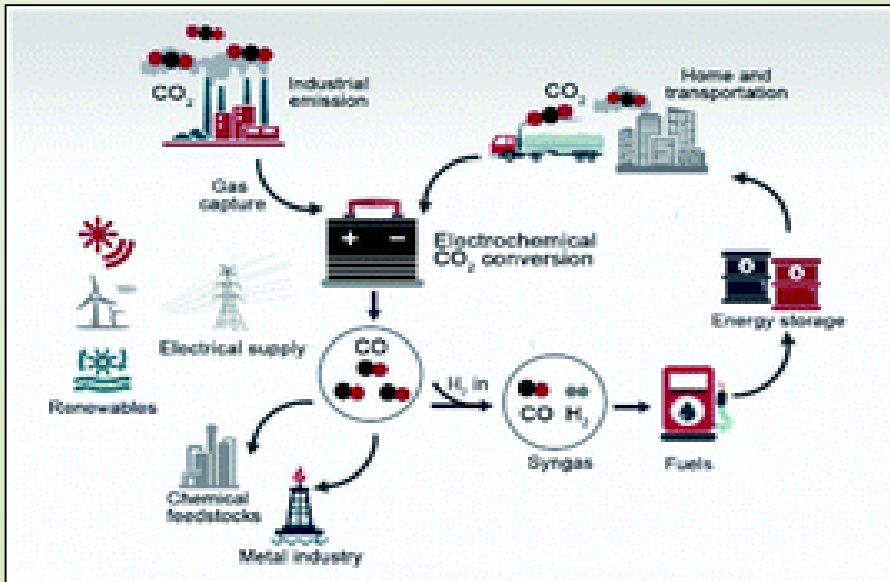
The train is equipped with the push-pull technology that involves having two engines—one at the front and another at the rear. While the front engine pulls the train, the rear engine simultaneously pushes it, enabling improved acceleration and deceleration. This design results in significant time savings at bridges, curves, and other speed-restricted sections, making the journey more efficient.

There is also passenger information system facility available in the train to display details about approaching station. Amrit Bharat Express trains will have 22 coaches including sleeper and general coaches. This is a non-AC sleeper cum unreserved class service is specifically designed to be cost-effective.

The train's non-AC configuration is also impressive. When speed of the train exceeds 100 kmph, the train would face air pressure. To address this, the space between the coaches is fully covered, creating a seamless appearance. The train is equipped with other design features aimed at water conservation in toilets and modifications to enhance the comfort of train drivers, including air-conditioned cabins and minimised vibrations

## CO<sub>2</sub> to CO Conversion Technology

In November 2023, the **National Centre of Excellence in Carbon Capture and Utilisation (NCoE-CCU)** at IIT Bombay has developed a new technology for converting carbon dioxide (CO<sub>2</sub>) to carbon monoxide (CO).



The technology is energy-efficient and can be used in the steel sector. It aligns with India's goal for net-zero emissions by 2070.

### Working Process:-

- The CO<sub>2</sub> to CO conversion technology operates through an electro catalytic process.
- Unlike traditional methods that require high temperatures (400-750 °C), and the presence of the equivalent amount of hydrogen, this process can operate at ambient temperatures (25-40 °C) in the presence of water, eliminating the need for high-temperature conditions.

- The energy for this electrocatalysis reaction can be sourced directly from renewable energy, such as solar panels or windmills, ensuring a carbon-neutral operation. Making it highly energy-efficient process and environmentally friendly and sustainable.

### Significance for the Steel Industry:-

- CO is a crucial chemical in the steel industry, used in the conversion of iron ores to metallic iron in blast furnaces.
- CO is a widely used chemical in the industry especially in the form of syn gas.
- Traditionally, CO is produced through the partial oxidation of coke/coal, resulting in significant CO<sub>2</sub> emissions.
- The new CO<sub>2</sub> to CO conversion technology presents an opportunity to establish a circular economy, reducing carbon footprint and associated costs in steel production.



Dear Members,  
Greetings from IEI Faridabad Local Centre,  
Wishing you a very beautiful new year full  
of joy and happiness. May this one brings  
you success in every area of your life.  
Happy New Beginning! — Happy New Year  
2024.

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