Date: _____

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

List of Publications for EEE Department Year Wise

S.No.	Academic Year	No. of *Publications*
01	2019-20	04
02	2018-19	09
03	2017-18	09
04	2016-17	08
05	2015-16	03

HEAD OF THE DEPARTMENT

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3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years (10)									
S.No.	Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the Journal /Digital Object Identifier (doi) number		
							Link to website of the Journal	Link to article/paper/ abstract of the article	Is it listed in UGC Care list/Scopus /Web of Science/oth er, mention
2019-20									
1	SOLAR BICYCLE	Dr.K.Srinivasa n	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2019-2020	ISSN :2348-3105	http://jrrset.co m/Volume7iss ue11.html	http://jrrset.co m/2019/Nove mber/paper7.p df	UGC
2	SOLAR BICYCLE	KahkashanSha rab	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2019-2020	ISSN :2348-3105	http://jrrset.co m/Volume7iss ue11.html	http://jrrset.co m/2019/Nove mber/paper7.p df	UGC
3	SOLAR BICYCLE	Dr.K.Srinivasa n, Sujitha	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2019-2020	ISSN :2348-3105	http://jrrset.co m/Volume7iss ue11.html	http://jrrset.co m/2019/Nove mber/paper7.p df	UGC
4	SOLAR BICYCLE	Vikhar Ahmed	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2019-2020	ISSN :2348-3105	http://jrrset.co m/Volume7iss ue11.html	http://jrrset.co m/2019/Nove mber/paper7.p df	UGC

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				2018-19				
1	Effect of RC Surge Suppressor in Reduction of Over Voltages at Motor Terminal Caused by PWM-Based Inverter	Md Sajid, Amer Ali Khan, M. Suryakalavathi and B. P. Singh	EEE	[Lecture Notes in Electrical Engineering 511] Vijay Nath, Jyotsna Kumar Mandal - Nanoelectronics, Circuits and Communication Systems (2019, Springer Singapore) SCI	2018-2019	Volume5, Issue 12, pp: 595-606, ISSN 2349-5162	https://mail.google.com/mail/u/0/?ogbl#search/ilyas/FMfcgzGkXSRLfKBWQlvkFVzKdlCTpbbV?projector=1&messagePartId=0.1	https://mail.google.com/mail/u/0/?ogbl#search/ilyas/FMfcgzGkXSRLfKBWQlvkFVzKdlCTpbbV?projector=1&messagePartId=0.1	Scopus
2	Power Generation through Pedaling	Md Sajid, Mohammed Umair Quadri, Amer Ali Khan and Shariq Ayjaz	EEE	Grenze International Journal of Engineering and Technology, Special Issue	2018-2019	2395-5287 / 2395-5295	http://thegrenze.com/index.php?display=page&view=journaldetails&id=8	http://thegrenze.com	No
3	A Study on Power Control System Administration via Smart Grid	Dr.P.K.Prakasha	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2018-2019	ISSN: 2348-3105	http://jrrset.com/Volume6_Issue10.htmI	http://jrrset.com/2018/volume6issue10/paper2.pdf	UGC
4	OVERVOLTAGE AND UNDERVOLTAGE PROTECTION SYSTEM	Dr.P.K.Prakasha	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2018-2019	ISSN: 2348-3105	http://jrrset.com/Volume6_Issue10.htmI	http://jrrset.com/2018/volume6issue10/paper7.pdf	UGC
5	OVERVOLTAGE AND UNDERVOLTAGE PROTECTION SYSTEM	KahkashanSharab	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2018-2019	ISSN: 2348-3105	http://jrrset.com/Volume6_Issue10.htmI	http://jrrset.com/2018/volume6issue10/paper7.pdf	UGC

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6	OVERVOLT AGE AND UNDERVOL TAGE PROTECTIO N SYSTEM	T.Ashok Kumar	EEE	International Journal on Recent Researches In Science, Engineering & Technology(I JRRSET)	2018-2019	ISSN: 2348-3105	http://jrrset.c om/Volume6 _Issue10.htm l	http://jrrset.c om/2018/volu me6issue10/ paper7.pdf	UGC
7	OVERVOLT AGE AND UNDERVOL TAGE PROTECTIO N SYSTEM	MohdKhaja Ali	EEE	International Journal on Recent Researches In Science, Engineering & Technology(I JRRSET)	2018-2019	ISSN: 2348-3105	http://jrrset.c om/Volume6 _Issue10.htm l	http://jrrset.c om/2018/volu me6issue10/ paper7.pdf	UGC
8	CASCADED H-BRIDGE 15-LEVEL INVERTER USING RENEWABL E ENERGY SOURCES	Dr.P.K.Prakash a	EEE	International Journal on Recent Researches In Science, Engineering & Technology(I JRRSET)	2018-2019	ISSN: 2348-3105	http://jrrset.c om/Volume6i ssue8.html	http://www.jrr set.com/2018 /volume6issu e8/paper5.pd f	UGC
9	Optimal Topology in Multilevel Inverter for Power Quality Improvement using PWM Strategies	Dr.K.Srinivasa n	EEE	International Journal on Recent Researches In Science, Engineering & Technology(I JRRSET)	2018-2019	ISSN: 2348-3105	http://jrrset.c om/volume6i ssue7.html	http://www.jrr set.com/2018 /volume6issu e7/paper4.pd f	UGC
2017-18									
1	FUZZY BASED UNIFIED POWER QUALITY CONDITIONE R FOR POWER QUALITY IMPROVEME NT	SYED KHADRUN SULTANA, G. VIJAYA KUMAR	EEE	International Journal of Research	2017-2018	2348-6848 / 2348-795X	https://docum ents.pub	https://docum ents.pub/docu ment/11-eng- power-quality- improvement- in-electrical- network-by- adarsh-kumar- pandey.html	no

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2	SOLAR WATER PUMP CONTROL WITH FOUR DIFFERENT TIME SLOTS FOR POWER SAVING APPLICATIONS	Dr.K.Srinivasan	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2017-2018	ISSN :2348-3105	http://jrrset.com/volume5_issue9.html	http://www.jrrset.com/2017/volume5issue9/paper9.pdf	UGC
3	SOLAR WATER PUMP CONTROL WITH FOUR DIFFERENT TIME SLOTS FOR POWER SAVING APPLICATIONS	D Shyamnath Rao	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2017-2018	ISSN :2348-3105	http://jrrset.com/volume5_issue9.html	http://www.jrrset.com/2017/volume5issue9/paper9.pdf	UGC
4	SOLAR WATER PUMP CONTROL WITH FOUR DIFFERENT TIME SLOTS FOR POWER SAVING APPLICATIONS	Sayed Mahaboob	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2017-2018	ISSN :2348-3105	http://jrrset.com/volume5_issue9.html	http://www.jrrset.com/2017/volume5issue9/paper9.pdf	UGC
5	SOLAR WATER PUMP CONTROL WITH FOUR DIFFERENT TIME SLOTS FOR POWER SAVING APPLICATIONS	Kahkashan Sharab	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2017-2018	ISSN :2348-3105	http://jrrset.com/volume5_issue9.html	http://www.jrrset.com/2017/volume5issue9/paper9.pdf	UGC

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6	RESIDENTIA L APPLICATIO N OF PHOTOVOL TAIC INVERTER FOR RENEWABL E ENERGY SYSTEM	Dr.K.Srinivasa n	EEE	International Journal of Research in Mechanical, Mechatronics and Automobile Engineering(I JRMMAE)	2017-2018	ISSN: 2454-1443	http://ijrmma e.in/Volume3 ,Issue3.html	http://ijrmma e.in/Volume3-Issue-3/paper4.pdf	UGC
7	SPECTROS COPIC STUDIES OF COMMERCI AL LED LIGHTS – BLUE LIGHT HAZARD	Dr.R.Sivakuma r	EEE	International Journal of Research in Mechanical, Mechatronics and Automobile Engineering(I JRMMAE)	2017-2018	ISSN: 2454-1443	http://ijrmma e.in/Volume3 ,Issue3.html	http://ijrmma e.in/Volume3-Issue-3/paper3.pdf	UGC
				2016-17					
1	Analysis and Usage of Quantum dot LED	Dr.Viswanath	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2016-2017	ISSN :2348-3105	http://jrrset.co m/volume4_is sue8.html	http://www.jrr set.com/2016/ volume4issue8 /paper5.pdf	UGC
2	COMPREHE NSIVE PERFORMA NCE ASSESSMEN T OF EDGE DETECTION TECHNIQUE S IN FREQUENCY DOMAIN	Dr.Viswanath	EEE	International Journal of Research in Mechanical, Mechatronics and Automobile Engineering(IJ RMMAE)	2016-2017	ISSN: 2454-1443	http://ijrmmae. in/Volume2-Issue-3.html	http://ijrmmae. in/Volume2-Issue-3/paper9.pdf	UGC

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3	An Evaluation on Rising Economic Challenges in Power Generation on Electrification Networking	Dr.R.Sivakumar	EEE	International Journal of Research in Mechanical, Mechatronics and Automobile Engineering(IJRMMAE)	2016-2017	ISSN: 2454-1443	http://ijrmmae.in/Volume2-Issue-4.html	http://ijrmmae.in/Volume2-Issue-4/paper5.pdf	UGC
4	Implementation of A FFT Using High Speed and Power Efficient Multiplier	Dr.R.Sivakumar	EEE	International Journal of Research in Mechanical, Mechatronics and Automobile Engineering(IJRMMAE)	2016-2017	ISSN: 2454-1443	http://ijrmmae.in/Volume2-Issue-4.html	http://ijrmmae.in/Volume2-Issue-4/paper4.pdf	UGC
5	An Evaluation on Rising Economic Challenges in Power Generation on Electrification Networking	Dr.Viswanath	EEE	International Journal of Research in Mechanical, Mechatronics and Automobile Engineering(IJRMMAE)	2016-2017	ISSN: 2454-1443	http://ijrmmae.in/Volume2-Issue-4.html	http://ijrmmae.in/Volume2-Issue-4/paper5.pdf	UGC
6	SIGNIFICANCE OF TRANSPOSITION FOR 220KV TOWER	G.Radhika, Dr.M.Suryakalavathi & K.Vamshi	EEE	International Journal of Latest Research in Science and Technology Volume 4, Issue 5: Page No.4-8, September-October 2015	2015-2016	2278-5299	https://www.mnkjournals.com/journal/ijlrst/Article.php?paper_id=10562	https://www.mnkjournals.com	UGC Care
7	Paper Battery for Future of Power Supply	Dr. K. Srinvasan	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJRRSET)	2015-2016	ISSN :2348-3105	http://jrrset.com/volume3_issue12.html	http://www.jrrset.com/2015/volume3issue12/paper11.pdf	UGC

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8	NEW TECHNOLOGY FOR ELECTRIC VEHICLES	Dr.K.Srinivasan	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2015-2016	ISSN :2348-3105	http://jrrset.com/volume3_issue11.html	http://www.jrrset.com/2015/volume3issue11/paper5.pdf	UGC
				2015-16					
1	A NOVEL SINGLE PHASE FIVE LEVEL INVERTER IN COUPLED INDUCTORS	Dr.R.Sivakumar	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2015-2016	ISSN :2348-3105	http://jrrset.com/volume3_issue10.html	http://jrrset.com/2015/volume3issue10/paper8.pdf	UGC
2	ESTIMATION AND CONTROL OF REALTIME JUNCTION TEMPERATURE OF A MOTOR DRIVE USING THERMAL CAMERA	Dr.R.Sivakumar	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2015-2016	ISSN :2348-3105	http://jrrset.com/volume3_issue7.html	http://www.jrrset.com/2015/volume3issue7/paper7.pdf	UGC
3	An Interacting Automata Based Redundant Modular Code Fault Tolerant Systems in Special Processors for DSP Applications	Dr.K.Srinivasan	EEE	International Journal on Recent Researches In Science, Engineering & Technology(IJ RRSET)	2015-2016	ISSN :2348-3105	http://jrrset.com/volume4_issue2.html	http://jrrset.com/2016/volume4issue2/paper4.pdf	UGC

SOLAR BICYCLE

Dr.K.Srinivasan, Sujitha, Vikhar Ahmed, KahkashanSharab

Department of Electrical and Electronics Engineering,Shadan College of Engineering and Technology
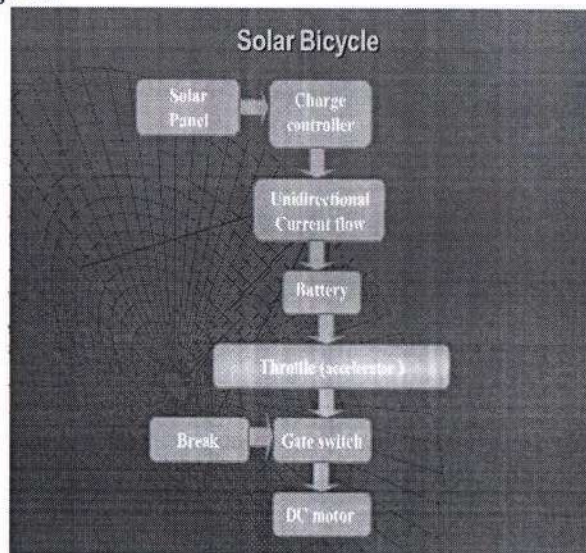HYD,T.S,INDIA

Abstract: This paper explains the implementation of "Development of Self charging Dynamo and Solar Powered based Electric Scooter"using Solar panel, charging circuit, and also hub motor.An embedded system is a combination of software and hardware to perform a dedicated task. Some of the main devices used in embedded products are Microprocessors and Microcontrollers.The project "Development of Self charging Dynamo and Solar Powered based Electric Scooter " using solar panel which is used to recharge the battery for running the hub motor, freely available source of energy "solar energy".

Keywords – Embedded System, Solar power, Dynamo

1.   INTRODUCTION

Power supply is a supply of electrical power. A device or system that supplies electrical or other types of energy to an output load or group of loads is called a power supply unit or PSU. The term is most commonly applied to electrical energy supplies, less often to mechanical ones, and rarely to others. A power supply may include a power distribution system as well as primary or secondary sources of energy such asConversion of one form of electrical power to another desired form and voltage, typically involving converting AC line voltage to a well-regulated lower-voltage DC for electronic devices. Low voltage, low power DC power supply units are commonly integrated with the devices they supply, such as computers and household electronics.

2.   Block diagram

The main blocks of this project are:
1.   DC Motor
2.   Solar cell/plate
3.   Charging circuit
4.   Brake
5.   Microcontroller
Project Description

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SOLAR BICYCLE

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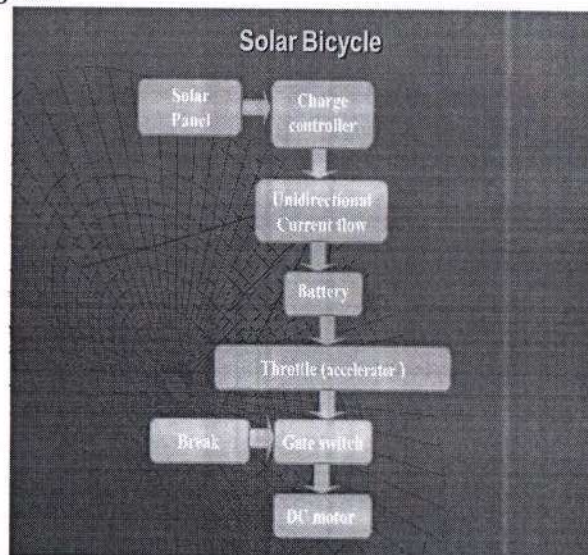HYD,T.S,INDIA

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SOLAR BICYCLE

Dr.K.Srinivasan, Sujitha, Vikhar Ahmed, KahkashanSharab

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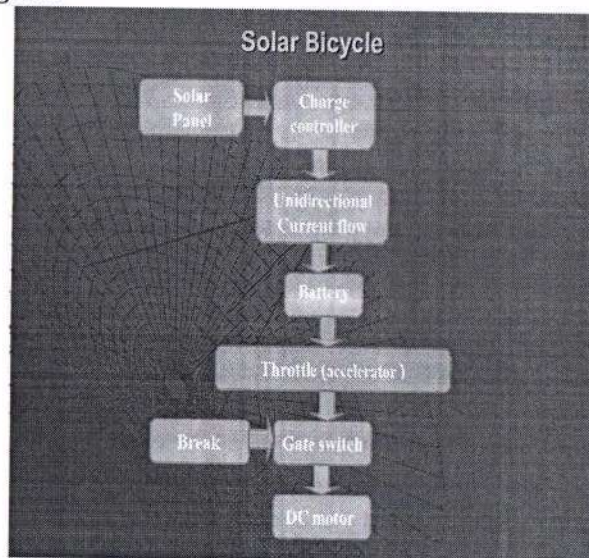HYD,T.S,INDIA

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Dr.K.Srinivasan, Sujitha, Vikhar Ahmed, KahkashanSharab

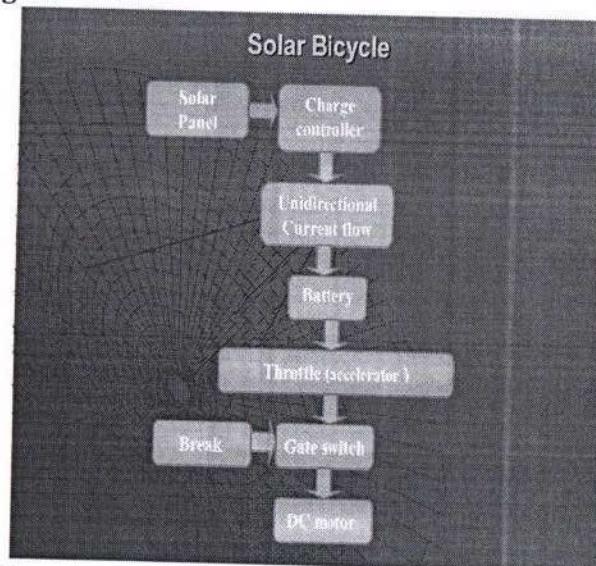Department of Electrical and Electronics Engineering,Shadan College of Engineering and Technology HYD,T.S,INDIA

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Project Description

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Power Generation through Pedaling

Md Sajid[1], Mohammed Umair Quadri[2], Amer Ali Khan[3] and Shariq Ayjaz[4]

[1-2]Asst. Prof., MJCET

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[3]Associate Professor & Head of Department Electrical Engineering,
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[4]ME, (PES) Student, MJCET

Abstract—It is known that the supply of fossil fuels are inadequate and their usage as energy source cause environmental degradation, besides as the world population increases the energy demand is also increasing day by day, this leads to search for new renewable energy sources. Clean and ecological friendly power is requested far and wide today. The main objective of this paper is to utilizing the human energy that is lost in pedaling, and transforms it into a useful form that is electricity. In this work a low cost pedal power generator is fabricated for pedal power generation. For this a single phase induction motor is converted to single phase 4-pole alternator by changing its parameter. The output of alternator which is AC is converted DC using the Bridge rectifier. In order to reject the harmonic components a capacitor filter is used. As an application the rectified output is used for battery charging. The paper explains in detail the method using car alternator to generate power. A detailed analysis of using pedal power is also presented.

Index Terms— Exercise Bike, Pedaling, Alternator, Converter, Batteries.

I. INTRODUCTION

It is well known that energy can neither be created nor destroyed but can be altered from one form to another. We are not utilizing the resources that can produce energy as if they are limitless. If we can renew the energy we don't utilize, it would contribute in some way to the problem of scarcity of energy, which is the dominant threat of the present world. Human muscles are able to generate approximately 150W of power while riding bicycle. Nevertheless, this is going wasted. If we can make use of this energy, we can empower many electronic devices. A dynamo or an alternator can be used for harvesting the energy generated by an exercise bike during riding. We can charge mobile phones or a small lighting device with this power. In addition, in cities, where most people use exercise bikes, the energy can be productively used to power electronic gadgets, which require less power. In India, many of the villages are still without electricity by basic transformation to an exercise bike in such places, our system will be of great help. Charging of the battery can be made by a rider by just connecting the circuit to the output of the alternator connected through a converter circuit which is connected to exercise bike and would charge the batteries. M. P. Mohurle et. al [1] reported that minor improvements at the mechanical block should increase the generator's speed and, consequently, the output current. Pawan et.al [2] reported that ANN modeling has been used to version the experimental findings for human powered flywheel motor. It has been found that neuron length, switch function, plays vital role in performance of the network. The most efficient choice of parametric values of

Effect of RC Surge Suppressor in Reduction of Over Voltages at Motor Terminal Caused by PWM-Based Inverter

Md Sajid, Amer Ali Khan, M. Suryakalavathi and B. P. Singh

Abstract Problems relating to the achievement of protection for inter-turn insulation in multi-turn coils in PWM-based induction motors have currently aroused the interest of system designers and are being studied in great detail. However, such methods are impracticable to be carried out at every installation. A system designer should have prior knowledge of the transient overvoltages which are likely to occur in a proposed installation. For this, determination of transient overvoltage is essential. Present paper deals with the investigation of transient overvoltages in 5 HP synchronous motor caused by PWM-based inverter as well as the reduction of transient overvoltages at motor terminal by connecting appropriate RC suppressors. The simulation results show the effect of placing RC suppressor in the system to reduce the overvoltages at motor end. For this, a Simulink model is developed and implemented in MATLAB.

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B. P. Singh
Electrical Engineering Department, St. Martins Engineering College, Hyderabad, India

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A Study on Power Control System Administration via Smart Grid
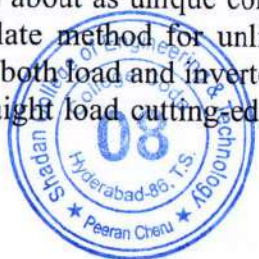
Dr.P.K.Prakasha

Department of Electrical and Electronics Engineering,Shadan College of Engineering and Technology HYD,T.S,INDIA"

Abstract: The motion in control equipment and digital control development, the DG structures can be workable controlled to overhaul the system operation with upgraded PQ at PCC. The use of vitality devices based equipment and non-coordinate burdens at PCC deliver symphonious streams, which debilitate the thought of vitality. A converter is being used which can be used both as a rectifier and an inverter. In this paper centered on the network interfacing inverter can competently be used to perform the following critical capacities to transfer of dynamic strength reaped from the sustainable assets (wind, sun-oriented, and so forth.); Stack responsive electricity request bolster; Current sounds remuneration at PCC; and Current unbalance and unbiased modern remuneration if there be an occurrence of 3-stage 4-wire framework. In addition, with fantastic manage of lattice interfacing inverter, all four dreams can be subtle both exclusively or at the identical time. The PQ requirements at the PCC can along these strains be entirely stored up inside the utility fashions except greater gear cost.

Keywords: Power Control System, Smart Grid

I. INTRODUCTION

Electric utilities and stop customers of electric powered power are getting to be exceptionally worried about taking care of the creating vitality demand. 75 percent of aggregate international vitality request is furnished by the ingesting of non-renewable electricity sources. Regardless, extending air tainting, a perilous environmental deviation concerns, diminishing oil-based goods and their growing expense have made it vital to seem closer to boundless sources as a future imperativeness path of action. There has been a considerable enthusiasm for nations on life like energy hotspot for power age. The market motion and government's impulses have enlivened the realistic electricity supply section advancement. The movement in manage contraptions and automatic control development; the DG structures can be effectively controlled to redesign the device operation with expanded PQ at PCC. The use of vitality equipment based equipment and non-straight masses at PCC create consonant streams, which debilitate the thought of vitality. Current controlled voltage source inverters are used to interface the unpredictable RES in appropriated structure. Starting late, various manipulate techniques for prepare related inverters uniting PQ graph have been proposed. In an inverter acts as a unique inductor at a precise repeat to preserve the consonant current. In any case, the right tally of framework inductance often is tough and might also disintegrate the manage execution. A comparable strategy in which a shunt dynamic channel goes about as unique conductance to damp out the song on hand for use type out is proposed. A manipulate method for unlimited interfacing inverter in mild of − principle is proposed. In this procedure, both load and inverter cutting-edge detecting is required to repay the heap modern music. The non-straight load cutting-edge harmonics might also result in voltage harmonics

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OVERVOLTAGE AND UNDERVOLTAGE PROTECTION SYSTEM

Dr.P.K.Prakasha, KahkashanSharab, T.Ashok Kumar, MohdKhaja Ali

Department of Electrical and Electronics Engineering,Shadan College of Engineering and Technology HYD,T.S,INDIA

Abstract: The purpose of this project is trip the relay according to the variations in supply voltage for protecting electrical household as well as industrial equipment in case of overvoltage and under voltage. The electronic devices are very sensitive towards voltage variation, as voltage variation comes in supply the electronic equipment get easily damaged. In that condition it requires an additional protecting mechanism to protect the equipment as a load. According voltage comparator integrated circuits the decision of tripping of relay mechanism get performed, as voltage varies above or below the set value. The main advantage of this relay based mechanism is that it also protects three-phase appliances from single phasing and fluctuation of voltage in ac voltage waveform. In future their might be addition of earth fault detection and protection, automatic starting protection circuitry

Key Words:overvoltage and under voltage protection, voltage comparator circuitry, tripping mechanism of relay..
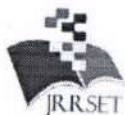
1. INTRODUCTION

The aim of this project is to develop a low voltage and high voltage tripping mechanism to protect the load from damage. The fluctuation in AC mains supply is frequent in homes and industries. The sensitive electronic devices in these conditions can get easily damaged. It is preferable to have a tripping mechanism to protect the load. This proposed system will trip the load in the event of the input voltage falling below/above a set value. Two 555 timers are used as window comparator. This delivers an error output if the input voltage to them crosses the range beyond the voltage window. A relay is then operated to cutoff the load for safety reasons. A lamp is used as load in this project. The concept in future can be extended by integrating an alarm, which sounds when voltage fluctuations occur. It can also be interfaced with a GSM modem to convey alertmessage to the user via SMS to take appropriate action.

1.1 SCHEMATIC DIAGRAM

OVERVOLTAGE AND UNDERVOLTAGE PROTECTION SYSTEM

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1.1 SCHEMATIC DIAGRAM

CASCADED H-BRIDGE 15-LEVEL INVERTER USING RENEWABLE ENERGY SOURCES

Dr.P.K.Prakasha

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Abstract – This paper aims at reducing the THD (Total Harmonic Distortion) in the sine wave of the transmission system. These harmonics occurs in the power wave due to external disturbances and noise which affect the system. In order to reduce these harmonics a component called asymmetric cascaded H-bridge multilevel inverter is introduced in place of a normal inverter which converts DC power to AC power in high voltage long transmission system. This paper deals with a MATLAB simulation to calculate the overall percentage of THD obtained when a 15 level DC source cascaded MLI is used. Also a comparison between the THD of DC sourced cascaded 7 level inverter and a DC sourced 15 level is done to prove that 15 level inverter is better in reducing harmonics than a seven level inverter. A new method of using asymmetric hybrid sources instead of asymmetric DC sources is also proposed. So, a MATLAM simulation is also done for a 15 level Hybrid Cascaded H-bridge multilevel inverter to calculate the THD and a comparison is made between the THD of a hybrid cascaded 15 level multilevel inverter and a DC sourced cascaded 15 level multilevel inverters to see if there are any changes in the THD using hybrid sources. Since, the overall aim is to totally eliminate the THD in the power system, these are some measures proposed to eliminate them. Though complete elimination of harmonics in the power system is not possible now, in future as technology and awareness increases THD could be possibly reduced to zero.

Keywords – Cascaded H-Bridge(CHB), Multilevel Inverter (MLI), Pulse Width Modulation (PWM), Total Harmonic Distortion(THD), Peripheral Interface Controller (PIC), Renewable Energy Sources (RES)

I.INTRODUCTION

In recent years, the energy demand is rapidly rising. In order to meet the rising demands, generating units have been set up. The power generated is transmitted through power systems. The quality of power transmitted is characterized by THD (Total Harmonic Distortion). The THD is the ratio of sum of the powers of all harmonic components to the power of the fundamental frequency. Lower THD means reduction in peek currents, heating and core loss in motors. THD is represented in percentage. The power generated is stored in batteries in the form of DC power and converted to AC power using inverters. Cascaded H-bridge multilevel inverters are medium or high voltage inverters used in high voltage applications, industrial drives, static VAR compensators etc. A DC source is connected to a H bridge inverter. In order to reduce the THD the levels are increased. This project is aimed at achieving the minimum THD of the staircase modulated output voltage of single-phase cascaded H-bridge multilevel inverter with elimination of the lower order harmonics. The THD value obtained, accounting for the device voltage drops when the load is resistive or moderately inductive, is less than 5%. Hybrid energy source which includes renewable energy is used as the input to the multilevel inverter, instead of a DC power source to make use of energy available around us efficiently.

In this paper [1] the different topologies used in the case of multilevel inverter are discussed. The important topologies are Diode-clamped inverter (neutral-point clamped), Capacitor clamped (flying capacitor) and cascaded multilevel with separate DC sources. This paper also presents the most relevant control and modulation methods developed like multilevel sinusoidal pulse width modulation, multilevel sinusoidal pulse width modulation, multilevel selective harmonic elimination and space vector modulation. The **drawback** in the case of these topologies is that when more number of diodes and capacitors are used more reactive power is injected in the system, hence more losses occur. In the paper [2] Multilevel inverters have some disadvantages compared to a conventional two level inverter, the number of components increases and causes more harmonic distortion, complex pulse width modulation control method and voltage balancing problem. In this paper a new topology with a reversing-voltage component is proposed to improve the multilevel performance.

Optimal Topology in Multilevel Inverter for Power Quality Improvement using PWM Strategies

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Abstract

The general function of a multilevel converter is to synthesize a desired output voltage from several levels of dc voltage as inputs. In order to increase the steps in the output voltage, a new topology is recommended in this paper, Various topologies of multilevel inverter provides several advantages including Power voltage stress, higher efficiency, lower EMI, better waveforms, low switching losses and improved THD. This paper proposes the simulation of novel algorithms for Cascaded H-Bridge Cell Multilevel Inverter to improve power quality by optimizing its structure. The optimization of structures is achieved by reducing the number of power semiconductor switches in the inverter. This is achieved with the help of mathematical equations which are obtained from the structure of the inverter. To validate the proposed algorithms the simulation results are compared with conventional methods.

Keywords - Cascaded H-Bridge (CHB) Multilevel Inverter (MLI), Pulse Width Modulation (PWM), Total Harmonic Distortion(THD)

I) INTRODUCTION

The general function of a multilevel converter is to synthesize a desired output voltage from several levels of dc voltages as inputs[1]. In order to increase the steps in the output voltage, a new topology is proposed in the reference [2], which benefits from a series connection of sub-multilevel converters. In the procedure described in this reference, despite all the advantages, it is not possible to produce all the steps (odd and even) in the output. In addition, for producing an output voltage with a constant number of steps, there are different configurations with a different number of components [2]-[3]. In this chapter, the optimal structures for this topology are investigated for various objectives such as minimum number of switches and dc voltage sources and minimum standing voltage on the switches for producing the maximum output voltage steps. Two new algorithms for determining the dc voltage sources magnitude have been proposed. A new general cascaded multilevel inverter using developed H-bridges is proposed. The proposed topology requires a lesser number of dc voltage sources and power switches and consists of lower blocking voltage on switches, which results in decreased complexity and total cost of the inverter. A new single-phase H-bridge multilevel inverter (MLI) topology constructed using auxiliary reverse-connected voltage sources along with a hybrid pulse width modulation (PWM) strategy is proposed [4]-[6], to extract a variable frequency variable amplitude output voltage. It involves the use of reduced number of switching devices for a specific

FUZZY BASED UNIFIED POWER QUALITY CONDITIONER FOR POWER QUALITY IMPROVEMENT

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ABSTRACT:

In this project Fuzzy based Unified power quality conditioner for power quality improvement is presented. Unified power quality conditioner is a compensating device which is made for mitigation of all power quality problems together. This device will reduce harmonics which affects the quality of power. Unified power quality conditioner is the combinations of series active power filter and shunt active power filter which are joined back to back by a common DC link through capacitor. The performance of the filters mainly depends on its control strategy. A Fuzzy Logic Controller (FLC) is based on fuzzy sets and fuzzy rules with their membership functions of inputs and outputs. In this paper control technique is used for series active power filter and shunt active power filter is synchronous Reference frame (SRF) and instantaneous PQ (IPQ) used to compensate power quality problems by a three phase unified power quality conditioner under imbalanced and distorted load conditions. This paper accentuates improvement of power quality by using Unified power quality conditioner with proportional integral controller and fuzzy logic controller and comparing it with & without compensating devices. The performance and behavior of the proposed controllers has been evaluated through MATLAB/SIMULINK.
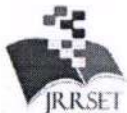
Key words- Active filter, dual control strategy, power conditioning, three-phase distribution systems, unified power quality conditioner (UPQC), Fuzzy Logic Controller.

I. INTRODUCTION

In recent years, many researchers give attention to solving power quality problems. These problems are appeared due to usage of reactive loads and non-linear loads. This load creates reactive power burden and harmonic problem. This harmonic pollution degrades the quality of power at transmission side as well as distribution side [1-2]. In literature, many papers have addressed these issues and have proposed the compensating devices for eliminating this problem. Usually passive filters are used to eliminate harmonics because of low cost and high efficiency.

However, this filters produce resonance with supply frequency therefore active filters are used for suppressing harmonics. The harmonics makes many undesirable effects

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SOLAR WATER PUMP CONTROL WITH FOUR DIFFERENT TIME SLOTS FOR POWER SAVING APPLICATIONS

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Abstract The solar energy is converted into electrical energy by photo-voltaic cells. This energy is stored in batteries during the day time for it to be utilized to run water pump for agriculture. This project deals with a controlled charging mechanism with protections for over charge, deep discharge and under voltage of the battery. The project is designed to operate water pump at four different time slots. It overcomes the difficulties of switching the pump ON/OFF manually. This proposed system has an inbuilt real time clock (RTC) to keep tracking the time and thus to switch ON/OFF the pump accordingly. This project consisting of a real-time clock (RTC) is interfaced to a microcontroller of the 8051 family. While the set time equals to the real time, then microcontroller gives command to the corresponding relay to turn on the load, and then another command to switch off as programmed by the user. Multiple on/off time entry is the biggest advantage with this project. A matrix keypad helps entering different time slots. A 7-sement display is interfaced to the microcontroller to display time. In this project, a solar panel is used to charge a battery. A set of op-amps are used as comparators to continuously monitor panel voltage, load current, etc.

Keywords: solar energy, photo-voltaic cells, water pump, continuity test, battery, efficiently.

1. INTRODUCTION

A solar powered pumping system method needs to take proper account of the fact that demand for irrigation system water varies throughout the year. Solar-powered systems are being preferred for use in developing countries instead of other forms of alternative energy because they are extremely durable and can also exhibit long-term economic benefits. Solar powered water pumping systems can be the most appropriate solution for grid-isolated rural locations in poor countries where the levels of solar radiation are extremely high. Solar powered water pumping systems (SPPS) can cater to basic needs of the public like provide drinking water, water for irrigation etc without the need for any kind of fuel or extensive maintenance. A large-scale SPPS can serve well over 240 people at a time.

The Solar panel serves as the main power source that provides the energy to charge a battery. A separate circuitry is also added to control the charging and current transmission constant. In the proposed system, when the battery is charged long enough, it drives the water pump, i.e. the load, for a proper timing. As it can be clearly seen from the block diagram that the load is connected to a relay in-between which actually triggers the load. There is one additional feature in the setup. This additional feature allows us to set the timing in order to control the ON/OFF time of the

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RESIDENTIAL APPLICATION OF PHOTOVOLTAIC INVERTER FOR RENEWABLE ENERGY SYSTEM

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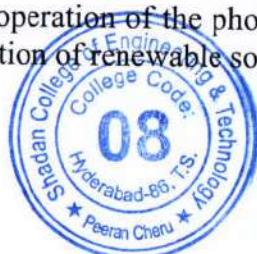Shadan College of Engineering and Technology HYD,T.S,INDIA

Abstract: A single stage grid-tied photovoltaic (PV) inverter for residential software is presented. In this dissertation utilization of buck-boost converter for control of photovoltaic electricity the usage of maximum power factor tracking (MPPT) mechanism is presented. The MPPT is responsible for retaining the maximum energy from the photovoltaic and fed it to the load through buck-boost converter which step up or step down the voltage to the magnitude required by means of the grid. Here H-bridge inverter is used which is then connected to RL load and grid with LC filter for harmonic reduction and to get sinusoidal waveform required for grid.

1. Introduction

One of the main worries in the electricity region is the dayto-day growing energy demand but the assets are now not ample to meet the power demand the usage of the conventional power sources. Renewable sources like wind electricity and solar strength are the high electricity sources which are being utilized in this regard. The continuous use of fossil fuels has caused the fossil gasoline deposit to be decreased and has appreciably affected the environment depleting the biosphere and cumulatively including to global warming. Solar electricity is abundantly available that has made it possible to harvest it and utilize it properly. Another advantage of the usage of solar power is the portable operation each time anywhere necessary. The development in electricity electronics and fabric science has helped engineers to come up very small however powerful systems to withstand the excessive energy demand. Trend has set in for the use of multi-input converter units that can successfully manage the voltage fluctuations.

But due to excessive production fee and the low effectivity of these structures they can infrequently compete in the competitive markets as a prime power generation source. The consistent increase in the improvement of the photo voltaic cells manufacturing technology would certainly make the use of these applied sciences viable on a wider groundwork than what the state of affairs is presently. The use of the most modern energy control mechanisms referred to as the Maximum Power Point Tracking (MPPT) algorithms has led to the enlarge in the efficiency of operation of the photo voltaic modules and as a consequence is effective in the field of utilization of renewable sources of energy [7].

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SPECTROSCOPIC STUDIES OF COMMERCIAL LED LIGHTS – BLUE LIGHT HAZARD

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ABSTRACT:Light-emitting diodes (LEDs) have been used to provide illumination in industrial and commercial environments. LEDs are also used in TVs, computers, smart phones, and tablets. Although the light emitted by most LEDs appears white, LEDs have peak emission in the blue light range (400–490 nm). The accumulating experimental evidence has indicated that exposure to blue light can affect many physiologic functions, and it can be used to treat circadian and sleep dysfunctions. However, blue light can also induce photoreceptor damage. Thus, it is important to consider the spectral output of LED-based light sources to minimize the danger that may be associated with blue light exposure. In this review, we summarize the current knowledge of the effects of blue light on the regulation of physiologic functions and the possible effects of blue light exposure on ocular health.

KEYWORDS: Light-emitting diodes, spectral output, illumination

I. INTRODUCTION

LED devices have set a new trend in the technology market today, their use is increasing exponentially because they are easy to manufacture, cost effective and power efficient. Use of LEDs can be seen from the balcony bulb of a ban glow to the bulb on a street vendor's vegetable cart, wrist watches and mobile phones etc. [1,2,3]. White light, with color temperature around 5000 K, is preferred especially in Asian countries over conventional incandescent lamps. This is the reason for surge in commercial value for white LED's. White LED Bulbs are also available in many shades, from cool white (5500 K and higher) and warm white day light (2700 K to 3500 K) range. It is a known fact that by the use of different materials such as GaAs, GaP, GaAsP etc white light can be obtained[4,5].

These white LEDs bulbs have many advantages but they suffer from some critical problems. In cool white LEDs, substantial amount of energy is present in blue region of spectra ie, wavelengths between 400-500 nm. This is known as blue hazard whereas in daylight LEDs wavelengths in blue region are very feebly present. "Blue light hazard" causes retinal injury created by photochemical reaction by electromagnetic exposure of radiation at wavelength between 400-500 nm[6]. A permanent damage to pigment epithelial cells of retina may be caused by the continuous exposure of LED light of shorter blue band spectrum. Moreover longer use of such devices may cause fatigue in eyes and create skin problems [7, 8, 9].

Physical pain some people feel from high intensity discharge (HID) car headlights and particularly intense blue LEDs seems to be a combination of these focus and scatter effects, together with a third. We have a particularly strong aversion reaction to bright blue light sources, including bluish-white light. "Pupilary reflex is down in the blue [part of the

Analysis and Usage of Quantum dot LED

Dr.Viswanath

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ABSTRACT

The lookup on the LED base subsequent technology lighting fixtures is actively done in the area of lighting fixtures for the power saving for the world warming prevention. In this study, we made the multifunctional LED light supply as research on the lights equipment that the use of the Quantum Dot. We synthesized the quantum dot having the requisite wavelength and tested the opportunity of attribute comparison end result that it used to be relevant as the result LED fluorescent substance. We make the multi-wavelength LED machine in order to verify the possibility for application for the plant manufacturing unit and evaluated the electrical characteristic of the LED mild source. Also, we evaluated the growth characteristic so that the quantum dot could affirm the possibility for application by means of plant growth light source. Finally we presented the possibility for software of the quantum dot with the multifunction LED light source. The evaluation and utilization of quantum dot LED has been widely discussed in outcomes and discussion.

Index Terms - QD hybrid sol, multifunction LED, Quantum dot, LED, mild source.

1. Introduction

Nano-sized quantum dots with crystal structure was confirmed the characteristic that wavelength was once changed according to dimension of such substances. Adjusting the dimension of quantum dots can be output that converting the wavelength of incident light. The measurement of quantum dots (QDs) is smaller with shorter wavelength light-emitting, and the measurement increases with a longer wavelength of light emitted, and multi-wavelength light-emitting device can be produced is possible by way of mixing the quantum dots of one of a kind sizes.[1–4] For this reason, QDs can be applied to many fields as light-emitting diodes, photovoltaic devices, sensor and bio imaging.[5–8] Application of quantum dots have been studied in a number of fields such as bio-imaging, optical conversion materials, light-emitting materials, photo voltaic mobilephone materials. For examples, one of these applications is the the use of of quantum dots for mild conversion substances that quantum dots used to be utilized for phosphor of light emitting diode (LED), and uses the quantum dots film. LED returned mild unit (BLU) show with top notch of coloration replica is a most traditional utility subject by the usage of vast range of QDs and lookup of utility on the mild supply of synthetic lighting fixtures for high shade rendering light is actively being conducted.[9–11] Artificial mild is used in a variety of field, amongst them, the excessive lighting fixtures efficiency, develop price of plant, disorder prevention are utilized to the facility enlargement and the growth rate is sharply on the rise. High-pressure sodium lamp, metal halide lamp and fluorescent lamp had been used as a mild source for artificial light. To boom of plant using synthetic light, it has a high mild efficiency, however, excessive power, thermal stability, mild excellent and volume of light have been continue to be to

COMPREHENSIVE PERFORMANCE ASSESSMENT OF EDGE DETECTION TECHNIQUES IN FREQUENCY DOMAIN

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Abstract

This paper presents a comprehensive performance evaluation of different high pass filtering techniques for Edge detection in both time domain and frequency domain. The paper examines various kernels and compares the efficiency of the filtering technique against the computation time for various sizes of images with various sizes of high-pass filter kernels. We have made use of Sobel filter as the standard filter kernel against which other techniques are compared. The results clearly demonstrate that the implementation of edge detection in frequency domain is better in terms of computation time as compared to that of the time domain implementation.

1. Introduction

Image sharpening and smoothening is perhaps one of the most ubiquitously used techniques in any image processing application. While these are considered inexpensive operations, multiple use of the same may become computationally intensive, and hence may make the overall application slow. In this paper we examine and compare the performance of sharpening filters in time-domain and frequency domain. While there are many apparent computational advantages in converting an image into frequency domain to apply a filter, it is not very apparent whether the conversion is required in smaller images. Applying the filter in time domain is straight forward, and requires the convolution operation of the filter kernel over the entire image, but applying the filter in frequency domain requires the steps as shown in figure [1]. The primary advantage of converting an image into frequency domain is the change in the operation from convolution to multiplication. Convolution is an expensive procedure requiring an asymptotic time of O (n2), but multiplication in certain architectures can be implemented in constant time. However, the image needs to be preprocessed and converted into frequency domain using FFT, and reconstructed using Inverse FFT. Further, the use of Fourier transform works well for large images that are correctly padded. Padding the image with appropriate number of zeros is essential when applying Fourier Transform because images are infinitely tiled in the frequency domain and filtering may produce wrap around effects [1]-[5].

An Evaluation on Rising Economic Challenges in Power Generation on Electrification Networking

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Abstract: Power age and dissemination is the two particular highlights of mechanical life which is for the most part rely on the idea of generation of vitality and usage of correspondence innovation, where control is the wellspring of motivation and inspiration to play out a work and exercises. In this way, it is the essential need forever. Be that as it may, for vitality no type of lifewould has ever risen. We as a whole know vitality for giving us light and solace yet in addition sustaining us by giving our coveted items to devour in our every day life. It spreads its arm in each part of human life, for example, foundation advancement, correspondence, Agriculture, Industry, Manufacturing, drug, Engineering, Information innovation, research, business and even item reusing for further usable and so on. Other than that it can assist us with cooling down amid summers and feel warm amid winter's season. It likewise encourages us to move between various places by the utilization of fuel, power. and so forth., Each and every organization, manufacturing plants needs to vitality to work different machines, engines through the supply of vitality by which an organization ready to deliver items, all autos require vitality to run; however even generally all different methods for transport require vitality. Clearly we have to know and additionally how control age and its conveyance framework how impacted on the zap to different part for a superior creation and advancement of business open doors for twenty five century. In this manner, the specialists were attempting to their dimension best to legitimized the said issue title taken by the Researchers in the accompanying method for their discoveries and perceptions.

Keywords: Net-Work System (NWS) Network- Application Technology (NWAT), Power Generation and distribution (PGAD) Power Supply System (PSS) Power Generation and Electrification (PGE)

1. Introduction

Power Generation and its conveyance is a critical and important piece of modern life which encourages an extravagant life to people .The power age is the measure of power a generator delivers over an explicit timeframe. For instance, a generator with 1 megawatt (MW) limit that works at that limit reliably for one hour will deliver 1 uber Watt-hour (MWh) of power. On the off chance that the generator works at just a large portion of that limit with respect to 60 minutes, it will deliver 0.5 MWh of power. Numerous generators don't work at their full limit constantly. A generator's yield may differ as indicated by conditions at the power plant, fuel costs, and additionally trained by the electric power network administrator. Net age is the measure of gross power age a generator produces less the power used to work the power plant. These power utilizes incorporate fuel taking care of hardware, water siphons, burning and cooling air fans, contamination control gear, and other power needs. Before Michael Faraday had found his renowned law of electromagnetic enlistment, battery were the main wellspring of electric power. From that point onward, DC generator was created, yet it could deliver just a couple of hundred volts of electric power and normally low voltage power

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SIGNIFICANCE OF TRANSPOSITION FOR 220KV TOWER

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Abstract- Economy is becoming increasingly dependent on electricity as a basic input. Transmission lines provide the means of connecting the generating capacities to the load centres. Knowledge of the parameters of multi-conductor transmission lines is necessary in analysing a number of problems in power-transmission systems. These parameters under power frequency i.e. 50Hz are required in order to study load flow, system stability and fault levels. Transmission lines are electrically short at power frequency and it is permissible to calculate series and shunt parameters separately. As the number of conductors increase, the complexity in calculating the matrices increases with the use of classical methods. The complexity of the mathematical expressions involved in multi-conductor line problems is reduced with the aid of digital computer program. The objective of this paper is to study the effect of transposition for a chosen 220kV twin bundled over head transmission line with two ground wires having asymmetrical spacing between the conductors by representing with a digital computer program using MATLAB. The Phase impedance matrix (3X3) calculated by eliminating earth wires contains unbalanced impedances of (5x5) and also its corresponding sequence impedance matrix (3X3) contains intersequence mutual couplings and are eliminated by doing Perfect Phase Transposition. The comparison shows the closer agreement between calculated values and those obtained by the digital program. The same technique is valid for tower with any number of conductors.

Keywords - Transmission Line, Transposition, Phase Impedance Matrix, Sequence Impedance Matrix, MATLAB

I. INTRODUCTION

Untransposed lines are reckoned to be the main source of current unbalance in the transmission systems. To evaluate the unbalanced conditions on transmission lines, method of symmetrical components [4] is applied by expressing the impedance of a transmission line as a positive, negative and zero sequence components. The advantage of the application of sequence components is that the size of the problem is effectively reduced in compared to phase components approach.

The asymmetrical spacing of lines results in the unbalance of line self and mutual impedances in phase frame of reference and hence unequal voltage drops even though the currents are balanced and they can be made equal with the help of transposition. It is defined as interchanging the position of the line conductors at regular intervals along the line so that each conductor occupies the original position of every other conductor [1]. It is an effective way to equalize the phase impedances and reduce the induction from normal operating currents and voltages

In this paper, 220kV Overhead line with two ground wires is presented with a horizontal phase conductor configuration. Generally, Bundled conductors with two, four, six and eight sub conductors are used for many reasons for voltages exceeding 220kV.Twin Bundled Conductors are chosen for this type of transmission line to present lesser reactance per phase.

Modern computer technology gives an opportunity to prevent the difficulties occurred during the calculation of unbalance caused by transmission lines as well as to implement the new approach in relation to operational speed and accuracy of calculations [2].

The average height of the conductor including sag with respect to earth is calculated by using [1].

$$H_{av} = H_t - \frac{2}{3} S_{av} \text{ Meters} \qquad (1)$$

Where, H_{av} is the average Height in mt
H_t is the total Height in mt
S_{av} is the average sag in mt

II. PHASE AND SEQUENCE IMPEDANCES

Figure shows 220kV single-circuit overhead line with a symmetrical horizontal phase conductor configuration and two earth wires. The cross numbered 1-5 represents the mid span conductor positions due to conductor sag.
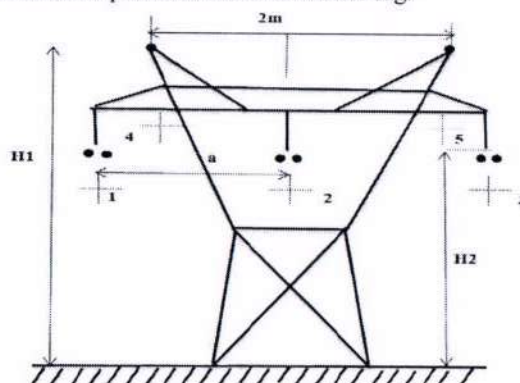

Figure 1: The 220KV S/C OH line geometry

Paper Battery for Future of Power Supply

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ABSTRACT:Light-emitting diodes (LEDs) have been used to provide illumination in industrial and commercial environments. LEDs are also used in TVs, computers, smart phones, and tablets. Although the light emitted by most LEDs appears white, LEDs have peak emission in the blue light range (400–490 nm). The accumulating experimental evidence has indicated that exposure to blue light can affect many physiologic functions, and it can be used to treat circadian and sleep dysfunctions. However, blue light can also induce photoreceptor damage. Thus, it is important to consider the spectral output of LED-based light sources to minimize the danger that may be associated with blue light exposure. In this review, we summarize the current knowledge of the effects of blue light on the regulation of physiologic functions and the possible effects of blue light exposure on ocular health.

KEYWORDS: *paper based device, power supply, energy*

I. INTRODUCTION

LED devices have set a new trend in the technology market today, their use is increasing exponentially because they are easy to manufacture, cost effective and power efficient. Use of LEDs can be seen from the balcony bulb of a ban glow to the bulb on a street vendor's vegetable cart, wrist watches and mobile phones etc. [1,2,3]. White light, with color temperature around 5000 K, is preferred especially in Asian countries over conventional incandescent lamps. This is the reason for surge in commercial value for white LED's. White LED Bulbs are also available in many shades, from cool white (5500 K and higher) and warm white day light (2700 K to 3500 K) range. It is a known fact that by the use of different materials such as GaAs, GaP, GaAsP etc white light can be obtained[4,5].

These white LEDs bulbs have many advantages but they suffer from some critical problems. In cool white LEDs, substantial amount of energy is present in blue region of spectra ie, wavelengths between 400-500 nm. This is known as blue hazard whereas in daylight LEDs wavelengths in blue region are very feebly present. "Blue light hazard" causes retinal injury created by photochemical reaction by electromagnetic exposure of radiation at wavelength between 400-500 nm[6]. A permanent damage to pigment epithelial cells of retina may be caused by the continuous exposure of LED light of shorter blue band spectrum. Moreover longer use of such devices may cause fatigue in eyes and create skin problems [7, 8, 9]. Physical pain some people feel from high intensity discharge (HID) car headlights and particularly intense blue LEDs seems to be a combination of these focus and scatter effects, together with a third. We have a particularly strong aversion reaction to bright blue light sources, including bluish-white light. "Pupilary reflex is down in the blue [part

NEW TECHNOLOGY FOR ELECTRIC VEHICLES

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Abstract – This paper provide an overview of the latest work of electric car in the region. The paper describes the development and the evaluation of one of a kind part of components. The fundamental aspects in battery technology, charger design, motor, guidance and braking are examined. The paper sooner or later shows some electric powered car prototype as a conclusion of the papers.

Keywords – ABS, battery management systems, BMS, Inverter , Electric vehicle, AFS, steering system, braking system.

I. INTRODUCTION

Electrical vehicle (EV) based on electric powered propulsion system. No inner combustion engine is used. All the energy is based on electric powered strength as the power source. The fundamental advantage is the excessive effectivity in energy conversion through its proposition machine of electric powered motor. Recently there has been big lookup and improvement work pronounced in both tutorial and industry. Commercial vehicle is additionally available. Many countries have supplied incentive to customers thru lower tax or tax exemption, free parking and free charging facilities. On the other hand, the hybrid electric vehicle (HEV) is an alternative. It has been used sizeable in the final few years. Nearly all the auto producers have at least one mannequin in hybrid electric powered vehicle. The questions come to us: Which automobile will dominate the market and which one is suitable for future? This paper is to examine the latest improvement of electric powered car and endorse the future development in the area.

II. EV AND HEV

HEV has been promoted considerably in the ultimate decade. Nearly every producer has at least one HEV in the market [1]. It is hypothetical to liberate the battery energy storage problem at that time. Using hybrid car it lets in the electric energy can be received from engine. The HEV is widely divided into sequence hybrid and series hybrid. The engine power of the sequence hybrid is linked totally to the battery. The entire the motor power is resulting from the battery. For the parallel amalgam both the engine and motor give the propulsion power. The torque is the totting up of both motor and engine. The motor is also used as a generator to absorb the electricity from engine

A NOVEL SINGLE PHASE FIVE LEVEL INVERTER IN COUPLED INDUCTORS

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Abstract: Multilevel inverters are very critical in the modern days because of many uses and also due to the advantage of producing many ranges of voltages enabling a variety of functions such as power conditioning, lively filters and motor drives. The proposed multilevel inverter enables us to produce 5 tiers barring   any phase shift. The proposed method uses pwm approach alongside with a feedback sign so whole circuit is applied in closed loop. The simulation is carried out using matlab. The effects are included to exhibit the overall performance of 5 degree inverter carried out in closed loop system

Keywords: Multilevel inverters, Inductors, pwm

I. INTRODUCTION

The multilevel inverters are turning into famous from the time when it used to be proposed. Multilevel inverter means the inverter in which greater than two tiers are used. The multilevel inverter has many advantages such as:-1) Simple building and handy implementation. 2)Less switching losses is compared with current system.3)The positive control of the switches is achieved.4) This inverter can produce output 5 stage voltages with solely one dc source, through which we can avoid the voltage balancing trouble in traditional multilevel inverters.5)The level of the output voltage is only 1/2 of the dc-link voltage in all conditions, leading to much decreased dv/dt.6)This inverter is primarily based on widely used three-arm power module and the voltage stresses on all power switches are same, making it very effortless to construct. Applications of this multilevel inverter encompass energetic filters, electricity conditioning and motor drives. In these current years it has been referred to that the use of multilevel inverters are increasing. In the before days there required the use of more wide variety of switches. In this technique it permits us to produce the output with decreased number of switches. Also we can notice that there is less dv/dt in the output side.Thus this approach is of great advantage. The dangers of the current approach are:

[1]The inverter plan is difficult to assemble and robust in operation.
[2]The furnish sources used in each bridge is doubled for every bridge. These hazards are overcome by way of the usage of feedback technique. The purposes consist of energy conditioning which is the technique of enhancing nice of energy delivered to electrical equipment. Thus it affords more safety in energy disturbances. For eg:- PC, VCR, oven, stereos It is used as two a two surge two safety system two by means of decreasing two magnitude of voltage spikes to safe level. It is also used as noise filters by way of blocking characteristic noise pattern and permit solely desired frequency to equipment. Another utility is motor drives.

The blessings of this are
[1]Smooth operation
[2]Acceleration control
[3]Different operating speed

ESTIMATION AND CONTROL OF REAL-TIME JUNCTION TEMPERATURE OF A MOTOR DRIVE USING THERMAL CAMERA

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Abstract—Defects detection in industrial productsplays an important role now a days. Many methods are involved to find defects in the products like motor faults. Infrared thermography is used to identify the cracks or defects present in metal surfaces, electronic PCBs etc., Infrared thermography detects flows more accurate than normal image processing schemes Using FST algorithms the thermal images are analyzed and plotted for the control of motor temperature and as well as to control load.

Keyword: Thermal camera, Junction temperature, Microcontroller

I.INTRODUCTION:

To analyse the motor temperature through thermal camera by using FST(Fractional Spline Transfer)algorithm . This may seem to be usual, but in the existing system, we have drawbacks like the phase of these methods of heat conduction, joule heating and heat diffusion has been conducted and proved the efficiency for cracks analysing in external surface. As already said "heat evolves ina sparse pattern " and there have been several test conducted like theNDT(Non Destructive Testing) and ECPT(Extreme Cold Pressure Test) to evaluate this existing methods.The scattering pattern extraction method is used to emphasis sparse unique pattern which have already been cracked to be automatically extracted for the enhancement of flawing contrast.

Infact the proposed method both artifiicial and natural defects prevailing is also tested the industry.It is so clear that, whenever there is an existence of a new system or method, the previous method might have drawbacks, in order to overcome those drawbacks usually new methods are proposed.Similarly in the existing system, we have drawbacks like it cannot tell about samples with complexity in surface condition.The best examples are rooughness and emissitivity variation .One more thing is that complex means it is

used to defect the detection –some of the examples are sub surface detection in all metallic material ,impactual damage and de-lamination taking place mainly in carbon fibre structures in brushes.Now ,lets get into our proposed system ,here we manily concentrate on the physical characteristics changes and also the defects that is extremely complex to identify .In order to

An Interacting Automata Based Redundant Modular Code Fault Tolerant Systems in Special Processors for DSP Applications
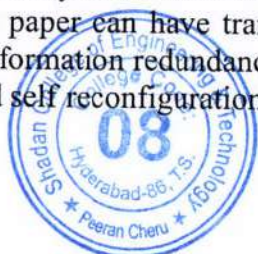
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Abstract - The objective of the work is to propose an Interacting Extended Finite State Machine (IEFSM) model of a fault tolerant system with enhanced fault detection and recovery capabilities applicable for special processors used in Digital Signal Processing (DSP) Applications. The fault or error detection latency is to be minimal and thereby any recovery action can be triggered at the earliest time to minimize the system failure. The state and transition level analysis of the system will try to identify the bad transitions or the bad set of states so that the system can safely recover into safe states immediately when the error has been identified. The faster error detection techniques are analyzed so as to develop a fault tolerant system model using interacting extended linear finite state machines. The focus is not only to identify the faulty states and transitions but also identify the best recoverable states and minimize the recovery time. The proposed model being a parallel interaction of individual FSMs is verified as a Continuous Time Markov chain (CTMC) using PRISM model checker.

KEYWORDS Fault Tolerant, Automata, FSM

1. INTRODUCTION

Hardware fault tolerance mainly focuses the challenge of designing reliable systems from unreliable components. Systems must be protected from a variety of potential faults like permanent stuck at faults or intermittent faults. The classical approaches to fault tolerance are having many shortcomings especially in the phases of fault detection and removal. A framework on the notion of finite-state a machine for describing discrete state and discrete-event systems, which continuously receive inputs from and react to their environment, is considered [1]. In principle, any hardware system can be represented by a set of interconnected finite state machines (FSM). Finite state machines define the acceptable states and transitions between states under normal and faulty conditions. The possible state transitions of the model with the calculus for binary relations can be used [2]. In this present work, an FSM model of fault tolerant system has been proposed that will help in determining the faulty transitions between states rather than the faulty states themselves. An EFSM comprises states, variables and transition among states to

represent complex systems with many guard expressions [3]. The finite state machines that are modeled in this paper can have transitions only if they satisfy a set of guard expressions. Time, hardware and information redundancy provides fault tolerance in a system through self healing, self stabilization and self reconfiguration [4, 5,6]. This model aims at identifying the transitions for safe