



# News Magazine of The Institution of Engineers(India), Kerala State Centre

## Voice of Kerala Engineers

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### CHAIRMAN SPEAKS

Prof. (Dr.) M. Jayaraju FIE



It is with a great sense of affection and friendship that I give the first message of this year. Let us take a pledge to take forward this historical Institution to greater heights with our relentless work and commitment so that we continue our nation building journey.

The celebrations of the 75th Anniversary of the formation of Kerala State Centre will continue till October, 2023. There is not much time left and we have to begin forthwith. The details were discussed during the State Committee Meeting on 24 - 12 - 2022. It is planned to bring out a Souvenir to mark the 75th Anniversary of Kerala State Centre. The participation of all Members in this regard is invited.

I had attended the 37th Indian Engineering Congress at Chennai from 16 - 18 December 2022. The theme was 'Role of Engineers for creating a sustainable and self-reliant India'. In this connection, we have a major role to play. It is planned to have an Internship Programme for Engineering students. This will help them for employment.

During the State Committee Meeting it was planned to conduct Vacation Classes for students. Regarding lease issue, discussion was held with the Collector of Thiruvananthapuram and the report was forwarded to Government. Also, recommendation to name the road in front of Kerala State Centre as Sir.M.Visvesvaraya Road was submitted to Government.

Christmas was celebrated with much fanfare at the State Centre.

Until next time then.

### HONORARY SECRETARY'S DESK

Er.Roy Mathew, MIE

#### Upcoming Events

**11.01.2023** Talk Business Skills for Engineers and Scientists ' by Er. E. J. Francis, FIE, Former Group Director, CCQG, VSSC, ISRO.

**18.01.2023** Talk on 'Management of anxiety and stress' by Mr. P. Sekharan Kutty, AGM (Retd.), Indian Overseas Bank.

**25.01.2023** Talk on 'Engineers as Arbitrators' by Dr. Sunil Vasudevan, Deputy Chief Engineer (Retd), PWD -Kerala

**26.01.2023** 74<sup>th</sup> Republic Day Celebrations. Hoisting of National Flag at Visvesvaraya Bhavan, IEI Kerala State Centre at 9.00 am.

**01-02-2022** will be announced.

**08-02-2011** Er.C.S.Padmanabha Iyer Memorial Lecture by Er.P.Balakrishnan Nair, Committee Member, IEI Kerala State Centre.



### Reports from Local Centre

#### Kollam Local Centre

21-11-2022: To help students explore the myriad opportunities offered by The Institution of Engineers (India), The Kollam Local Centre of IEI and IEI Computer Science Student Chapter, TKM College of Engineering, Kollam jointly conducted a First Year Orientation program at Jubilee Hall, TKMCE.

Mili Murali, Chairman IEI SB TKMCE guided the session.

### ENERGY CONSERVATION DAY

14-12-2022 Energy Conservation Day Celebrations 2022. Prof. V K Damodaran, Fellow, IE (India); Life Senior Member, IEEE (NY), Founder Director, Energy Management Centre-Kerala delivered the lecture on 'Move towards Carbon Neutrality: Need to redefine Conservation'. Er.N.Rajkumar, FIE, Past Chairman, IEI KSC welcomed the gathering and introduced the speaker. After the lecture Er.Roy Mathew, MIE, Honorary Secretary, IEI KSC proposed the vote of thanks.



*A Century of Service to be Nation*

Student Chapter faculty Coordinatorr, Prof Shyna A welcomed students and gave an insightful speech about the functioning of IEI in our campus including which the goals of the club were discussed such that the extracurricular activities organized promote outcome-based education.



Dr. Sheeba R (Honorary Secretary, IEI Kollam Local Centre) inaugurated the event and during inaugural address Dr. Sheeba R mentioned about IEI, its establishment and the benefits of IEI for students being an IEI student member. Sanjay S J, Secretary IEI SB TKMCE explained how IEI helps students to explore new opportunities and past activities held at our campus.

The formal program was followed by various group activities and game sessions which helped the students to interact and get to know their batch mates more. Around 126 participants attended the event. The session ended around 6:30pm and refreshments were served to all participants.

The session received great response and students shared positive feedback

13.12.2022: 'Energy Conservation Day' was celebrated by The Institution of Engineers at Einstein hall at Baselos Mathews II college of Engineering, Sasthancotta. The event was jointly organized with IEI Mechanical student chapter, Baselos Mathews II college of Engineering, Sasthancotta. Inaugural session was presided over by Principal, Dr. L Padmasusresh and welcome speech by Abraham Sam Thomas. Program was Inaugurated by Dr Sheeba R, Honorary Secretary, IEI Kollam Local Centre, and special address by Dr. Madhusoodanan pillai and Felicitation by Er, Sreekumar R vote of thanks proposed by Midhun P Mathew. Director Rev Fr. Thamas Varghese also graced the function. A talk on Energy conservation an Overview was held by Mr. Dr Madhusoodanan pillai Former professor TKMCE and Executive Committee member, IEI KLC,. It was a Talk generally described the importance of Energy Conservation and the methods to save energy use and vote of thanks for seminar talk was proposed by Prof Shehna Salim.



## Kochi Local Centre

A Technical presentation on 'The Technology Involved In I.N.S Vikrant - An Aircraft Carrier Built By The Cochin Shipyard, Kerala' (IAC 1) built by Cochin shipyard. Ernakulam Kerala had been presented by Er. Anish S, Dy General manager, Strategic and Advanced solutions department of CSL. This was In connection with the felicitation of CMD of CSL Er Madus S Nair and his team jointly by IEI Kochi Local center and Mariners Society of Kerala on 13-12-2022 under the Chairmanship of Er. P A Salahudheen Chairman IE(I) Kochi Local Centre.

Before the felicitation functions starts Er Anish presented the Technology incorporated in the indigenously built Aircraft Carrier. Er, Shai Jacob introduced the speaker to the Audience.

The felicitation function started with the welcome address by Dr K. A Simon President Mariners Society of Kerala, he briefed about the historical background of marine and shipbuilding heritage quoting a relevant portion of references from ancient Indian Books.

In the Presidential address, Er P A Salahudheen mentioned the importance of the Cochin shipyard in shipbuilding industries duly inherited with the legacy of Kerala cost in shipbuilding for the 3000 years known History referring Beypore port near Calicut.

Dr M P Sukumaran Nair Past Chairman of Kochi Local Centre mentioned the importance of public sector undertaking in strategically important industries



and the dedication of management and workers' attitude. And He congratulated Er Madhu S Nair for his exemplary contribution to bringing the project into reality

Dr G Madhu, council member-elect introduce CMD CSL Er Madhu S Nair to the audience.

Dr Madhusudan, Vice Chancellor of CUSAT and the

chief guest of the function felicitated Er Madhu S Nair, CMD CSL and he mentioned the CSL's contribution to the field of technical education in our country. He also congratulated Er Madhu S Nair for his marvellous achievement.

Er Madhu S Nair CMD CSL in his reply speech after accepting our Shawl and Plaque as a token of honour from the Chief guest of the function Dr Madhusudan Vice Chancellor CUSAT. And he clearly mentioned that the credit for this achievement of CSL is mainly due to the teamwork and dedication of the entire team. He also briefly explained the importance of this asset and mentioned the cost comparison between similar work carried out by other foreign shipbuilders.

Er K S Babu, Hon: Secretary IEI Kochi, expressed the vote of Thanks and the function concluded with g the National Anthem.

#### Trichur Local Centre

06-12-2022 Webinar on "Impact on Electrical System During Fault with Transformer in System & Fault Diagnosis" by Er. Suresh P, Senior Protection Engineer, Arabian Industries Project, Oman He narrated that transformers are used in the electric system. In Generation as generating transformers as TX and Star side is HV. The voltage is stepped up and the secondary is Star connected. External Transformer fault detection and analysis are conducted for single-phase faults in DAC, DAD and 2 phase fault in DAB.



14.12.2022 Celebrated Energy Conservation Day in Webinar Mode. Dr. Ajith Gopi, Joint Chief Technical Manger, ANERT delivered talk on "Renewable Energy for a Sustainable & Carbon Neutral World"

#### Palghat Local Centre

14.12.2022 Observed Energy Conservation Day 2022 at the Seminar Hall of the Local Centre. Dr.P.Rajan, Director(Retd) KSEBL, DEAN (Entrep), LEAD College of Management, Palakkad was the guest speaker who delivered a speech with PPT presentation on the topic "EMERGING TRENDS TOWARDS ENERGY SECURITY". Dr. P. Rajan was formally introduced by Dr.C.Pradip, Honorary Secretary.



Er. K.Madhana Mohan, Chairman of the Local Centre presided over the function. He welcomed all the members and the guest speaker on the day of observing the "Energy Conservation Day". He remarked that the per capita electricity consumption of our country is only 1205 kWh and it is low comparing the world average. However this situation is not going to remain like this and the per capita consumption will be increased many fold due to more and more industrialization and more and more urbanisation. Most of our energy (more than 60%) comes from thermal power plants burning fossil fuels and the ill effects of burning fossil fuels are known to everyone like GHG emissions, global warming and climate change so on and so forth. As per the COP 26 summit held in Glasgow last year and COP 27 climate change summit held in Egypt this year emphasized the importance of reducing the global warming temperature rise by 1.5 Deg.C , therefore every nation is targeting to achieve carbon neutral or net zero carbon nation. In this scenario there is a need to redefine energy conservation in the light of carbon neutrality. Accordingly we have to focus on four major areas as far as energy conservation is concerned.

First and foremost is reduce the use of fossil fuels in all walks of life whether it is in energy sector or transportation sector or industry sector or domestic sector. Secondly harness more and more renewable energy and induct more renewable energy in the total energy mix there by reducing the energy content from thermal plants progressively. We are planning to have an ambitious programme for harnessing renewable energy to the tune of 500 GW by 2030.

Thirdly we have to go in for only energy efficient gadgets, equipments, plant and machinery and appliances, all BEE rated and certified ones.

Finally and most importantly every individual have to exercise a self-imposed discipline of using energy judiciously and they have to switch off lights, fans and ACs when not required and the same is applicable to kitchen where cooking gas and tap water to be switched off when not in need. The same thing to be extended to all sectors and not limiting to domestic sector.

People to be sensitised and made aware of the significance of energy conservation, then only

observing energy conservation day becomes meaningful.

In the keynote speech Dr.P.Rajan, Guest speaker explained the following: There are disruptive changes happening in the Energy sector world over, right from Generation to Consumption due to Energy Transition related to various issues including Climate change issues. Keeping in mind this fact, we need to focus more on Energy Conservation.

The Energy Conservation Act, 2001 provides a framework for regulating energy consumption and promoting energy efficiency and energy conservation. Energy efficiency means using less energy to perform the same task. The Act has set up the Bureau of Energy Efficiency to recommend regulations and standards for energy consumption. The picture shown above illustrates few areas for energy saving potential. These apply to appliances, vehicles, industrial and commercial establishments and buildings. Efforts towards energy conservation and efficiency gains are among the key instruments envisaged for climate change mitigation. Efforts on these fronts lower the energy generation requirement, and thereby reduce greenhouse gas emissions. These also have positive implications for energy security in a country like India, which relies on imports to meet some of its energy needs.

Key Features of EC Act

- Carbon credit trading:
- Obligation to use non-fossil sources of energy:
- Energy conservation code for buildings:
- Standards for vehicles and vessels:

He also discussed the other green and renewable energy sources and emerging experiments & research going on in:

Hydrogen as a fuel, Water as a fuel, Battery with the higher storage capacity, Wireless power transmission, Smart Grid with Dynamic pricing for power, Gas Hydrates-Fossil, Bio Mass Energy, Waste to Electricity, Prosumers and DC electric gadgets etc.

The session concluded with a vote of thanks by Hon. Secretary Dr.C.Pradip.

### Kerala State Centre- WEDNESDAY TALKS - Glimpses

**07-12-2022** Talk on “Sustainable Transportation System” by Prof. Samson Mathew, Director, NATPAC



**21-12-2022** Technical talk on “HAM RADIO - The Hobby of 21st Century” by Mr.D.Joseph, Patron, Radio Amateur Society of Ananthapuri (RASA).



**28-12-2022** Technical talk in Regional Language on the topic “അക്ഷരകല കലാശാസ്ത്രത്തിന്റെ പേര് അച്ചടിയുടെയും പ്രസാധനത്തിന്റെയും നൂതന ലിഖി വിന്യാസം” Mr. Saji S. Nair, Sujilee Printers, Chathannor, Kollam.



**04.01.2023** Talk on ‘Disaster Management – A Practical View’ by Dr. R. Murukesan, FIE, Retd. Chief Engineer, Kerala PWD.



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