Volume:04 Jan-Dec 2019

ELECTRO-MOTTO

Magazine of

ELECTRICAL AND ELECTRONICS ENGINEERING DEPARTMENT

R.V.R. & J.C.COLLEGE OF ENGINEERING
(AUTONOMOUS)
Chandramoulipuram, Chowdavaram, GUNTUR – 522 019.

From the Principal

It is always a pleasure to be a part of a team which strives to bring out the talents of students and staff. Electrical and Electronics department of RVR&JC College of Engineering has always been striving to keep itself ahead of the competition. The essential purpose of a magazine is to inform, engage, inspire and entertain a diverse readership including alumni, parents, students, faculty, staff and other friends of the college by telling powerful stories that present a compelling, timely and honest portrait of the college and its extended family. This magazine has made an earnest attempt in this direction and brought out certain aspects to the eyes of the public so that they may understand and know the EEE department even better.

Dr.K.Srinivasu

From the HOD of EEE

I am happy to note that the magazine brought out in our EEE department is of good quality and taste. Hearty congratulations to the editorial team. It is a matter of great pleasure for me to go through the wonderful contributions made by the students. This magazine is intended to bring out the hidden literary talents in the students and to inculcate leadership skills among them. The outside world will come to know about the caliber of our students through this magazine. I extend my thanks to all the contributors for their articles, poems and drawings.

Dr.K.Chandrasekhar

ABOUT THE DEPARTMENT:

The Department of Electrical and Electronics Engineering has been established during the academic year 1994 - 1995 with an intake of 60 students. The intake has been enhanced to 120 from the academic year 2004 -2005 and 180 from the academic year 2013-2014. Department was accredited twice by National Board of Accreditation of AICTE first in the year 2002 with A-Grade for five years, in the year 2007 for three years and in 2012 for two years. Accreditation by NBA for 5^{th} time in 2017. We have over 10 laboratories with advanced equipment and facilities for supporting our teaching and research. It is envisioned to strengthen the quality of its faculty, research and teaching facilities, as well as student's academic performance.

Our vision:

The vision of the department of Electrical & Electronics Engineering is "To impart education leading to highly competent professionals in the field of Engineering who are globally competent and to make the Department a Centre for Excellence".

Our Mission:

The mission of the department of Electrical & Electronics Engineering is "The Integrated development of professionals with knowledge and skills in the fields of specialization, ethics and values needed to be employable in the fields of Electrical Engineering and contribute to the economic growth of the employing organization and pursue lifelong learning**".**

Achievements:

The Department of Electrical & Electronics Engineering standing among all the other branches of our college.

- Accredited "A" grade for three years by NBA, AICTE New Delhi in the year 2017 for three years.
- Accredited "A" grade for two years by NBA, AICTE New Delhi in the year 2012 for two years.

- Accredited "A" grade for three years by NBA, AICTE New Delhi in the year 2007 for three years.
- Accredited "A" grade for five years by NBA, AICTE New Delhi in the year 2002 for five years.
- College Accredited by APSCHE, Hyderabad in academic Audit Grade. It is informed that it is the Second best among the private Engineering Colleges in Andhra Pradesh.
- P.G. Course M.Tech. In Power Systems Engineering was started in 2004 with an intake of 18 students.
- The Students of the department excels in the University Examinations by being University I Rank Every Year.
- The Department is the winner of CZARS Title (Overall Championship) thrice in the years 2008, 2014, 2016 within the college.

Program Educational Objectives:

I. To facilitate the students to become Electrical & Electronics Engineers who able to competent, innovative and productive in addressing the broader interests of the organizations & society.

II. To prepare the students to grow professionally with proficient soft skills.

III. To make our graduates to engage and excel in activities to enhance knowledge in their professional works with ethical codes of life & profession.

Program Outcomes:

Engineering Graduates will be able to:

PO1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. **Problem analysis**: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reportsand design documentation, make effective presentations, and give and receive clear instructions.

PO11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12**. Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs) of EEE Department:

PSO 1: Graduates of the program must demonstrate knowledge and hands on competence in developing, Testing, Operation and Maintenance of Electrical & Electronics systems.

PSO 2: Graduates of the program must demonstrate knowledge and hands on competence in Modern Engineering tools to engage in life-long learning and to successfully adapt in multi disciplinary environments.

PSO 3: Graduates of the program must demonstrate knowledge in Project Management techniques, environmental issues and Green technologies.

List of Students eligible for academic prizes on Annual day celebrations in 2019

III/IV B.Tech EEE			
Regd No.	**Name**	**CGPA**	**Rank**
Y15EE816	Bathina Revanth Kumar	9.86	First
Y15EE909	Palakollu Naveena	9.80	Second
Y15EE921	Prasadam Puja Sri	9.75	Third
II/IV B.Tech EEE			
Regd No.	**Name**	**CGPA**	**Rank**
Y16EE960	Tallapaneni Chandana	9.72	First
Y16EE912	Nagineni Parameswari	9.5	Second
Y16EE910	Nagaboina Likhitha	9.41	Third

I/IV B.Tech EEE			
Regd No.	**Name**	**CGPA**	**Rank**
Y17EE079	Kollimarla Sesha Sireesha	9.69	First
Y17EE112	Nalluri Srivarsha	9.54	Second
Y17EE148	Sivangula RamaKrishna Prasad	9.46	Third
M.Tech (PSE)			
Regd No.	**Name**	**CGPA**	**Rank**
Y17MPS09	Muttineni Jayasri	9.36	First
Y17MPS05	Kavuri Sirisha	8.36	Second
Y17MPS10	Nagaboina Lekhya Sri	8.21	Third

Turning footsteps into electricity

Walking is the most common activity in day to day life. When a person walks, he loses energy to the road surface in the form of impact, vibration, sound etc, due to the transfer of his weight on to the road surface, through foot falls on the ground during every step. This energy can be tapped and converted in the usable form such as in electrical form. In order to develop a technique to harness foot step energy, a foot step electricity generating device was developed in the Reactor Control Division, BARC. This device, if embedded in the footpath, can convert foot impact energy into electrical form. The working principle is simple. When a pedestrian steps on the top plate

Fig. 1: Foot Step Electric Converter Device

of the device, the plate will dip down slightly due to the weight of the pedestrian. The downward movement of the plate results in rotation of the shaft of an electrical alternator, fitted in the device, to produce electrical energy. The top plate reverts back to its original position due to negating springs provided in the device. If such devices are embedded in places where there is continuous human traffic such as in city malls, railway platforms, city footpaths etc., the electricity generated from these devices can be used for street lights. The device developed at the Reactor Control Division is shown in Fig. 1. The device was tested and it was demonstrated that the energy generated by this device can be stored in a 12 V lead acid battery. A 100 watt, 230 volt bulb was connected to the battery through an inverter. The device was operated by persons walking over to it. The bulb automatically lights up when the battery reaches its full voltage. The bulb remained lighted till the battery was exhausted. However, if there is continuous movement of pedestrians over the device, the bulb can be kept lighted continuously.

Operation

The working of the Foot Stop Electric Converter (FSEC) is demonstrated in photographs in Fig. 2. The right side photograph shows the foot touching the top plate without applying weight. The left side photograph shows the foot when full weight of the body is transferred to the top plate. A 6 W, 12 V bulb connected to the output of

Fig. 2: Operation of Foot Step Electric Converter
(a) After applying weight (Bulb lights up)
(b) Before applying weight (No light)

the alternator glows, to indicate the electric output when foot load is applied. The unit is designed to generate full power pulse when actuated by a person weighing nearly 60 kg. An experimental plot of voltage vs time was generated, by using an oscilloscope. Using voltage data and the load (a resistor), a typical plot of power vs. time was generated. The plot is shown in Fig. 3.

Energy storing

The power generated by the foot step generator can be stored in an energy storing device. The output of the generator was fed to a 12 V lead acid battery, through an ac-dc converter bridge. Initially, the battery was completely discharged. Then, the FSEC was operated by applying foot load and energy was stored in the battery. A 100 W, 230V bulb was connected to the battery through an inverter. The arrangement is shown in Fig. 4. The duration of lighting, the bulb for number of footsteps and corresponding energy stored, are given in Table 1. The main objective of developing the FSEC was to demonstrate the technology of harnessing energy from human walk. However, multiple unit clusters may be more useful for producing useable power. A single cluster with 5 FSEC devices was developed for experimental purpose.

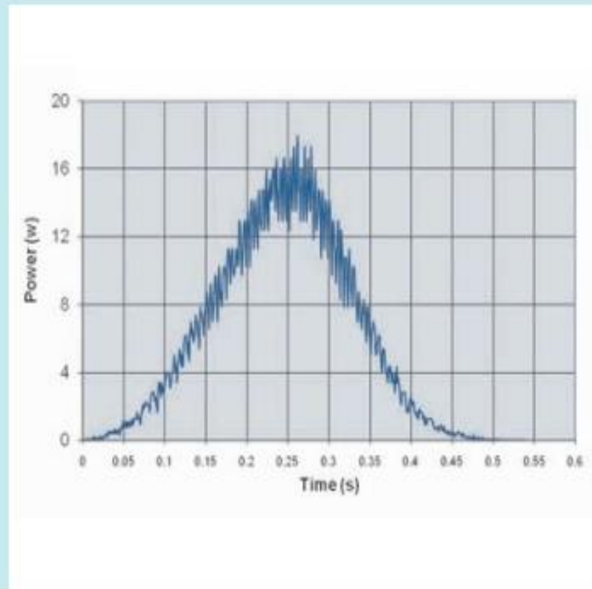


Fig. 3: Power vs. Time Plot for Single Step

Table 1: Energy Storage by Foot Steps

No. of foot steps	Duration of lighting a 100 watt 230 Volt bulb (s)	Total energy (J)	Energy /step (J)
250	6	600	2.4
500	12	1200	2.4
750	18	1800	2.4
1000	25	2500	2.5

Multi FSEC unit platform

A cluster of 5 FSEC devices mounted on a wheeled platform was developed. A view of the internal components of a typical FSEC device used in the cluster is shown in Fig. 5. The electrical output of all five FSEC devices is stored in 2 batteries provided in the platform. An electronic digital energy meter is fitted on the platform. The energy generated in each of the five FSEC units fitted in the mobile platform is integrated and displayed on the energy meter. The energy meter shows a total integrated value of electrical energy in KJ generated in all FSECs fitted in the platform.

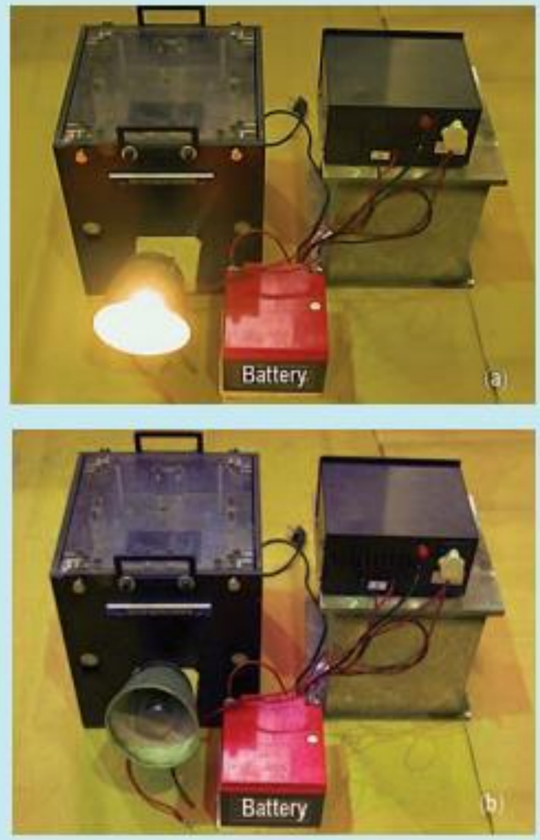


Fig. 4: Storing Device for Foot Step Electric Energy
(a) Bulb on (after charging battery)
(b) Bulb off (before charging battery)

The platform is shown in Fig. 6. The platform is provided castor wheels, and can be placed at any public place where there is continuous movement of people. This unit is designed for persons weighing 50 Kg and above. However, persons below 50 kg weight can also operate but the power produced will be low. The unit is fitted with two 12 V, 26 AH lead acid batteries for storing the output energy from this unit. Also, an inverter is provided to convert 12 V DC from battery to 230 V AC supply for general use.

Fig. 5: Internal View of the FSEC Mechanism

When a person walks over to the platform, the reading on the energy meter was observed to be incremented by 3-5 J per step, depending on the weight of the person. The output may be further increased by increasing the efficiency of the FSEC device. As millions of people are on the move in cities, significant amount of electricity can be generated by installing these devices at places where public walk through.

The economic viability aspects of these units will be studied, after sufficient data is collected. There is a plan to put the platform for public use, for testing and collecting data.

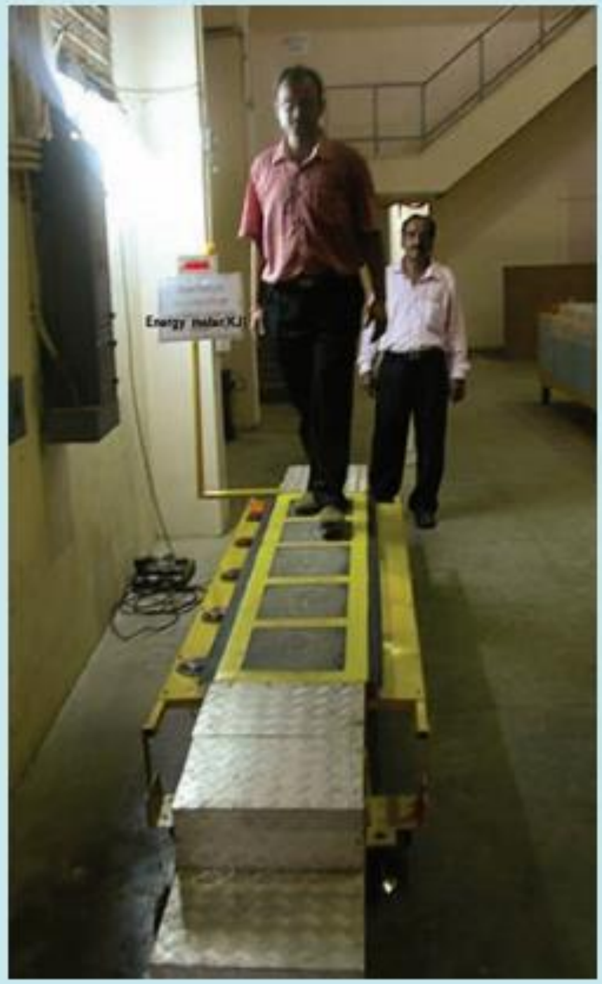


Fig. 6.: Multi Unit FSEC Platform

Tips to Save Energy and Money with Electric Motors

Industry is flooded with advice on how to save energy with electric motors. Most of these items of advice only tackle one issue, or in even worse cases only provide a single and biased viewpoint. With over 30 years of experience in motor control, Fairford Electronics is uniquely positioned to provide honest, unbiased and reliable information. Here are 10 tips from them on saving energy and money.

1. Measure

The phrase, ‘If you can’t measure it, you can’t manage’ remains a true statement for electric motors. To make the biggest impact, you must have a clear understanding of which motors and processes are consuming the most energy in your plant. This will allow you to target your efforts, and gain the quickest Return on Investment.

2. Understand Energy Use

Electric motors are energy conversion devices, they convert electrical energy into rotational energy and some heat. It is important to understand the difference between motor speed (rotational speed) and motor load [opposing force (torque)]. The energy consumption of a motor is related to both speed and load. A slow motor with a full load will consume more energy than a fast motor with no load.

3. Fixed Speed v Variable Speed

Consider which applications are already variable speed, those that must remain fixed speed and those where the speed could be reduced. Be careful though, reducing speed on some applications will not reduce energy consumption. For example, halving the speed of a conveyor system will just mean the conveyor will take twice as long to move the same amount of material.

4. Turn it Off

It sounds simple, but the most effective way to save energy is to switch the motor off when it's not needed. Often the reason for not doing this is the perceived risk of additional wear and tear at motor start up. This is especially true for motors started Direct On Line or with Star Delta starters.

5. Efficient System Design

There is a little point in installing the latest high efficiency motors and equipment, if the entire system is fundamentally inefficient.

Study how the system works and identify when and where the motor is doing work unnecessarily.

6. Slow Down

In the simplest terms, at the same load, a slow motor does less work than a fast motor. So you can only save energy in applications where you need less work done. Variable Speed Drives save energy by allowing the motor to do less work. They are very effective in reducing speed and saving energy in applications where the main opposing force is drag, so this is especially true in HVAC, fan and centrifugal pump applications. Due to the physics of drag, a small reduction in motor speed will result in a larger reduction in the work done and the energy consumed.

7. Use Energy Saving Motor Controls

All motors, even IE3/NEMA Premium Efficiency Motors are most efficient at near full load, as motor load fall below 50%, efficiency begins to reduce. This effect exists because the motor will always use a certain amount of energy to create the magnetic fields needed to rotate the motor irrespective of load.
In applications where the motor load is variable or the motor runs at light loads for long periods, Intelligent Energy Saving Motor Controllers should be used.

8. Size Motors Correctly

At full load all motors, even old motors, are surprisingly efficient. But as the load reduces, motor efficiency quickly falls away – even on the latest high efficiency motors. Therefore, a high efficiency motor is only truly efficient when it is being used near full load conditions.

It is a good engineering practice to slightly oversize a motor for a particular application, this will extend motor life and provide some extra capacity – when it is required, and if a motor is oversized, larger than required, the motor should be re-examined.

9. Use High Efficiency Motors

The latest IE3/NEMA Premium Efficiency motors are more efficient, but the efficiency gains are marginal. Only in few cases where the motor is very old and running 24/7, it will make financial sense to replace a perfectly functioning motor with a new motor.

However, upgrading the motor as it reaches the end of its service life, or when the motor fails, should be considered as best practice. Motor rewinds should only be considered when the motor cannot be replaced due to specific technical reasons or lack of availability of suitable replacements.

10. Reduce Wear & Tear

After energy costs, down time is the next single biggest cost to any plant operator.

A large amount of wear occurs when an electric motor is started; the high initial currents and forces put great strain on the mechanical and electrical systems. To reduce the damaging effects, Soft Starters should be used in all fixed speed applications, and this then will extend motor life.

Need of Energy efficient Motors & Drives

Electric motors impact almost every aspect of modern living. Refrigerators, vacuum cleaners, air conditioners, fans, computer hard drives, automatic car windows, and multitudes of other domestic appliances and devices all use electric motors to convert electrical energy into useful mechanical energy. In addition to running the commonplace appliances, electric motors are also responsible for a very large portion of industrial processes. Electric motors are used at some point in the manufacturing process of nearly every conceivable product that is produced in modern factories. Because of the nearly unlimited number of applications for electric motors, it is not hard to imagine that there are million motors of various sizes in operation across the world. This enormous number of motors and motor drives has a significant impact on the world because of the amount of power they consume.

The systems that controlled electric motors in the past suffered from very poor performance and were very inefficient and expensive. In recent decades, the demand for greater performance and precision in electric motors, combined with the development of better solid-state electronics and cheap microprocessors has led to the creation of modern adjustable speed drive. An adjustable speed drive is a system that includes an electric motor as well as the system that drives and controls it. Any adjustable speed drive can be viewed as five separate parts: the power supply, the power electronic converter, the electric motor, the controller, and the mechanical load.

The power supply can provide electric energy in the form of AC or DC at any voltage level. The power electronic converter provides the interface between the power supply and the motor. Because of this interface, nearly any type of power supply can be used with nearly any type of electric motor. The controller is the circuit responsible for controlling the motor output. This is accomplished by manipulating the operation of the power electronic converter to adjust the frequency, voltage, or current sent to the motor. The controller can be relatively simple or as complex as a microprocessor. The mechanical load is the mechanical system that requires the energy from the motor drive. The mechanical load can be the blades of a fan, the compressor of an air conditioner, the rollers in a conveyor belt, or nearly anything that can be driven by the cyclical motion of a rotating shaft.

Electrical Motor Drives

Today, with advancements in power electronics, control electronics, microprocessors, microcontrollers, and digital signal processors (DSPs), electric drive systems have improved drastically. Power electronic drives are more reliable, more efficient, and less expensive. In fact, a power electronic drive on average consumes 25 per cent less energy than a classic motor drive system. The advancements in solid-state technologies are making it possible to build the necessary power electronic converters for electric drive systems. The power electronic devices allow motors to be used in more precise applications. Such systems may include highly precise speed or position control. Systems that used to be controlled pneumatically and hydraulically can now be controlled electrically as well.

More advanced electric motor drives are now replacing older motor drives to gain better performance, efficiency, and precision. Advanced electric motor drives are capable of better precision because they use more sophisticated microprocessor or DSP controllers to monitor and regulate motor output. They also offer better efficiency by using more efficient converter topologies and more efficient electric motors. The more advanced drives of today also offer a performance boost by utilizing superior switching schemes to provide more output power while using lighter motors and more compact electronics.

Electrical Motor Losses

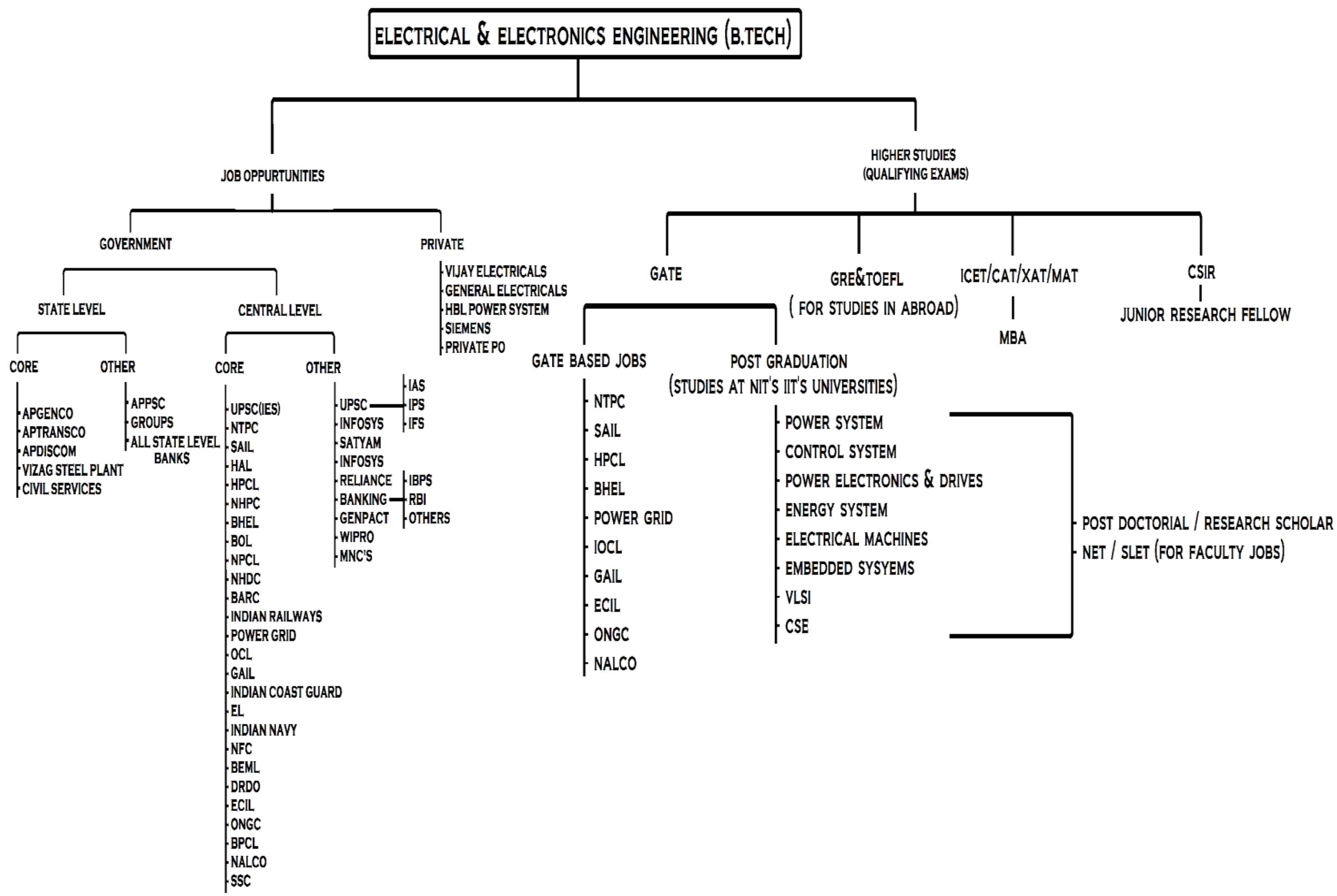
Motor efficiency may be increased by reducing losses. Motor energy losses can be divided into various categories, each of which is influenced by design and construction of the motor. One design consideration is the size of air gap between the rotor and the stator. Large air gaps tend to maximize efficiency at the expense of power factor, while small air gaps slightly compromise efficiency while significantly improving power factor. Fixed losses consist of magnetic core losses and friction and windage losses.They vary with the core material and geometry and with input voltage. Friction and windage losses are caused by friction in the bearings of the motor and aerodynamic losses associated with the ventilation fan and other rotating parts.

Variable losses consist of resistance losses in the stator and in the rotor and miscellaneous stray losses. Variable losses depend upon motor load. Resistance to current flow in the stator and rotor result in heat generation that is proportional to the resistance of the material and the square of the current (I2R). Where R is the stator winding resistance for stator resistance loss and for rotor resistance loss it can be used as rotor winding resistance.

Stray losses arise from a variety of sources and are difficult to either measure directly or to calculate, but are generally proportional to the square of the rotor current. No load losses such as core losses and friction and windage losses both are about 15% of the total losses that occur in the motor while under loaded condition. Part-load performance characteristics of a motor also depend on its design. Both η and PF fall to very low levels at low loads.

Energy Efficient Motors

Electric motors are of utmost importance in industrial as well as agriculture sector. These motors found their application as constant speed drives with very low rating as well as variable speed drives with very high rating. Energy efficiency and energy conservation are very closely related to each other. With increase in demand of energy and due to uncertainties in oil supply and fluctuating price of conventional fuels, efficiency and conservation of energy has become an important aspect of industrial as well as rural development. A large amount of electrical energy is consumed by induction motor used for irrigation in rural sector and industrial purpose in urban sector. In country like India agriculture and industrial sector is developing rapidly, in same way electrical energy consumption is increasing. A study indicated that a 5 per cent improvement in overall efficiency of induction motor would save enough energy that would be comparable to energy produced by a new power plant of few hundred megawatts.


ELECTRICAL & ELECTRONICS ENGINEERING (B.TECH)
JOB OPPURTUNITIES
GOVERNMENT
STATE LEVEL
CORE
APGENCO
APTRANSCO
APDISCOM
VIZAG STEEL PLANT
CIVIL SERVICES
OTHER
APPSC
GROUPS
ALL STATE LEVEL BANKS
CENTRAL LEVEL
CORE
UPSC(IES)
NTPC
SAIL
HAL
HPCL
NHPC
BHEL
BOL
NPCL
NHDC
BARC
INDIAN RAILWAYS
POWER GRID
OCL
GAIL
INDIAN COAST GUARD
EL
INDIAN NAVY
NFC
BEML
DRDO
ECIL
ONGC
BPCL
NALCO
SSC
OTHER
UPSC
IAS
IPS
IFS
INFOSYS
SATYAM
INFOSYS
RELIANCE
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RBI
OTHERS
GENPACT
WIPRO
MNC'S
PRIVATE
VIJAY ELECTRICALS
GENERAL ELECTRICALS
HBL POWER SYSTEM
SIEMENS
PRIVATE PO
HIGHER STUDIES (QUALIFYING EXAMS)
GATE
GATE BASED JOBS
NTPC
SAIL
HPCL
BHEL
POWER GRID
IOCL
GAIL
ECIL
ONGC
NALCO
POST GRADUATION (STUDIES AT NIT'S IIT'S UNIVERSITIES)
POWER SYSTEM
CONTROL SYSTEM
POWER ELECTRONICS & DRIVES
ENERGY SYSTEM
ELECTRICAL MACHINES
EMBEDDED SYSYEMS
VLSI
CSE
POST DOCTORIAL / RESEARCH SCHOLAR
NET / SLET (FOR FACULTY JOBS)
GRE&TOEFL
(FOR STUDIES IN ABROAD)
ICET/CAT/XAT/MAT
MBA
CSIR
JUNIOR RESEARCH FELLOW

'STUDENT NO 1' , a game show where fun games are conducted between seniors and juniors of R.V.R. and J.C. College of Engineering, Guntur.

Winners in the event of STUDENT NO 1, Y17EE055- NAGA SAI GUMMADI, Y18EE107- AARON

Round wise winners (EEE) in *2K19 CZARS*

R.V.R. &J.C. COLLEGE OF ENGINEERING
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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
BATCH : 2015-19 SECTION- A

STAFF SITTING ROW- 1 : Y.SuriBabu, P.Siva Krishna, M.Anitha, V.Sarayu, Dr.N.Chaitanya, Dr.K.RadhaRani, Dr.K.Swarna Sree, Dr.K.Srinivasu, Dr.K.Chandra Sekhar, Dr.G.Sambasiva Rao,
(LEFT TO RIGHT) Dr.N.C.Kotaiah, Dr.A.Rama Koteswara Rao, Ch.Ranga Rao, B.V.Vasantha Rao.

STANDING 1st row : D.Akhila, D.Nikhila, B.Lvanya, A.Tejaswini, P.Pushpanjani, B.Jerusha Blessy, B.Mamatha, A.Divya, A.Pavani, A.Karuna, A.Prathima, B.Ramya Sree, B.Raja Sri, A.V.Sai Keerthika, B.Siri Sri, Ch.Uma Sri Lakshmi, J.chandana Chowdary, Sk.Haseena, G.Subhashini, T.Phani Priya, D.Sai Divya Sri, Ch.Samrajyam, B.UshaRani.

STANDING 2nd row : J.Venkatesh, G.Hemanth Kumar, E.Bramhachari, J.Adithya, D.Rajesh, B.Srihari, B.GopiNayak, B.Sairam Chanakya, D.Venkateswara Rao, B.Harish, K.ManiKumar, G.Ramesh, K.Madhu, Ch.Syambabu, G.P.Prasanna Kumar, B.Revanth Kumar, J.Avinash, I.Sunil Kumar, Ch.Anjaneyulu, G.Mohan Manikanta, K.Chandra Kiran, A.Kalyan

STANDING 3rd row : Ch.Tirupathi Rao, A.HarshaVardhan, Ch.VarunKumar, B.PeddiReddy, B.Tejdeep, B.Prasanna Kumar, B.Suneel Kumar, B.Vinay, E.VenkateswaraReddy, A.SaiKumar, D.ajay Babu, G.Venkatesh, B.Meghanadh Reddy, G.HariKrishna, G.V.S.Sainadha Reddy, Ch.Srikanth, I.V.Vaibhav,

G.Radha Krishna, Ch.Mohana Krishna, D.Yagneshwar Rao, Ch.SaiKrishna Reddy, G.Manikanta, K.Gopi, B.V.S.Rakesh

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

BATCH : 2015-19 **SECTION- B**

STAFF SITTING ROW- 1 (LEFT TO RIGHT) : Y.SuriBabu, P.Siva Krishna, M.Anitha, V.Sarayu, Dr.N.Chaitanya, Dr.K.RadhaRani, Dr.K.Swarna Sree, Dr.K.Srinivasu, Dr.K.Chandra Sekhar, Dr.G.Sambasiva Rao, Dr.N.C.Kotaiah, Dr.A.Rama Koteswara Rao, Ch.Ranga Rao, B.V.Vasantha Rao.

STANDING 1st row : N.NagnjaliBai, M.Lakshmi, M.SiriChandana, M.Revathi, M.S.Reshmitha Chowdary, N.Sowjanya, N.Niharika, M.SriPradha, Y.Navitha, K.Prathyusha, N.Ohitha Sai, K.Rupa, N.Sahiti, J.Lavanya, B.NagaSailndira, M.RatnaKumari, N.Bindu, M.Bhavana, N.Keerthi, K.Harika

STANDING 2nd row : M.Gopinath, N.Chandra Sekhar, M.Samba, N.BlaKrishna, M.PavanSaiKumar, M.YerriNaidu, K.V.K.D.S.PavanKumar, K.SathiRamesh, K.N.Veeranjaneyulu, K.PavanSivaKumar, K.DattathreyaSai, n.SasiMohan, K.RaviTeja, M.GpalaKrishna, N.A.BrahmaTeja, K.Lakshman, M.S.V.Sailesh, Md.Rafi, K.J.V.Vamsi, K.VenkateswaraRao

STANDING 3rd row : N.SivaKoteswaraRao, P.AshokKumar, N.Venkatesh, N.AbhishekPaul, N.SaiHarsha, J.M.V.KiranNaidu, M.M.KrishnaChaitanyaSai, M.VijayKumar, K.BalakoteswaraRao,M.Srinivas, K.SivaKrishna, K.N.DurgaPraneeth, K.Praveen, k.Raju, N.NaveenKumar, M.Gurunadham, M.HariKrishna, K.LokeshGopal, K.PavanKumar, N.Mahesh

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

BATCH : 2015-19 SECTION- C

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STANDING 2nd row : V.RevanthKumar, V.Srikanth, T.TaviTeja, P.KumarNaik, T.S.ChandraDurgaVardhan, P.BhanuPrakash, Y.J.BillyGraham, V.D.SasankaMouli, P.Prudhvi, P.Ashok, Y.SajjanRao, P.Nagaraju, Y.PavanKumar, T.GowthamSai, U.ashok, P.HariKrishna, Y.SudheerKumar, P.ManishKumar, V.BharathRevanth, D.PrasanthKumar, B.Srikanth, Sk.NagurBaji, P.Vishnu

STANDING 3rd row : P.BhaskarSai, S.Varun, P.VenuSai, Sk.MasthanGhori, R.NaveenSriRam, Sk.AbdulRahaman, V.PhaniSainath, T.S.S.Manideep, Sk.ShahidPasha, V.S.D.Phaneendra, P.V.Sasikiran, P.SaikiranKumar, P.AkhilRaj, P.ThimothiRaja, P.Ramana, Y.Gopi, S.PurnachandraRao, S.SaiJithendra, P.Syamkowshik, Sk.Farooq, T.V.Manohar.

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