VOL 2 ISSUE 5 SEPTEMBER 2022

ROOTS

Newsletter of Alumni Association of NSSCE

This issue:

Message

Warm greetings to all…

I am really happy to pen down my proud feeling as an alumnus of NSSCE and a member of our Alumni Association. I have been very fortunate to become a faculty at NSSCE and has served as the secretary of the Alumni association for 9 years. When I first took charge as the secretary in 2004, I realised that many of our alumni are having the same or even better feeling towards our college. The name and fame of any institution relies highly on the signature left by its alumni on the society. Our alumni represent one of the most talented and innovative communities and has always been committed in supporting its alma mater, and the strong alumni network is instrumental in enhancing the visibility of our institutional profile globally.

During my tenure as secretary, I was blessed to work with a sincere and dedicated team of alumni members who supported and guided me to do various tasks assigned from time to time, including the construction of a 3 storied Alumni block for the institution. To mention each one of them will be a tough job, but let me place my pranams to my batchmate, colleague and dear friend Dr. Radharishnan R. who has sincerely carried out his duties as treasurer of the association for 2 years, and left all of us on this July 21st. I was also privileged to be the coordinator for the first Global Alumni Meet (GAM 2016). The role as secretary has immensely helped me in getting connected with many illustrious alumni worldwide and to improve my alumni network.

I hope and wish that all of us strive to improve the networking among the alumni fraternity, stay connected among us and also to the institution. As individuals, we may or may not be able to contribute much, but definitely as a group, the possibilities are infinite. In addition to contributing towards our alma mater, we can extensively support the students in various aspects like sharing experiences and success stories to inspire them to aim high; assisting for internships and placement; mentoring and nurturing them to bring out the best in them; shaping their personality with a sense of commitment to the society; and so on.

Let me wish the very best to all of you and to our alma mater…

Dr.Umadevi.P.P
(1981-86 batch)
Former Secretary
Alumni Association.

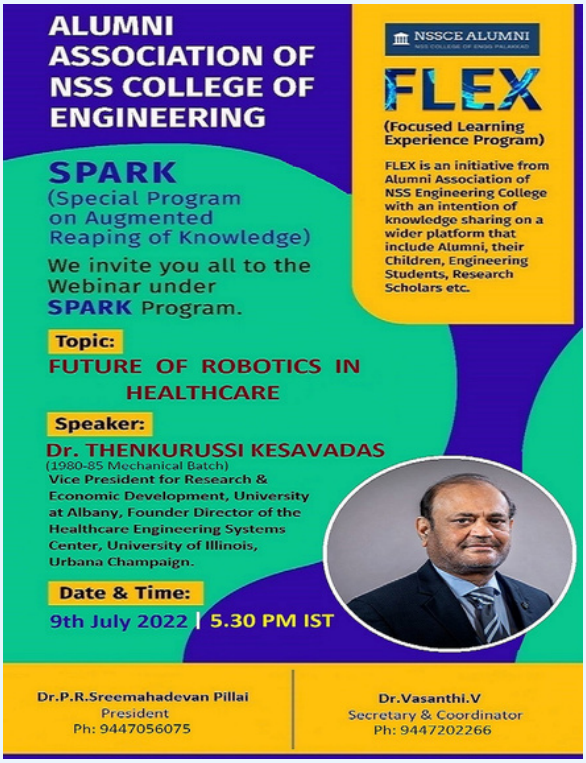
VISION

"To leapfrog into global excellence in technology and education in the present millennium."

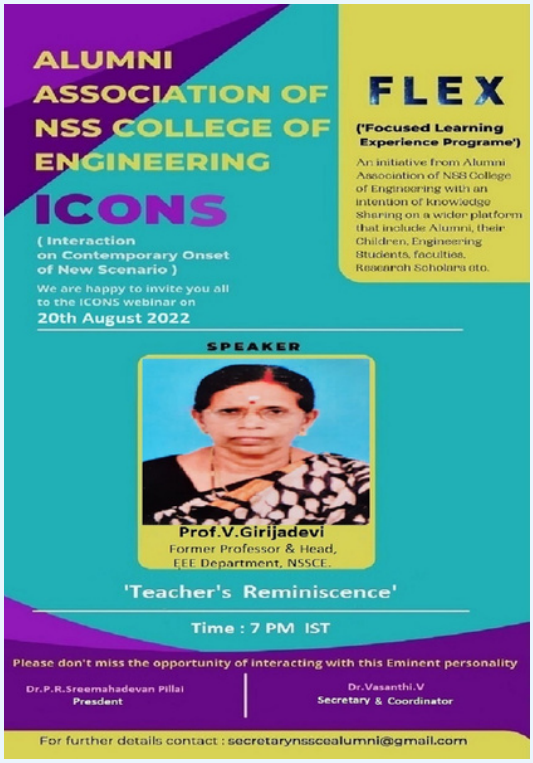
MISSION

"To be a premier institution producing self motivated professionals of global standards through quality education to meet the scientific and technological needs of the society."

RECENT ACTIVITIES OF THE ASSOCIATION



Dr.Thenkurussi Kesavadas, Vice President for Research & Economic Development, University at Albany, Founder Director of the Healthcare Engineering Systems Center, University of Illinois, Urbana Champaign, interacted about 'Future of Robotics in Healthcare' on 9th July 2022.



Prof.V.Girijadevi, Former Professor & Head of Electrical & Electronics Engineering Department, NSSCE, interacted and shared her experiences on 20th August 2022.

The musical event DHWANI-1 was conducted on 7th August, 2022. The event was inaugurated by Prof. Achuthsankar.S.Nair, Department of Computational Biology and Bioinformatics, University of Kerala.

BATCH GETTOGETHER

We are the 85-89 batch of Civil Engineering from NSS College of Engineering, Palakkad and we usually conduct a bi annual get together. We never had a usual venue for the event, since all us work and live in different places. The event that was supposed to happen during July 2020 and it couldn't happen because of obvious reasons, because of that we conducted the event on June 24-26 2022, and it was very well received.

This year's event, titled Opparam was hosted in Krishna beach resort, Kannur. We commenced our preparation through our WhatsApp group. The WhatsApp group is supposed to host a total of 82 members, but we only have 64. The other 18 are not a part of the group, for reasons unknown to us. Within the 64, we have always had more that 40 people participating for the event, but this time the number came down to 31. Everyone has their reasons to not attend. But truth be told, the enthusiasm that our attendees showed us, made us oblivious to the fact that we lacked a few members.

For the first time, we had a title song for our get together. Our general convenor, Mr. Rajan Azhikodan has not only given a trip through the memory lane through his lyrics, but also transported us back to our college with his videography.

Our get together have given us all a lifetime worth of memories in these 3 days. The frontman for our event was Mr. Rajan Azhikodan, who didn't spare a second to organize the programme chart and made sure every event was better that the one before. We are all eternally grateful to Mr. Rajan Azhikodan for organizing every part of this event. In a span of two days, we witnessed the extraordinary performances of, Kalamandalam Srinath who performed Chakyarkuthu and Kalamandalam Mahindran who performed Ottamthulal. Some of us were new to both of these artforms and yet they were mesmerized by the performances. To host an artform which originated from Kerala was a masterstroke from Mr. Rajan Azhikodan.

We had people attend Opparam from all corners of the world. They understand what friendship means, they realise that this relationship is the most valuable asset they could ever possess and heartfelt friendships like this is simply priceless. All the 31 members fully acknowledged the deep rooted bond that we all shared. When we met each other, it felt like we were kids again. Kids who had only love to give.

Opparam was an truly an untainted event. But what really made the whole event a success was the fact that, when each of the 31 of us performed, everyone cheered them on without a care in the world.

ഓർമ്മകൾക്ക് 3 വ്യാഴവട്ട നിറവ്

(1981-86 batch Get-together, 25th June, Kovalam)

NSSCEലെ മധുരമുള്ള ഓർമ്മകളിലേക്ക് തിരിച്ചു പോവാനും കൂട്ടുകാരുമായുള്ള സൗഹൃദങ്ങൾ ഒന്നുകൂടി ഊട്ടിയുറപ്പിക്കാനും 1981-86 batch ഇക്കഴിഞ്ഞ June 25thനു കോവളത്ത് ഒത്തുകൂടി. Covid pandemic/lockdowns മൂലം 2 വർഷത്തോളം വീർപ്പുമുട്ടിയിരുന്ന സാഹചര്യത്തിൽ, ഈ ഒരു സംഗമം എല്ലാവർക്കും ഇരട്ടി മധുരമുള്ളതായി. വേദിയായത് സുന്ദരവും പ്രകൃതി രാമണീയവുമായ കോവളത്ത് Uday Samudra Leisure Beach Hotel ആയിരുന്നു.
വിവിധ branch കളിൽ നിന്നായി സഹപാഠികളായ 90 പേരും 30ഓളം family membersഉം പങ്കെടുത്തു. രാവിലെ ഈശ്വരപ്രാർഥനക്കു ശേഷം, അകാലത്തിൽ തങ്ങളെ വിട്ടുപോയ കൂട്ടുകാർക്ക് പ്രണാമം അർപ്പിച്ചു കൊണ്ടാണ് പരിപാടികൾ തുടങ്ങിയത്. College days ലെയും, മുൻപ് നടന്ന സമാഗമങ്ങളുടെയും ഫോട്ടോകൾ കോർത്തിണക്കിയ re-wind session എല്ലാവർക്കും വളരെ ആകർഷകമായി തോന്നി. 2018ൽ പ്രളയകാലത്തു വീട് നഷ്ടപ്പെട്ടവർക്ക് വീട് വെച്ച് കൊടുക്കാൻ 86 batchനു സാധിച്ചതിലുള്ള സന്തോഷം ഈയവസരത്തിൽ ഒരിക്കൽ കൂടി എല്ലാവരും പങ്കുവെക്കുകയുണ്ടായി. സഹപാഠികൾക്കു വേണ്ടി സംഘാടകർ ഏർപ്പെടുത്തിയ 'Manthra' എന്ന ഗ്രൂപ്പിന്റെ സംഗീതപരിപാടിയിൽ കൂട്ടുകാരുടെയും കുടുംബാംഗങ്ങളുടെയും പാട്ടുകളും നൃത്തവും കൂടിചേർന്നപ്പോൾ എല്ലാവർക്കും അത് 81-86 കാലത്തിലേക്കും പ്രായത്തിലേക്കും ഉള്ള ഒരു തിരിച്ചുപോക്കായി. രാവിലെ തുടങ്ങിയ പരിപാടികൾ വൈകിട്ട് വരെ നീണ്ടു. സന്ധ്യാസമയത്തെ Beach സന്ദർശനം ഉല്ലാസപ്രദമായ ഒരു അനുഭവമായിരുന്നു. 2024ൽ വയനാട് കണ്ടുമുട്ടാമെന്നുള്ള വാക്കോടു കൂടിയാണ് അന്ന് എല്ലാവരും പിരിഞ്ഞത്. പങ്കാളിത്തവും, സംഘാടക മികവും കൊണ്ടു ശ്രദ്ധേയമായ ഒരു batch get-together ആയിരുന്നു കോവളത്തേത്. കൂട്ടുകാരോടൊത്തുള്ള സമയം ഒരു ദിവസം പോര എന്ന തോന്നൽ മിക്കവർക്കും ഉണ്ടായിരുന്നത് കൊണ്ടു കുറേപേരെങ്കിലും അടുത്ത ദിവസവും ഒത്തൊരുമിച്ച് അടുത്തുള്ള tourist spots സന്ദർശിച്ചാണ് അവരവരുടെ സ്ഥലങ്ങളിലേക്ക് മടങ്ങിയത്, ഇനി വയനാട്ടിൽ കണ്ടുമുട്ടാനുള്ള ആവേശവും മുന്നോട്ടുള്ള യാത്രക്കുള്ള ഒരു പുതുഊർജ്ജവുമായി...

Batch of 1993 - 97 had get together on July 16 at Tripenta, Malampuzha and July 17 at college.

NSS College of Engineering Palakkad 1998-2002 Civil Engineering Batch energetic Family Get together after 20 Years on 24th July Sunday @ Crowne Plaza Hotel, Kochi.

ALUMNI ACHIEVEMENT

Congratulations... You're the pilot of inspiration!

അശോക് താമരാക്ഷൻ ഭാര്യ അഭിലാഷ, മക്കൾ താര, ദിയ എന്നിവർക്കൊപ്പം, സ്വന്തമായി നിർമിച്ച വിമാനത്തിനു സമീപം.

ലണ്ടനുമീതേ
അശോകവിമാനം

മനോരമ ലേഖകൻ

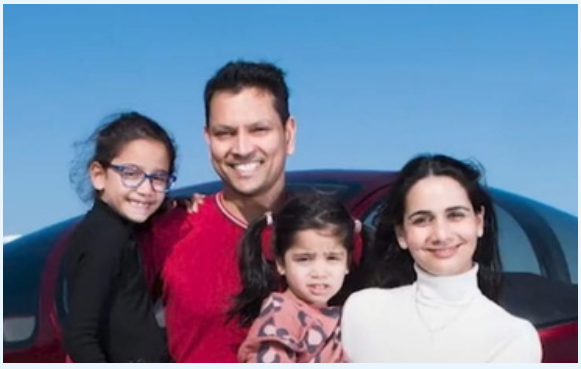
ആലപ്പുഴ • കുടുംബസമേതം യാത്ര ചെയ്യാൻ ലണ്ടനിൽ സ്വന്തമായി വിമാനം നിർമിച്ച് മലയാളി എൻജിനിയർ. മുൻ എംഎൽഎ പ്രഫ. എ.വി.താമരാക്ഷന്റെയും ഡോ.സുഹൃദലതയുടെയും മകൻ അശോക് താമരാക്ഷൻ ആണു സ്വയം നിർമിച്ച വിമാനത്തിൽ ഇതിനകം വിവിധ രാജ്യങ്ങളിലേക്കു പറന്നത്. നാലുപേർക്കു യാത്ര ചെയ്യാവുന്ന വിമാനമാണിത്.

കോവിഡ് ലോക്ഡൗണിലാണു വിമാനം നിർമിക്കാനുള്ള ആശയം മനസ്സിൽ ഉദിച്ചതെന്നു മെക്കാനിക്കൽ എൻജിനീയർ ആയ അശോക് പറഞ്ഞു. ബ്രിട്ടിഷ് സിവിൽ ഏവിയേഷൻ അതോറിറ്റിയിൽനിന്നു നേരത്തേ പൈലറ്റ് ലൈസൻസ് സ്വന്തമാക്കിയിരുന്നു. ലണ്ടനിലെ വീട്ടിൽ താത്കാലിക വർക്ഷോപ് നിർമിച്ചു.

2019 മേയിൽ തുടങ്ങിയ നിർമാണം 2021 നവംബർ 21നു പൂർത്തിയായി. ലൈസൻസ് ലഭിക്കാൻ 3 മാസത്തെ പരീക്ഷണപറക്കൽ. കഴിഞ്ഞ ഫെബ്രുവരി 7ന് ആദ്യ പറക്കൽ ലണ്ടനിൽ, 20 മിനിറ്റ്. മേയ് 6 നു കുടുംബത്തോടൊപ്പം ജർമനി, ഫ്രാൻസ്, ഇറ്റലി തുടങ്ങിയ രാജ്യങ്ങളിലേക്കും പറന്നു.

ഇളയ മകൾ ദിയയുടെ പേരിനൊപ്പം ബ്രിട്ടനിലെ വിമാനങ്ങളുടെ ഐക്കൺ ആയ ജി ചേർത്ത് ജി-ദിയ എന്നാണു വിമാനത്തിനു പേരിട്ടത്. ഇൻഡോർ സ്വദേശിയായ ഭാര്യ അഭിലാഷ ഇൻഷുറൻസ് കമ്പനി ഉദ്യോഗസ്ഥയാണ്.

ഇപ്പോൾ ആലപ്പുഴയിലെ വീട്ടിൽ അവധിക്കെത്തിയ അശോകും കുടുംബവും 30ന് മടങ്ങും.



Ashok Aliseril Thamarakshan, a native of Kerala, built a four-seater plane to take his family on holiday. He is the son of MLA AV Thamarakshan and after completing his BTech from NSS College of Engineering, Palakkad, he moved to UK in 2006 for his Masters degree.

Memoirs of Electrical Times

I have now completed 33 years of service in teaching and research. I started my career as a lecturer in EEE dept. in 1987. I was a fresh M.Tech graduate from IIT Bombay. From the mad rush of the metropolis, it was a great contrast to settle down into a sleepy village, Akathethara. The beautiful paddy fields around Emoor, the rustic thatched roof theatre near Emoor, the majestic hills that stand as the canvas on which NSSCE is drawn, the Palakkadan dialect of malayalam (which looked strange to a speaker of തിരുവനന്തപുരം dialect), the concrete tables in the hostel, the music of the leaves of banyan trees near the main building, the SNS bus for which many a student and teacher waited anxiously... all these are fresh in my mind.

I walked into the EEE dept. headed by a Professor who had a colorful personality, O.M. Neelakandan (he once hit me on my shoulder from behind and surprised me by explaining it as a checking my 'impulse response'. It has ever since been an insightful metaphor for me to teach digital signal processing). The college had many worlds, one of junior teachers (Rajan, C.M. Suresh, P.M. Manosh, Rathi, Sree Latha, Pius, Susheela, Sheela, Ajithkumar, K. Geetha, Devi, Swapna Gopal), one of senior teachers Dr. Babu Rajendran, Dr. P.M.S. Nambeesan, Dr. K.S.M.Panicker, Dr. A. Nirmal Kumar, Dr. U. Krishnakumar etc.), one of the teachers who stayed in the hostels (M.S. Jagannath, Prasad, R. Vijayakumar, Sreenadhan, myself), and one of the teachers who stayed near the college (Janardhanan Potty, V. Girija devi, T. Ambika Devi Amma, K.I Geetha). I was fortunate to have friends among all these; I remain connected to them even today. I was also editor of a magazine named ‘Electrical Times’, full of fun, cartoons, jokes. Does any reader have copies of it?

My evenings in college were beautiful and unforgettable. Regular visits to houses of colleagues, visits to temples (both near and far-Hemambika temple, Vadavathoor, Chittoor, Kadambazhippuram, Kalpathi, Thirunavaya, Edappal,….) are etched in golden glitter in my mind. I fell in love with Nila, during my journeys to temples. I started learning Carnatic music formally under Sri. Pallavoor Krishnan Kutty who was the Nadaswara Vidwan in Emoor temple. Dr. Janardanan Potti sir was great motivator for me.

Regarding academics, there are many golden memories. I led the compilation of 3 lab manuals with support from ISTE Kerala Section. With help of students, I developed a electro-mechanical model for the transistor, which was later published in the journal IJEEE from Manchester University and also included and cited in the preface of the popular text “Hughe’s Electrical Technology” by Orient Longman, UK (though by that time I had left the college, I gave many affiliation as NSSCE and it appears so in the book).

Gopikrishnan was a student noted for asking creative and unanswerable questions which were philosophical. I taught basic electronics to a batch full of brilliant students. I gave them an assignment to 'make', not write about, a full wave rectifier to power a Walkman cassette player. I can never forget a student, Vijayalakshmi, running from the college premises towards the Men's hostel road, behind me, to show me the rectifier which she tested as working. I taught for some hours the students of Civil Dept. I noted Raji, a student of the batch I taught (who hails from Cherpulassery), as a singer of great merit. I was a judge in arts festival when I heard her sing Kalyani Raga that still rings in my ears. I accompanied students for tours, the photography club to Kodaikanal and the EEE juniors for their All- Kerala tour, when they visited my house at Trivandrum.

I found my life partner from NSSCE. Hema joined the EEE Dept. as lecturer in 1993. In 1994, we were husband and wife. We stayed in Railway colony for some time, near the house of my colleague K.I Geetha who was like my elder sister. Soon I got a career promotion to Model Engineering College Kochi and our life in Palakkad came to an unplanned end.

Prof. Achuthsankar.S.Nair,
(Former Lecturer, NSSCE)
Dept. of Computational Biology & Bioinformatics,
University of Kerala.

ENERGY EFFICIENCY FOR BETTER PRODUCTIVITY

Energy conservation is rapidly becoming one of the main activity, to cut down costs of production, in industries, more-so in this scenario of an increased competitive market, consequent upon liberalization and entry of global players in the domestic market. The Indian industry is now pushed to a situation wherein increased glut of foreign goods in the Indian market has resulted in a severe competition both in terms of quality and price. Matching our indigenous produce to international quality and standards, involves investment in research, development and capital investment, all of which increase the cost of product. The increase in the cost of the final product reduces the marketability and cuts on the industry's profitability and its bottom line.

The market factors contributing to valve in a finished product are cost of raw materials, cost of manpower, cost of production/manufacturing etc., interest on capital, depreciation, cost of capital and other financial factors, royalty on technologies, process, know-how etc. & lastly but not the least COST OF ENERGY USED.

Engineering tools like value engineering, industrial engineering, techniques like time and motion study etc., optimization of product pattern, better process technologies and up-gradation, production planning, wastage reduction, indigenization programmes, automation, advanced quality control techniques and varied other methods have continually effected better yield and PRODUCTIVITY, resulting in increased production at lesser costs.

Now the area which has thrown open the gamut of energy conservation equipments and energy efficient methods in operation and maintenance of equipments, is the adoption of ENERGY AUDIT exercises in industries, which lead to lesser consumption of energy, leading to lower cost of production. The main advantage of implementation of energy conservation and management in industries is the fact that this is one of the least cost alternative to bring done the product cost, without sacrificing productivity. Energy audit, its consequent implementation and energy monitoring and management, not only benefits the industry and financial advantage to its owners, but also the society and the nation as a whole, by way of lesser abuse of the environment. The industry also consequently faces lesser trouble of meeting the pollution control standards when lesser energy is used during the manufacturing process, without sacrificing productivity and levels of production. Abuse of energy is a kin to abusing the environment and nature. The board avenues available with us are :

1. Seeking best possible efficiency of process/technologies within thermodynamic limits.
2. Usage of cleaner fuels with best efficiency.
3. Exploitation of non conventional energy sources to the hilt.
4. Substitution of high quality energy with low quality energy.

of which points 3 and 4 need more elaboration. Usage of renewable energy sources like, wind power, solar energy etc. are actually beneficial in two ways.

1. Dependence on fossil fuel based energy is reduced and to that extent, conservation takes place.
2. More importantly, environment is protected since.

- There is no solid/gaseous emissions.
- They are by and large ENTROPY decreasing activities and by doing so we are in line with nature.

Apart from speaking about quantity of energy, thermodynamics also speaks of quality of energy or in other words EXERGY. The crux of the argument that even though measured in the same magnitude are not equal to each other because of the difference in quality or more aptly EXERGY.

1KJ of electrical energy ==//== 1KJ of chemical energy.

Since to generate electricity, chemical energy has to be converted to thermal-mechanical-electrical forms accompanied to by huge losses. So electrical energy is considered to be of highest quality or EXERGY, when compared to other forms like thermal and mechanical. It is preferred to thus use the high energy electrical energy to some superior activities where it is absolutely essential and irreplaceable, rather than mundane and easily replaceable work like heating in electric geysers/ovens/furnaces etc.

The crux of the issue is that, selection of the form of energy, should be the one which takes the shortest route from fossil fuel energy, wherever possible. By this, the number of energy conversions and thereby losses can be minimized. Degradation of energy during a process, entropy generation, lost opportunities to do work, finite high quality energy sources, possible savings and conservation are the factors which the energy and environmental engineers are concerned with. And the consolidation is the fact that there is plenty of scope for improvement.

ENERGY AUDIT

OBJECTIVES

1. How much of various forms of energy are being used?
2. Where is energy consumed?
3. How is energy consumed?
4. How can we reduce specific energy consumption?
5. What will be the cost of implementation of ENCON solutions and economic viability?

TYPES OF AUDITS

1. Walk through audit
2. Preliminary audit
3. Detailed audit
4. Energy management plan.

The solutions and improvements arising out of walk through and preliminary audit, is viewed in terms of technical feasibility and economic viability in detailed audit. Energy management plan is drawn and implementation is done. This is not the end and periodic review is done.

ENERGY AUDIT CYCLE

1. Recognize the problem
2. Plan to take action
3. Conduct energy audit
4. Identify ENCON solutions
5. Application of pay back, rate of return & life cycle costing techniques
6. Energy management plan
7. Formulation of energy policy
8. Implementation
9. Monitoring
10. Review.

BENEFITS ARISING OUT OF AN ENERGY AUDIT

1. At present rates, investment on ENERGY CONSERVATION projects yield up-to 50%-60% as against the average return in other projects like 20%-25%.
2. Returns are assured and not dependent on market risks, etc.
3. Least gestation period.
4. Incidental benefits like, increased production and productivity.
5. Environmental benefits.
6. Social benefits, like preservation of fossil fuels for future generation.
7. Competitive advantage to the producer and profit to the share holder.

Though the options, techniques and the methodology adopted in the process of savings of fossil fuels like petroleum products are exhaustive. The following checklist may serve as an useful guide.

1. Conduct boiler efficiency trails periodically to fine tune operations.
2. Adopt usage of fuel efficient burners and systems.
3. Avoid leakage of steam by arresting them promptly.
4. Check the condition of steam traps and maintain them properly.
5. Improve the insulation of steam lines and boiler furnace walls.
6. Give scientific blow-down in boilers based on water parameters.
7. Change over to cheaper fuels like LSHS, FO, LDO instead of the more costly HSD wherever possible. The demand for HSD is going up due to the increasing consumption in the transport sector.
8. Adopt combustion air control in boilers and furnaces to avoid excess air losses.
9. Adopt waste heat recovery systems like ECONOMISERS and AIR PREHEATERS where ever possible.

Apart from saving fossil fuel, electrical energy had also to be saved due to the following factors.

1. Indirectly saves the fossil fuel based power generation energy, leaving the surplus capacity for more productive purposes.
2. Reduction in consumption of electrical energy in industries, leads to lesser dependence on petroleum based power plants and thereby reducing consumption of petroleum fuels for power generation.

Apart from efficient generation, transmission and distribution of electrical energy, which are no doubt important factors to increase availability of electrical energy for a particular amount of fossil fuels, EFFICIENT USAGE plays an important role, in which an electrical engineer as an energy auditor is concerned. In the industries 50% of the total 72000MW generated in our country is consumed. Out of which, 73% is consumed by motors, 11% for electrolysis, 9% for lighting, 3% for electric arc furnaces, 4% for miscellaneous. Though the list of opportunities available in industries for energy conservation is exhaustive and typical of process and production technologies/systems, the sample list of factors listed below are generally used as a checklist during audit.

1. **POWER DISTRIBUTION**

(a) Transformer loading: The study of the power distribution system and transformer loading, indicate the efficiency levels of operation. Loading transformers upto 80% generally results in the best efficiency.

(b) Power factor improvement: Correction of power factor upto 0.9 (lag) is mandatory to avoid penalty from State Electricity boards. There is still scope to increase it to unity, so that the overall MD comes down and results in reduced PMD, overall current reduction results in incremental savings in copper losses. Automatic power factor correction systems over and above the conventional capacitor banks help to maintain unity PF at all times.

(c) Demand management and control: Using automatic demand controllers, help in operating the plant close to PMD and thus saving on demand costs.

2. LIGHTING

Factors which govern savings are task based lighting-study of illumination levels at places reveal the actual requirement and usage and possible reduction, usage of natural light, energy efficient fittings, electronic chokes and energy savers in lighting circuit, control and maintenance.

3. COMPRESSED AIR SYSTEM

As a thumb-rule, cost of 1 normal CFT of 100 psi compressed air costs about 35 paise. Factors are replacement with efficient ones, periodical performance checks on compressors, better house keeping, compressor loading/unloading system, separate lines for HP and LP, dummy unwanted lines.

4. FANS/BLOWERS/PUMPS

Factors are; use high efficiency equipment, automatic speed control using v/f drives, impeller trimming, RPM reduction, pipeline sizing, reduce idle running, use flat belts instead of V belts, avoid discharge valves throttling, usage of fluid couplings.

5. MOTORS & DRIVES

Factors are correct sizing of motors, fullest capacity utilization, usage of energy efficient motors, usage of variable speed drives and soft starters.

6. DG SETS

It includes efficient operation, waste heat recovery, fuel quality, maintenance practices, spares, optimizing loading pattern.

7. VOLTAGE AND FREQUENCY PROFILES

Maintaining rated voltage and frequency at various bus sections lead to better utilization of energy. Usage of OLTCs and AVRs to improve profiles lead to conservation of energy.

8. CABLES

Life cycle costing technique applied on economical sizing of cables, pays back the incremental cost incurred in selection of next higher sixed cable by reduction in cable losses over a period of time. Study in a typical chemical industry revealed a loss of even up-to 5% and this is an useful technique to reduce losses.

9. VAPOUR ABSOPTION REFRIGERATION (VAR) UNITS

The maximum energy used in the refrigeration and AC plants is by the compressor. Latest technology vapour absorption units use waste heat from DG sets, furnaces or steam instead of high quality electrical energy, leading to benefits.

10. COOLING TOWERS

1. Changing of fan blades from conventional metal die-cast to FRP material.
2. Optimizing cooling tower fan operation duty cycle based on cooling tower discharge water temperature.
3. Optimizing cooling water pumps duty cycle based on discharge water temperature and pressure.

The above broad factors are only indicative and options available are still many.

INSTRUMENTS USED DURING ENERGY AUDIT

1. LUX meter
2. Clip on Ammeter
3. Load managers/power analyzers for 11KV and 415 V
4. PF meter
5. Tachometer
6. Hygrometer
7. Temperature indicator
8. Fuel efficiency monitors and analyzers
9. Temperature indicators
10. Trapman

ESCO CONCEPT

As in the case of developed countries, Energy Service Companies (ESCOs), who's main business is to make energy efficiency happen at customer's facility and getting paid is the recent trend. Advantages are: upgrade facilities with no front-end cost, cut operations cost, capture a positive cash flow from wasted energy, guaranteed results, shed risks, good business sense because both ESCO as well as the industry and nation benefits-WIN/WIN/WIN for everyone concerned.

Er.Nambiar.T.K
Ex. GM, Indian Oil,
Ex. Sr. VP ESSAR Oil Ltd., Mumbai,
1962-67 Electrical Batch.

@NSSCE

- Civil Engineering, Electrical & Electronics Engineering, Mechanical Engineering, Instrumentation & Control Engineering and Electronics & Communication Engineering branches of our college has got the extension of NBA accreditation upto 30-06-2025. NBA team visited our college on 8th July, 2022.

- M.Tech in Biomedical Engineering is sanctioned for Department of Instrumentation & Control Engineering of NSSCE.

An interdisciplinary convocation program "Aloha 22" was organised on 22nd July, 2022 for the M.Tech students of batch 2020-2022. Mr. Pradeep Sreedharan, CEO of Reliance Unlimit was the chief guest for the event.

MOE's Innovation Cell (MIC), AICTE, sponsored Impact Lecture Series was organized by Institution's Innovation Council on 2nd July, 2022. The sessions were handled by Githu.N.S, CEO, Kasperob Robotics and Dinoj Joseph, MD, Medgyor Pvt.Ltd.

Congratulations to all toppers of 2018-2022 B.Tech programme

Civil Engineering

Computer Science & Engineering

Mechanical Engineering

Electronics & Communication Engineering

Electrical & Electronics Engineering

Instrumentation & Control Engineering

Sneha Kumaresan of B.Tech Computer Science and Engineering (2018-2022) at NSSCE, Palakkad bagged the first rank in B.Tech Computer Science and Engineering and the third rank overall among other branches under APJAKTU. Sneha is currently associated with IBM India Software Labs.

Adhith.R (S4 ECE, Unit 128) has been selected for NSS National Integration Camp at Mar Baselious Christian College, Peerumade.

മികച്ച എൻജിനിയറിങ് കോളേജുകളുടെ പട്ടികയായി

തിരുവനന്തപുരം ▸ ബി.ടെക്. ഫല ത്തിന്റെ പശ്ചാത്തലത്തിൽ, സാ കേതിക സർവകലാശാല മികച്ച എൻജിനിയറിങ് കോളേജുകളു ടെ റാങ്ക് പട്ടിക പ്രസിദ്ധീകരിച്ചു. അക്കാദമിക് നിലവാരം അടിസ്ഥാ നമാക്കിയാണ് പട്ടിക. ആദ്യ 25 കോളേജുകളാണ് ചുവടെ.

1. തിരുവനന്തപുരം ഗവണ്മെന്റ് എൻജിനിയറിങ് കോളേജ്, ചാവടി മുക്ക്, തിരുവനന്തപുരം
2. ഗവണ്മെന്റ് എൻജിനിയറിങ് കോളേജ്, ബാർട്ടൻഹിൽ, തിരുവ നന്തപുരം
3. മോഡൽ എൻജിനിയറിങ് കോളേജ്, തൃക്കാക്കര, കൊച്ചി
4. ഗവണ്മെന്റ് എൻജിനിയറിങ് കോളേജ്, തൃശ്ശൂർ
5. ക്രൈസ്റ്റ് കോളേജ് ഓഫ് എൻജിനിയറിങ്, ഇരിഞ്ഞാല ക്കുട, തൃശ്ശൂർ
6. രാജീവ്ഗാന്ധി ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് ടെക്നോളജി, കോട്ടയം
7. മാർ അത്തനേഷ്യസ് കോളേജ് ഓഫ് എൻജിനിയറിങ്, കോതമംഗലം, എറണാകുളം
8. മുത്തൂറ്റ് ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് ടെ ക്നോളജി ആൻഡ് സയൻസ്, പു ത്തൻകുരിശ്, എറണാകുളം
9. എൻ.എസ്.എസ്. കോളേജ് ഓഫ് എൻജിനിയറിങ്, അകത്തേ ത്തറ, പാലക്കാട്
10. രാജഗിരി സ്കൂൾ ഓഫ് എൻജിനിയറിങ് ആൻഡ് ടെക്നോ ളജി, രാജഗിരി വാലി, എറണാ കുളം
11. ടി.കെ.എം. കോളേജ് ഓഫ് എൻജിനിയറിങ്, കരിക്കോട്, കൊല്ലം
12. മാർ ബസേലിയോസ് കോളേജ് ഓഫ് എൻജിനിയറിങ് ആൻഡ് ടെക്നോളജി മാർ ഇവാ നിയോസ് വിദ്യാനഗർ, തിരുവന ന്തപുരം
13. ഗവൺമെന്റ് കോളേജ് ഓഫ് എൻജിനിയറിങ്, പറശ്ശിനിക്കട വ്, കണ്ണൂർ
14. ശ്രീചിത്ര തിരുനാൾ കോളേജ് ഓഫ് എൻജിനിയറിങ്, പാപ്പനംകോട്, തിരുവനന്തപുരം
15. സെയിന്റ് ഗിറ്റ്സ് കോളേജ് ഓഫ് എൻജിനിയറിങ്, പാത്താമു ട്ടം, കോട്ടയം
16. ക്രൈസ്റ്റ് നോളജ് സിറ്റി, മൂ വാറ്റുപുഴ, എറണാകുളം
17. വിശ്വജ്യോതി കോളേജ് ഓഫ് എൻജിനിയറിങ് ആൻഡ് ടെക്നോ ളജി, മൂവാറ്റുപുഴ, എറണാകുളം
18. ഫെഡറൽ ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് സയൻസ് ആൻഡ് ടെക്നോളജി (ഫിസാറ്റ്), അങ്കമാലി, എറണാ കുളം
19. സഹൃദയ കോളേജ് ഓഫ് എൻജിനിയറിങ് ആൻഡ് ടെക്നോ ളജി, കൊടകര, തൃശ്ശൂർ
20. എൽ.ബി.എസ്. ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് ടെക്നോളജി ഫോർ വുമൺ, പൂജപ്പുര, തിരുവനന്തപുരം
21. കോളേജ് ഓഫ് എൻജിനി യറിങ് കല്ലൂപ്പാറ, തിരുവല്ല, പത്ത നംതിട്ട
22. ഗവ. എൻജിനിയറിങ് കോളേജ്, വടകര, കോഴിക്കോട്
23. അമൽ ജ്യോതി കോളേജ് ഓഫ് എൻജിനിയറിങ്, കാഞ്ഞിര പ്പള്ളി, കോട്ടയം
24. സെന്റ് ജോസഫ്സ് കോളേജ് ഓഫ് എൻജിനിയറിങ് ആൻഡ് ടെക്നോളജി, പാലാ, കോട്ടയം
25. കെ.എം.സി.ടി. കോളേജ് ഓഫ് എൻജിനിയറിങ് ഫോർ വിമെൻ കളന്തോട്, എൻ.ഐ.ടി. കാമ്പസ്, കോഴിക്കോട്

NSSCE secured 9th position in the best engineering colleges announced by APJAKTU based on 2018-22 batch result.

കൈതാങ്ങായി കളിക്കളം

NSS എഞ്ചിനീയറിംഗ് കോളേജിലെ ഓരോ വിദ്യാർത്ഥിക്കും കോളേജ് പ്രീമിയർ ലീഗ് ക്രിക്കറ്റ് വെറും ഒരു ടൂർണമെന്റ് മാത്രം അല്ല. കഴിഞ്ഞ 10-വർഷമായി സമൂഹത്തിൽ ദുരിതമനുഭവിക്കുന്ന വ്യക്തികളുടെ ദുരിതത്തിനു തങ്ങളാൽ ആവും വിധം ഒരു കൈത്താങ്ങ്, അതിനു വേണ്ടി അവർ NSSCE യുടെ മണ്ണിൽ ക്രിക്കറ്റ് ബാറ്റ് എടുക്കും. ഏകദേശം 6-ലക്ഷത്തോളം രൂപ ഇത് വരെ സഹായമായി നൽകാൻ കഴിഞ്ഞു എന്ന ചരിതാർഥ്യത്തോടെ കൂടുതൽ മനോഹരമായി CPL ഓരോ വർഷവും പുനർജനിക്കും. ടീം മാനേജ്മെന്റുകളിൽ പെൺകുട്ടികൾ നിർബന്ധം കൂടെ അദ്ധ്യാപകരും, പെൺകുട്ടികളെക്കൂടെ കളിക്കളങ്ങളിൽ കൂടെ നിർത്തുക എന്ന സമത്വവും, അദ്ധ്യാപക വിദ്യാർത്ഥി ബന്ധങ്ങൾ ക്ലാസ് മുറികൾക്ക് പുറത്തും ദൃഢമാക്കുക എന്ന ലക്ഷ്യം കൂടി CPL സാക്ഷത്കരിക്കുന്നു. ഓരോ വർഷവും CPL നു സംഭാവനകൾ നൽകുന്നതിൽ നമ്മുടെ പൂർവ വിദ്യാർത്ഥികൾ വഹിക്കുന്ന പങ്കു പ്രശംസിക്കാതെ വയ്യ. നമ്മുടെ പൂർവ വിദ്യാർത്ഥി സംഘടന സംരംഭം ആയ "അഡോൺ കൺസ്ട്രക്ഷൻ "ഇത് വരെ നടന്ന എല്ലാ CPL ന്റെയും മുഘ്യ പ്രായോജകർ ആയിരുന്നു. "CPL leads to charity "എന്ന നന്മയിലേക്ക് ഇനിയും NSS ലെ വിദ്യാർത്ഥികൾ ബാൾ ഏറിയും.

പ്രണവിന് സഹായം
കൈമാറി

OBITUARY

K K Ananda Kishore
1968 batch (Mechanical)
passed away on 8th July

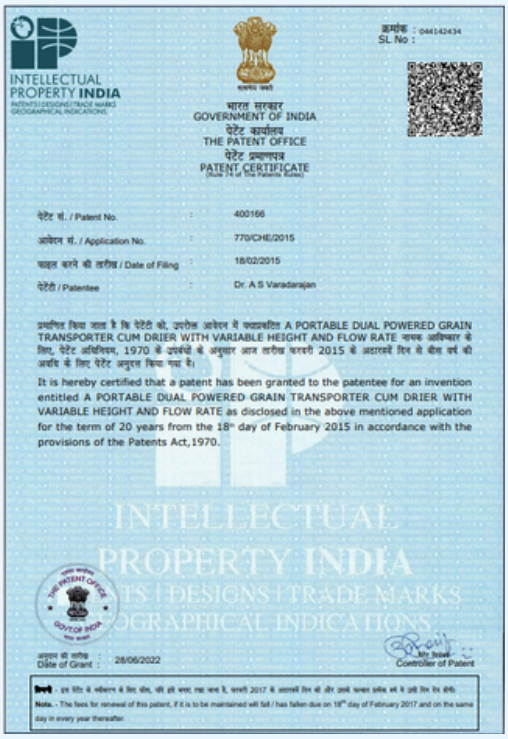
S Gopalakrishnan
1969 batch (Mechanical)
passed away on 18th July

Dr.Radhakrishnan R
1986 batch (Civil)
passed away on 21st July

Rajendra Selvam
1989 batch (IC)
passed away on 21st July

K T Abdu Rahman
1986 batch (Mechanical)
passed away on 6th August

Krishna Kumar A
1987 batch (Mechanical)
passed away on 25th August



INTELLECTUAL PROPERTY INDIA

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE

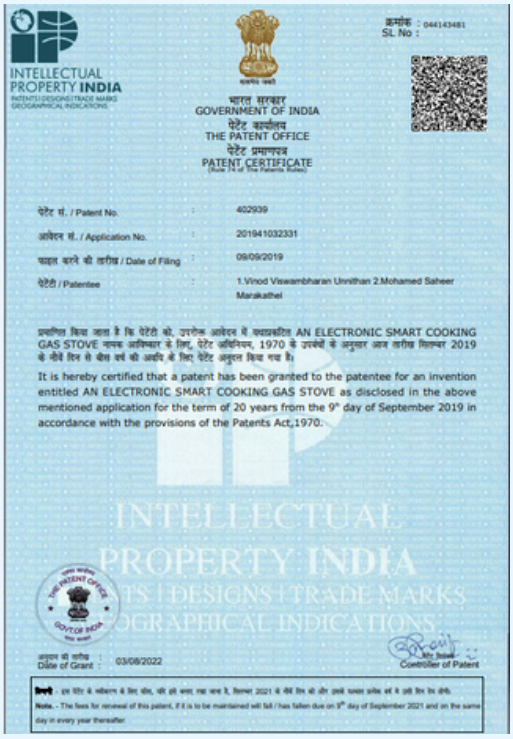
पेटेंट सं. / Patent No. : 400166
आवेदन सं. / Application No. : 770/CHE/2015
फाइल करने की तारीख / Date of Filing : 18/02/2015
पेटेंटी / Patentee : Dr. A S Varadarajan

A PORTABLE DUAL POWERED GRAIN TRANSPORTER CUM DRIER WITH VARIABLE HEIGHT AND FLOW RATE

It is hereby certified that a patent has been granted to the patentee for an invention entitled A PORTABLE DUAL POWERED GRAIN TRANSPORTER CUM DRIER WITH VARIABLE HEIGHT AND FLOW RATE as disclosed in the above mentioned application for the term of 20 years from the 18th day of February 2015 in accordance with the provisions of the Patents Act,1970.

Date of Grant : 28/06/2022
Controller of Patent

Dr. A.S.Varadarajan, retd. prof. (Mechanical Dept.) has got a patent last week. Congratulations to Dr. Varadarajan for this achievement. Dr.Varadarajan is NSSCE Alumnus 1979-84 batch.



INTELLECTUAL PROPERTY INDIA

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE
पेटेंट प्रमाणपत्र
PATENT CERTIFICATE

पेटेंट सं. / Patent No. : 402939
आवेदन सं. / Application No. : 201941032331
फाइल करने की तारीख / Date of Filing : 09/09/2019
पेटेंटी / Patentee : 1.Vinod Viswambharan Unnithan 2.Mohamed Saheer Marakathel

AN ELECTRONIC SMART COOKING GAS STOVE

It is hereby certified that a patent has been granted to the patentee for an invention entitled AN ELECTRONIC SMART COOKING GAS STOVE as disclosed in the above mentioned application for the term of 20 years from the 9th day of September 2019 in accordance with the provisions of the Patents Act,1970.

Date of Grant : 03/08/2022
Controller of Patent

A patent was received by Dr.Vinod.V (Professor, Mechanical department) & Mohamed Saheer (Student), for the innovation - "An electronic smart cooking gas stove".

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