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Voice of Kerala Engineers

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CHAIRMAN'S MESSAGE

Er. N. Rajkumar FIE



My self and our Hon.Secretary attended the interactive session for Chairmen & Hon. Secretaries of IEI, States & Local Centres held at Engineering Staff College of India at Hyderabad on 19th Feb:2017. We had the occasion to interact with other Chairmen & Hon. Secretaries all over the country. We also had discussions with the executives of Engineering Staff College of India and visited the ESCI Campus. The ESCI is housed in a 73 acre campus in old Bombay road, Gachi Bowli, Hyderabad. The land for this campus was allotted to IEI by the then Govt. of Andhra Pradesh when Sri. N.T.Rama Rao was Chief Minister. We were thinking of the attitude of Govt. of Kerala towards the Engineering fraternity. Our State Centre Trivandrum was allotted 1 acre of land on lease by the 1st State Cabinet headed by Sri. EMS Namboothiripad. Thanks to the efforts of the Cabinet which has allotted the land for a lease of Rs.65/- per year. Subsequently GOK has raised the lease to several crores and finally we have paid about Rs.66.57/- lakhs as lease arrears and 40 cents of land was taken away from us. Now a fresh demand for Rs.3,22,38,652/- have been made on us. Presently we are forced to approach the High Court of Kerala and we are continuing in the leased land of 60 cents on the basis of the stay order issued by Hon.High Court of Kerala. Many of our members may be aware of these facts. We are proposing to continue our persuasions with present GOK for favorable consideration to us as an Institution catering to the aspirations of Engineers in the State. Hope for the best.

HONORARY SECRETARY'S DESK

Er. K. S. Udaya Kumar MIE

Kerala State Centre Diary

01-03-2017 Talk on 'Vizhinjam Port – A Dream Coming True' by Dr. Jayakumar, Managing Director and CEO, Vizhinjam International Seaport Limited.

08-03-2017 Talk on 'Power Scenario in Kerala – Problems and Solutions' by Er. K.Madhavan Pillai, Chief Electrical Inspector (Retired).

15-03-2017 Talk on 'Indian Housing Projects in Sri Lanka' by Er.Justin Mohan IFS, Director, Soil Conservation.

22-03-2017 World Water Day Celebrations. Lecture on the theme 'Waste Water' by Dr.Manoj Samuel, Principal Scientist & Head, Engineering Division, Central Institute of Fisheries Technology, Kochi.

29-03-2017 Talk on 'Evolution of Aircraft Technology' by Er. Sheeju Chandran, Dy. Project Director, Human Spaceflight Project, VSSC.



NATIONAL SAFETY DAY

National Safety Day is observed all over India every year on 4th March, being the Foundation Day of National Safety Council.

The Institution of Engineers (India), Kerala State Centre requests all to follow Safety Rules at home, at work and on the road.

20th Er.C.S.Padmanabha Iyer Memorial Lecture

The Institution of Engineers (India), Kerala State Centre conducted the 20th Er.C.S.Padmanabha Iyer Memorial Lecture on 15-02-2017 at Visvesvaraya Bhavan, Thiruvananthapuram.

Er. N. T. Nair, Past Chairman, The Institution of Engineers (India), Kerala State Centre delivered the lecture on the topic 'Artificial Intelligence – Key Factor of All Modern Computer Applications'. Earlier Er.N.Rajkumar, *Er. N. T. Nair* Chairman, IEI Kerala State Centre welcomed the gathering introduced the speaker and narrated the life sketch of Er.C.S.Padmanabha Iyer.

After the lecture Er.Udaya Kumar K.S., Honorary Secretary, IEI Kerala State Centre proposed the vote of thanks.



An exhibition of models of Engineering projects was also held.



IEI ALUMNI NETWORK

In 2015, IEI Alumni Association has been registered at Karnataka State Centre and First Executive Committee was formed with Dr Enti Ranga Reddy as its President. President, IEI inaugurated the official website of IEI Alumni Association during the inaugural function of Indian Technological Congress on 29 Jul 2015. The matter was noted by the Council at its 687th meeting held at Kochi during 26-27 Sep 2015.

Thereafter, based on the recommendation of EEAC, the Council at its 689th meeting held at Ahmedabad during 02-03 Apr 2016 approved that IEI Alumni Association Secretariat be set up at IEI HQs at Kolkata and noted the following:

"All State Centres may form their Alumni Association within its area of jurisdiction. The Chairman of the respective State Centre will be the Chairman of the Alumni Association and two members from the State Centre Committee and one IEI alumni and one treasurer be constituted. If no IEI alumni is available in State Centre Committee, one IEI alumni member can be co-opted from within the area of jurisdiction for effective functioning of IEI Alumni Association".

Alumni Database

Pursuant to the decision of EEAC and Council IEI Alumni Association Secretariat has been set up **in EEA Department with Director (EEA) as its nodal officer**. To facilitate the process of building an Alumni Network three separate databases (State-wise list, Division-wise list and Centre-wise list (passout candidates of Summer 1997 up to Winter 2015 examination) of alumni along with their mailing addresses, e-mail ids and mobile numbers have been prepared at the Secretariat. Necessary actions have already been initiated to create database of Alumni prior to 1997.

Alumni Meet

In this connection, also, please note that an Alumni Meet was organised on 17 Dec 2016 during 31st Indian Engineering Congress held at Kolkata where Mr N B Vasoya, President, IEI desired that an alumni meet be organised zone-wise. Based on the above decision, it is proposed to conduct these alumni meet zone-wise. The first meeting would be held at Chennai in second week of March (dates to be finalised subsequently). The alumni meeting would be conducted and organised under the aegis of the Tamilnadu State Centre. The second meeting is tentatively scheduled in May/June 2017 under the aegis of Gujarat State Centre.

NEWS FROM LOCAL CENTRES

Kozhikode Local Centre

"Internet of things and Smart grid"

A Technical Presentation was held on 14th February 2017 by Kozhikode Local Centre of the IEI, **Prof(Dr)S.Ashok**, Professor & Head, National Institute of Technology, Kozhikode delivered a lecture on **"Internet of things and Smart grid"**.

Prof (Dr)K P Mohandas, FIE, Chairman IEI, welcomed the Chief Guest and other members. Er. C.Jayaram, MIE, Committee member Kozhikode Centre introduced the speaker. Prof (Dr) S.Ashok gave a comprehensive presentation on the historical development of Microgrid to Smart Grid and the challenges in interconnecting dynamic loads and dynamic sources within small Micro grids to the larger grids. The need to use the ideas in the



Prof (Dr) S.Ashok speaking

Internet of Things (IoT) to meet the challenges offered by the Smart Grid was highlighted by the speaker.

The function concluded with vote of thanks of Er.M Sajan AMIE Committee Member Kozhikode local centre.

Palghat Local Centre

"Performance Excellence Through Lean optimization"

A technical session on "Performance excellence through Lean optimization" was organized by the Palghat Local Centre of IEI on 16-01-2017. Er Swamy Narayana, Vice President, Perungo Systems Inc., Jacksonville, Florida(USA) was the guest speaker who delivered the speech. Er A.Kesavan, Chairman of the Local Centre presided over the function.

In the speech Er Swamy Narayana explained that current



Er Swamy Narayana speaking

business finds necessity of using less resource with lean thinking. Need to change the focus of management to optimizing the process flow of products or services through value mapping and streams. References were made to Toyota Production system showing differences from traditional concept. During increasing demands from customers, it is crucial to use resources in a way that maximizes customer value and continue focus on improved efficiency

Organizations need to find new and innovative ways to meet the requirements. This makes lean and process optimization as relevant

Er Swamy had shared his personal expertise while launching General Motor Truck under headings, what went well; what surprised and what could have done better. The session concluded with a vote of thanks by Hon. Secretary Dr E.K.K.Nambiar.

Kochi Local Centre

'Need for Appropriate Technological Innovations in MSW Management Sector'

The Institution of Engineers (India) Kochi Local Centre conducted a talk on **"Need for Appropriate Technological Innovations in MSW Management Sector"** on 11th February 2017 by Shri. M Anand, Asst. Professor, School of Environmental Studies, CUSAT. He emphasized the necessity of proper Solid Waste Management. Even though, urbanization is growing fast in India there is no planned effective solid waste Management System. The municipal waste is simply dumped into public places resulting nuisance and health risks. The matters in rural areas are also not different. The present system of waste disposal like incineration, pyrolysis, Anaerobic digestion, Thermal gasification again pollute the air in one way or other. Aerobic composting owing to its simplicity in the process is suitable to Indian condition. The concept of Reduce, Reuse and Recycle could be fully contemplated by adopting composting technology. Composting process has been scientifically studied and engineered and has become more efficient in waste disposal method.

Two types of composting system have been widely applied

in vessel system and window system. Very efficient composting system have been developed in Europe based on forced aeration technology. The idea is to optimize microbial activity by controlling moisture content in the vessel containing solid waste. It is high time for us to think seriously about effective solid



Shri. M Anand

waste management lest we surrender to fatal diseases.

Earlier Er. N Paul George, Chairman welcomed the audience and introduced the speaker. Er. K G Govindan Kutty Nair gave the memento to the respected speaker and Er. T P Raveendran, Hon. Secretary proposed vote of thanks.

Power Supply Arrangements for Kochi Metro Rail Systems



Shri. K Unnikrishnan Nair, Deputy Chief Electrical Engineer, Delhi Metro Rail Corporation . Electrical Power to Muttom Yard for Kochi Metro is fed from 220KV substation, Kalamassery through 2 sets of 110 KV dedicated feeders. Approximately 3.2 kilometers of 630sqmm Aluminum underground cables connects KSEB 110KV yard at Kalamassery with gas insulated substation at Muttom Yard. The receiving end substation – RSS – at Muttom has 110 KV gas insulated duplicate bus bar arrangements. 2 Nos of 25MVA transformers step down 110 KV to 33KV. 33 KV via duct cables along the 25.6 KM elevated metro tracks feeds power to 22 nos Auxiliary substation at 22 metro stations from Aluva to Pettta Junction. Each Auxiliary substation

has 2 transformers, one for lighting, power escalator at 33KV/415V and another for traction at 33KV/590-590V. The 590V-590V A/C supply is rectified to 750 VDC and fed to the third rail which is installed by the side of the running rail at an elevated level.

Each train has 8 traction motors of 275KW each working on 415V three phase AC which is derived from inverting 750VDC tapped from the third rail. The speed control is achieved by variable voltage variable frequency (3VF) control system. The running rail is used as the negative return conductor of 750 VDC. Each station is equipped with most modern system of control and monitoring like SCADA, BMS and safety is given prime importance. Each train can accommodate 975 passengers and can operate in driverless mode also. The rated speed is 80kmph and maximum speed designed in 90kmph. The power supply systems is also strengthened by 2 nos 110KV feeders from New Vyttila Substations and 33 KV feeder from Kaloor substation.

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**Kerala State Centre-
WEDNESDAY TALKS - Glimpses**

01-02-2017 Talk on 'Towards Effective Project Management' by Mr. P.A.Prabhakaran, Retd. Chief Engineer, ISRO & Advisor to Chairman, ISRO, Department of Space.



08-02-2017 Talk on 'Relax... Oh Mind' by Dr. M Manohar, Scientist, VSSC – ISRO, Thiruvananthapuram.



22-02-2017 Talk on 'Effects of Demonetisation' by Mr.Salim Gangadharan, Chairman, South Indian Bank & Former Regional Director, Reserve Bank of India.



WORLD CANCER DAY

World Cancer Day is observed on 4th February every year. Let us prevent Oral (Mouth) Cancer by avoiding Tobacco; Lung Cancer by avoiding Cigarette and Beedi; Colon and Prostate Cancer by avoiding Non-vegetarian food.

Save Energy, Save Nature

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