

All India Seminar on “Urban Flood Management : Challenges and Strategies in India” – Brief Report

June 16-17, 2017 • New Delhi



Delhi State Centre - IET organised an All India Seminar on “Urban Flood Management : Challenges and Strategies in India” during June 16-17, 2017 in collaboration with Institution of Public Health Engineers, India - Delhi Regional Centre & Indian Water Resources Society - IIT Roorkee. Dr Amarjit Singh, IAS, Secretary of Ministry of Water Resources, Govt. of India was the Chief Guest & Shri Kamal Kishore, Member, National Disaster Management Authority was Guest of Honour. Shri O P Goel, Past President, IET also graced the dias during the Inaugural Function.

Dr Amarjit Singh complemented Delhi State Centre of IET for jointly holding a seminar on Urban Floods Management with other like minded professional bodies like IPHE and IWRs. He also appreciated the contribution of IET in national development during its nearly 100 years of existence. He appreciated that the AMIE qualification was recognized with great respect and has a big brand name, legacy and goodwill. IET should carefully keep a watch on changing scenario and update its curriculum to provide the highest level of education on engineering subjects there by contribute to national development.

He mentioned that effective and scientific use of

irrigation water has helped in crop development at a rapid pace. There is a recent example of Madhya Pradesh now producing food grains at an unprecedented level even from areas that were not consider fertile earlier. Proper water management has helped in achieving it. Wetlands need to be properly treated. True cost of development of water supply for irrigation purposes should be built into agricultural production costs for efficient use of water in agriculture. Currently cost of water is not taken into consideration in agricultural production. Understanding of

social and economic issues is as important as of the engineering interventions for effective urban floods management. Urban landscape should not be disturbed in an unplanned manner and proper land use planning must be ensured so that the water run-off is not blocked or affected.

Dr. Amajit Singh emphasized that Engineering fraternity under the umbrella of IET has the tremendous responsibility to plan and manage urban floods.

Mr. Pradeep Chaturvedi, Chairman, Strategic Plan Committee, IET, in his address emphasized that flood forecasting is very important for preparedness and should be expanded extensively across the country using real time data acquisition system linked to forecasting models. Efforts should be focused on developing physical models for various basin sections and urban centers and big data on the same needs to be collected and analysed for exact prediction of rainfall and likely flood prone areas in the urban centre. Operating procedures for cities should be such that there is least sedimentation or blockage of storm water drains and the sewer systems.

Gist of Recommendations

The Institution of Engineers (India), should serve as

Contd. on Page 3...

From the Chairman's Desk



Dear Members,

This edition of Newsletter is coming out on a very special occasion when Delhi State Centre is hosting the Council Meeting during 30th June – 02nd July, 2017 at Delhi. I on behalf of the entire Committee of Delhi State Centre extend a hearty welcome to the Council Members and Special Invitees to the Capital City of India. We shall strive hard to make your stay at Delhi comfortable and entire experience memorable.

Ever since we have assumed charge, the Committee has strived hard to connect to our members. Various technical activities have been organized and all possible ways are being explored to reach out to our members to ensure their presence and participation. We have achieved satisfactory results and now are prepared to launch more intense activities in the next six months. All India Seminars, National Conventions, Safety Convention and Quality Conclave are planned for coming month. I seek guidance and support of all fellow engineers to successfully organize these events.

I am happy to report that Dignitaries of high esteem have visited our Centre in the past 3-4 months. Secretary of Government of India and Member Secretary of AICTE were Chief Guests of our technical programme and have addressed the gathering. Their words have been very encouraging towards the role of IEI in promoting Science, Technology and Engineering knowledge to the masses. We are committed to make Delhi State Centre take centre stage and promoting the interest of IEI. Delhi State Centre has already offered services to celebrate IEI Centenary year in the most befitting manner.

Our membership base is expanding, existing members are getting reconnected and new initiatives are being implemented. There is excellent synergy between State Centre Committee, Corporate Members, IEI HQ's and Delhi State Centre, which is a very auspicious sign for success.

I look forward to continuous support from one and all at Delhi, National Council and IEI HQ's to make this dream come true.

Devendra Gill

From the Honorary Secretary's Desk



Delhi State Centre is privileged to host next Council Meeting at Delhi during 30 June to 2 July 2017. This occasion is unique as this is the first Stand Alone Council Meeting. Earlier such Meetings have taken place with Engineering Congress. This time Delhi State Centre has taken up the challenge of hosting the Council Meeting.

The Council Meeting will witness confluence of eminent engineers from all parts of the country, and with diverse backgrounds like technocrats, academicians and business tycoons. This combination is unique to the Institution. It also helps in deliberating on national problems and engineering solutions to them. The inherent expertise of the Institution has evolved a number of forward looking solutions. Even this Council Meeting is expected to deliver in the

same vein.

India is faced with a number of issues and the most important is overcoming poverty and providing larger number of jobs. These can best be developed by appropriate skills building in engineers and then providing them an eco-system that allows the skilled persons to work in the country freely. IEI has promoted skills development programmes and support income generation and job creation for large number of professionals.

Engineers have to promote the development process that will give more job opportunity, and at the same time minimise natural resource use. Some of the recent evidence show that being achieved. I am sure the Council will deliberate on issues of national importance and provide advisories on the same.

Praveen Kumar Singh

Council Members – Welcome to Delhi



Delhi State Centre has been bestowed the honour to host 695th (Special) and 696th Meetings of the Council of the Institution of Engineers (India). This Council Meeting is being organized to discuss issues of significance where enhancing the role of members in Real Estate activities (because of introduction of Real Estate Development Act); role of members in valuation (because of the Draft Rules for Registration of Valuers, issued by the Ministry of Corporate Affairs for public response); appreciations by various authorities of AMIE courses and examinations; and expansion of membership base will receive attention. Being just three years away from completion of Centenary Year of IEL will obviously generate discussion on image building of IEL during the next couple of years. All these issues have been receiving attention of the distinguished Council Members, over time, and each one of them will like to deliberate and

ensure an Action Plan for achieving desired results.

Delhi State Centre is ideally situated to play an important role whether it is discussion on matter of national concern which called for interaction with, policy makers and central government officials or it is a matter of events as run-up to the Centenary Celebrations. Delhi State Centre has attempted effective business like facilities to create a conducive environment for members to discuss and deliberate.

Delhi State Centre is undergoing transformational change, both in terms of intellectual and professional discourse as well as physical infrastructure. It therefore represents an appropriate venue for the crucial Council Meeting.

I have great pleasure in welcoming the distinguished Council Members to the city of Delhi for the Council Meeting.



Pradeep Chaturvedi

Chairman, Strategic Plan Committee; & Council Member, IEL, from Delhi

Contd. from Page 1... (All India Seminar...)

an umbrella organization to coordinate engineering developments with other like minded professional engineering bodies to coordinate planned development of urban flood management. The approach used in Seminar by Delhi State Centre should also be replicated at other state centres by IEL to promote engineering professionals to focus attention on urban flood management. Large scale public awareness programme should be launched.

Urban flood management is a complex issue as there are multiple agencies involved. A proper coordination mechanism should be created with the coordinating agencies having sufficient administrative authority over different agencies.

Unplanned growth of cities should be prevented. A Master Plan exclusively for drainage should be drawn and executed so that no encroachment of natural drainage system is existing. Appropriate legal provisions for damage control and compensation of sufferers must exist.

Flood mapping must be carefully carried out and studies be conducted for detention and retention basins on flow path to reduce peak floods.

Rain Water harvesting and ground water recharging should be encouraged to reduce run-off. The quality aspect of water from storm water drain should be effectively maintained if this is to be used for ground water recharge or for any other application, as the

quality is directly linked with pollutant load from catchment/drainage area.

Precipitation- Inter-event-dry period-Frequency (PIF) curves should be developed from rainfall records for determining storage volume of detention and retention basins and quality control of run-off.

Several indices e.g. master plan index, rainfall intensity index, permeability index, water-logging index, water bodies index, rainwater harvesting index, storm sewer capacity index etc. covering different aspects of drainage system may be developed to measure the efficiency of the system.

Desilting and removal of debris for open, covered and closed conduit drains either manually or by mechanical means must be carried out to ensure that the conveying capacity of the drainage system is restored fully, especially before onset of monsoon.

For cities like Gurugram, where there is no direct outlet like river, rain water harvesting by constructing check dams, percolation tanks, bio-swells, planter boxes, permeable pavements, green street and alleys, green parking etc. are very effective methods of reducing storm water run-off. Recycling of storm water (after appropriate treatment) may be undertaken for various uses.

For cities like Delhi where there is a possibility of back flow during high rains and floods, sufficient water pumping capacity should be created.

World Environment Day 2017 on “Connecting People to Nature”

June 5, 2017 • New Delhi

Delhi State Centre of The Institution of Engineers (India) organized a Technical Programme on theme: “Connecting People to Nature” on June 5, 2017 at Institution’s Premises, New Delhi. On this occasion Dr Chandan Ghosh, Professor & Head of the Geo-Hazard Risk Management Division, National Institute of Disaster Management, (Ministry of Home Affairs, Govt. of India) was the Chief Guest and delivered the lecture.

Shri Devendra Gill, Chairman, Delhi State Centre, IEI welcoming the Chief Guest highlighted the importance of World Environment Day 2017. He narrated that this year, the theme “Connecting People to Nature” has been well chosen as Environment can be protected only when common people get associated with this mission.

Dr. SK Singh, Member of Delhi State Centre Committee introduced the speaker as well as the significance of environment preservation for survival of mankind.

Environment degradation has caused havoc in the society and Climate Change is a potential threat to human civilisation. If urgent steps are not taken serious disaster are likely to happen. The Institution of Engineers (India) has a very important role in promoting the message to the society as well as provide technical knowhow for various stakeholders to manage this challenges in most efficient manner.

In his address Speaker Dr Ghosh narrated that the Growing of Vetiver hedges on contours and adopting conservation tillage practices between them has proved to be an effective method to reduce runoff and soil loss, and increase in-situ moisture, thereby obtaining higher crop yields. The species of Vetiver System (*Chrysopogon zizanioides*), originates in the state of Tamil Nadu, South India, which is now being promoted in nearly 120 countries. It is sterile, non invasive and has to be propagated by clump subdivision. Generally nursery multiplication of bare rooted plants is the preferred method. The average multiplication rate varies but is normally, in a nursery, about 1:30 after about three months. The Vetiver System (VS) can reduce or even eliminate landslides, mudslides, road batter instability, and erosion (river banks, canals, coastlines, dikes, and earth-dam batters).

Some of the various uses of Vetiver Grass discussed during the lecture were:

- **Harvest Rainwater** – vetiver hedges intercept and retain overland flows (storm runoff) and significantly increase soil-porosity in the root-zone



- **Protect Infrastructure** – road shoulders/cuttings/banks, causeways, bridges, pathways, canals, drainage systems Protect Structures – stabilizes unconsolidated banks and cuttings, mitigates flood damage
- **Protect Coastlines** – barrier to windblown sand, grows well in the littoral zone.
- **Protect Waterways** – stabilizes riverbanks, improves water quality (reduces sediment loads) by filtering run-off Stabilize Sloping Land – permanent bioengineering solution against sheet erosion, gully erosion and landslides
- **Protect Flood-prone Land** – slows down overland flows, traps sediments
- **Protect Farmland** – stabilizes slopes, riverbanks and flood zones, does not compete with adjacent crops, vetiver is non-invasive
- **Sequester Carbon** – creates a permanent, massive root system comprised mainly of carbon.
- **Facilitate Reforestation and Plantation Establishment** – increases survival rates and promotes rapid growth of tree seedlings
- **Treat Liquid Wastes** – nutrient removal via massive, fibrous root system and rapid biomass production, removes other pollutants including some heavy metals in leachates.

Shri Praveen Kumar Singh, Honorary Secretary, Delhi State Centre - IEI coordinate the event and proposed the vote of thanks.

Nearly 70 members, guests and invitees attended the function.

Technical Programme on “The Challenges involved in the Waste-To-Wealth Paradigm & the Current Regulatory Systems”

May 30, 2017 • New Delhi

Delhi State Centre of The Institution of Engineers (India) organized a Technical Programme on theme: “The Challenges Involved in the Waste-To-Wealth Paradigm & The Current Regulatory Systems” on May 30, 2017 at Institution's Premises, New Delhi. On this occasion Shri Asit Nema from Foundation for Greentech Environmental Systems, New Delhi, India, was the Chief Guest and delivered the lecture on the programme theme.

Delivering his welcome address, Shri Devendra Gill, Chairman, Delhi State Centre apprised about the purpose of the programme mentioning that main objectives is to discuss various provisions in revised Municipal Solid Waste (Handling and Management) Rule, 2016 and its likely impact on the current state of MSW disposed Scenario.

In his address invited speaker, Shri Asit Nema narrated that in the year 2000 India got its first regulatory system for Solid Waste Management in urban areas called Municipal Solid Waste (Handling and Management) Rules, 2000. This system attempted to embrace a paradigm characterised by, among others, segregation of waste at source, treatment of waste by diverse technologies for maximising resource recovery and thereby minimising waste loads that shall be destined for safe disposal into sanitary landfills, etc. The timeline prescribed in the Rules was rather ambitious as more than 5600 large, medium and small municipalities alike were mandated to achieve full compliance within a period of three years.

However over the next 16 years, notwithstanding the limited capacity within the sector/country and within the respective municipalities, they aspired in various ways to improve their solid waste management operations, but none could claim to achieve compliance with the Rules. In the process we have seen a large number of initiatives for segregation which have come a cropper; and an equally large number of capital intensive treatment plants set up for conversion of 'waste into wealth' based on diverse technologies have gone defunct.

As per the expert Speaker, it is evident that the Rules were too complicated and ambitious to comply with; and the municipalities simply do not have the expertise, capacity, resources and the will to achieve



compliance. As regards the Rules, there are far too many inconsistencies in relation to the ground reality of the Indian urban landscape and socioeconomic setting, and a critical analysis makes it evident that they could not have been complied with even in one and a half decades, let alone within the initially mandated three year period. Over the last 16 year the country has lived with this regulatory system and in the year 2016 we have the revised version of the rules which is called Municipal Solid Waste Management Rules, 2016. However a critical analysis of the revised version shows that instead of drawing lessons from the experience of the last 16 years, they come with even more inconsistencies and complexities. They embrace the same old paradigm of segregation and treatment so as to avoid land filling, as was the case with the previous version.

The speakers suggested that it is evident that the Rules are heavily inclined towards waste 'processing'-converting waste into wealth and energy, and not towards safe disposal of waste into sanitary landfills which represents a least cost and robust and dependable option. World over all cities with successful SWM operations involve a sanitary landfill (SLF) as the bedrock of their infrastructure. This is so, because SLFs are recognized to be robust, dependable, elastic, forgiving and affordable as regards resource recovery as well as safe disposal.

Shri Praveen Kumar Singh, Honorary Secretary, The Institution of Engineers (India), Delhi State Centre coordinate the event and proposed the vote of thanks.

Nearly 60 members, guests and invitees attended the function.

World Telecommunication & Information Society Day 2017

Theme : "Big Data for Big Impact"

May 17, 2017 • New Delhi



Delhi State Centre of The Institution of Engineers (India) jointly with Institution of Engineering & Technology (UK), Delhi Local Network celebrated World Telecommunication & Information Society Day 2017 on theme "Big Data for Big Impact" on May 17, 2017 at Institutions' Premises. On this occasion, Prof A P Mittal, Member Secretary, All India Council for Technical Education was the Chief Guest, while Mr Shiv Kumar, Technical Director, National Informatics Centre, Ministry of Communications & Information & Technology, Government of India delivered the Key-Note address on the theme.

Mr Devendra Gill, Chairman, Delhi State Centre -IEI delivering his welcome address informed that The Institution of Engineers (India) has been regularly celebrating the World Telecommunication & Information Society Day nationally through all its Centres in line with UN resolution to mark the foundation of the International Telecommunication Union and signing of first International Telegraph Convention. Mr Gill further apprised audience about the various activities planned by Delhi State Centre to raise awareness regarding use of Internet and other information and communication technologies (ICT), that can bring revolutionary advantages to societies and economies.

Mr R N Rajpoot, Chairman, Institution of Engineering & Technology (UK), Delhi Local Network in his

address apprised about the background of IET (UK), mentioned that IET (UK) has been conducting various activities to create awareness among common masses on ICTs.

Delivering the Key-Note address, Mr Shiv Kumar, Technical Director, National Informatics Centre (NIC) informed that NIC has been actively handling the vast data received from various sources in the society to assist Government in handling critical & burning issues. Mr Shiv Kumar cited example of how NIC is assisting Ministry of Women & Children Development & State

Governments for resolving the issues of Child Kidnapping, finding missing children through the use of abundant Data. Highlighting on the current marketing strategies of Major MNCs, Mr Shiv Kumar mentioned that now data's available through various search engines & social websites are being used to bring big Impact in the market by way of strategizing product quality, Product location, cost & customization.

Chief Guest of the function, Prof A P Mittal, Member Secretary, All India Council for Technical Education in his address highlighted on the growth of usage of ICTs in day to day life and its significance in Technical Education Sector. Prof A P Mittal informed that AICTE has been vigorously working towards the upliftment of Technical Institutions in the Country by way of facilitating them to participate in innovative competition programme, like Hackathon etc. Chief Guest's address broadly covered the status of Technical Education in India & future challenges in view of rising global competition.

Mr Praveen Kumar Singh, Honorary Secretary, The Institution of Engineers (India), Delhi State Centre coordinated the programme & proposed the vote of thanks.

Event was attended by nearly 60 participants, mainly Corporate Members, Student Members, professionals from industries & other invitees.

Technical Programme on “Developing Safety Culture”

May 13, 2017 • New Delhi



Delhi State Centre and Safety & Quality Forum of The Institution of Engineers (India) jointly organized a Technical Programme on the topic “Developing Safety Culture” on May 13, 2017 at Institution's Premises. The activity comprised of Technical Talk and Screening of Movie “Deepwater Horizon” followed by group discussions among participants after the movie.

Welcoming the audience, Shri Devendra Gill, Chairman, Delhi State Centre-IEI apprised the audience about contribution of Delhi State Centre of The Institution of Engineers (India) which was established in 1927. With a total Corporate Membership of Delhi State Centre of over 8500 having

representatives from 15 Engineering disciplines and about 25000 non-corporate members consisting of Technicians, Sr. Technicians and Graduates, Delhi State Centre is one of the most vibrant State Centre having connect to its member through such programme. He dwelled upon the importance of developing culture for growth of an organization.

The movie “Deepwater Horizon” displayed real life story of collapse of Rig in April, 2010, which led to causality of nearly 115 crewman on board, apart from causing the largest Oil Spill in US waters in the gulf of Mexico. It took nearly 5 months to control the whole impact of accident. Movie magnificiently depicted how ignorance of routine maintenance can even make one of the Safest Oil Rig meet a catastrophe.

Shri Praveen Kumar Singh, Honorary Secretary, Delhi State Centre and Director, Safety & Quality Forum - IEI proposed the vote of thanks.

It was a very informative technical programme and was appreciated by all the Participants. Nearly 100 Corporate members, Students, guests and invitees attended the function.

Fire Safety Week 2017

Theme: “Firemen – Your Partner for Saving Life & Property “

April 19, 2017 • New Delhi

Delhi State Centre of The Institution of Engineers (India) jointly with Safety & Quality Forum (SQF) organized technical programme on the occasion of FIRE SAFETY WEEK 2017 on the theme “Firemen – Your Partner for Saving Life & Property” on April 19, 2017 at Institutions' Premises. Mr R C Sharma, Former Director, Delhi Fire Service was the Chief Guest of the function.

Mr Devendra Gill, Chairman, Delhi State Centre -IEI delivering his welcome address mentioned that SQF & Delhi State Centre has been striving hard for the last one decade to disseminate the knowledge regarding Fire Safety by way of conducting technical lectures and various skill development programme as well as screening of safety related movies. He stressed that reduction in fatalities due to fire accidents can happen by imparting awareness & training to common mass on a larger scale.



Mr R C Sharma, Former Director, Delhi Fire Service in his very informative & elaborative presentation highlighted on various challenges Firemen face in their day to day life, constraints involved in a case to case accidents scenario, impact of poor information system on Firemen's performance and varying behavior of different stake-holders engaged in any

Contd. on Page 5...

Technical Programme on “Current Trends in Aerospace Engineering”

April 17, 2017 • New Delhi

Delhi State Centre of The Institution of Engineers (India) organized a Technical Programme on theme: “Current Trends in Aerospace Engineering” on April 17, 2017 at Institution's Premises, New Delhi.

Delivering the welcome address Shri Devendra Gill, Chairman, Delhi State Centre, The Institution of Engineers (India) mentioned that Aviation Sector has developed very rapidly post liberalization. The entries of foreign players have made market competition in Aviation sector stiffer. Additionally, Aviation Industries are also playing vital role in ensuring Security of the Nation. In view of these circumstances, it has become imperative for Technical Institutions & Research Organization to focus more on innovating cutting edge technology in this field.

Chief Guest of the function, Gp. Capt Praveen Khanna, VSM (Retd) delivered appreciative and indepth lecture on the theme. Gp. Capt Khanna, in his presentation, broadly focused on 3-major aspects of current aerospace technology, viz Propulsion - SCRAM JET, Structures & Aerodynamics (Techniques) - CFD/FEM & Present Designs & Applications. - UAV & DRONES

Gp Capt Praveen Khanna, in his presentation, highlighted on propulsion system for scramjet engine. Starting with the introduction of S-C-RAMJET engine i.e. Supersonic Combustion RAMJET engine, he compared its propulsion system with present-turbojet and ramjet engines. He also highlighted the application of CFD/FEM software-based mathematical & Flow models & technologies. The application of these would help design & analysis of



structural Design & Fluid-Flow predictions, well before the “Wind-Tunnel” Testing, which are very expensive & time-consuming. Presentation also focused on Finite element method (FEM) for solving problems of engineering and mathematical physics.

With its significance in Aviation Sector, he also spoke on Present Designs & Applications of Unmanned Aerial Vehicles UAVs/Drones. Concluding his presentation, Gp. Capt Praveen Khanna also shared concerns over Make in India Challenges. The speaker touched upon the various critical issues like Regulations, Awareness, Drone Identification, Economic Considerations & Operator's Skills.

Shri J K Jain, Professor, Amity School of Aerospace Engineering and also member of Delhi State Centre Committee coordinated the event.

Nearly 50 members, guests and invitees attended the function.

Proposed Events

All India Seminar, on “5-G Technologies & Future Scenario” during August 18, 2017 at New Delhi under the Aegis of Electronics & Telecommunications Engineering Division Board - IEL.

Safety Convention 2017 on “Industrial Safety with Focus on Manufacturing Excellence” during September 4-6, 2017 at Hotel Le Meridian, New Delhi under the Aegis of Safety and Quality Forum

Two Day National Conference on “Real Estate Industry and Agricultural Potential of India” during

October 6-7, 2017 at New Delhi under the Aegis of Agriculture & Civil Engineering Division Board - IEL.

All India Seminar on “National Electric Mobility Mission 2020” on November 17-18, 2017, Delhi under the Aegis of Electrical Engineering Division Board- IEL.

31st National Convention of Agriculture Engineers on “Engineering Interventions in Doubling the Income of Small and Marginal Farmers by 2022” during February 2-3, 2018 at New Delhi under the Aegis of Agriculture Engineering Division Board-IEL.

Technical Programme-cum-Movie Screening Show

Theme : "Occupational Risks to Fire Emergency Responders"

April 8, 2017 • New Delhi

Safety & Quality Forum jointly with Delhi State Centre of The Institution of Engineers (India) organized technical programme on theme "Occupational Risks to Fire Emergency Responders" on April 8, 2017 at Institutions' Premises. Programme comprised of a presentation on the theme address by Mr HS Rawat, MIFireE (UK) General Manager (Retd), Airports Authority of India, followed by Screening of Movie: "Back Draft".

Mr Devendra Gill, Chairman, Delhi State Centre -IEI delivering his welcome address apprised the audience about the severity of Fire accidents occurring due to Back Draft. He mentioned that probability of casualties occurring due to Back Draft is extremely high in comparison to other Fire accidents. He insisted on conducting more awareness & training programme on Back Draft, since lack of knowledge & training in handling Back Draft effectively is the main cause of fatalities occurring during accidents due to Back Draft.

Mr HS Rawat, Former General Manager, Airports Authority of India in his elaborative presentation on "Occupational Risks to Fire Emergency Responders" apprised the audience about the various challenges Firemen faced in their day to day life, while countering any Fire Incident. He mentioned Occupation Risks to Firemen are extremely high, since the site of any fire incident never remains same. It changes every day, posing severe threat of loss of life when a person is not able to adjust to the changing scenario. Additionally, apart from technical skill &



Physical strength of any Firemen, the mental stability in handling emergency scenario plays a vital role. Presentation of Mr H S Rawat covered in detail on types of challenges faced by Firemen, factors effecting the performance of Firemen & tools available to reduce the Occupational risks of Fire Emergency Responders.

Movie "Back Draft" magnificently focused in details the various issues pertaining to fire accident occurred in one building & the challenges faced by Firemen to handle the devastating damage occurred due to Back Draft.

Mr Praveen Kumar Singh, Honorary Secretary, The Institution of Engineers (India), Delhi State centre coordinated the programme & proposed the vote of thanks.

Event was attended by nearly 90 participants, mainly Corporate Members, Student Members, Safety professionals from industries & other invitees.

Contd. from Page 3... (Fire Safety Week 2017)

fire disaster cases. Mr Sharma lamented on current situation of poor fire safety management system in the country. He categorically mentioned that reason for majority of casualties of firemen goes to improper or incorrect information available with them. He stressed that development of effective Investigation System has become imperative due to rising cases of fire accidents & also to develop counter strategy for different types of fire accidents. Presentation of Mr R C Sharma covered in details the risks involved in any fire incident alongwith case studies of major fire

accidents happened in India during the last one decade and factors effecting the performance of Firemen & strategies available to reduce Fire Accidents.

Mr Praveen Kumar Singh, Honorary Secretary, The Institution of Engineers (India), Delhi State centre coordinated the programme & proposed the vote of thanks.

Event was attended by nearly 60 participants, mainly Corporate Members, Student Members, Safety professionals from industries & other invitees.

33rd Maj. Gen. Harkirat Singh Memorial Lecture

Theme : “Digital India - Digital Economy - The World Economic Order”

April 7, 2017 • New Delhi

Delhi State Centre of The Institution of Engineers (India) organized 33rd Maj Gen Harkirat Singh Memorial Lecture on April 7, 2017 at Institutions' Premises. On this occasion Lt Gen (Retd) Ashok Agarwal, PVSM, Former Director General (QA), Ministry of Defence & Past President, IETE was the Chief Guest & delivered Memorial Lecture on topic “Digital Economy-The New Economic World Order”. The function was graced by Daughter, Family members of Maj Gen Harkirat Singh. Mr Pradeep Chaturvedi, Council Member-IEI also presided over the function.

The Memorial function started with homage paying ceremony by garlanding of photograph of Maj Gen Harkirat Singh by dignitaries.

Mr Devendra Gill, Chairman, Delhi State Centre -IEI delivering his welcome address mentioned that greatest homage Engineering Fraternity can pay to Maj Gen Harkirat Singh is by adopting his principles & to work strenuously towards the betterment of The Institution of Engineers (India). Briefing about the contribution of Maj Gen Harkirat Singh, Mr Gill mentioned that Maj Gen Harkirat Singh was instrumental in conceptualizing, designing & construction of IEI's Head Quarters Seven Stories building. Later on, IEI HQs' building became landmark location in the city of Kolkata only due to vision of Maj Gen Harkirat Singh.

Mr Pradeep Chaturvedi, Council Member-IEI in his address mentioned that Maj Gen Harkirat Singh played a key role in ensuring the incessant support of Indian Army in the various activities of the Institution of Engineers (India) during the era of 60's & 70's.

Chief Guest of the function Lt Gen (Retd) Ashok Agarwal delivering Memorial Address on topic “Digital Economy-The New Economic World Order” mentioned that Digital India is a plan envisioned by Prime Minister. Narendra Modi "to transform India into a digitally empowered society and knowledge economy". The key to the program is turning high-speed internet into a core utility. Apprising about the India's Telecom revolution, Gen Agarwal mentioned that Indian Telecom revolution started about 30 years ago. At that time Waiting list for Landline phone connection was 5-10 years. Next 10 years saw the galloping growth and by mid 90s, Telephones were freely available, practically all villages were connected and had STD booths. Along with telecom, Computers and IT also simultaneously emerged in India. Markets, Offices, enterprises were flooded with computers. By



mid 90s, India assumed position of large supplier of software and ITES. He informed that India's software, ITES and BPO, revenue has contributed to 66% of total export for 2016 and it is acting as an important driver of Indian economy Referring to the mobile phones' consumers, Gen Agarwal highlighted that India has surpassed USA in smart phone population to become second largest smart phone market in the world after China. Mobile networks are being upgraded with superior technologies; 2G to 3G and now 4G LTE to provide higher data speeds for better user experience.

Lt Gen (Retd) Ashok Agarwal in his address spoke in detail on Digital economy & mentioned that Digital economy is the new productivity platform that experts regard as the third industrial revolution. According to Goldman Sachs prediction India comprising 15% of world population with growth @ 7-8% could be the second largest economy by 2030. PM Modi considers “Digital India” as major growth driver and therefore strategically listed among the top priorities of the Government. He mentioned that Digital India is the key enabler to all plans like 'Skill India', 'Make in India', 'Start-up India' etc. Concluding his address, Gen Agarwal mentioned that Digital India is not only providing internet connectivity to rural India but a Program to transform India into a digitally empowered and knowledge society. Convergence between the connectivity, knowledge and economy will decide our future and transform India into a modern 21st Century nation.

While proposing the vote of thanks Mr Praveen Kumar Singh, Honorary Secretary, The Institution of Engineers (India), Delhi State Centre informed that Delhi State Centre-IEI started conducting Maj Gen Harkirat Singh Memorial Lecture since 1985. Over the years, this memorial lecture has grown in stature & importance due to persistent support of the corporate members of the Institution of Engineers (India).

Event was attended by nearly 70 participants, mainly Committee & Corporate Members, Officers from Defence, Student Members & other invitees.

Technical Programme

Topic : “Innovation in High Speed Railway”

April 6, 2017 • New Delhi

Delhi State Centre, The Institution of Engineers (India) and Institution of Engineering & Technology (UK), Delhi Local Network jointly organised a Technical Programme on April 6, 2017 at Institution Premises, New Delhi on theme: “Innovation in High Speed Railway”.

Delivering the welcome address Shri N Venkatesan, Past Chairman, Institution of Engineering & Technology (UK), Ex Member/Electrical, Railway Board mentioned that significance of high speed Railways is increasing day by day due to continuous implement in economy of the country and simultaneously now people desire to spent their time effectively on useful activities.

Shri Pradeep Chaturvedi, Council Member, The Institution of Engineers (India) in his address stressed that High Speed trains is a topic that has been attracting attention of the common men and they look up to the engineering fraternity to provide them faster trains at the earliest. There is a different perception of what is really meant by high speed trains. Is bullet train the only solution or keeping in view the infrastructure conditions of the Indian Railways, train at a little lower speed can also be termed as High Speed Train?

Expressing satisfaction over the future traffic load of Railways, Shri Chaturvedi mentioned that Construction of Dedicated Freight Corridors (DFCs) which are being built more or less parallel to the existing double line tracks will release the congestion on the existing tracks as these will then be carrying only the passenger traffic and the freight traffic will shift to the newly constructed train corridors.

Shri Pankaj Guleria, WoE Test Manager, Hitachi Rail Europe, IET Global Ambassador who was key note speaker of the programme in his address apprised in details about the strategy of Hitachi Rail Europe in effectively providing the test services to the citizen in UK. Shri Guleria in his presentation highlighted on various key features of AT services of trains manufactured by Hitachi Rail Europe. Some of the key features of the train are best of specific energy consumption, highest level of safety features, comfort for crew and passengers and reliability of engine and Bogies. Shri Guleria informed that AT400 train is the



latest version of train released by Hitachi Rail Europe.

Chief Guest of the function Shri Ghanshyam Singh, Member Traction, Railway Board, in his address stressed the various actions taken by Indian Railways to reduce rail accidents. He mentioned that commendable improvement has been witnessed in this area during the last five years. However, still more cohesive actions are required to achieve International Bench Mark. Shri Singh in his address highlighted the achievements of Indian Railways after running of “Semi Speed Rail” from Nizamuddin to Agra. He mentioned that innovation on “High Speed Corridor” is already in progress and expected results can be seen in the coming years.

He informed that Railways is also focussing on Energy Efficiency and Energy conservation. In this regard, installation of Solar Power Plants is one of the key projects. Intention is to reduce carbon foot print of major railway stations. Saving of traction energy is also other option. Concluding his address, Shri Singh mentioned that “Safety” has been of paramount interest for Indian Railways and in this regard Railways is working actively to eradicate accidents occurring in Rail-Line.

Shri Praveen Kumar Singh, Honorary Secretary, Delhi State Centre-IEI proposed the vote of thanks.

Shri Aman Rajput, Secretary, YPS, Institution of Engineering & Technology (UK)-DLN coordinated the programme.

Nearly 160 members, guests and invitees attended the function.

World Water Day 2017 on the theme “Waste Water”

March 22, 2017 • New Delhi



Delhi State Centre of The Institution of Engineers (India), Delhi Regional Centre of Institution of Public Health Engineers, India and IET (UK), Delhi Local Network jointly organized World Water Day 2017 on the theme “Waste Water” on March 22, 2017 at Institution's Premises. On this occasion, special lectures were delivered by Shri Alok Suman, Treasurer, IPHE on “Waste Water Treatment: Technology Options” and Shri K A Roy, Honorary Secretary, on the topic: “Ganga River Pollution Abatement – Past, Present & the Future” respectively.

Delivering the welcome address, Shri Devendra Gill, Chairman, Delhi State Centre-IEI mentioned that scarcity of pure drinking water is posing threats internationally, on the health of all living creatures in world, including human being. He insisted on focussing the recovery of waste water in order to counter this challenge.

Shri R N Rajpoot, Chairman, IET (UK), Delhi Local Network in his address stressed on implementing collaborative efforts to reduce the pollution of rivers in India.

Shri Alok Suman, Treasurer, Institution of Public Health Engineers, India, Delhi Regional Centre delivered his address on the topic “Waste Water Treatment: Technology Options”. Shri Suman spoke on Wastewater System, Need for Safe Sanitation System, Present Scenario of Urban Sanitation in India, Composition of Domestic Sewage and Design Parameters, Objective of Wastewater Treatment, Treated Effluent Discharge Standard, Policies and

Institutional Set-up for WWTs, Sewage Treatment Process Selection, Options for Wastewater Treatment and Levels of Treatment.

Shri K A Roy, Honorary Secretary, Institution of Public Health Engineers, India, Delhi Regional Centre delivered address on the topic: “Ganga River Pollution Abatement – Past, Present & the Future”. Shri Roy in his address cited various reasons for Ganga Water's pollution. He mentioned that realizing that rivers of the country were in a serious state of degradation, a beginning towards their restoration was made with launching of the Ganga Action Plan (GAP) in 1985. Shri Roy mentioned

that establishment of National Ganga River Basin Authority (NGRBA), is a turning points towards the rejuvenation of River Ganga. Subsequently “Ganga River Basin” management plan has been developed for restoration of River Ganga through Eight important Missions Aviral Dhara, Nirmal Dhara, Ecological Restoration, Geological Safeguarding, Sustainable Agriculture, River Hazard Management, Basin Protection from Natural Disaster and “Environmental Knowledge-Building and Sensitization. He mentioned that Namami Gange approaches Ganga Rejuvenation by consolidating the existing ongoing efforts and planning for a comprehensive action plan for future. His address conveyed in details the various stages of Ganga Rejuvenation project.

Shri Praveen Kumar Singh, Honorary Secretary, The Institution of Engineers (India), Delhi State Centre coordinate the event and proposed the vote of thanks.

Nearly 70 members, guests and invitees attended the function.

For further details, please contact :

Honorary Secretary

The Institution of Engineers (India)
DELHI STATE CENTRE

"Engineers Bhawan"

2, Bahadurshah Zafar Marg, New Delhi - 110002

Phone : +91-11-23379948/9052 Fax : +91-11-23370489

E-mail : delhisc@ieindia.org, ieidsc1@gmail.com

Website : www.ieidsc.com