



AVERA  
(Association of Electrical and Electronics Engineering)

PULSE

## From the Editorial ENGINEERING

An art well known to mankind, that came in to existence since ancient times, a solution to the present problems faced by mankind, a powerful complicated art that emerged into this world and achieved a name familiar to even the common man. "ENGINEERING".

One of the oldest platform in ENGINEERING "ELECTRICAL ENGINEERING". Be proud to be an "ELECTRICAL ENGINEER".



## LAUNCHING OF 2015 WITH RAINBOW COLOURS

The present year 2015 has witnessed tremendous achievements on the side of the students belonging to EEE department. More than 90 final year students of EEE department has been placed in various companies. This has been a remarkable achievement that has to be appreciated. The department has conducted intra department workshop, guest lecture, and few quiz contents that has benefited several students. Several outside students had come to take part in the symposium held by MCET that happened for 2 days. The volunteers played a main role in making the symposium a great success.



# GUEST LECTURE ON “ELECTRIC AND HYBRID VEHICLES”.

A hybrid vehicle is a vehicle that uses two or more distinct power sources to move the vehicle.<sup>[1]</sup> The term most commonly refers to hybrid electric vehicles (HEVs), which combine an internal combustion engine and one or more electric motors. However, other mechanisms to capture and use energy may also be included. Any vehicle that combines two or more sources of power that can directly or indirectly provide propulsion power is a hybrid.

Advanced technologies typically used by hybrids are:



Mr.S.Karthik ,Manager R & D , Ampere Vehicles, India Pvt Ltd ,Coimbatore. The guest lecture was conducted for II year students of EEE department . The guest lecture continued for more than 2 hours. The contents discussed during the session were - an introduction on the electric and hybrid vehicles , how it remains unique when compared to the other vehicles, a detailed information on how to manufacture such a vehicle , and also the benefits of using such vehicles. The session was very interesting and the session was able to impart knowledge to the students on how to manufacture such vehicles.

## ● Regenerative Braking.

● The electric motor applies resistance to the drive train causing the wheels to slow down. .

● In return, the energy from the wheels turns the motor, which functions as a generator, converting energy normally wasted during coasting and braking into electricity, which is stored in a battery until needed by the electric motor.

## Electric Motor Drive/ Assist.

The electric motor provides additional power to assist the engine in accelerating, passing, or hill climbing. This allows a smaller, more efficient engine to be used. In some vehicles, the motor alone provides power for low-speed driving conditions where internal combustion engines are least efficient.

The guest lecture on “Electric and Hybrid vehicles “ was given by





## TECHNICAL QUIZ

An intra-department technical quiz was conducted by AVERA association for II-years on 02.03.2015. About 55 students participated in the preliminary round from which 16 students were qualified for the first round. The participants were split up into teams comprising of 2 per team and were asked to choose questions from a particular domain. By the end of first round there was a tie breaker among 9 teams. The teams were about to answer the questions, by which 5 teams were qualified for the finals. In the final round each team were supposed to design a circuit for alternate glowing of LED's



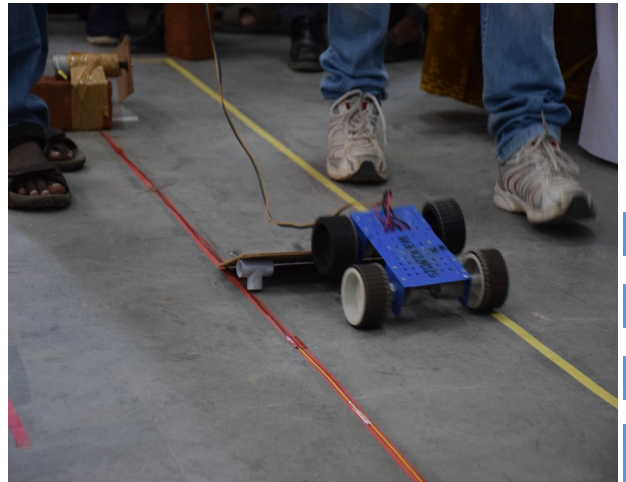
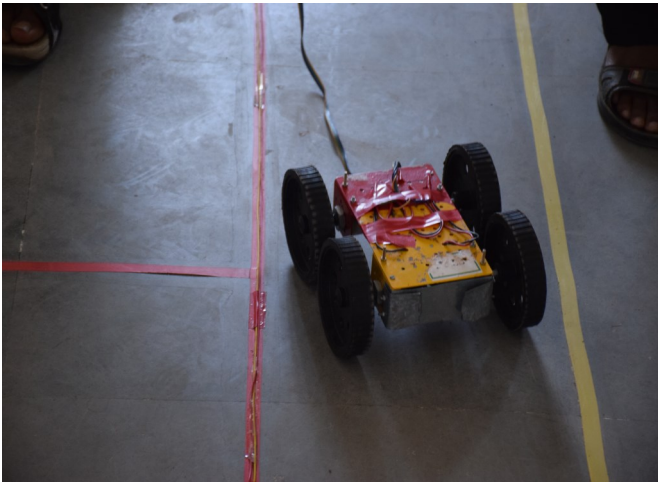
with reversal voltage and based upon time constrain and the accuracy of the circuit, WINNERS were announced. The same task was given to the audience and the best circuits were selected and they were awarded with BEST CIRCUIT DESIGNER title. The event was monitored by Mr.A.SenthilKumar , AP (SS) along with the staff coordinators of AVERA Ms.J.Amudha AP(SG) and Mr.SaravanaKumar (AP). The Event was held at ELECTRICAL SEMINAR HALL in 'C' block from 11.00A.M to 1.05 P.M. Two teams were selected as winners.

## MCET'S GRAND TECHSYM

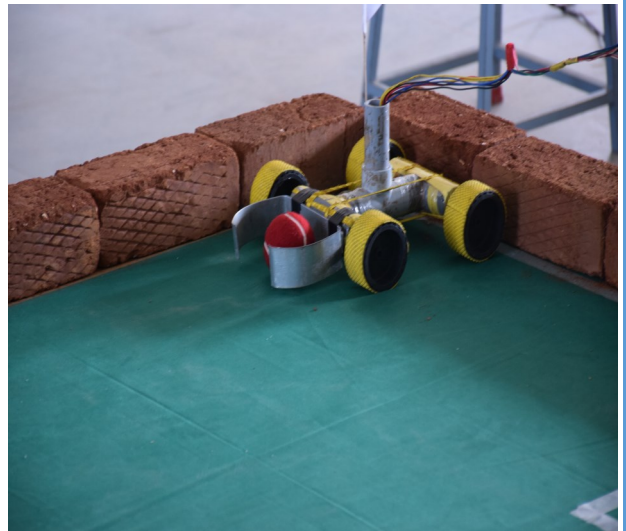
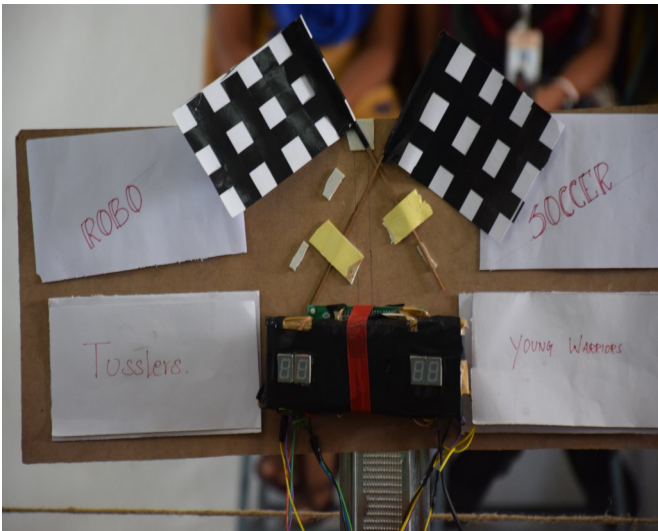
During the big event of the year "THE TECHSYM—2015" the events that were conducted by the EEE department were –Paper Presentation, Project Presentation, Technical Quiz, All Terrain Robots and Robo soccer. The field events All Terrain Robots and Robo Soccer were conducted in a grand manner. Among all the departments of the techsym the field event "ROBO SOCCER" was awarded as the best event of all the event conducted in Techsym.

## ALL TERRAIN ROBOTS

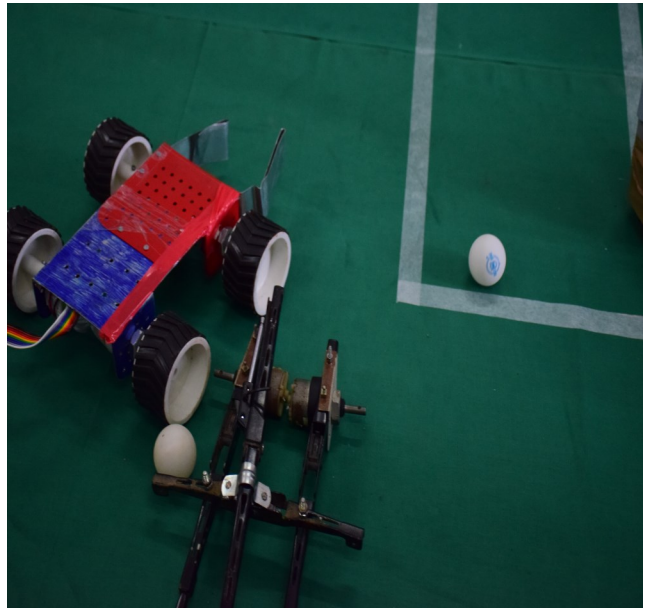
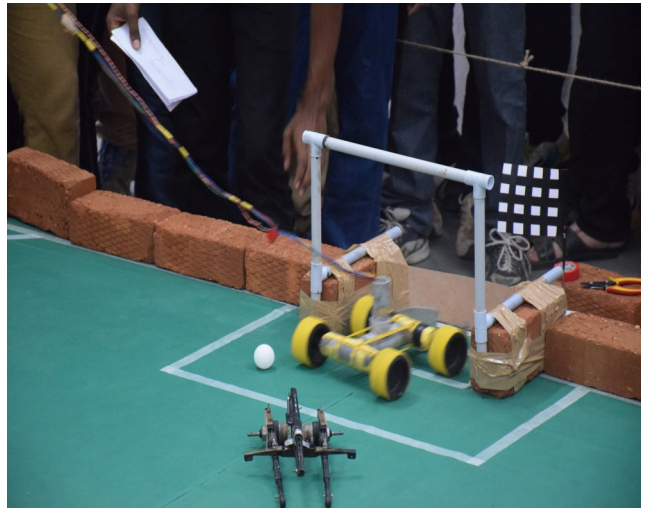
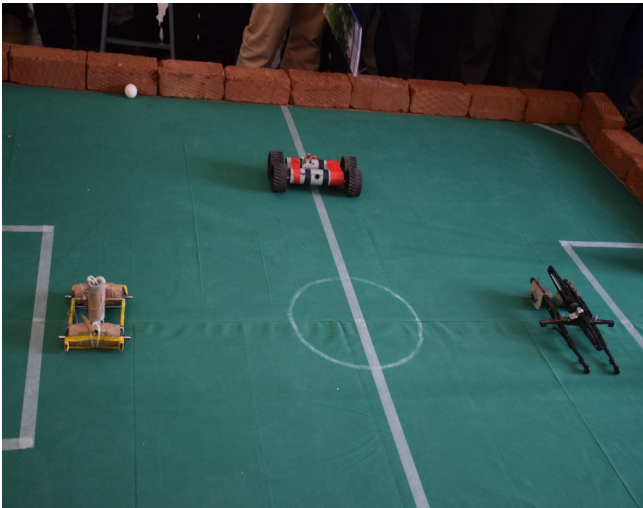
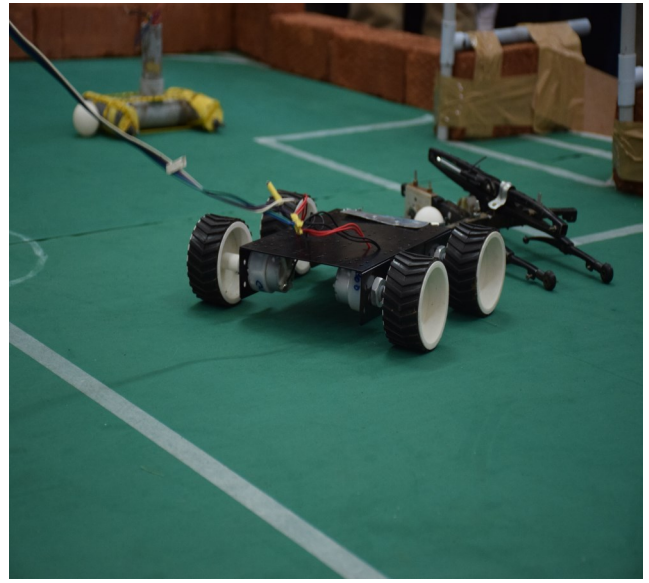
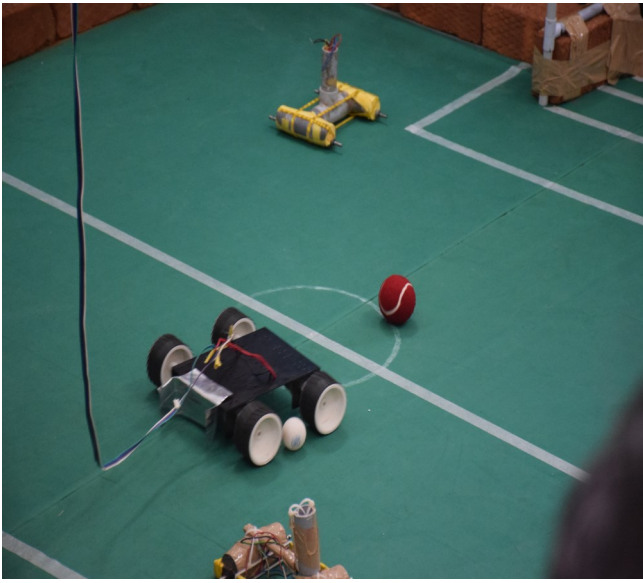




## ROBO SOCCER







## STUDENT'S ACTIVITIES

### IN THE MONTH OF JANUARY

### PAPER PRESENTATION

S.No	Student's Name	Year and Department	Title of Paper Presented	Organizer and Place of program	Date
1	B.Surendra Prasad S.Udaya Shankar K.Saravanakumar	III BE EEE	INDO-ASIAN SOLAR CHALLENGE	International Level Solar Vehicle Fabrication Event 18 <sup>th</sup> place of 100 teams,LPU Punjab	3-01-2015
2	R.TamilVannan S.Sarath M.Ashok Kumar	II BE EEE	Power Generation Using Biomass	CIT,CBE	24-01-2015
3	K.Gokul M.Manivel	II BE EEE	Power Generation using Piezoelectric Material and Dynamo	CIT,CBE	24-01-2015
4	Arun.K.Sanjeev K.Arun Kumar	II BE EEE	Renewable energy & Application	CIT,CBE	24-01-2015
5	M.Chitra Chandana S.Pavithra	III BE EEE	Nano Technology	KSR,Karur	30-01-2015

### In-Plant Training by the Students

S.No	Student's Name	Year and Department	Place of In-plant Training	Period of Training (Date(s))
1	R.Mukesh Krishna	II BE EEE	Steel Authority of India ltd	29-12-2014 To 3-01-2015
2	K.Keerthiga	II BE EEE	Sugar Mill, Mohanur, Namakkal	2-01-15 to 05-01015

## Extra-Curricular / Co-curricular Activities

S.No	Students Name	Year and Department	Events Details	Awards / Medals	Date of the Event
1	D.Shalini N.Valli Pavithra	III BE EEE	Inter Zonal Tournament	III	24-01-2015 To 25-01-2015
2	K.Keerthiga	III BE EEE	Interzonal Cricket	Runners	23-01-2015 To 25-01-2015

## Participation of Inter and Intra Collegiate

S.No	Student's Name	Year and Department	Details of event & Prize if any	Organizer and Place of program	Date
1	Z.Khalidha Banu	II BE EEE	Hopefest-A talkshow organized by GKNM hospital for promoting cancer awareness	G.Kuppusamy Naidu Hospital	8-02-2015
2	M.Guna P.Gowtham R.Narendra Prasad S.Sathish	II BE EEE	ROBO Race	Kongu Engineering College	4-02-2015

## IN THE MONTH OF FEBRUARY

## Extra-Curricular / Co-curricular Activities

S.No	Students Name	Branch and Department	Events Details	Awards / Medals	Date of the Event
1	R.Harish	III BE EEE	TN-TIES Basket Ball	Participated	6-02-2015 & 09-02-2015

## PAPER PRESENTATION

S.No	Student's Name	Branch and Department	Title of Paper Presented	Organizer and Place of program	Date
1	R.Siva prasad M.Sivabalakrishnan	II BE EEE	Automatic AC shut down in car using Embedded	SKCET,CBE	20-02-2015
2	A.Senthil Kumar M.Murugan	II BE EEE	3D Printing Technology	Angel College of Engineering & Tech	20-02-2015
3	E.Sandhya K.Poorani	II BE EEE	Carbon Solar panels to harness infrared radiation	SKCET CBE	20-02-2015
4	D.Anusya K.S.Jeevitha	II BE EEE	5G Technology	Hindusthan College of Engg & Tech	26-02-2015
5	M.Ashok Kumar.M T.D.Om Prakash	II BE EEE	Charging on Electric Car using Dyanamo	SKCET,CBE	06-02-2015
6	Keerthana.K Anisha Nazrin	III BE EEE	Nano Leaves-A Future Renewable Energy Sources	Kongu Engineering College	21-02-2015
7	R.Dhivya	III BE EEE	Automatic File Tranfer Using PIC	Kongu Engineering College	20-02-2015

## NSS ACTIVITIES

S.NO	Name of the Students	Branch and Department	Programmes Organized / Conducted / Participated	Venue	Date (s)
1	R.Gayathri J.Shalini P.S.Pradeepa Guna.M P.Indhumathi S.Vishnu priya R.S.Srilekha S.Vigneswaran Sabari Alagar	II BE EEE	NSS Camp	Kanjampatti	18-02-2015, 19-02-2015, 24-02-2015



## Awards – Academic

Name of the Student	Year and Degree	Branch	Name of the Award	Awarded by (Name of the Organization)	Purpose of Award	Date of Awarded
Nishanth.S	IV BE	EEE	R.Thiruvenkadam Scholarship	MCET	Best Out-going student-EEE	25-02-2015
Gayathri.S	IV BE	EEE	Proficiency Award	MCET	FIRST RANK	25-02-2015
B.Sudhakaran	III BE	EEE	Proficiency Award	MCET	FIRST RANK	25-02-2015
K.B.Suganya	II BE	EEE	Proficiency Award	MCET	FIRST RANK	25-02-2015
Om Prakash.T.D	II BE	EEE	Proficiency Award	MCET	FIRST RANK	25-02-2015
Kalaiselvi.S	ME	AE	Proficiency Award	MCET	FIRST RANK	25-02-2015
Surendra Prasad.B Muruganatham.M Jegadiss.R Thangavel.M Karuppana Kumar.S Nagaarjun.D	III BE	EEE	Acheivement Honour Award	MCET	Excellent performance	25-02-2015

## Name and Address of Important Visitors

S. No	Name of the Visitors	Purpose	Date of Visit
1	Mr.S.Karthick Manager R & D Ampere Vehicle India PVT Ltd Coimbatore	Guest Lecture on “Electric & Hybrid Vehicle”	12-02-2015

## YRC / RRC Activities

Name of the Students	Degree Studying	Branch	Programmes Organized / Conducted / Participated	Venue	Date (s)
R.Siva Prasad M.Sivabalakrishnan C.NaveenSelvakumar G.Bhuvanesh M.Shriram	BE	II EEE	Awareness rally on organ and Blood donation	Pollachi	19-02-2015



# FLYING WINDMILL AND HYDROGEN FUEL GENERATION

This article is about the conversion of surplus electrical energy into the hydrogen fuel and flying wind mill .

## **NEED FOR THE ABOVE PROPOSED IDEA:**

Nowadays, there is a scarcity of petrol and other types of fossil fuels. So, here there is a technique of production of hydrogen fuel which can be used to drive a vehicle.

Hydrogen fuel is a safe and eco-friendly type of fuel used in automobiles. Future generation are waiting to welcome the invention of hydrogen powered vehicle.

## **WORKING:**

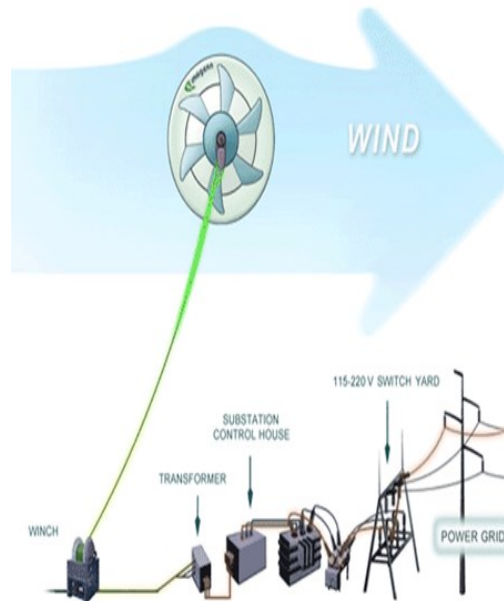
The following method is to produce hydrogen from wing energy. In wind power generation, storage of generated electricity is one of the difficult task. Technological improvements are needed for efficient storage of wind power.it is not possible to store the excess electricity in case of wind power generation. We have to use the surplus electricity in the efficient manner. Here comes the technique of producing hydrogen by electrolysis method. Surplus electricity is made to pass through the Water ( $H_2O$ ), as electricity is passed through it ,water electrolyzed into hydrogen( $H_2$ ) and oxygen ( $O_2$ ).Thus the byproduct hydrogen and oxygen is



obtained. The oxygen will be released to the environment and hydrogen enters into the next stage of storing. As it is difficult to store hydrogen we use a polymer called *Plexiglas*. This polymer will store an hydrogen and this can be used as a fuel to drive a car.

In addition to the above method we are going to implement the technique of flying wind mill . These flying windmill consists of a turbine and the balloon/kite. The turbine will be carried by the balloon/kite and is made to fly above certain height .As the height increases the velocity of wind increases, based on that the turbine will rotate at greater velocity at certain height. The power generated in that turbine will be transmitted down using an Nano cables . As Nano cables are so strong we employed that here for higher efficiency. It can be noted that the power generated using flying turbine is 8-27 times greater than that of the ordinary windmill.

Thus, both techniques are going to implement in the same wind farm for high output and to get valuable by-product without any wastage.



- M.ASHOK KUMAR (SECOND EEE)



# Practical Approaches To Minimize Voltage Drop Problems

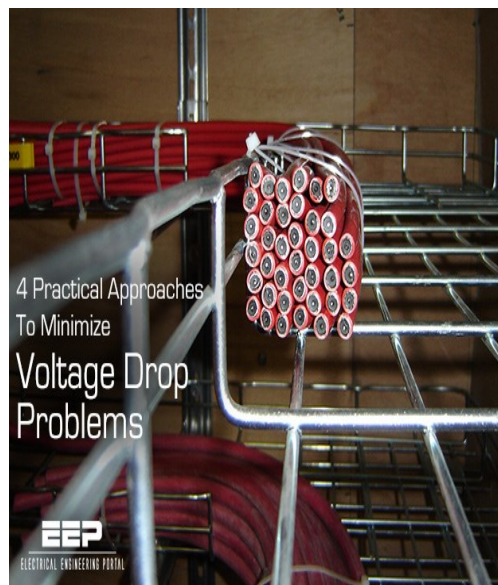
The NEC states in an Informational Note that a maximum voltage drop of 3% for branch circuit conductors, and 5% for feeder and branch circuit conductors together, will provide reasonable efficiency of operation for general use circuits. For sensitive electronic loads, circuits should be designed for a maximum of 1.5% voltage drop for branch circuits at full load, and 2.5% voltage drop for feeder and branch circuits combined at full load. Four practical approaches can be used to minimize voltage drop problems:

1. Increasing the number or size of conductors.
2. Reducing the load current on the circuit.
3. Decreasing conductor length.
4. Decreasing conductor temperature.

## 1. Increase the Number or Size of Conductors.

Parallel or oversized conductors have lower resistance per unit length than the Code-required minimum-sized conductors, reducing voltage drop and increasing energy efficiency with lower losses than using the Code-required minimum-sized conductor. In data centers and other sensitive installations, it is not

uncommon to find conductor gauges for phase, neutral, and ground exceeding Code minimums, and a separate branch circuit installed for each large or sensitive load. To limit neutral-to-ground voltage drop, install a separate, full-sized neutral conductor for each phase conductor in single-phase branch circuit applications. For three-phase feeder circuits, do not downsize the grounded conductor or neutral.



For three-phase circuits where significant non-linear loads are anticipated, it is recommended to install grounded or neutral conductors with at least double the Ampacity of each phase conductor.

## 2. Decrease Load Current Limiting:

The amount of equipment that can be

connected to a single circuit will limit the load current on the circuit. Limit the number of receptacles on each branch circuit to three to six. Install individual branch circuits to sensitive electronic loads or loads with a high inrush current. For residential applications, install out door receptacles not to exceed 50 linear feet between receptacles, with a minimum of one outdoor receptacle on each side of the house, and with individual branch circuits with a minimum of 12 AWG to each receptacle.

## 3. Decrease Conductor Length

This reduces the resistance of the conductor, which reduces voltage drop. Circuit lengths are usually fixed, but some control can be exercised at the design stage if panels or subpanels are located as close as possible to the loads, especially for sensitive electronic equipment.

## 4. Adjust Conductor Temperature:

Conductor temperature is a major factor in conductor resistance, and therefore in voltage drop. The temperature coefficient of **electrical resistance for copper**,  $\alpha$ , about **0.3%** for each °C of temperature change. The effect of temperature can be determined by the following equation:  $R_2 = R_1 [1 + \alpha \cdot (T_2 - T_1)]$

- M.ARUN (SECOND EEE)

# Why it's important to know which type of power factor correction to use

## 1. Distributed power factor correction

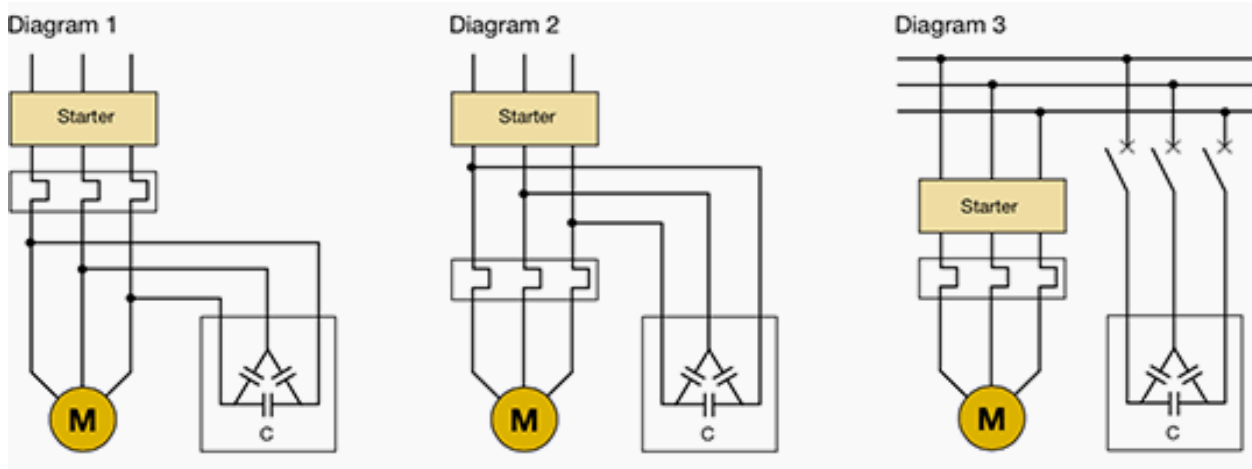
Distributed power factor correction is achieved by connecting a capacitor bank properly sized directly to the terminals of the load which demands reactive power. The installation is simple and inexpensive. Capacitor and load can use the same protective devices against overcurrents and are connected and disconnected simultaneously. This type of power with constant advisable in the case of large electrical equipment load and power and long

self-excite with the reactive energy drawn from the capacitor bank, and may turn into an asynchronous generator. In this case, the voltage on the load side of the switching and control device is maintained, with the risk of dangerous overvoltage (up to twice the rated voltage value). **When using diagram 3**, the compensation bank is connected only after the motor has been started and disconnected in advance with respect to the switching off of the motor supply. With this type of power factor correction the network on the supply side of the load works with a high power factor; on the other hand, this solution results economically onerous.

It consists in improving locally the power factor of groups of loads having similar functioning characteristics by installing a dedicated capacitor bank.

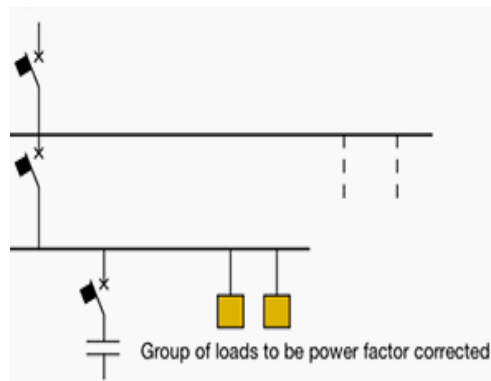
This is the method reaching a compromise between the inexpensive solution and the proper management of the installation since the benefits deriving from power factor correction shall be felt only by the line upstream the point where the capacitor bank is located.

## 3. Centralized power factor correction:



connection times and it is generally used for motors and fluorescent lamps.

**In** case of direct connection (diagrams 1 and 2), the following risk may be run: after the disconnection from the supply, the motor will continue to rotate (residual kinetic energy) and



These assemblies are normally used with banks divided into steps, installed directly in the main distribution boards. The use of a permanently connected bank is possible only if the absorption of reactive energy is quite constant all day long.

#### 4. Automatic power factor correction

In most installations there is not a constant absorption of reactive power for example due to working cycles for which machines with different electrical characteristics are used. In such installations there are systems for automatic power factor correction which, **thanks to a monitoring varmetric device and a power factor regulator, allow the automatic switching of different capacitor banks**, thus following the variations of the absorbed reactive power and keeping constant the power factor of the installation constant.

**An automatic compensation system is formed by:**

1. Some sensors detecting current and voltage signals;



2. An intelligent unit which compares the measured power factor with the desired one and operates the connection and disconnection of the capacitor banks with the necessary reactive power (power factor regulator);

3. An electric power board comprising switching and protection devices;

4. Some capacitor banks. To supply a power as near as possible to the demanded one, the connection of the capacitors is implemented step by step with a control accuracy which will be the greater the more steps are foreseen and the smaller the difference is between them.

- S.VIGNESWARAN(SECOND EEE)

## Basic Transformer Routine Test – Measurement of Winding Resistances

**Purpose of the measurement**  
The resistance between all pairs of phase terminals of each transformer winding are measured using direct current. Furthermore the corresponding winding temperature is measured. The measured resistances are needed in connection with the load loss measurement when the load losses are corrected to correspond to the reference temperature. The resistance measurement will also show whether the winding joints are in order and the windings

correctly connected.

**Apparatus and basic measuring circuit**  
The measurement is performed by **TETTEX 2285 transformer test system**. This device is an **automatic winding analyzer**, optimized for three phase power and distribution transformer measurements.

**Where:**  $T_1$  - transformer under test,

**A** – Ammeter, **U** – Voltmeter

**B** – DC supply, **T<sub>h</sub>** - Thermometer

**The principle of the measurement is as follows:** The voltage drop  $U_{dc}$  caused by the direct

current  $I_{dc}$  and by the resistance **R<sub>AB</sub>**, **R<sub>AC</sub>** and **R<sub>BC</sub>** is measured. The resistances are then calculated from  $U_{dc}$  and  $I_{dc}$  using correction for the error caused by the internal resistance of the voltage measuring equipment. The temperature is measured from oil filled thermometer pockets situated in the transformer cover by means of an electronic thermometer connected to the computer.

R- MUKESH KRISHNA (SECOND EEE)



# Selection of Induction Motors for Industrial Applications

All types of industries are invariably required to install different types of electric motors as prime mover for driving process equipment participating in their respective production line up. The continuous process of technical development has resulted into availability of highly diversified types of electric motors. Hence, an utmost care should be exercised in selection of most appropriate type of factors for each application, so that the motor would provide desired and optimum performance. The characteristics of motors stops, etc. should be taken their total service life. In view of above, an incorrect selection of motor always lands the industrial buyer into all sorts of problems, including premature failure of the motor, causing severe production into consideration carefully when deciding for the type of a motor for that specific application.

Moreover, the motors are required to perform quite often under abnormal conditions during curtailments. Like one mentioned above, a number of other factors and design features like weather conditions, stringent system conditions, abnormal surroundings, [hazardous area](#), duty cycle, motor efficiency, etc. should be considered while deciding the



rating and subsequently drawing out the technical specifications of the motor.

### Abnormal conditions and effects:

The usual abnormal conditions encountered by the motors are given below.

### 1. Abnormal System Conditions Voltage

1. Undervoltage
2. Overvoltage
3. Unbalance in 3-phase
4. Single phasing Voltage surges

### Frequency

1. Low frequency
2. High frequency
2. Abnormal Operating conditions

### 1. Locked rotor or stalled rotor

2. Reswitching/Frequent start-stops.
3. Momentary interruption/Bus transfer

### 3. Environmental conditions

1. Overloading
2. Improper cable sizing
3. High/low ambient temperature
4. High altitude
5. High humidity
6. Corrosive atmosphere
7. Hazardous atmosphere/surroundings
8. Exposure to steam/salt-laden air/oil vapour

#### 4. Mechanical problems

Seized bearings , Incorrect alignment/ foundation levelling , Incorrect fixing of coupling ,High vibration mounting External shock due to load

#### 5. Condition at location

Poor ventilation, Dirt accumulation, Exposure to direct sunlight Though, above mentioned abnormalities may prevail for short or long duration or may be transient in nature, major impact of the listed abnormal conditions is overheating of the motor along with

one or several of the other effects as follows. Change in the motor performance characteristics like drawl of more power and consequent deterioration in motor efficiency, etc. Though, above mentioned abnormalities may prevail for short or long duration or may be transient in nature, major impact of the listed abnormal conditions is overheating of the motor along with one or several of the other effects as follows.

Change in the motor performance characteristics like drawl of more power and consequent deterioration in motor efficiency, etc. Increase in mechanical stresses

Leading to:

Shearing of shafts ,Damage to winding overhang, Bearing failures, Insulation failures. Increase in stator and rotor winding temperature leading to:

Premature failure of stator or rotor insulation (For wound rotor motor) Increased fire hazard ,Breakage of rotor bar and/or end ring (For squirrel cage motors) All the motors encounter few or several of these abnormalities during the course of their service lives. Consideration of listed abnormal conditions at design stage greatly helps to minimise the effects of abnormal conditions to maintain a consistent performance.

#### Design Considerations

**Following are the** most important design factors required to be considered when selecting a motor for any of the diversified industrial applications.

#### Output in kW/HP

There are two principle limitations for selecting the motor output:

##### 1. Mechanical limitation

The breakdown torque, which is the maximum torque that the motor can produce when operating without stalling. This is a critical design factor in motor applications, particularly for the motors subjected to occasional extreme load conditions. Another critical factor is the locked.

##### 2. Electrical limitation due to insulation provided

on the motor windings The electrical load on the motor can be imposed till the winding insulation is able to withstand the prescribed temperature rise over an ambient for that particular class of insulation. Life of the motor greatly depends on the temperature rise of the windings. Anticipated life-span of the motor can be achieved provided it is operated at its rated output without overloading and the prescribed preventive maintenance practices are religiously followed. Speed of the Motor Most of the motors are directly coupled with the driven equipment where in the speed of the motor and the driven equipment will be same. In order to meet the speed of the driven equipment,

like gearbox chains or belts are introduced between motor and driven equipment. In this case, it may be necessary to provide the rotor shaft suitable for its attachment with the speed decreasing or increasing device and hence the specification should include such specific requirement. In case a variable speed drive is to be used for the speed variation, the motor should be compatible for this specific application. The standard motor may not provide desired performance when operated via variable speed drive.

**Power Supply Voltage and Frequency Variations:**

Variations in the power supply parameters, i.e. voltage and frequency significantly affect overall performance of the motor. As provided in IS:325-1996, **the permissible voltage variation is  $\pm 5$  to  $\pm 10\%$ , permissible frequency is  $50\text{Hz} \pm 3\%$ , and permissible combined variation is  $\pm 6\%$ . The effect of undervoltage** is more serious

than that of overvoltage. The higher torque, resulting from overvoltage, can handle a little overload without undue heating of the winding, but only for a short duration. Continuous operation with undervoltage condition increases the current at the rate of about 20% for every 5% reduction in the supply voltage, increasing the rated copper loss. This results into **heating and prolonged temperature rise**, and finally the **burning of winding**. During a motor start-up, the torque reduces by 10% for each 5% reduction in the supply voltage, causing more starting current and consequently more rapid heating of the winding. **The motor offers reduced efficiency at either overvoltage or undervoltage.** Power factor drops sharply with higher voltage and improves with lower voltage. Even when motor is lightly loaded, over-voltage cause rise in current and temperature thus reducing the life of motor. The variation in frequency by +5% decreases the torque by about 10% and vice-versa at - 5% frequency, the torque increases by about 10%. It is,

therefore, of utmost importance to consider the combined effect of variation in voltage and frequency both when purchasing the motor. **Unbalance in the supply voltage results into a current unbalance of 6 to 10 times the percentage voltage unbalance.** This in turn results into generation of negative sequence currents in the rotor causing its overheating and premature failure. It is therefore vital to specify the permissible limits of variations in the power supply parameters for the motor in accordance with the requirement of the driven equipment. However, the permissible limits should never be more than provided in the applicable Indian Standard IS:325-1996.



# VALIDICTORY FUNCTION FOR AVERA 2014-2015



## ANNUAL REPORT(2014-2015)

Sno	Date	Particulars	Chief guest	Participants	Place
1	25-07-2014	Inaugural Function and Guest Lecture on "Recent Trends in Electric Drives"	Er.N.Arulprakash Product Engineer' M/s Supreme Scientific Corporation of India, Madurai	II,III,IV year Students	CS Hall
2	21-08-2014	Technical Quiz	-	III Year Students	Electrical Seminar Hall
3	16-10-2014	Workshop on "Programming of PIC Microcontroller using CCS Compiler"	Mr.R.Muthu Bharathi, Mr.C.Kannan Assitant Professors, EEE Dept MCET	III Year Students	Simulation Lab
4	06-11-2014	Intra Department Paper Presentation	-	II and III year Students	A-411
5	12-02-2015	Guest Lecture on "Electric and Hybrid Vehicles"	Mr.S.Karthick, Manager R&D, Amperes Vehicles India Pvt Ltd, Coimbatore	II year Students	Hall No-12
6	03-03-2015	Technical Quiz	-	II Year Students	Electrical Seminar Hall
7	12-03-2015	Workshop on "CMOS Design flow Using MICROWIND EDA Tool"	Mr.O.Vignesh Professor/ECE, Anna University Regional Center, Coimbatore	III Year Students	Research Lab
8	18.03.2015	Inter Department Paper Presentation	Dr.K.N.Vijeyakumar, Assoc.Prof,EEE Dept. Mr. T.GopalaKrishnan, AP(SS)/E&I Dept Mrs.C.Kalamani, AP(SS),ECE Dept	ECE,EEE,ICE, E&I students	Electrical seminar Hall
9	01.04.2015	Valedictory	Principal MCET	All EEE students	CS hall

## BRAIN TEASERS

1. Johnny's mother had three children. The first child was named April. The second child was named May. What was the third child's name?
2. A clerk at a butcher shop stands five feet ten inches tall and wears size 13 sneakers. What does he weigh?
3. Before Mt. Everest was discovered, what was the highest mountain in the world?
4. How much dirt is there in a hole that measures two feet by three feet by four feet?
5. What word in the English language is always spelled incorrectly?
6. Billie was born on December 28th, yet her birthday always falls in the summer. How is this possible?
7. In British Columbia you cannot take a picture of a man with a wooden leg. Why not?
8. If you were running a race and you passed the person in 2nd place, what place would you be in now?
9. Which is correct to say, "The yolk of the egg is white" or "The yolk of the egg are white?"
10. A farmer has five haystacks in one field and four haystacks in another. How many haystacks would he have if he combined them all in one field?

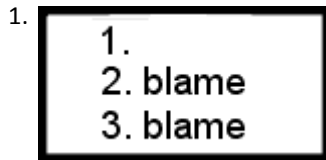
### Answers

1. Johnny.
2. Meat.
3. Mt. Everest. It just wasn't discovered yet.
4. There is no dirt in a hole.
5. Incorrectly (except when it is spelled incorrectly).
6. Billie lives in the southern hemisphere.
7. You can't take a picture with a wooden leg. You need a camera (or iPad or cell phone) to take a picture.
8. You would be in 2nd place. You passed the person in second place, not first.
9. Neither. Egg yolks are yellow.
10. One. If he combines all his haystacks, they all become one big stack.

## FUN QUESTIONS

1. Manoj Singh left on a horse on Thursday , was gone for two days, and came back on Thursday How did that happen?
2. A man has a barrel with filled with oil that weighs 100 pounds, and then he puts something into it. Now the barrel weighs less than 100 pounds. What did he put in the barrel?
3. Jack tells Jill, "This isn't the \$5 bill you left on the the table. I found it between pages 15 and 16 of Harry Potter." Jill retorts, "You're lying and I can prove it." How did Jill know?

## REBUS PUZZLES



ANS FOR FUN QUESTIONS:

1. Horse name was Thursday
2. A Hole
3. Harry Potter, like all other books, has odd-numbered pages on the right. Therefore, pages 15 and 16 are the front and back of a single page, and nothing could have been found between them.

ANS FOR REBUS QUESTIONS:

1. No one to blame
2. Ready for anything
3. Space invaders



# Congratulations!!!



Ashish K

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Qamaran Nouh Ibrahim Mohamed  
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Vignesh M

Vignesh Raj S

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Abinaya B

Abirami S

Anitha S

Anjana R

Aravind P L

Aravindhan V

Archana Ambethkar

Arvind Kumar E

Chelladurai L

Gayathri P

Gopiha V

Janani Priya S

Jegadiss R

Karthik V

Keerthiprabha R

Keerthiprasad P

Lalith Prasad S

Leema J

Madhumathi S

Manjunathan R

Abdul Basith A

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## Programme Educational Objectives

**PEO1.** Actively apply technical and professional skills in engineering practices to face industrial challenges around the globe.

**PEO2.** Own their professional and personal development by continuous learning and apply to create new knowledge.

**PEO3.** Conduct themselves in a responsible, professional and ethical manner supporting sustainable economic development, which enhances the quality of life

## Programme Outcomes

- PO1** : Apply the knowledge of Mathematics, Science and Engineering to solve problems in the field of Electrical and Electronics Engineering
- PO2** : Identify, formulate/model, analyze and solve complex problems in the field of Electrical and Electronics Engineering
- PO3** : Design an Electrical/Electronic System/Component, or Process to meet specific purpose with due consideration for economic, environmental, social, political, ethical, health and safety issues
- PO4** : Design and conduct experiment, analyze and interpret data to provide valid conclusions in the field of Electrical and Electronics Engineering
- PO5** : Apply appropriate techniques and modern tools for design and analysis of Electrical/Electronic systems with specified constraints
- PO6** : Apply contextual knowledge to provide engineering solutions with societal, professional & environmental responsibilities
- PO7** : Provide sustainable solutions within societal and environmental contexts for problems related to Electrical and Electronics Engineering
- PO8** : Comply with code of conduct and professional ethics in engineering practices
- PO9** : Work effectively as an individual or as a member/leader in multi-disciplinary team to find solutions for engineering problems
- PO10** : Communicate effectively to engineering community and society with proper aids and documents
- PO11** : Demonstrate knowledge and understanding of the engineering and management principles to manage projects in multidisciplinary environment
- PO12** : Recognize the need for, and have the ability to engage in independent and lifelong learning