ME-01 Reliability of Mathematical model in Cupola Furnace

Hemant R. Bhagat [1], Dr. V. G. Arajpure [2],

[1] *Research scholar*
B.D.C.O.Engg. Wardha,(M.S), India
[2] *Principal & Research Guide*
Godavari College of Engineering, Jalgaon, India

Abstract *– A subject that is so important to many decisions in this world could hardly escape quantitative analysis. The name "reliability" is given to the field of study that attempts to assign numbers to the propensity of systems to fail. In a more restrictive sense, the term "reliability" is defined to be the probability that a system performs its mission successfully. This presents an approach to reliability of models. Error frequency distribution for developed models with graphical representation. These graphs were compared with probability density function graphs of commonly used life distributions. Reliability of the model can be established by using Reliability % = 100 - % Mean Error*

Keywords- Mathematical model, Cupola furnace, field data.

ME-04 Throwing Profile and Tools on the Potter's Wheel for the Production in the Pottery: a Critical Review

Nandkishor M. Sawai[1], Dr. V. G. Arajpure[2], and Dr. C. C. Handa[3]

[1]*Ph. D. Scholar,*
Mechanical Engineering,
nandkishor_sawai@rediffmail.com
[2]*Principal,*
Godavari College of Engineering, Jalgaon, India
[3]*Professor and Head of Department*
Mechanical Engineering, K.D.K.C.E, Nagpur, India

Abstract *- Pottery is our earliest handicraft in prehistoric times; most of the clay was shaped on the wheel. In this paper, review existing throwing profile on the potter's wheel which is technological innovation. In this technological innovation. by the new idea, modification for throwing profile process gauges or tools used on the potter's wheel for the shaping of clay or earthen ware. Push clay down, with the left hand also push the left side of clay and with right hand press down on the top of it. Pull fingers of right hand outward, for cylinder; keep floor flat, for bowl; let fingers curve up wall to establish curve. During throwing profile, the surface of the clay body becomes smeared so that agate patterning is obscured. The prepared clay ball is then centred on the wheel. Once centred, the clay ball is opened and pulled quickly into a cylinder. During throwing, the surface of the clay body becomes smeared so that agate patterning is obscured. This throwing process used hands, left and right. The study specifies factors influencing the throwing process and recommends of tool replaced by hands. These are based on a systematic analysis of the throwing process and testing of a prototype throwing process consisting of standard tools. For which we consider literatures reviews &some of them are explained.*

Keywords: Throwing process, throwing profile equipments or tools, earthen ware, potter's wheel.

ME-05 Investigation of MPFI System using Magnetism for Petrol Engine Enhancement

Nilesh T. Waykole[1], Tushar A. Koli[2], Dr.Vijay H. Patil[3]

[1] P.G.Student,
nileshtwaykole0801@gmail.com
[2] Assistant Professor,
Mechanical Engineering, G.F's Godavari College of Engineering, Jalgaon, India, 425003
[3]Asso. Professor and Head of Department
Mechanical Engineering, G.F's Godavari College of Engineering, Jalgaon, India, 425003

Abstract *– The prices of fuels are increasing day by day due to technological constrains, gap in the demand and supply and scarcity of conventional fuels . When fuel (Hydrocarbons) flows through magnetic emission reducer which contain strong magnetic field, change their orientation and molecule change their configuration. NdFeB magnetic emission reducer, which improves the performance of four strokes SI engine used before carburetor observed by test. Test studies include effect of NdFeB magnetic fields on fuel line, the engine performance like energy consumption and exhaust emissions. This happens because of Hydrocarbon molecules get realigned, converts para to ortho rotation hydrogen molecules and actively interlocked with oxygen during combustion to produce a near cent percent burning of fuel in combustion chamber. The current research investigates the effect of magnetic field on I.C.engines. The study concentrates on engine performance parameters such as fuel consumption and exhaust emissions. The magnetic field was applied to S.I.E. using gasoline fuel. Moreover, the fuel is subjected to a permanent magnet mounted on fuel inlet lines. The experiments were conducted at different idling engine speeds. The exhaust gas emissions of CO, NO, and CH4 were measured by using an exhaust gas analyzer. The magnetic effect on fuel consumption reduction was up to 15%. CO reduction at all idling speed was range up to 7%. The effect on NO emission reduction at all idling speed was range up to 30%. The reduction of CH4 at all idling speed was range up to 40%*

Keywords- Fuel, Magnetic Field, Engine performance, Four stroke multi cylinder S.I. engine, Hydrocarbons, Strong permanent magnets, Efficiency.

ME-07 A Review on Hill Descend Control System for Vehicle

Salunke Rahul Prabhakar[1], Chaudhari Homraj Ashok[2], Patil Mahendra Shantaram[3], Valvi Sharad Surupsing[4], Chandankar Pradnya Milind[5], Prof. M.P.Thakur[6]

[1,2,3,4,5] *B.E. Student*

GF'S Godavari College of Engineering Jalgaon, India, 425003

[6] *Assistant Professor*

Department of Mechanical Engineering GF'S Godavari College Of Engineering Jalgaon, India 425003

Abstract *– The objective of this topic is to study hill descend controlled system in vehicle. Hill assist is an automatic system that operate break to stop rolling back when it is starting on sleep hill. When hill assist system senses vehicle is starting from rest on slop, it automatically keeps food break even after you released the pedal by accelerated vehicle using parking break/hand break. The hill descent controlled system help to increased controlled on sleep greades and prevent from rolling back. Another function is hill hold function which is highly desirable feature in manual transmission vehicle*

ME-10 Review on Design of Stationary Spindle Swaging Machine

Vaibhav Patil[1] , Amol Mundokar[2] , Yogendra Patil[3], Swapnil Suryavanshi[4], Samadhan Bhutekar[5], K.M.Mahajan[6]

[1,2,3,4,5] *B.E. Student*
Department of Mechanical Engineering, Gf's Godavari College of Engineering, Jalgaon, India,425501.
[6] *Assistant Professor*
Department of Mechanical Engineering, Gf's Godavari College of Engineering, Jalgaon, India,425501.

Abstract *This project is purely based on Forming process. Basically, in forming process diameter or shape of work piece is reduces by external load which is applied by using manually or mechanically. The Rotary Swaging machine is the type of forming process. Rotary swaging is a process for precision forming of tubes, bars or wires. It belongs to the group of net-shape-forming processes, of which one of the characteristics is that the finished shape of the formed work pieces is obtained without, or with only a minimum amount of further final processing by machining. The forming dies of the swaging machine are arranged concentric around the work piece. The swaging dies perform high frequency radial movements with short strokes. Usually one die set consists of four die segments. The swaging dies rotate around the workpiece, or alternatively the workpiece rotates between the dies. For production of non-circular forms, the dies and the workpiece are stationary without rotational movement. Rotary swaging is an incremental forming process where the oscillating forming takes place in many small processing steps. One of the advantages of the incremental forming process compared to the continuous processes is the homogenous material forming. This project gives us knowledge, experience, skills and new ideas of design and manufacturing. This project is the equipment useful to improve quality of swaging machine and overcome disadvantages of rotary spindle and the output can be made in less time, hence we have selected this project. In rotary spindle swaging machine during working vibration on work piece is to much due high vibration work piece handling is very difficult but, In stationary spindle swaging machine overcome this drawback. The stationary spindle swaging machine allow multiple shapes on works piece. In this machine high product quality formed and the efficiency of this machine is high.*

Keywords- Base on Forming process, Reduce Diameter.

ME-11 A Review on Design of Hydraulic Mold Splitter and Tipper Equipment

Mr. Abhyuday Joshi[1], Mr. Girish Patil[2], Mr. Lalit Patil[3], Mr. Ravindra Patil[4], Prof. Tushar Koli[5]

1,2,3,4 Students / Department of Mechanical Engineering, Gf'S Godavari College of Engineering, Jalgaon, India, 425003

5Assistant Professor Department of Mechanical Engineering, Gf'S Godavari College of Engineering, Jalgaon, India, 425003

Abstract *- In the present review paper an effort is made to study the previous investigations that have been made in the different designs of hydraulic mold separators. This machine is purely based on hydraulics system.. The machine which we are designing is useful to improve quality of mold being manufactured and can be made in less time. Now days, vertical machines of such type are present in industries which causes many difficulties during mold manufacturing. To reduce these kinds of difficulties, we are trying to improve this vertical machine and make it horizontal. Tasks which are too heavy or too delicate for human muscles to do can be done easily by this machine. The-use of this equipment has resulted in large-scale production and has reduced costs to levels never dreamt of before. Our core pull accessory is usually added to the housing of the tipper and this, of course, allows technicians to hydraulically work cores while the mold half is still in the Die-Sep, further saving time and energy from not having to move the mold for testing.*

Keywords- Hydraulic mold separator, hydraulic systems, mold manufacturing, Die-sep, core pull accessories.

ME-12 Comparative Analysis of Metallic & Non Metallic Spur Gear – A Review

Shailendra Sakharam Wani [1], Dr. V. G. Arajpure [2]

[1] PhD student

North Maharashtra University, Jalgaon, INDIA, PIN-425001

[2] Principal

G.F's Godavari College of Engineering, Jalgaon, INDIA, PIN-425003

Abstract *– Gears are the back bone & one of the most critical components in mechanical power transmission systems. Gears are the very useful components in mechanical power transmission system and industrial rotating machinery. A spur gear generally subjected to two types of stresses like bending stresses and contact stresses which are causes teeth failure during meshing with another tooth. Among the contributors in gear set failure bending and surface strength are identified as one of the contributors which plays major role in it. Thus, to reduce the failure of gear & for optimization of gear design analysis of stresses resulted into major are of interest. Gears are generally made from metallic materials but recently advanced polymers materials were developed which have sufficient strength and properties similar to the metallic materials so it can easily replace the metallic gears if some care will be taken. Nylon, polycarbonate, acetals and delrin are the structure polymers materials are used for gears in printing and robotics mechanism with good functionality but polymers gears are not used in heavy loading type application. Specially polymers gives extra benefits compared to metallic gears like less noise-vibration, low requirement of maintenance-lubrication, low cost and easy manufacturing. Static finite element analysis requires performing the design optimization process on both materials. This paper presents the design optimization methodology step by step for comparative analysis of metallic and polymer gears using static finite element analysis. In this paper the major focus is on studying the comparative analysis of Metallic & Non-metallic spur gears.*

ME-17 Implementation of Process Capability Study to Improve the Quality of the Piston Manufacturing Process in Batch Production

S. M. Wani[1], A. R. Bang[2], H. S. Rane[3], A. D. Bagul[4], Dr. V. G. Arajpure[5]

[1] *Assistant Professor, Deptt. of Mechanical Engineering*
Government College of Engineering, Jalgaon, (MS), India, pin code 425001,
[2] *Head and proprietor,*
SOFT –TOUCH CAD/CAM/CAE, Jalgaon, (MS) India, pin code 425001 ,
[3] *Assistant Professor, Deptt. of Mechanical Engineering*
N. M. K.C., Jalgaon, (MS), India, 425001,
[4] *Assistant Professor, Deptt. of Mechanical Engineering*
N. M. K.C., Jalgaon, (MS), India, 425001,
[5] *Principal and Professor, Deptt. of Mechanical Engineering*
GF's Godavari C. O.E., Jalgaon, (MS), India, 425003,
(gcoe_smw@yahoo.com)

Abstract - *Quality has turned out to be a standout amongst the most critical shopper choice factors in the determination among contending products and processes. The nature of conformance is the way well the product fits in with the particulars specifications required by the developed design.*

The quality can be estimated as far as Process Capability characterized as the index of which the process is equipped for generating mass products with specification limits. Be that as it may, for each item there are sure breaking points for design, manufacturing and use. The farthest point of manufacturing for generating accurate dimensional items may called as specification limits. These limits of confinement mean the end criteria for the batch manufacturing.

The approach introduced here is to characterize the significance of quality and the impact of process capability study on batch manufacturing. The writing accommodated the quality and process capability are valuable to think about the conduct of the manufacturing processes under production. Certain graphical charts have examined here to study the piston manufacturing process.

ME-19 A Review Paper on Chairless Chair

Mr.Jagtap Vinayak[1] Mr.Vyas Mahesh[2] Mr. Mahajan Chetan[3] Mr. Soni Vijay[4] Mr. Bonde Pankaj[5], Prof. Talha Ahmed[6].

[1,2,3,4,5]Students / Assistant Professor[6]

GF's Godavari College Of Engineering ,Jalgaon ,India , 425001

Abstract *– It's an innovative and forward-thinking concept, the ability to sit anywhere and everywhere with the aid of a chairless chair. It's like a chair that isn't there, but magically appears whenever you need it. It's called the chairless chair and you wear it on your legs like exoskeleton , when it's not activated , you can walk normally or even run. Like a chair that is now there. Standing for hours or end causes a lot of distress to lower limbs, but most works get very few breaks and chairs are rarely provided, because they take up too much space. So the best idea was to strap an unobtrusiv chair directly to yourself. So it was decided to have this innovative concept in reality, to help workers who work for hour on production line in standing position and tired*

Keywords- Chairless Chair, Exoskeleton, Ergonomics

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Impact factor: 3.441
e-ISSN: 2456-3463
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

ME-20 A Review on Automatic Tyre Inflation System

Patil Tejas Sanjay[1], Patil Dhanraj Gulabrao[2], Nikum Mayur Chandrakant[3], Pawar Rohit Shamkant[4], Pingale Mayur Suresh[5], Dr. V H Patil [6]

[1,2,3,4,5]B.E. Student
GF'S Godavari College Of Engineering Jalgaon, India 425003
[6] Head of Department of Mechanical Engineering
GF'S Godavari College Of Engineering Jalgaon, India 425003

Abstract *– Driven by studies that show a drop in tyre pressure by just a few PSI can result in the reduction of gas mileage, tire life, safety and vehicle performance, we have developed an automatic, self-inflating tire system that ensures that tyre are properly inflated at all times. Our design proposes and successfully implements the use properly compressor that will supply air to all four tyre via hoses and a rotary joints fixed between the wheel spindle and wheel hub at each wheel. The rotary joints effectively allow air to be channeled to the tyres without the tangling of houses. With the recent oil price hikes and growing concern of environmental issues, this system a potential improvement in gas mileage; tyre wear reduction; and an increase in handling and tyre performance in diverse conditions.*

Keywords- Automatic Tyre Inflation System, Manual Tyre Inflation System etc.

ME-21 A Review on Manufacturing of Cooling Tower

Mr. Aakash Shinde[1], Mr. Danish Khan[2], Mr. Pawan Deore[3], Mr. Kunal Sonawane[4], Mr. Rehan Shaikh[5], Dr. V. H. Patil[6]

[1,2,3,4,5]*Students*
GF's Godavari College Of Engineering, Jalgaon, India, 425001
[6]*Associate Professor*
GF's Godavari College Of Engineering, Jalgaon, India, 425001

Abstract *– Study on the performance of the cooling tower in steam power plant by using Cussons technology steam plant to conduct on experiment and analyze the effect of flow rate control and water make up control to the cooling tower. This simply investigated the flow floe rate of water from cooling tower effect the condensate time, the condensate flow rate and the efficiency of steam turbine by using three different flow rate of cooling tower for 12,000 L/hr 10,000 L/hr and 8,000 L/hr. Then it is separated for two types , one is for two nozzles fully open and other is three nozzle fully open. Comparison between them is performing in the analysis. An was made for analyzing the effect of tower make-up control in performance of cooling tower but due to technical problems there are no data taken regarding the make-up water.*

Keywords- Cooling tower, Flow rate control, Nozzles, performance

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST - 2018)
e-ISSN: 2456-3463
Impact factor: 3.441
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

ME-22 Design of Compact Condenser for Heat Recovery and COP Enhancement of Domestic Refrigerator

Miss. Harsha Gangaram Nathjogi [1], Mr. Vinayak G. Nathjogi [2], Asst. Prof. Tushar A. Koli[3], Dr.V.H.Patil[4]

[1] *PG Student*
Godavari College of Engineering, Jalgaon (425001)
[2] *Mr. Vinayak Gangaram Nathjogi*
Smt.Kashibai Navale College of Engg.,Vadgaon,Pune
[3] *Asst. Prof.*
Godavari College of Engineering, Jalgaon (425001)
[4] *Associate professor & H.O.D.*
Godavari College of Engineering, Jalgaon (425001)

Abstract – *Refrigerator is now an essential commodity. It is not a luxury item. The heat which is absorbed in refrigerated space and the compressor work added to refrigerant is rejected to environment through a condenser. Aim of this experiment is to recover waste heat from condenser unit of a domestic refrigerator, thereby improve the efficiency of the system. This paper presents research work on a design of compact condenser (shell and tube type) for effective heat recovery and cop enhancement of the household refrigerator. The condenser is located in such a way that thermo-syphon effect will be generated. Because of this system eliminate the use of pump to circulate the water. Known quantity of water is allowed to flow through the shell side of condenser. By changing the water flow rate through condenser required rise in temperature of water can be gained. Cop of the system can be increased up to 28.61%. Hot water having temperature about 500C can be obtained within 20 minutes.*

Keywords- VCR Cycle, COP, Shell and tube Heat exchanger, Recovery System.

ME-23 Energy Involvement in the Transportation of Building Materials

Mahajan Kishor M.[1], Koli Tushar A.[2], Patil V. H.[3]

[1] *Assistant Professor,*
GF'S GCOE, Jalgaon, India, 425501
[2] *Assistant Professor,*
GF'S GCOE, Jalgaon, India, 425501

Abstract –*The embodied energy is a significant factor in the whole life energy consumption of a building. Its proportion of the total energy consumption attributable to a building throughout its life is increasing as improvements in thermal performance and energy efficiency of systems reduce the energy consumption during the occupied phase of the building life. The embodied energy can include all energy attributed to a building material from its original source through to construction on site. This paper considers the component of embodied energy that is attributable to the transportation of*

the materials. It is based on a case study undertaken of a single construction site, determining the energy consumed in transporting the construction materials to site. The results of this study are based on the energy consumed in delivery only, the fuel consumed for a one way delivery journey. Literature search identified that common assumptions made by different researchers when evaluating transportation by road vary between 1.18 - 4.5 MJ/tonne/km. However these figures are assumed to include allowances for other aspects of the energy consumed that can be attributed to transportation such as return journeys and. the manufacture and maintenance of vehicles and roads. The paper shows that for a particular study of a site in Brighton 1.5% of the total embodied energy was attributed to the energy consumed in the delivery of the materials. Part load delivery and packing ratio are identified as factors affecting the energy consumed in transportation of materials and these issues are discussed with reference to the Brighton case study.

Keywords- Embodied Energy, Transportation

ME-24 CFD Simulations of 2D Venturimeter

Prof. Narkhede Laxmikant P.[1], Mr. Limesh V. Mahajan[2], Mr. Pratik S. Lad[3]

[1]Assistant Professor, [2]Student, [3]Student
BCOE, Badlapur, Maharashtra, India. 421503

Abstract- *The venturimeter is a typical obstruction type flow meter, widely used in various sectors for flow measurements. The present work deals with the study of the flow of venturimeter and demonstrates the use of technology by improving mass flow rate in it. This study of venturimeter gives necessary pressure drop across venture section by increasing the velocity. A Venturi meter is a tube with a constricted throat that increases velocity and decreases pressure. Venturi meters are used for measuring the flow rate of both compressible and incompressible fluids in a pipeline. Drawing exploration from AutoCAD Workbench is used in the study. The computational fluid dynamics (CFD) software ANSYS FLUENT-14 has been used as a tool to perform the simulation of venturimeter. The objective of the study was to maximize the mass flow rate of Venturimeter. Numerical results were compared with CFD Simulations for its accuracy and to develop a standard methodology for future iterations. It uses a finite-volume method, the k-ε turbulence model, and a multigrid method. The calculated results for velocity and pressure distributions are discussed. The mass flow rates through the Venturimeter pipes are shown to be in good agreement with the measured values.*

Keywords – venturimeter, AutoCAD, CFD, mass flow rate, k-ε turbulence model.

ME-25 Experimental and Finite Element Analysis of Bending Effect on Leaf Spring.

Bhatu Borane[1], Tushar A Koli[2]

[1] Student of Master of Technology,
GF'S GCOE, Jalgaon, India, 425501
[2] Assistant Professor,
GF'S GCOE, Jalgaon, India, 425501

tract – *The work is carried out on composite leaf spring of a commercial vehicle. The objective of this work is to yout design and analysis of composite leaf spring with experimental design consideration and loading condition. The*

material of leaf spring is E-GFRC (Glass Fiber reinforced composite). The GFRC leaf springs are manufactured by hand lay-up method which were evaluated and study. The model of composite leaf spring is prepared and analyzed using ANSYS14.0 for the deflection and stresses under defined loading condition. The experimental and FEA result compared for validation. The dimension of conventional leaf spring is taken with varying thickness for evaluation of result and Static analysis is performed

Keywords- E-glass/epoxy composite, ANSYS14.0, Static Analysis

ME -26 A Review on Advance Intelligent Parking Brake System

Shahnawaz Khan[1], Khan Naved [2], Behere Kamlesh[3],Deepesh Chaudhari[4], Pinjari Salman[5],Prof.Mayur Thakur[6]

[1,2,3,4,5]B.E. Student,
GF'S Godavari College Of Engineering Jalgaon, India 425003
[6] Assistant Professor
Department of Mechanical Engineering *GF'S Godavari College Of Engineering Jalgaon, India 425003*

Abstract- *"Smart parking brake" is nothing but one of the breaking systems in automobile at the time of vehicle switch-off condition. In this breaking system motorized operated one. In this project, the control unit is received the signal from the key switch. The key switch is 'ON' at the time of vehicle start condition. The first time clutch is applied so that the motor is rotating in forward direction for 2 sec to release the break (Already wheel is on braking condition). The key switch is 'OFF' the motor is rotating in reward direction for 2 sec to applying the break-parking in major cities, particularly with dense traffic, directly effects the traffic flow and people's life. In this paper, we introduce a new smart parking system that is based on intelligent resource allocation, reservation, and pricing. The proposed system solves the current parking problems by offering guaranteed parking reservations with the lowest possible cost and searching time for drivers and the highest revenue and resource utilization for parking managers. New fair pricing policies are also proposed that can be implemented in practice.*

Keywords- Parking brake, Automatic parking brake system, Finite element analysis (FEA), Limit switch, Electrical motor, Temperature,Torque.

ME-27 Double Axis Welding Machine Attachment

Umesh Patil[1], Kishor M. Mahajan[2], Dr. V.H.Patil[3]

[1] Student of Master of Technology,
GF'S GCOE, Jalgaon, India, 425501
[2] Assistant Professor,
GF'S GCOE, Jalgaon, India, 425501

...nal Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
...e Factor: 3.441
Organized by GF's Godavari College of Engineering, Jalgaon
...ternational Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
e-ISSN: 2456-3463
www.ijies.net

[3]Associate Professor & H.O.D.
GF'S GCOE, Jalgaon, India, 425501

...ract – In our research "**AUTOMATED DOUBLE AXIS WELDING MACHINE**" is beings with an introduction to ...ding the various components automatically. Two motors for controlling and relay are provided in this attachment. ...e motor is for the up and down movement, another one for arm lifting and one for the rotary motion. The aim of the ...ect is to manufacture a welding machine which simplifies the work and improve the accuracy. The working principle ...ld machine is different other that of other welding machine. The working principle is very easy and at the same time ...duction time is very much reduced. This machine is best suitable for mass production. The working principle is very ...d and at the same time, production time is very much reduced. This machine is best suitable for mass production.

...words: **Welding, Mechanism, Robots etc**

ME-28 Performance Improvement of Vortex Tube, By Varying Inside Surface Roughness of Cylindrical Hot Tubes

Nitin Vijay Galwade[1], Prof. Tushar A Koli[2], Dr. V H Patil[3]

[1]PG Student,
Godavari College of Engineering, Jalgaon
[2]Assistant Professor,
Godavari College of Engineering, Jalgaon
[3]Associate Professor,
Godavari College of Engineering Jalgaon

...tract - Refrigeration plays an important role in developing countries, primarily for the preservation of food, ...ture, and for air conditioning. Conventional refrigeration systems are using Freon as refrigerant. As they are the ...use for depleting ozone layer, extensive research work is going on alternate refrigeration systems. Vortex tube is ...conventional cooling device, having no moving parts which will produce cold air and hot air from the source of ...ressed air without affecting the environment. When a high pressure air is tangentially injected into vortex chamber ...ong vortex flow will be created which will be split into two air streams. It can be used for any type of spot cooling or ...ng application. In this paper, counter flow vortex tube with different surface roughness hot tubes performance is ...ained. It was found that the vortex tube with a surface roughness of R_a= 6.264 μm surpassed the hot tubes with a ...e roughness of R_a = 4.510 μm & R_a = 3.133 μm by 6% to 26% and 16% to 52% in COP respectively. The COP of ...rtex tube increases with the increase of inside surface roughness of hot tube. A vortex tube contains the different ...ports vortex chamber inlet nozzle and cold terminal orifice, hot control valve and orifice. It works in such a way ...e fluid enters in the tube circulates about an axis which is called as vortex. And that rotation creates a vortex from ...mpressed air and separates that flow in two in air streams hot and cold. From its Centre the super-cooled air is ...ed and which is being delivered though cold end port. The surface finish of nozzle and the tube i.e. hot end takes an ...nt role in performance of Vortex Tube.in this paper the it is observe that the vortex tube with major values of

surface roughness of cylindrical hot tubes are used to increase the efficiency of vortex tube. It results in COP of vortex tube.

Keywords- Vortex chamber, Roughness value of cylindrical hot tubes, COP of the system, Efficiency of tube.

ME-29 Maximising the Heat Transfer Through Fins Using CFD as a Tool

Kumbhar Shanteshwar I.[1], Koli Tushar A.[2], Thakur.M.P.

[1] M Tech Thermal engg Student
GF'S GCOE, Jalgaon, India, 425501
[2] Assistant Professor,
GF'S GCOE, Jalgaon, India, 425501
[3] Assistant Professor,
GF'S GCOE, Jalgaon, India, 425501

Abstract *–This study presents the results of computational numerical analysis of air flow and heat transfer in a light weight automobile engine, considering three different morphology pin fins. A numerical study using Ansys fluent(Version 6.3.26) was conducted to find the optimum pin shape based on minimum pressure drop and maximizing the heat transfer across the Automobile engine body. The results indicate that the drop shaped pin fins show improved results on the basis of heat transfer and pressure drop by comparing other fins. The reason behind the improvement in heat transfer by drop shape pin fin was increased wetted surface area and delay in thermal flow separation from drop shape pin fin*

Keywords- CFD, Continuum Type, FLUENT, Optimization, Simulation, Turbulence.

ME-30 Experimental Set Up For Measurement of Strain by Using Strain Gauges on Simply Supported Beam and Analysis on ANSYS

Salve Mohanraj [1],Tushar A. Koli [2], Dr.V.H.Patil[3]

[1] P.G. student,
GF'S GCOE, Jalgaon, India, 425501
[2] Assistant Professor,
Dept. of Mechanical Engineering, GF'S GCOE, Jalgaon, India, 425501
[3]Associate Professor
Dept. of Mechanical Engineering, GF'S GCOE, Jalgaon, India, 425501

A review on polymer gear applicability for power transmission

Show affiliations

Koli, Tushar A. ; Arajpure, V. G. ; Patil, Vijay H.

The most vital element in mechanical transmission system is gear, and it is also employed in most industrial machinery. Metallic gears have noise, more friction, and wear meantime its operation and such types of gears have more cost. To avoid such difficulties associated with metallic gears, they are substituted by plastic gears. Composite polymer gears are used in various engineering applications due to their properties like self-lubricating, better wear resistance, low cost, and mass production possibility. This paper reviews the different design and testing procedures for performing plastic gears under various load applications and also gives the statistical comparison of new composite material with conventional material.

Publication: AIP Conference Proceedings, Volume 2469, Issue 1, id.020019, 10 pp.

Pub Date: March 2022

DOI: 10.1063/5.0080454

ISSN [illegible]

Vol. 6 No. 1 December 2021

International Journal of Mechanical Engineering

Design and analysis of different polymer gears in feed drive mechanism for all geared Lathe machine

Tushar Kolia, V.G.Arajpureb, V.H.Patil

a, PhD Scholar, Mechanical Engineering Department Godavari College of Engineering, Jalgaon 425001, India b, Professor, Mechanical Engineering Department Suryodaya College of Engineering, Nagpur 440027, India

c, Professor, Mechanical Engineering Department Godavari College of Engineering, Jalgaon 425001, India

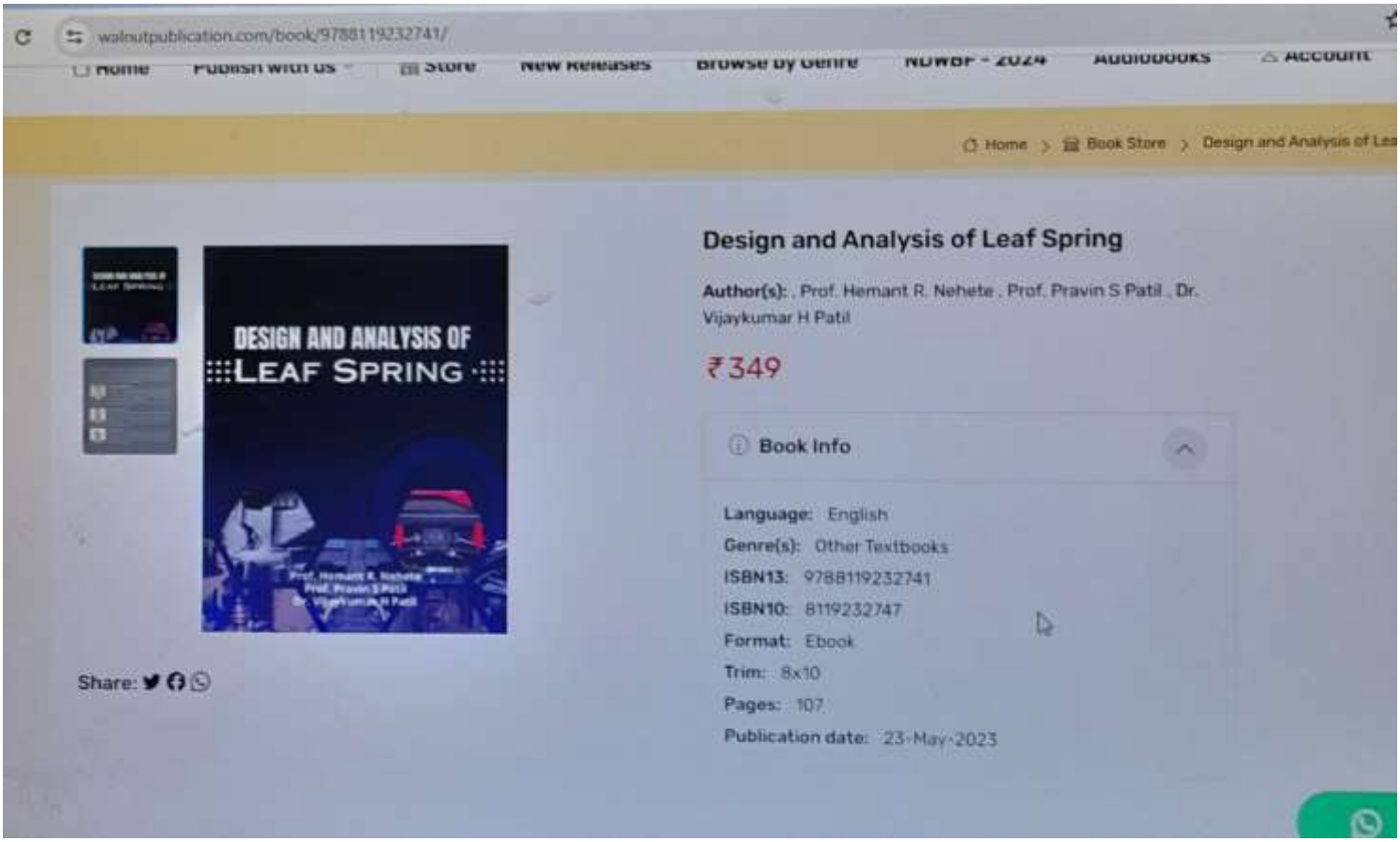
Abstract

Gears are the most vital parts in industrial machines as a power transmission component. Nowadays polymer gears are considered as a correct replacements to a conventional metallic gears. In all geared lathe machine for better performance metallic gears in drive mechanism is replaced by three different polymer materials viz. Nylatron (NSM), Nylon 66, PTFE (Polytetrafluroethelene). Gear design parameter like module, face width, and pitch circle and etc. considered to optimize the design parameter in geared model to make polymer as feasible gear model. An attempt is made in this paper to analyze the reconstruction of drive mechanism in all geared lathe machine considering the contact stresses, bending stresses, equivalent(Von-Mises) stress, equivalent elastic strain, total deformation. Static analysis of a 3D model has been performed using ANSYS 15R. It is concluded that use of high strength engineering polymer in the industrial bending. The main aim is to determine the contact stresses, bending stresses and total deformation. Analysis of spur gear by Ansys software, for this spur gear train is prepared in catia software.

2. Literature Review

Ashwin Chopane et al. [1] calculated the beam strength, wear strength, effective load for designing the arrangement of rack and pinion for racing car. He prepared a 3D model of the steering system and accumulated it in software like Creo, and ANSYS is used for performance analysis of tetrahedral mesh element to gear better precision results. It concluded that with polymer gears arrangements in this steering system with supra car seems very beneficial as it gives reduced weight, vibration, and noise for the system.

Ashish Taywade et al. [2] made design analysis for both metal and polymer helical gears. It showed that in


walnutpublication.com/book/9788119232741/
Home
Publish With Us
Store
New Releases
Browse by Genre
NUWBF - 2024
Audiobooks
Account
Home > Book Store > Design and Analysis of Lea
DESIGN AND ANALYSIS OF
LEAF SPRING
Design and Analysis of Leaf Spring
Author(s): , Prof. Hemant R. Nehete , Prof. Pravin S Patil , Dr. Vijaykumar H Patil
₹349
Book Info
Language: English
Genre(s): Other Textbooks
ISBN13: 9788119232741
ISBN10: 8119232747
Format: Ebook
Trim: 8x10
Pages: 107
Publication date: 23-May-2023
Share:

Available onlinewww.ejaet.com

European Journal of Advances in Engineering and Technology, 2022, 9(4s):416-422
International Conference on Tech Trends in Science & Engineering (ICTTSE) 2022
Suryodaya College of Engineering & Technology, Suryodaya Polytechnic, Nagpur, Maharashtra, India

Review Article ISSN: 2394 - 658X

Growth of Microgrids and New Possibilities: A Review in Indian Scenario

[1]Mahesh H. Patil, [2]Dr. A. R. Phadke

[1]Research Scholer, Research Laboratory, [2]Head of Department, Electrical Engineering
Govt. College of Engineering, KBC North Maharashtra University, Jalgaon (MH) India 42500
[1]mhpatils@gmail.com , [2]phadkeatul@gmail.com

ABSTRACT

Renewable Energy (RE) has come in the main streamline of the electrical power system as the environmentalstandards are taken seriously like never before. With the increase in several renewable sources, new modes to use them are being developed. Also, the Distributed Energy Resources (DER) of various kinds are operating to provide a reliable power supply. This gave rise to Microgrids which are serving loads with various DERs together. As energy management is getting more and more efficient and effective, these Microgrids are proving themselves a reliable source of electrical power in remote places. India focusing on RE has rapidly developed mechanisms for getting ahead in protecting the environment and simultaneously providing power supply to remote places with the mission of 100 percent electrification targets. This in turn made the Indian government draft new policies. That's the reason why India is looking forward to more Microgrids. The discussion and review of the increase in Microgrid projects and new possibilities are discussed in this work.

Key words: Renewables (RE), Distributed Energy Resources (DERs), Microgrid (MG), Networked Microgrids

---

INTRODUCTION

MICROGRID (MG) is the new technological application that has been developed in the electrical power sector. MG have proved their effectivenessin various ways. Distributed Energy Recourses (DERs) are there since very long, but as the DERs operated individually may not be sufficient to serve the load, and also there may be under-utilization of these resources. It has been then found by various ways that the possibility of using DERs together can make the more reliable and stable source of power serving load if managed properly. this led to the development of MGs. One of the biggest advantages of MG is that it operates in both Islanding and Grid-connected mode. As far as India is concerned the Government looksforwardto this technological advancement and the falling prices of solar photovoltaic made it feasible technically as wellas economically.

According to Union Minister, around 63 MGs totaling 1,899 kWp have been installed in India by 2018 totaling 1,899 kWp. and Government of India, Ministry of New and Renewable Energy (MNRE) has planned 10,000 such MG projects across India. Though the Government of India looking for remote electrification with MGs in addition to that MGs possess other possibilities like supporting the main grid in case of emergency.

The discussion on the current MG development keeping Indian development towards MGs and remote electrification along with added Possible benefits of these is done. Also, a constraint discussion on MGs acrossanother part of the world

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Nano sized ZnO: Synthesis, Characterisation And Gas Sensing

Saroj D. Patil[1], Nitin N. Bhole[2], R. B. Waghulade[3]

[1,2] *Applied Science Department, GF's-Godavari College of Engineering, Jalgaon, 425003*
[3] *D.N.C.V.P's Shirish Madhukarrao Chaudhari College, Jalgaon 425001*
patilsaroj77@gmail.com

Abstract *– This paper reports the synthesis, characterization of nano-sized ZnO. A simple chemical co-precipitation method is used for the synthesis of ZnO nano-sized powder at room temperature. The resulting nano-sized powder was characterized by X-ray diffraction (XRD) measurements, transmission electron microscopy (TEM) and energy dispersive X-ray (EDX). The XRD studies revealed that the nano ZnO have wurtzite structure (hexagonal).The crystalline size was found to be smallest for nano sized ZnO when the as prepared powder was cacinated at 800^{0}C for 2 hr. The H_2S sensing properties of the synthesized nano-sized ZnO were investigated at different operating temperatures and H_2S concentrations. It was found that the operating temperature significantly affect the sensitivity of the nano-sized ZnO powder to the H_2S.*

Keywords- Co-precipitation, XRD, TEM, Gas Sensing.

INTRODUCTION

The semiconducting metal oxides such as SnO_2 [1], ZnO [2], WO_3 [3] and Fe_2O_3 [4] have been widely used as gas sensing materials for the detection of inflammable and toxic gases. It was reported that the sensor performance is strongly dependant on the microstructural features such as crystalline size, grain boundary characteristics and thermal stability [5]. Zinc oxide, wide band gap II-VI compound semiconductor, has a stable wurtzite structure with lattice spacing a=0.325 nm and c=0.521 nm. Zinc oxide is on the borderline between a semiconductor and an ionic material [6, 7]. It has attracted intense research effort for its unique properties and versatile applications in transparent electronics, ultraviolet (UV) emitters, piezoelectric devices, chemical sensors and spin electronics [8-17].

EXPERIMENTAL

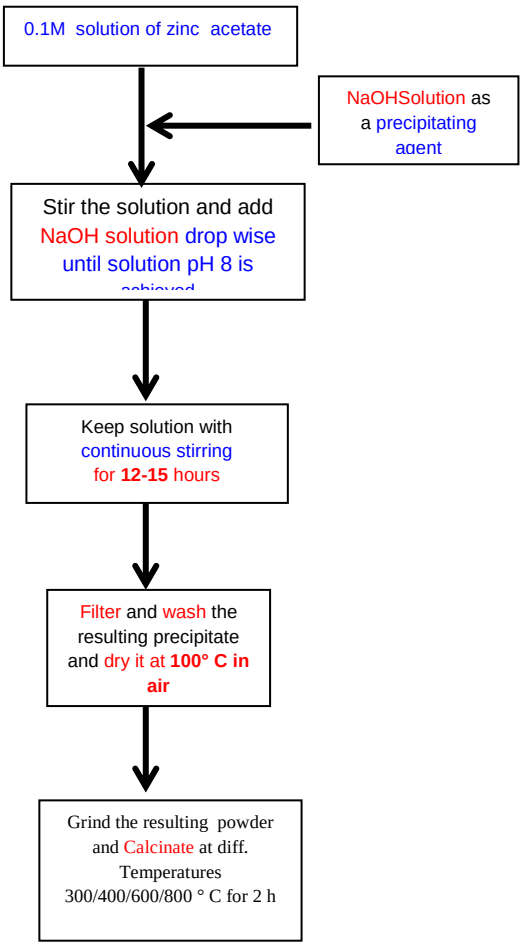


Fig. 1 : A schematic diagram of the synthesis procedure.

The nano-sized powder of ZnO was prepared by a simple co-precipitation method. In this work, the aqueous solution of 0.1 M zinc acetate ($Zn(C_2H_3O_2)_2$) was prepared in double distilled water. To this solution the

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Techniques of pollution control in construction

Patil Lalita B.

Assistant Professor,
GF'S Godavari college of Engineering,, Jalgaon
lalitalalitapatil@rediffmail.com

Abstract – *Construction sector is considered as one of the main sources of environmental pollution in the world. It has massive direct and indirect effects on the environment.*

Keywords- Construction, pollution, effects, techniques, control.

INTRODUCTION

Environmental protection is an important issue in developed and developing countries (Tse, 2001). Construction is not an environmentally friendly process by nature (Li et al., 2010). Levin (1997) indicated that building construction and operations have a massive direct and indirect effect on the environment. Ijiga et al. (2013) stated that identifying the impacts of construction project on the environment is a task that needs to be accomplished to realize an effective environmental.

Shen et al. (2005) claimed that construction is a main source of environmental pollution, compared with other industries. Li et al. (2010) agreed with Shen (2005) and maintained that any typical construction process involves using various construction equipment's and natural resources and generates many pollutants. Several writers (Morledge and Jackson, 2001; Ball, 2002; Chen et al., 2004; Lam et al., 2011; Zolfagharian, 2012) summarized these pollutants as noise, air pollution, solid and liquid waste, water pollution, harmful gases, and dust. Furthermore construction projects have become one of the driving forces for the national economy, whose energy consumption, environmental emissions, and social impacts are significant (Chang et al., 2011).

It has been reported that very few contractors and private developers spend efforts in considering the environment and developing the concept of recycling building materials (Lam, 1997), because most of them ranked completion time as their top priority and pay little attention to the environment (Poon et al., 2001).

Most construction projects are located in a densely populated area. Thus, people who live at or close to construction sites are prone to harmful effects on their health because of dust, vibration and noise due to certain construction activities such as excavation and pile driving (Li et al., 2010). During the construction phase of a project, construction dust and noise are regarded to be two major factors that affect human health (Tam et al., 2004). Li et al. (2010) and Zolfaghrian et al. (2012)

IMPACTS OF CONSTRUCTION

The main impacts experienced during the construction of the project are given in detail below

Noise:

- Noise was felt to be particularly bad during demolition and the early stages eg. pile driving, drilling, hammering
- Noise was caused by extra traffic, lorries, heavy machinery and engines.
- Local residents kept windows closed at all times.

Vibration:

- Damage occurred to houses eg cracking occurs to walls , plaster
- People were stressed by vibration from demolition and drilling at the same time.

Pollution:

- Residents were worried about pollution, eg asbestos dust from the site coming into homes.

Dust:

- Homes were covered in the dust both inside and outside, particularly in summer .Windows curtains and bed clothes were covered in dust even when the windows were closed.
- Plants and gardens were damaged.
- Children could not play outside for many months. This was problematic particular in the summer.

Impact Factor Value 4.046 e-ISSN: 2456-3463
National Conference on "Recent Advances in Engineering and Technology" SAMMANTRANA 19
Organized by Government College of Engineering, Nagpur
International Journal of Innovations in Engineering and Science, Vol 4 No.8, 2019
www.ijies.net

Natural Fibers As Geo-Reinforcement-A Review

L. B. Patil [1] , Dr. S.S.Pusadkar[2]

[1]Asst. Professor,
GF'S Godavari College of Engineering, Jalgaon, India, 425003
[2]*Professor,*
Govt. College of Engineering, Jalgaon, India, 425002

Abstract *– The improvement in various geotechnical properties of soil is required for better performance. Many soil or ground improvement methods are practiced today for improving the properties. The choice of method, material and equipment's depends upon the type of soil, material available, project importance and longevity and sustainability. Out of these various materials, fibers are also used for soil improvement. Fiber is a form of structural reinforcement either in the form of natural or manmade material. The various synthetics and waste fibres are used for improving strength of soil which are neither economical nor eco-friendly. Hence, the present paper reviews the use of natural fiber for soil improvement and intends to find its suitability for various soil structures. The natural fibers are renewable, cheap, completely or partially recyclable, biodegradable, and environment friendly materials. Due to their availability, low density and price as well as satisfactory mechanical properties, make them attractive alternative reinforcements to glass, carbon and other manmade fibers. Geo reinforcement are used for various purposes like barrier, drainage, surficial erosion control, filtration, protection, reinforcement and separation. The various natural fibers used as geo- reinforcement are jute, coir and banana. The different geotechnical properties such as MDD & OMC, CBR, shear strength characteristics, permeability were investigated by various researchers with different percentage of fibers. The study reveals that these natural fibers can be suitably used for soil improvement. However, study available is limited and detailed investigation is required for the durability and various applications.*

Keywords*- Natural fibres, Geo-reinforcement, banana fibres , longability, durability*

INTRODUCTION

Geo-reinforcement is defined as a technique to improve the engineering characteristics of soil. Soil reinforcement is an effective and reliable technique for improving soil strength in a variety of applications. Combined product had much better engineering properties than the individual constituents. The primary purpose of reinforcing soil mass is to improve its stability, increase its bearing capacity and reduce settlements and lateral deformation. The concept and principle of soil reinforcement was first developed by Vidal (1969). The introduction of reinforcing elements in a soil mass increases the shear resistance of the medium. There are various types of geo-reinforcement like as geotextile, geo-grid, geo-net, geo-membranes, geo-composites and others. Geo-reinforcement are used for various purposes like barrier, drainage, surficial erosion control, filtration, protection, reinforcement and separation. Along with these geo-reinforcement fibers are also used as soil improvement additives. Fiber is a form of structural reinforcement either in the form of natural or manmade material. The various synthetics and waste fibres are used for improving strength of soil which are neither economical nor eco-friendly. The natural fibres such as coir, jute or Banana fibres are studied for as prospective fibres to be used as geo-reinforcement. Hence, the present paper reviews the use of natural fiber for soil improvement and intends to find its suitability for various soil structures.

NATURAL FIBERS

Natural fibers are defined as substances produced by plants and animals that can be spun into filament, thread or rope and further be woven, knitted, matted or bound. The most viable structural fibers typically derive from specifically grown textile plants and fruit trees. Natural fibers are cheaper in cost, environment - friendly, renewable and bio-degradable. Based on their origin, the fibers may be classified as belonging to one of the following two categories: Natural and Man-made. Natural fibers can be further classified according to their origin into three groups. Fig. 1 shows the detailed classification of natural fibres.

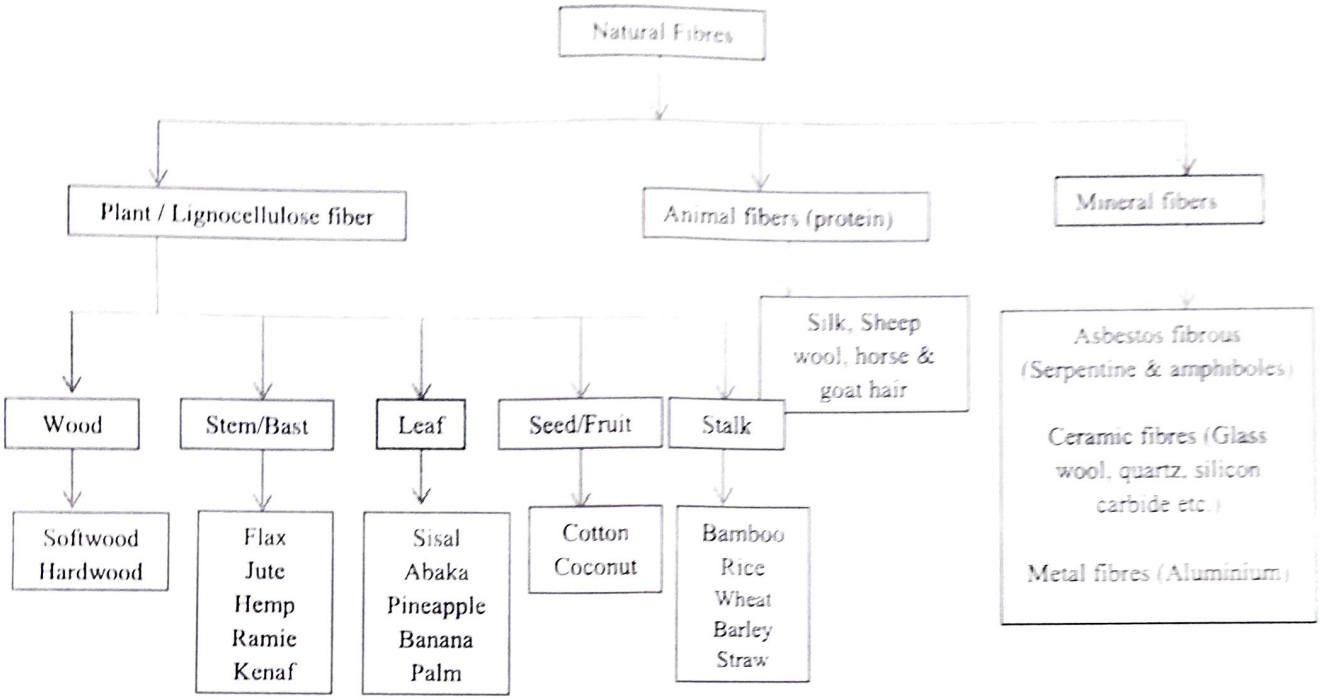


Fig. 1: Classification and Sources of Natural Fibers

The natural fibers mainly classified based on source of the fibers viz. plant, animal and minerals. Many of these fibers are widely used in day to day life of the human kind. The engineering uses of these fibers are also accepted in the practice. The various study carried out on coconut fiber i.e. coir, jute fiber and banana fiber is discussed below.

COIR FIBRES

Coconut (coir) fibers are normally 50–350 mm long and consist mainly of lignin, tannin, cellulose, pectin and other water soluble substances. However, due to its high lignin content, coir degradation takes place much more slowly than in other natural fibers. Rowell *et al.* (2000),described that coir is very long lasting, with in-field service life of 4–10 years. The water absorption of that is about 130–180% and diameter is about 0.1–0.6 mm. Coir retains much of its tensile strength when wet. It has low tenacity but the elongation is much higher.

Ravishankar and Raghavan (2005) confirmed that for coir-stabilized lateritic soils, the maximum dry density (MDD) of the soil decreases with addition of coir and the value of optimum moisture content (OMC) of the soil increases with an increase in percentage of coir. The compressive strength of the composite soil increases up to 1% of coir content and further increase in coir quantity results in the reduction of the values. The percentage of water absorption increases with an increase in the percentage of coir. Tensile strength of coir-reinforced soil (oven dry samples) increases with an increase in the percentage of coir.

JUTE FIBERS

Jute is mainly environmental-friendly fiber that is used for producing porous textiles which are widely used for filtration, drainage, and soil stabilization. Aggrawal and Sharma (2010) used different lengths (5–20 mm) of jute fibers in different percentages (0.2–1.0%) to reinforce soil. Bitumen was used for coating fibers to protect them from microbial attack and degradation. It was concluded that jute fiber reduces the MDD while increases the OMC. Maximum CBR value is observed with 10 mm long and 0.8% jute fiber, an increase of more than 2.5 times of the plain soil CBR value.

Singh and Bagra (2013) studied the influence of Jute fiber on the CBR value of Itanagar, Arunachal Pradesh, soil which is a typical soil and is normally used in the construction of embankments and pavement. The effects

sustainable solution will be available for geotechnical engineers with longevity of the reinforced system.

REFERENCES

[1] *Aggarwal P and Sharma B.(2010), Application of Jute Fber in the Improvement of Subgrade Characteristics, Proc of International Conf on Advances in Civil Engineering, Trabzon, Turkey; 27–30 September, 2010.*

[2] *Begum K. and Islam M.A.(2013), Natural Fiber as a substitute to Synthetic Fiber in Polymer Composites: A Review, Research Journal of Engineering Sciences, Vol. 2(3), 46-53, April (2013)*

[3] *Dharmendra Kumar, Sudhir Nigam, Abhinav Nangia and Shailendra Tiwari,(2015), California Bearing Ratio Variations in Soil Reinforced with Natural Fibres (A Case Study Bhopal Bypass Road ,) International Journal on Emerging Technologies 6(2): 95-104(2015), ISSN No. (Online) : 2249-3255*

[4] *Ravishankar U and Raghavan S.(2005), Coir Stabilized Lateritic Soil for Pavements, Indian Geotechnical Conference-2005, Ahmedabad, India.*

[5] *Rowell M, Han S, and Rowell S.(2000), Characterization and Factors Effecting Fiber Properties, Nat Polym Agr Compos pp.115–34.*

[6] *Singh H. P. and Bagra M.(2013), Improvement In CBR Value of Soil Reinforced with Jute fiber, International Journal of Innovative Research in Science, Engineering and Technology, IJIRSET, ISSN: 2319-8753*

[7] *Singh A. K. and Yadav R. K. (2016), Improvement in CBR of Expansive Soil with Jute Fiber Reinforcement, International Research Journal of Engineering and Technology (IRJET), Volume: 03 Issue: 11 | Nov -2016*

[8] *Teresa Sunny, Annie Joy, (2016), Study on the Effects of Marine Clay Stabilized with Banana Fibre, International Journal of Scientific Engineering and Research, Volume 4 Issue 3, March 2016, ISSN (Online): 2347-3878*

[9] *Vidal H. (1969), The Principle of Reinforced Earth, Highway Research Record, 282:, pp. 1–16.*

Table 1: Optimum % of Different Natural Fibres

Sr. No	Soil	Fiber	Optimum Reinforcement	Properties	Author
1	Alluvium soil	Jute	1% , 90mm length &2mm dia	CBR increased	Singh and Bagra (2013)
2	Alluvium soil	Jute	5% 60-80 mm length	CBR increased	Dharmendra et al. (2015)
3	Black cotton soil	Jute	Jute mats 2 mm thickness	UCS increased	Singh and Yadav (2016)
4	Fine sand	Jute	20 mm length and 1%	Compressive strength increased and dry density decreased	Aggrawal and Sharma (2010)
5	Expansive soil	Jute	Jute mat in multilayer	MDD ,CBR increased and OMC decreased	Singh and Yadav (2016)
6	Marine Clay	Banana	0.75%	OMC ,CBR Increased and MDD decreased	Sunny and Joy (2016)

Table 2: Improvements of the mechanical properties of epoxy, polyester, polyethylene based polymer composites [Begum and Islam (2013)]

Resin	Reinforcing fibers	Investigated mechanical properties	Properties of the base polymer (MPa)	Property improvement*, %	Corresponding Fiber content w, %
Epoxy	Banana	Tensile strength	23.98	90	-
	Coconut		-	307.82	30 w
	Banana	Flexural strength	53.38	38	-
	Bagasse (treated)		-	23.34	30 w
	Coconut		-	39.40	30 w
Polyester	jute (untreated)	Tensile strength	250	900	60 v
	pineapple-leaf (untreated)		22.9	176	40 w
	okra (treated)		28	135	27.61 v
	Coir (untreated)		-	30	25 w
	Bagasse (treated)		10.6	152	65 w

of different lengths and diameters of Jute fiber on CBR value of reinforced soil have also been investigated and results were compared with that of unreinforced soil. CBR value of soil increases with the inclusion of Jute fiber. When the Jute fiber content is increases, the CBR value of soil is further increases and this increase is substantial at fiber content of 1 %. It is concluded that there was significant effects of length and diameter of fiber on the CBR value of soil. The CBR value of soil increases with the increase in length and diameter of fiber. The maximum increase in CBR value was found to be more than 200 % over that of plain soil at fiber content of 1 %for fiber having diameter 2 mm and length 90 mm.

BANANA FIBERS

Banana fiber is a strong fiber, light weight and has smaller elongation. It has strong moisture absorption quality. It absorbs as well as releases moisture very fast. It is bio- degradable and has no negative effect on environment and thus can be categorized as eco-friendly fiber.

Sunny and Joy (2016) studied the properties of marine clay with addition of banana fibers. The addition of banana fiber improved the properties of marine clay. The optimum value for marine clay stabilized with banana fiber was obtained at 0.75%. It was observed that OMC value increased with the addition of banana fiber and dry density decreases. The shear strength increased from 8.5kN/m^2 to 32.91kN/m^2 with the addition of 0.75% of banana fiber and CBR value increased from 2.79 to 13.2 which makes it suitable for subgrade soil for road pavements.

Table 1 shows the use of various natural fibers used in the study for various soil improvements. It can observed that depending upon the length of fiber, optimum % of fibers varies. In all soils and fibers, CBR and UCS increases with the use of natural fibers. However, except for expansive soil with coir, in all other cases, MDD decreases and OMC increases.

NATURAL FIBERS REINFORCED THERMOSET COMPOSITES

Begum and Islam (2013) presents a brief overview of the improvement of the mechanical properties (tensile and flexural strength and the corresponding modulus of elasticity) of natural fiber reinforced polymer materials (NFRPCs). A number of thermosetting and thermoplastic polymers have been studied as binding materials in NFRPCs. Among the most studied thermosetting materials are epoxy resins and unsaturated polyesters, and among the thermoplastics, poly-olefins such as low and high density polyethylene as a well as polypropylene are the most studied. Different natural fibers have been introduced into the polymer compositions with a view to improve their mechanical properties.

The mechanical properties of a composite depend on the nature of the resin, fiber, resin-fiber adhesion, cross-linking agents and not the least on the method of the processing.
Epoxy based polymer composites, polyester based composites and polyethylene based composites are being used to strengthen the natural fiber and increase the strength. The various researchers studied the effect of epoxy, polyester and polyethylene based composites blended with various natural fibers. Table 2 gives the improvement in tensile strength, young modulus, and flexural strength of the fibers.

NEED OF THE RESEARCH

Natural fibers are derived from a renewable resource and do not have a large energy requirement to process, and are biodegradable. Besides ecological considerations natural fibers exhibit many advantageous properties which promote the replacement of synthetic fibers. They are a low-density material yielding relatively lightweight composites with high specific properties. The use of natural fibers untreated or treated with epoxy polymer or polyethylene have large potential to be used in the application of geotechnical engineering such as soil improvement, pavement construction, slope protection, improving bearing capacity and reduction in settlement. Hence, a lot of scope is available in this field for research and bringing natural material in wide applications.

CONCLUSION

The present papers review the suitability of natural fibers in soil improvement and conjunctive use of thermoset composite of natural fiber and polymers. The strength characteristics of soil viz. unconfined compressive strength, CBR increases with the use of natural fibers while MDD reduces and OMC increases. The biodegradability factor of natural fibers puts the use of natural fibers in long term projects in big failure domain. This can be taken care of by treating these natural fibers with suitable polymers or other composites, so that a

sustainable solution will be available for geotechnical engineers with longevity of the reinforced system.

REFERENCES

[1] *Aggarwal P and Sharma B (2010), Application of Jute Fber in the Improvement of Subgrade Characteristics, Proc of International Conf on Advances in Civil Engineering, Trabzon, Turkey; 27–30 September, 2010.*

[2] *Begum K. and Islam M.A (2013), Natural Fiber as a substitute to Synthetic Fiber in Polymer Composites: A Review, Research Journal of Engineering Sciences, Vol. 2(3), 46-53, April (2013)*

[3] *Dharmendra Kumar, Sudhir Nigam, Abhinav Nangia and Shailendra Tiwari,(2015), California Bearing Ratio Variations in Soil Reinforced with Natural Fibres (A Case Study Bhopal Bypass Road ,) International Journal on Emerging Technologies 6(2): 95-104(2015), ISSN No. (Online) : 2249-3255*

[4] *Ravishankar U and Raghavan S (2005), Coir Stabilized Lateritic Soil for Pavements, Indian Geotechnical Conference-2005, Ahmedabad, India.*

[5] *Rowell M, Han S, and Rowell S (2000), Characterization and Factors Effecting Fiber Properties, Nat Polym Agr Compos pp 115–34.*

[6] *Singh H. P. and Bagra M.(2013), Improvement In CBR Value of Soil Reinforced with Jute fiber, International Journal of Innovative Research in Science, Engineering and Technology, IJIRSET, ISSN: 2319-8753*

[7] *Singh A. K. and Yadav R. K. (2016), Improvement in CBR of Expansive Soil with Jute Fiber Reinforcement, International Research Journal of Engineering and Technology (IRJET), Volume: 03 Issue: 11 | Nov -2016*

[8] *Teresa Sunny, Annie Joy, (2016), Study on the Effects of Marine Clay Stabilized with Banana Fibre, International Journal of Scientific Engineering and Research, Volume 4 Issue 3, March 2016, ISSN (Online): 2347-3878*

[9] *Vidal H. (1969), The Principle of Reinforced Earth, Highway Research Record, 282:, pp. 1–16.*

Table 1: Optimum % of Different Natural Fibres

Sr. No	Soil	Fiber	Optimum Reinforcement	Properties	Author
1	Alluvium soil	Jute	1% , 90mm length &2mm dia	CBR increased	Singh and Bagra (2013)
2	Alluvium soil	Jute	5% 60-80 mm length	CBR increased	Dharmendra et al. (2015)
3	Black cotton soil	Jute	Jute mats 2 mm thickness	UCS increased	Singh and Yadav (2016)
4	Fine sand	Jute	20 mm length and 1%	Compressive strength increased and dry density decreased	Aggrawal and Sharma (2010)
5	Expansive soil	Jute	Jute mat in multilayer	MDD ,CBR increased and OMC decreased	Singh and Yadav (2016)
6	Marine Clay	Banana	0.75%	OMC ,CBR Increased and MDD decreased	Sunny and Joy (2016)

Table 2: Improvements of the mechanical properties of epoxy, polyester, polyethylene based polymer composites [Begum and Islam (2013)]

Resin	Reinforcing fibers	Investigated mechanical properties	Properties of the base polymer (MPa)	Property improvement*, %	Corresponding Fiber content w, %
Epoxy	Banana Coconut	Tensile strength	23.98 -	90 307.82	- 30 w
	Banana Bagasse (treated) Coconut	Flexural strength	53.38 - -	38 23.34 39.40	- 30 w 30 w
Polyester	jute (untreated) pineapple-leaf (untreated) okra (treated) Coir (untreated) Bagasse (treated)	Tensile strength	250 22.9 28 - 10.6	900 176 135 30 152	60 v 40 w 27.61 v 25 w 65 w

LDPE	Sisal (untreated) Sisal (untreated) Wood (treated)	Young's modulus	140 140 350	458 853 272	30 w 21.5 v 40 w
HDPE	Hemp Rice hulls Hardwood-A Hardwood-B	Young's modulus	1070	555 181 349 349	60w 60 w 60 w 60 w
LDPE- Low Density Polyethylene, HDPE-High Density Polyethylene * Increment in relation to pure polymer (%), w = Fiber content in weight (%), v = Fiber content in volume (%)					

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Design of Compact Condenser for Heat Recovery and COP Enhancement of Domestic Refrigerator

Miss. Harsha Gangaram Nathjogi [1], Mr. Vinayak G. Nathjogi [2], Asst. Prof. Tushar A. Koli[3], Dr.V.H.Patil[4]

[1] Miss. Harsha Gangaram Nathjogi
PG Student, Godavari College of Engineering, Jalgaon (425001)
[2] Mr. Vinayak Gangaram Nathjogi
Smt.Kashibai Navale College of Engg.,Vadgaon,Pune
[3]Asst. Prof.Tushar A Koli
Godavari College of Engineering, Jalgaon (425001)
[4]Dr.V.H.Patil
Godavari College of Engineering, Jalgaon (425001)
[1]Email:- harshanathjogi295@gmail.com

Abstract – *Refrigerator is now an essential commodity. It is not a luxury item. The heat which is absorbed in refrigerated space and the compressor work added to refrigerant is rejected to environment through a condenser. Aim of this experiment is to recover waste heat from condenser unit of a domestic refrigerator, thereby improve the efficiency of the system. This paper presents research work on a design of compact condenser (shell and tube type) for effective heat recovery and cop enhancement of the household refrigerator. The condenser is located in such a way that thermo-syphon effect will be generated. Because of this system eliminate the use of pump to circulate the water. Known quantity of water is allowed to flow through the shell side of condenser. By changing the water flow rate through condenser required rise in temperature of water can be gained. Cop of the system can be increased up to 28.61%. Hot water having temperature about 500C can be obtained within 20 minutes. This experiment will make the household refrigerator to be work as both refrigerator and water heater.*

Keywords- VCR Cycle, COP, Shell and tube Heat exchanger, Recovery System.

INTRODUCTION

Energy saving is one of the major key issue, not only from the view of energy conservation but also for environment. Energy conservation is now facing the challenge of applying the latest technology for improvement that can be justified on its own merits and demerits. Energy conservation is the technique which needs to be adopted to face energy crisis in future. Before rejecting waste heat to the environment, there can be utilization of thermal energy available in heat for some heating applications. Various thermal waste heat sources are available such as domestic and urban waste which includes heat losses in cooking appliances, heat losses in air conditioners, heat losses in HVAC systems etc. Waste heat recovery system can be used in many of these applications but in current experiment, we are focusing on heat recovery of air cooled domestic refrigerator.There are few problems with air cooled refrigerator. Refrigerator should be located away from the wall to have proper air ventilation. Proper care needs to be taken while handling or shifting due to bare copper tubes of condenser which lies at backside of refrigerator. These problems can also be eliminated by using this system.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Energy Involvement in the Transportation of Building Materials

Kishor M. Mahajan [1], Tushar A. Koli [2], Dr.V. H. Patil [3]

[1] *Assistant Professor,*
GF'S GCOE, Jalgaon, India, 425501
[2] *Assistant Professor,*
GF'S GCOE, Jalgaon, India, 425501
[3] *Associate Professor*
GF'S GCOE, Jalgaon, India, 425501
[1]*Email:- mahajankishor87@gmail.com*

Abstract *–The embodied energy is a significant factor in the whole life energy consumption of a building. Its proportion of the total energy consumption attributable to a building throughout its life is increasing as improvements in thermal performance and energy efficiency of systems reduce the energy consumption during the occupied phase of the building life. The embodied energy can include all energy attributed to a building material from its original source through to construction on site. This paper considers the component of embodied energy that is attributable to the transportation of the materials. It is based on a case study undertaken of a single construction site, determining the energy consumed in transporting the construction materials to site. The results of this study are based on the energy consumed in delivery only, the fuel consumed for a one way delivery journey. Literature search identified that common assumptions made by different researchers when evaluating transportation by road vary between 1.18 - 4.5 MJ/tonne/km. However these figures are assumed to include allowances for other aspects of the energy consumed that can be attributed to transportation such as return journeys and. the manufacture and maintenance of vehicles and roads. The paper shows that for a particular study of a site in Brighton 1.5% of the total embodied energy was attributed to the energy consumed in the delivery of the materials. Part load delivery and packing ratio are identified as factors affecting the energy consumed in transportation of materials and these issues are discussed with reference to the Brighton case study.*

Keywords- Embodied Energy, Transportation

INTRODUCTION

Life cycle of a building commences with the winning of the raw materials that are used to produce building materials and components and ends with the final disposal of those materials after demolition of the building and the reuse or recycling of suitable products. It includes all of the stages of construction, operation and demolition as depicted in fig. 1.

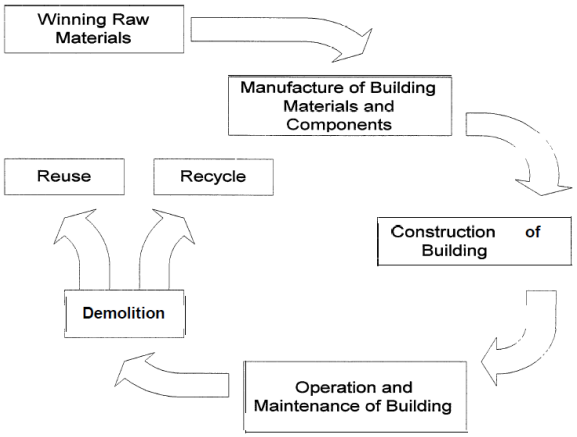


Fig. 1 Environmental Lifecycle of Buildings

Throughout its life cycle a building will consume energy, generally in the form of fossil fuels. The consumption of fossil fuels results in the depletion of natural resources and in the production of pollution with its subsequent problems such as global warming and

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Experimental and Finite Element Analysis of Bending Effect on Leaf Spring.

Bhatu Borane[1], Tushar A Koli[2]

[1] *Student of Master of Technology,*
GF'S GCOE, Jalgaon, India, 425501
[2] *Assistant Professor of,*
GF'S GCOE, Jalgaon, India, 425501
[1]*Email:- bhatuborane38@gmail.com*

Abstract *– The work is carried out on composite leaf spring of a commercial vehicle. The objective of this work is to carryout design and analysis of composite leaf spring with experimental design consideration and loading condition. The material of leaf spring is E-GFRC (Glass Fiber reinforced composite). The GFRC leaf springs are manufactured by hand lay-up method which were evaluated and study. The model of composite leaf spring is prepared and analyzed using ANSYS14.0 for the deflection and stresses under defined loading condition. The experimental and FEA result compared for validation. The dimension of conventional leaf spring is taken with varying thickness for evaluation of result and Static analysis is performed*

Keywords- E-glass/epoxy composite, ANSYS14.0, Static Analysis.

INTRODUCTION

Fig.1- Bending effect on leaf spring

Originally Leaf spring called laminated or carriage spring, a leaf spring is a simple form of spring, commonly used for the suspension in wheeled vehicles .It is also one of the oldest forms of springing, dating back to medieval times. Sometimes referred to as a semi-elliptical spring or cart spring, it takes the form of a slender arc-shaped length of spring steel of rectangular cross-section. The center of the arc provides location for the axle, while tie holes are provided at either end for attaching to the vehicle body. For very heavy vehicles, a leaf spring can be made from several leaves stacked on top of each other in several layers, often with progressively shorter leaves. Leaf springs can serve locating and to some extent damping as well as springing functions. A leaf spring can either be attached directly to the frame at both ends or attached directly at one end, usually the front, with the other end attached through a shackle, a short swinging arm. The shackle takes up the tendency of the leaf spring to elongate when compressed and thus makes for softer springiness.

In this project, the failure in the vehicles of M.S.R.T.C. State transport buses (Ashok Leyland and Tata Motors) has been identified at workshop depot,

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A REVIEW ON ADVANCE INTELLIGENT PARKING BRAKE SYSTEM

Shahnawaz Khan[1], Khan Naved [2], Behere Kamlesh[3],Deepesh Chaudhari[4], Pinjari Salman[5],Prof.Mayur Thakur[6]

[1,2,3,4,5]*B.E. Student,*
GF'S Godavari College Of Engineering Jalgaon, India 425003
[6] *Assistant Professor*
Department of Mechanical Engineering GF'S Godavari College Of Engineering Jalgaon, India 425003
[1]*Email:- shahnawazkhan309@gmail.com*

Abstract- *"Smart parking brake" is nothing but one of the breaking systems in automobile at the time of vehicle switch-off condition. In this breaking system motorized operated one. In this project, the control unit is received the signal from the key switch. The key switch is 'ON' at the time of vehicle start condition. The first time clutch is applied so that the motor is rotating in forward direction for 2 sec to release the break (Already wheel is on braking condition). The key switch is 'OFF' the motor is rotating in reward direction for 2 sec to applying the break-parking in major cities, particularly with dense traffic, directly effects the traffic flow and people's life. In this paper, we introduce a new smart parking system that is based on intelligent resource allocation, reservation, and pricing. The proposed system solves the current parking problems by offering guaranteed parking reservations with the lowest possible cost and searching time for drivers and the highest revenue and resource utilization for parking managers. New fair pricing policies are also proposed that can be implemented in practice.*

Keywords- Parking brake, Automatic parking brake system, Finite element analysis (FEA), Limit switch, Electrical motor, Temperature,Torque..

INTRODUCTION

PARKING is an expensive process in terms of either money or the time and effort spent for the "free spot chasing." Current studies reveal that a car is parked for 95 percent of its lifetime and only on the road for the other 5 percent. If we take England in 2014 as an example, on average a car was driven for 361 hours a year according to the British National Travel Survey yielding about 8404 hours in which a car would be parked. Now where would you park your car for these very long hours? Cruising for parking is naturally the first problem caused by the increase

of car owners globally. On average, 30 percent of traffic is caused by drivers wandering around for parking spaces. In 2006, a study in France revealed an estimation that 70 million hours were spent every year in France only in searching for parking which resulted in the loss of 700 million Euros annually . In 2011, a global parking survey by IBM states that 20 minutes is spent on average in searching for a coveted spot. With these statistics, we can assume that a great portion of global pollution and fuel waste is related to cruising for parking.

LITERATURE SURVEY

In cars, the hand brake (emergency brake, e-brake, parking brake) is a latching brake usually used to keep the car stationary, and in manual transmission vehicles, as an aid to starting the vehicle from stopped when going up an incline - with one foot on the clutch (to disengage it smoothly), the other on the accelerator (to avoid stalling from the increased torque required by the incline), a third limb is needed for the brake (to avoid rolling backwards while moving a foot from brake to accelerator). Automobile e-brakes usually consist of a cable (usually adjustable for length) directly connected

Impact factor: e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Double Axis Welding Machine Attachment.

Umesh Patil[1], Tushar A Koli[2]

[1] *Student of Master of Technology,*
GF'S GCOE, Jalgaon, India, 425001
[2] *Assistant Professor of,*
GF'S GCOE, Jalgaon, India, 425001
[1]*Email:- umeshnpatil.99@gmail.com*

Abstract – *In our research "Automated Double Axis Welding Machine" is beings with an introduction to welding the various components automatically. Two motors for controlling and relay are provided in this attachment. One motor is for the up and down movement, another one for arm lifting and one for the rotary motion. The aim of the project is to manufacture a welding machine which simplifies the work and improve the accuracy. The working principle of this machine is different other that of other welding machine. The working principle is very easy and at the same time production time is very much reduced. This machine is best suitable for mass production. The working principle is very easy and at the same time, production time is very much reduced. This machine is best suitable for mass production.*

Keywords- Welding, Mechanism, Robots etc

INTRODUCTION

Welding is a process of joining similar metals by the application of heat. Welding can be done with or without the application of pressure. While welding, the edges of metal pieces are either melted or brought to plastic condition. Welding can be done with the addition off filler materials or without it welding is used of making permanent joints. It is used in the manufacture of automobile bodies, aircraft frames, railways wagons, machine frames, structural work, tanks, furniture, boilers, general repair work and ship building, At most in all metal working industries welding is used.

METHODOLOGY

DESIGN OF BALL BEARING

Bearing No. 6202

Outer Diameter of Bearing (D) =35 mm

Thickness of Bearing (B) =12 mm

Inner Diameter of the Bearing (d)=15 mm

r_1 =Corner radii on shaft and housing

r_1 =1(From design data book)

Maximum Speed=14,000 rpm (From design data book)
Mean Diameter (d_m) = (D + d) / 2 =(35 + 15) / 2

d_m = 25 mm

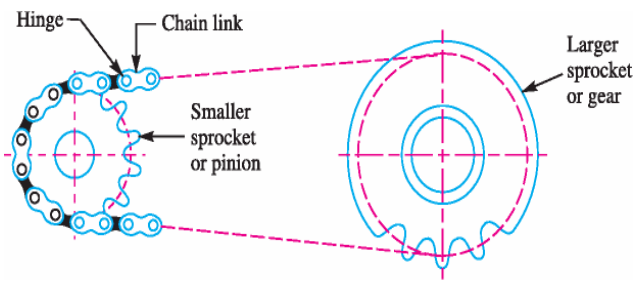
Spring index (C)=(D /d) =(35 /15) = 2.3

WAHL STRESS FACTOR

Ks=[(4C-1) / (4C-4)] + (0.65/C) .....{C=2.3}

Ks=1.85

CHAIN DRIVES



Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Performance Improvement of Vortex Tube, By Varying Inside Surface Roughness of Cylindrical Hot Tubes

Nitin Vijay Galwade[1], Prof. Tushar A Koli[2], Dr. V H Patil[3]

[1]PG Student,
Godavari College of Engineering, Jalgaon
[2]Assistant Professor,
Godavari College of Engineering, Jalgaon
[3]Associate Professor,
Godavari College of Engineering Jalgaon
[1]Email:- nitingalwade@gmail.com

Abstract *– Refrigeration plays an important role in developing countries, primarily for the preservation of food, medicine, and for air conditioning. Conventional refrigeration systems are using Freon as refrigerant. As they are the main cause for depleting ozone layer, extensive research work is going on alternate refrigeration systems. Vortex tube is a non-conventional cooling device, having no moving parts which will produce cold air and hot air from the source of compressed air without affecting the environment. When a high pressure air is tangentially injected into vortex chamber a strong vortex flow will be created which will be split into two air streams. It can be used for any type of spot cooling or heating application. In this paper, counter flow vortex tube with different surface roughness hot tubes performance is compared. It was found that the vortex tube with a surface roughness of R_a= 6.264 µm surpassed the hot tubes with a surface roughness of R_a = 4.510 µm & R_a = 3.133 µm by 6% to 26% and 16% to 52% in COP respectively. The COP of the vortex tube increases with the increase of inside surface roughness of hot tube*

A vortex tube contains the different main parts vortex chamber inlet nozzle and cold terminal orifice, hot control valve and orifice. It works in such a way that the fluid enters in the tube circulates about an axis which is called as vortex. And that rotation creates a vortex from the compressed air and separates that flow in two in air streams hot and cold. From its Centre the super-cooled air is passed and which is being delivered though cold end port. The surface finish of nozzle and the tube i.e. hot end takes an important role in performance of Vortex Tube.in this paper the it is observe that the vortex tube with major values of surface roughness of cylindrical hot tubes are used to increase the efficiency of vortex tube. It results in COP of vortex tube.

Keywords- Vortex chamber, Roughness value of cylindrical hot tubes, COP of the system, Efficiency of tube.

INTRODUCTION

The vortex tube is a thermal static tube that separates compressed gas flow to two streams; one stream colder than the inlet flow while the other stream is hotter than the inlet flow. The vortex tube does not have any moving parts and the separation occurs due to vortex flow generation without requiring any external mechanical work or heat transfer. The vortex tube was first discovered by Ranque [1, 2] who was granted a French patent for the device in 1932, and a United States patent in 1934. Ranque encountered the vortex tube phenomenon while he was experimentally working with vortex tube pump in 1928. In 1945, Rudolf Hilsch [3] conducted an experiment on vortex tube that focused on

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Maximising the Heat Transfer Through Fins Using CFD as a Tool

Kumbhar Shanteshwar I.[1], Koli Tushar A.[2], Thakur.M.P.

[1] *M Tech Thermal engg Student*
GF'S GCOE, Jalgaon, India, 425501
[2] *Assistant Professor,*
GF'S GCOE, Jalgaon, India, 425501
[3] *Assistant Professor,*
GF'S GCOE, Jalgaon, India, 425501
[1]*Email:- shanteshwarikumbhar@gmail.com*

Abstract –*This study presents the results of computational numerical analysis of air flow and heat transfer in a light weight automobile engine, considering three different morphology pin fins. A numerical study using Ansys fluent® (Version 6.3.26) was conducted to find the optimum pin shape based on minimum pressure drop and maximizing the heat transfer across the Automobile engine body. The results indicate that the drop shaped pin fins show improved results on the basis of heat transfer and pressure drop by comparing other fins. The reason behind the improvement in heat transfer by drop shape pin fin was increased wetted surface area and delay in thermal flow separation from drop shape pin fin*

Keywords- CFD, Continuum Type, FLUENT, Optimization, Simulation, Turbulence.

INTRODUCTION

Performance of various devices are based on heat transfer and widely used in the many industries, especially in power distribution sector (transformers), Automobile sector (engine cooling), Power Plant Sector, electric components, space industry etc. One of the useful methods to take away heat transfer from surface area of thermal device was extended surface or fins. Pin fin is suitable for numerous applications including heat transfer removal from air cooled I C engines, Electrical Small Transfers etc. "Pin fin geometry highly affects the different heat exchangers efficiency although these devices are used in various industries. Drop shaped pin fins can show more heat transfer with lower pressure drop from system and it was used for heat exchange purpose from past decades." In past this type of research work was based on experimental study, but having large technical and financial issues which was overcome by use of CFD techniques. A computational study was performed by various researchers using commercial software's to find out optimal shaped fins. Various researchers considered heat transfer and pressure drop across the thermal devices surface area. CFD analysis follow top to bottom procedure to perform simulation for any type of research problems. The first step is known as pre-processing, in which geometry making, mesh generation and boundary conditions of particular problem were defined by user. The heat transfer and associated pressure drop behaviour are characterized by second step known as solution of problem statement made in first step. To find optimum shape or performance of any thermal device third step was very useful because in this step post processing of results was performed and conclusion was made by researches. International Journal of Recent advances in Mechanical Engineering (IJMECH) Vol.2, No.3, August 2013 The objective of this study was to find out optimum type of fins used for heat removal application for automobile

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Experimental Set Up For Measurement of Strain by Using Strain Gauges on Simply Supported Beam and Analysis on ANSYS

Salve Mohanraj [1],Tushar A. Koli [2], Dr.V.H.Patil[3]

[1] *P.G. student,*
GF'S GCOE, Jalgaon, India, 425501
[2] *Assistant Professor,*
Dept. of Mechanical Engineering, GF'S GCOE, Jalgaon, India, 425501
[3]*Associate Professor*
Dept. of Mechanical Engineering, GF'S GCOE, Jalgaon, India, 425501
[1]*Email:- mohanrajsalve19@gmail.com*

Abstract – *The accurate assessment of stress, strain and loads in components under working conditions are an essential requirement of successful engineering design. Experimental stress analysis over years has been playing an increasingly important role in aiding engineering product designers to produce not only efficient, economic designs but also in substantial reductions in weight and yet aid in easier manufacturing of the products. This study develops a strain measurement test rig for beam structures subjected to point load acting at middle of the beam by using the strain gauges and for validation purpose analysis on ansys and compare with analytical values. Electrical resistance strain gauges are used as a sensor in wide variety of applications. And fairly inexpensive is used as a sensor in wide variety of applications. Load cell transducer is the most prevalent sensor which uses electrical strain gauges. In a load cell, the unknown, load is measured by sensing the strain developed in a mechanical member. Since the load is linearly related to the strain as long as the mechanical member remains elastic, the load cell can be calibrated so that the output signal is proportional to the load. The strain in the Simply Supported Beam will be calibrated and validated using numerical approach, analytical approach and experimental measurements.*

Keywords-Stress, Strain, Wheat stone Bridge Circuit, Ansys.

INTRODUCTION

It is difficult to determine stresses for a structure which has a complex shape or which has several loads applied to it. Failure of a structural member or machine parts can be caused by excessive normal stress or shear stress and, thus, it is important to determine the maximum principal stress and maximum shear stress at any point concerned. Hook's law is at work between stress and strain when an object has elastic deformation caused by external force and, therefore, an experimental method is used that measures strain and subsequently, calculates stress. Among many experimental methods, ones using a strain gauge are relatively most convenient and easy to use, and consequently are widely applied.

This study is intended to develop a training support tool to help students to understand the relation between stress and strain, elastic modulus, and strain measurement principles using a strain gauge. To that end, an experiment was implemented that determined normal stress at an attached point with a strain gauge, on a

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review on Design Development of Interchangeable Tool Head and Auto-Feed Table Mechanism for Portable Orbital Form Riveter

P.P.Gawande[1], Tushar A Koli[2], Dr.V. H.Patil[3]
[1] *Student*
Godavari college of engineering, Jalgaon, Pin 425001
[2] *Assistant Professor,*
Godavari college of engineering, Jalgaon
[3] *Associate Professor*
Godavari college of engineering, Jalgaon, Pin 425001
[1]*Email:- prasannagawande@gmail.com*

Abstract —*Riveting process is conventionally carried out using either a press machine, or manually hammering. This process is not accurate, takes considerable time and effort and so also may result into damage of component. The Portable orbital riveter uses the principle of orbital riveting where in a high speed spinning riveting tool held at an angle in the riveting head is fed into the rivet. This results in cold forming of the rivet head of maximum strength and with comparatively low force (less than 80% force that of conventional method) result into a strong and accurate joint. The angle of the riveting tool held in the riveting head plays a significant role in the reduction in forming force, where as the table motion will determine the accurate positioning of the rivet in to tool profile, resulting into exact shape and size of rivethead formed. Project deals with determination of optimal tool angle in tool head, and tool geometry and mechanism of table feed for accurate positioning. The portable orbital form riveting machine with optimal angle tool head and auto-positioning feed table will be designed and modeled using Unigraphix software, Analysis will be done using Ansys work bench 16.0. The rivet geometry dimensions(head diameter & depth), clearance in hinge joint will be parameters for optimization of tool angle by using ANNOVA software.*

Keywords- Interchangeable tool head.

INTRODUCTION

As we know, we are oftenly used small machine components joining together to form a larger machine part. Design of joints is as important as that of machine components because a weak joint may spoil the utility of a carefully designed machine part. Rivets are widely used in industrial applications for joining different machine components. Cracks developed on the rivet heads during their forming may lead to the failure of the entire machine. Hence it is very important to eliminate the formation of cracks. The possible reasons for this defect are improper tool design, machine fluctuations and improper material selection of the tool or rivet. In our effort to eliminate this problem redesigning the tool would be the most feasible and attractive option. Riveting process is conventionally carried out using either a press machine, or manually hammering. This process is not accurate, takes considerable time and effort and so also may result into damage of component.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Reliability of Mathematical model in Cupola Furnace

Hemant R. Bhagat [1], Dr. V. G. Arajpure [2],

[1] Research scholar
B.D.C.O.Engg. Wardha,(M.S), India
[2] Principal & Research Guide
Godavari College of Engineering. Jalgaon, India
[1]Email:- hrbhagatpatil@gmail.com

Abstract *– A subject that is so important to many decisions in this world could hardly escape quantitative analysis. The name "reliability" is given to the field of study that attempts to assign numbers to the propensity of systems to fail. In a more restrictive sense, the term "reliability" is defined to be the probability that a system performs its mission successfully. This presents an approach to reliability of models. Error frequency distribution for developed models with graphical representation. These graphs were compared with probability density function graphs of commonly used life distributions.*

Reliability of the model can be established by using

Reliability % = 100 - % Mean Error

Keywords- Mathematical model, Cupola furnace, field data.

INTRODUCTION

This represents an approach to reliability of models. Error frequency distribution graphs were plotted for developed models. These graphs were compared with probability density function graphs of commonly used life distributions.

In statistical analysis frequency distribution is most generalized case. Many statistical distributions are used to model various reliability parameters. The particular distribution used depends on the nature of the data being analyzed. Model reliability approximation is executed by comparing error frequency graphs of various mathematical models with probability density function graphs of commonly used life distribution.

This also presents a statistical method that explains how much of the variability of a factor can be caused or explained by its relationship to another factor. This is achieved through the trend analysis by the method of Coefficient of determination. The approach of R2-Co-efficient of Determination is used to analyze the behavior of mathematical models and clubbed models. The calculation for the reliability and the value of R2-Co-efficient of Determination is done for five response variables i.e. Π01 toΠ012and the proper comparisons are made to analyze the best suit for the reliability and the value of R2-Co-efficient.

Life distribution

Life distribution is the basic tool of reliability engineer; which may also be called as failure distribution. They can be either a combination of smaller distributions of different failure mechanism or a single distribution representing single failure mechanism. Life distribution can have any shape, but some standard forms have become commonly used over the years. Commonly used life distributions are: normal, lognormal, exponential and Weibull.

The normal distribution

The normal distribution is more often used to model repair many times, although it is also used to model reliability. In this application, the normal distribution is most applicable to simple maintenance tasks that consistently require a fixed amount of time to complete with little variation. The probability density function of the normal distribution is often called the bell curve

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Throwing Profile and Tools on the Potter's Wheel for The Production in the Pottery: A Critical Review

Nandkishor M. Sawai[1], Dr. V. G. Arajpure[2], and Dr. C. C. Handa[3]

[1]Ph. D. Scholar,
Mechanical Engineering,
nandkishor_sawai@rediffmail.com
[2]Principal,
Godavari College of Engineering, Jalgaon, India
[3]Professor and Head of Department
Mechanical Engineering, K.D.K.C.E, Nagpur, India
[1]Email:- nandkishor_sawai@rediffmail.com

Abstract *- Pottery is our earliest handicraft in prehistoric times; most of the clay was shaped on the wheel. In this paper, review existing throwing profile on the potter's wheel which is technological innovation. In this technological innovation, by the new idea, modification for throwing profile process gauges or tools used on the potter's wheel for the shaping of clay or earthen ware. Push clay down, with the left hand also push the left side of clay and with right hand press down on the top of it. Pull fingers of right hand outward, for cylinder; keep floor flat, for bowl; let fingers curve up wall to establish curve. During throwing profile, the surface of the clay body becomes smeared so that agate patterning is obscured. The prepared clay ball is then centred on the wheel. Once centred, the clay ball is opened and pulled quickly into a cylinder. During throwing, the surface of the clay body becomes smeared so that agate patterning is obscured. This throwing process used hands, left and right. The study specifies factors influencing the throwing process and recommends of tool replaced by hands. These are based on a systematic analysis of the throwing process and testing of a prototype throwing process consisting of standard tools. For which we consider literatures reviews &some of them are explained.*

Keywords: Throwing process, throwing profile equipments or tools, earthen ware, potter's wheel.

INTRODUCTION

Many countries are involved in production of earthen pot/ clay pot. Different types of clay pot included earthen pot, ceramics, crockery, pottery or earthenware. Earthen pots are extensively used in countries like India, Nigeria, Nepal, Pakistan etc... in the rural area. Earthen pot is made either manually by using layer of clays or throwing on the potter's wheel.

The throwing on the potter's wheel technique is important in making of an earthen pot. Throwing profile and tools is the best of all the clay shaping processes on the potter's wheel. The goal is to provide technological solution to shaping to clay on the potter's wheel. The potter imparts his creativeness on a lump of clay spinning on a potter's wheel, using his thumbs, fingers and palms. Pottery making is done by fine finger movements with a focus on both finger movements common among potters and on unique pot-forming procedures developed by each potters.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Investigation of MPFI System using Magnetism for Petrol Engine Enhancement

Nilesh T. Waykole[1], Tushar A. Koli[2], Dr.Vijay H. Patil[3]

[1] *P.G.Student,*
Thermal Engineering, G.F's Godavari College of Engineering, Jalgaon, India, 425003
[2] *Assistant Professor,*
Mechanical Engineering, G.F's Godavari College of Engineering, Jalgaon, India, 425003
[3]*Asso. Professor and Head of Department*
Mechanical Engineering, G.F's Godavari College of Engineering, Jalgaon, India, 425003
[1]*Email:-nileshtwaykole0801@gmail.com*

Abstract – *The prices of fuels are increasing day by day due to technological constrains, gap in the demand and supply and scarcity of conventional fuels . When fuel (Hydrocarbons) flows through magnetic emission reducer which contain strong magnetic field, change their orientation and molecule change their configuration. NdFeB magnetic emission reducer, which improves the performance of four strokes SI engine used before carburetor observed by test. Test studies include effect of NdFeB magnetic fields on fuel line, the engine performance like energy consumption and exhaust emissions. This happens because of Hydrocarbon molecules get realigned, converts para to ortho rotation hydrogen molecules and actively interlocked with oxygen during combustion to produce a near cent percent burning of fuel in combustion chamber. The current research investigates the effect of magnetic field on I,C.engines. The study concentrates on engine performance parameters such as fuel consumption and exhaust emissions. The magnetic field was applied to S.I.E. using gasoline fuel. Moreover, the fuel is subjected to a permanent magnet mounted on fuel inlet lines. The experiments were conducted at different idling engine speeds. The exhaust gas emissions of CO, NO, and CH4 were measured by using an exhaust gas analyzer. The magnetic effect on fuel consumption reduction was up to 15%. CO reduction at all idling speed was range up to 7%. The effect on NO emission reduction at all idling speed was range up to 30%. The reduction of CH4 at all idling speed was range up to 40%*

Keywords- Fuel, Magnetic Field, Engine performance, Four stroke multi cylinder S.I. engine, Hydrocarbons, Strong permanent magnets, Efficiency.

INTRODUCTION

The effect magnetic field on the biological and mechanical systems is the subject of study of interest from last fifty years. Many studies suggest that magnetic field has positive effect on the performance of the system. The study related to the effect of magnetic field on the fuel of I.C. engine is gaining importance in order to reduce the fuel consumption and the engine emissions. Since fuel of I.C. engine is a complex molecular arrangement of hydrocarbon as Fuel mainly consists of hydrocarbons. The simplest of hydrocarbon is methane. The chemical composition of methane is CH4. It has the major (90%) constituent of natural gas (fuel) and an important source of hydrogen. The greatest amount of releasable energy lies in the hydrogen atom. As an example, in octane (C8H18) the carbon content of the molecule is 84.2%. When combusted, the carbon portion of the molecule will generate 28,515 KJ/Kg of carbon. On the other hand, the hydrogen, which comprises only 15.8% of the molecular weight, will generate an amazing energy- 22,825 KJ /Kg of H2. In the present work, it is proposed to study the effect of magnetic field on the internal combustion (SI) engine.

1. EFFECT OF MAGNETIC FIELD ON FUEL MOLECULE

Hydrogen occurs in two distinct isomeric forms Para and ortho. It is characterized by the different opposite

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review on Hill Descend Control System for Vehicle

Salunke Rahul Prabhakar[1], Chaudhari Homraj Ashok[2], Patil Mahendra Shantaram[3], Valvi Sharad Surupsing[4], Chandankar Pradnya Milind[5], Prof. M.P.Thakur[6]

[1,2,3,4,5]B.E. Student
GF'S Godavari College Of Engineering Jalgaon, India, 425003
[6] Assistant Professor
Department of Mechanical Engineering GF'S Godavari College Of Engineering Jalgaon, India 425003
[1]Email:- rahulsalunke1202@gmail.com

Abstract – *The objective of this topic is to study hill descend controlled system in vehicle. Hill assist is an automatic system that operate break to stop rolling back when it is starting on sleep hill. When hill assist system senses vehicle is starting from rest on slop, it automatically keeps food break even after you released the pedal by accelerated vehicle using parking break/hand break. The hill descent controlled system help to increased controlled on sleep greades and prevent from rolling back. Another function is hill hold function which is highly desirable feature in manual transmission vehicle equipped with hybrid powers train. The hill hold feature supports the stop and go performance associated by holding the vehicle on an inclient and preventing undesired motion.*

Keywords- Hill Assist Control, Hill Starts Assist Control, Hill Hold Control.

INTRODUCTION

The mechanism is used in many applications effectively where the one side power transmission is required for example in (I) Giant wheel-It is the large wheel used in the amusement parks to rotate along the horizontal axis to rotate in one direction while carrying the number of passengers. (ii) Clock where the hands rotate in clockwise directions only. (iii) Baffle gates in the entrances of many buildings which rotate about vertical axis in one direction. (iv) Shaping Machines in the crank and slotted arm. In the hill station, the most common problem to the drivers is to park their cars in the slope and to start up the car. While waiting in the traffic, the cars have to move on step by step very slowly; this situation is difficult one for the drivers to make their car not to roll back in the slope. So the mechanism haste be developed to stop the vehicle from rolling back and it should not stop the vehicle in accelerating forwards. This function can be achieved by using thatched and pawl mechanism. The ratchet and pawl has to be designed and has to be fit in the front drive shaft in case of the front drive vehicles. The Marti Swift Dire car is considered and the ratchet and pawl has to be designed for it. In order to design for the worst case the road maximum slope is considered Zoji pass Road Kashmir which has 21.80 with gradient 2/5.

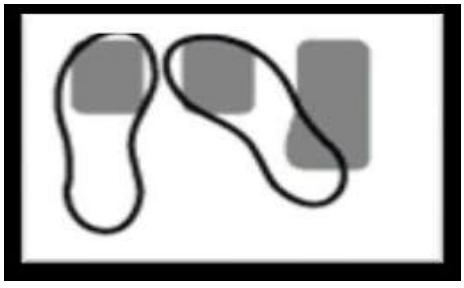


Fig. 1- Schematic representation of operating the brake)

clutch and accelerator simultaneously it is not advisable to use the hand

Brakes while the car is moving in forward movement.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Review on Design of Stationary Spindle Swaging Machine

Vaibhav Patil[1] , Amol Mundokar[2] , Yogendra Patil[3], Swapnil Suryavanshi[4], Samadhan Bhutekar[5], K.M.Mahajan[6]

[1,2,3,4,5] *B.E. Student*
Department of Mechanical Engineering, Gf's Godavari College of Engineering. Jalgaon, India,425501.
[6] *Assistant Professor*
Department of Mechanical Engineering, Gf's Godavari College of Engineering. Jalgaon, India,425501
[1]*Email:- veerpatil32@gmail.com*

Abstract *This project is purely based on Forming process. Basically, in forming process diameter or shape of work piece is reduces by external load which is applied by using manually or mechanically. The Rotary Swaging machine is the type of forming process. Rotary swaging is a process for precision forming of tubes, bars or wires. lt belongs to the group of net-shape-forming processes, of which one of the characteristics is that the finished shape of the formed work pieces is obtained without, or with only a minimum amount of further final processing by machining. The forming dies of the swaging machine are arranged concentric around the work piece. The swaging dies perform high frequency radial movements with short strokes. Usually one die set consists of four die segments. The swaging dies rotate around the workpiece, or alternatively the workpiece rotates between the dies. For production of non-circular forms, the dies and the workpiece are stationary without rotational movement. Rotary swaging is an incremental forming process where the oscillating forming takes place in many small processing steps. One of the advantages of the incremental forming process compared to the continuous processes is the homogenous material forming.*

This project gives us knowledge, experience, skills and new ideas of design and manufacturing. This project is the equipment useful to improve quality of swaging machine and overcome disadvantages of rotary spindle and the output can be made in less time, hence we have selected this project. In rotary spindle swaging machine during working vibration on work piece is to much due high vibration work piece handling is very difficult but, In stationary spindle swaging machine overcome this drawback. The stationary spindle swaging machine allow multiple shapes on works piece. In this machine high product quality formed, and the efficiency of this machine is high.[1]

Keywords- Base on Forming process, Reduce Diameter.

INTRODUCTION

Rotary swaging tooling rolling contact fatigue under operating conditions was investigated. First, rotary swaging tooling service conditions were identified in terms of load, speed, temperature, and lubrication. Secondly, analysis was conducted to characterize tooling materials and tooling contact fatigue mechanisms. Thirdly, computation was carried out to determine the load capacity of the rotary swaging machine, tooling dynamic load rating, tooling rolling contact fatigue life, Hertz contact stress and elasto hydrodynamic lubrication (EHL) analysis for oil film thickness. Finally tooling life improvement technologies were explored and discussed. Based on the results of experimental and computational work, typical tooling rolling contact fatigue and wear mechanism was determined, which consisted of surface brinelling, surface pitting, and crack growth. The

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review on Design of Hydraulic Mold Splitter and Tipper Equipment

Mr. Abhyuday Joshi[1], Mr. Girish Patil[2], Mr. Lalit Rane[3], Mr. Ravindra Patil[4], Prof. Tushar Koli[5]

1,2,3,4 Students /
Department of Mechanical Engineering, Gf'S Godavari College of Engineering, Jalgaon, India, 425003
5Assistant Professor
Department of Mechanical Engineering, Gf'S Godavari College of Engineering, Jalgaon, India, 425003
[1]Email:-joshiabhi815@gmail.com

Abstract - *In the present review paper an effort is made to study the previous investigations that have been made in the different designs of hydraulic mold separators. This machine is purely based on hydraulics system.. The machine which we are designing is useful to improve quality of mold being manufactured and can be made in less time. Now days, vertical machines of such type are present in industries which causes many difficulties during mold manufacturing. To reduce these kinds of difficulties, we are trying to improve this vertical machine and make it horizontal. Tasks which are too heavy or too delicate for human muscles to do can be done easily by this machine. The-use of this equipment has resulted in large-scale production and has reduced costs to levels never dreamt of before. Our core pull accessory is usually added to the housing of the tipper and this, of course, allows technicians to hydraulically work cores while the mold half is still in the Die-Sep, further saving time and energy from not having to move the mold for testing.*

Keywords- Hydraulic mold separator, hydraulic systems, mold manufacturing, Die-sep, core pull accessories.

INTRODUCTION

Today's world requires speed on each and every field. Hence rapidness and quick working is the most important. Now days for achieving rapidness we designed this machine. Hydraulic mold splitter and tipper equipment is compact equipment and helps to manufacture molds with considerable higher rate. In short we can say that it will improve the quality production of molds. Mold splitters or separators allow for safe and efficient handling of molds during maintenance, and can be built to the unique mold size, and plant configuration [1]. This project is purely based on hydraulics system. Pascal's law is the basis of hydraulic drive systems. The machine consists of two dies of which one is fixed while another is free to move. The pattern is mounted on one die and the mold to be manufactured is on second die. Both the dies can turn through 90 degrees, thus it becomes easy to inspect the defects and take out the manufactured mold from equipment.

METHODOLOGY

Following methodology is used for designing of Hydraulic mold splitter and tipper equipment [2]:-

1) **Formulation of the problem –** The success of any experiment is dependent on a full understanding of the nature of the problem.

2) Consider the possible mechanisms - When you designing the machine consider all the possible mechanisms which help desired motion or the group of motions in your proposed machine. From the various options the best can be selected whenever required [3].

3) Transmitted forces - Machine is made up of various machine elements on which various forces are applied. Calculate the forces acting on each of the element and energy transmitted by them.

4) Material selection - Select the appropriate materials for each element of the machine so that they can sustain all the forces and at the same time they have least possible cost.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Comparative Analysis of Metallic & Non Metallic Spur Gear – A Review

Shailendra Sakharam Wani [1], Dr. V. G. Arajpure [2]

[1]*PhD student*
North Maharashtra University, Jalgaon, INDIA, PIN-425001
[2] *Principal*
G.F's Godavari College of Engineering, Jalgaon, INDIA, PIN-425003
[1]*Email:- swani2001@gmail.com*

Abstract *– Gears are the back bone & one of the most critical components in mechanical power transmission systems. Gears are the very useful components in mechanical power transmission system and industrial rotating machinery. A spur gear generally subjected to two types of stresses like bending stresses and contact stresses which are causes teeth failure during meshing with another tooth. Among the contributors in gear set failure bending and surface strength are identified as one of the contributors which plays major role in it. Thus, to reduce the failure of gear & for optimization of gear design analysis of stresses resulted into major are of interest. Gears are generally made from metallic materials but recently advanced polymers materials were developed which have sufficient strength and properties similar to the metallic materials so it can easily replace the metallic gears if some care will be taken. Nylon, polycarbonate, acetals and delrin are the structure polymers materials are used for gears in printing and robotics mechanism with good functionality but polymers gears are not used in heavy loading type application. Specially polymers gives extra benefits compared to metallic gears like less noise-vibration, low requirement of maintenance-lubrication, low cost and easy manufacturing. Static finite element analysis requires performing the design optimization process on both materials. This paper presents the design optimization methodology step by step for comparative analysis of metallic and polymer gears using static finite element analysis.*
In this paper the major focus is on studying the comparative analysis of Metallic & Non-metallic spur gears.

Keywords: Metallic & Non metallic materials, bending stress, Polymer & hybrid materials, modeling,

INTRODUCTION

Gears are critical components of power transmission system. Gears are very useful due to its beneficial characteristic like constant velocity ratio & simple attachment for increase or decrease in speed of shaft. So it is widely used in most of power transmission system.
Gears are made from following types of materials as per application:

(a) Metallic material
  (i) Malleable CI
(b) Forged steel
  (i) Carbon steel
  (ii) Carbon chromium steel
  (iii) Carbon manganese
  (iv) Nickel chromium steel
(c) Surface hardened steel
(d) Case hardened steel
(e) Non metallic & composite:
  (i) Nylon
  (ii) Acetals
  (iii) Polycarbonate
  (iv) Delrin

LITERATURE REVIEW

The literature mainly focuses on comparative analysis of various materials & studies the possibility about replacement of metallic gears with polymer gears of light or medium power transmission.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Design and Fabrication of Prototype Automatic Braking System and Pneumatic Bumper for Automotives

Prof.Y.J.Wagh[1], Dr.V.G.Arajpure[2], Prof.S.D.Galande[3]
[1]*Assistant Professor,*
AVCOE Sangamner, India, 422608
[2]*Professor & Principal,*
Gf's GCOE, Jalgaon, India, 425001
[3]*Assistant Professor,*
AVCOE Sangamner, India, 422608
[1]*Email:- yogeshwagh30@gmail.com*

Abstract – *Vehicle technology has increased rapidly in recent years, particularly in relation to braking system and sensing system. In parallel development of braking technologies, sensors have been developed that are capable of detecting physical obstacles, other vehicles or pedestrians around the vehicles. Automation can assure higher reliability of braking as compared to fully manual braking. Since high speed crashes are more likely to be fatal than low speed collisions, automatic braking systems can saves lives and reduce the amount of property damage that occurs during accident. The concept is to improve the damage reduction capacity by adding an extendable and retractable bumper with an automatic braking mechanism. It will be an added safety measure in the current facilities such as Abs, Air Bags, etc. the use of pneumatic system can prove to be useful in automation due to its simplicity so the aim is design and developed a system based on automatic control of vehicles. This system improves response time of vehicles braking to keep safe distance between the vehicles, so we can obtain control over the speed of vehicle in short distance.*

Keywords- Automatic braking system, pneumatic bumper, Electromechanical system, Infrared sensor.

INTRODUCTION

A brake is a device which inhibits motion. Its opposite component is a clutch. Most commonly brakes use friction to convert kinetic energy into heat, though other methods of energy conversion may be employed. The effective braking depends mainly on the response time of the entire system and driver's feel. The response time is determined as the time elapsing between the beginning of the actuation of the control pedal and the moment the pressure in the actuator reaches 75 percent of its asymptotic value. The brake system layout configuration has to be designed in such a way that the response time should meet the vehicle safety standard regulations. The heavy commercial vehicle brake system layout is designed keeping various vehicle parameters like Gross Vehicle Weight, wheel base, Centre of Gravity of the vehicle, number of axles etc.

The system layout design is extremely complex since it involves number of valves which have to function in a logical sequence during different stages of braking (Normal, emergency, and One circuit failed condition).Conventionally, the system layout design is arrived after many iterations based on field trials and experience. This method involves more lead time and cost till the layout is finalized. Hence the modeling and analysis of the system layout using simulation helps us to predict the behavior of the layout in terms of response

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review on Design and Fabrication of Brush Making Machine

Nilesh Vishvasrao Suryawanshi[1], Rakesh Dhansing Pawara[2], SK. Altamash SK Qadir[3], Shubham Sanjay Pate[4], Prashant Ashok Patil[5], Prof. Vijay S. Chavan[6]

[1,2,3,4,5]B.E. Student
GF'S Godavari College Of Engineering Jalgaon, India 425003
[6] Lecturer,
Department of Mechanical Engineering GF'S Godavari College Of Engineering Jalgaon, India 425003
[4]*Email:- shubhampate25@gmail.com*

ABSTRACT : *In day to day life for cleaning we are using many sort of brush. Brushes can be categorised by their work and shapes. Some critical parts like bottles or any small necked or small entry passage type articles are very difficult to clean inside walls. Like a bottle it has very small opening, it required some sort of brush which can penetrate easily inside the bottle and again expands and rub the interior walls of bottle and clean it.*
To make cleaning work easy, we are making project "Design and Fabrication of Brush Making Machine." As per market demand for this kind of cleaning brushes, we try to make the machine to produce maximum brushes in prescribed time.
The Brush Making Machine will so design that it should have minimum moving parts which maximise reliability. The main components of machine are to be selected from some standard parts which are used in regular machines so that for future repair and maintenance of machine will be easy.
The brush is to be made by using two main parts as raw material, first is galvanized steel wire for handle and second polystyrene for bristles.

INTRODUCTION

Brush:-

A brush is a tool with bristles, wire or other filaments, used for cleaning, grooming hair, make up, painting, surface finishing and for many other purposes. It is one of the most basic and versatile tools known to mankind, and the average household may contain several dozen varieties. It generally consists of a handle or block to which filaments are affixed either parallel- or perpendicular-wise, depending on the way the brush is to be gripped during use. The material of both the block and bristles or filaments is chosen to withstand hazards of its application, such as corrosive chemicals, heat or abrasion.

Manufacturing fashion:-

A common way of setting the bristles, brush filaments, in the brush is the staple or anchor set brush in which the filament is forced with a staple by the middle into a hole with a special driver and held there by the pressure against all of the walls of the hole and the portions of the staple nailed to the bottom of the hole. The staple can be replaced with a kind of anchor, which is a piece of rectangular profile wire that is anchored to the wall of the hole, like in most toothbrushes. Another way to attach the bristles to the surface can be found in the fused brush, in which instead of being inserted into a hole, a plastic fibre is welded to another plastic surface, giving the option to use different diameters of bristles in the same brush. Configurations include twisted-in wire (e.g. bottle brushes), cylinders and disks (with bristles spread in one face or radially).

Types of Brushes:-

It is categorised by, Removal of material (cleaning and polishing), Assortment of cleaning brushes, including bottle brushes, the action of these brushes is mainly in the tip of each flexible bristle which dislodges particles of matter. Toothbrush, Floor brush (yard brush, yard

Impact factor: 3.441 e-ISSN: 2456-3463
National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018) Organized by GF's Godavari College of Engineering, Jalgaon.
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018 www.ijies.net

Implementation of Process Capability Study to Improve the Quality of the Piston Manufacturing Process in Batch Production

S. M. Wani[1], A. R. Bang[2], H. S. Rane[3], A. D. Bagul[4], Dr. V. G. Arajpure[5]
[1] *Assistant Professor, Deptt. of Mechanical Engineering*
Government College of Engineering, Jalgaon, (MS), India, pin code 425001,
[2] *Head and proprietor,*
SOFT –TOUCH CAD/CAM/CAE, Jalgaon, (MS) India, pin code 425001 ,
[3] *Assistant Professor, Deptt. of Mechanical Engineering*
N. M. K.C., Jalgaon, (MS), India, 425001,
[4] *Assistant Professor, Deptt. of Mechanical Engineering*
N. M. K.C., Jalgaon, (MS), India, 425001,
[5] *Principal and Professor, Deptt. of Mechanical Engineering*
GF's Godavari C. O.E., Jalgaon, (MS), India, 425003,
[1]*Email:-gcoe_smw@yahoo.com*

Abstract - *Quality has turned out to be a standout amongst the most critical shopper choice factors in the determination among contending products and processes. The nature of conformance is the way well the product fits in with the particulars specifications required by the developed design.*

The quality can be estimated as far as Process Capability characterized as the index of which the process is equipped for generating mass products with specification limits. Be that as it may, for each item there are sure breaking points for design, manufacturing and use. The farthest point of manufacturing for generating accurate dimensional items may called as specification limits. These limits of confinement mean the end criteria for the batch manufacturing.

The approach introduced here is to characterize the significance of quality and the impact of process capability study on batch manufacturing. The writing accommodated the quality and process capability are valuable to think about the conduct of the manufacturing processes under production. Certain graphical charts have examined here to study the piston manufacturing process.

Keywords - Batch manufacturing, piston, Process Capability, Quality, Specification Limits, etc.

INTRODUCTION

A] Quality of Product-

The quality of conformance is how well the product conforms to the specifications required by the process engineer. Quality of conformance is affected by a number of variables, including the selection of manufacturing processes, the training and supervision of the worker, the category of process controls, tests, and inspection activities that are applied, the extent to which these processes are followed, and the motivation of the workforce to achieve quality. Unfortunately, this definition has become associated more with the conformance aspect of quality than with development. This is in part due to the lack of formal education most product designers and process engineers receive in quality engineering methodology.

In factories Quality has more definitions and changes from men to men. The overall description about quality is that capability which superior from something in design and manufacturing field. It is also defined as degree of fitness for some purpose. For example, production workers might see quality as conformance to specifications. If the size of the hole they produce is within their tolerance, it is a good hole. If not, it's bad. Marketing people might think of quality as something that sells well and causes little trouble for the customer. Supervisors see quality when production is higher than normal and there are few reworks. Customers see quality if the product does what they expect it to do without any breakdowns.

B] Statistical Quality Control-

Statistical quality control really came into its own during 1942. The need for mass-produced war-related items, such as bomb sights, accurate radar, and other

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review of Solar water Distillation System with Different Basin Materials and Vacuum

Vishal A. Kale[1], Denin Chalakkal[2], Aniruddha Y. Chaudhari[3]

[1,2] *Diploma Student*
G.F's Godavari College of Engineering, Second Shift Polytechnic, Jalgaon ,India,425003
[3] *Assistant Professor*
G.F's Godavari College of Engineering, Jalgaon, India, 425003
[3]*Email:- ani_485@rediffmail.com*

Abstract – *Water is basic need of human being. Due to increase in population and industry there is problem of fresh or pure water. Purification of water is very essential. There are so many devices available in the market for purification of water, but solar still is the most economical method to purify the water as it uses only solar energy which is available on the everywhere and at zero cost. Also the solar still has no moving parts and other filtration member this makes the still maintenance free. An attempt is made in this paper to review about the solar water distillation system, in which the comparisons of basin materials like copper, aluminium, GI are studied for understanding the performance. From the study it shows that copper material of basin has highest productivity of distilled water approximately 5-8 lit/day/m2 as compared to aluminium and GI.*

Keywords: - solar still, copper, aluminium, GI, vacuum.

INTRODUCTION

Pure water is the basic need of human being. We cannot imagine life without water. The availability of pure water is an important issue in towns. Many people are not satisfied with the water supplied by their municipalities and purchase their own water purifier at home.

The increase in population with the development in industrial leads to pollution of water. The waste water from the industrial process is drained in the lakes or river in the area which is the main source of water Pollution. This not only affects the quality of water but also affect the animals living in the water.

Water is an abundant natural re-source that covers three quarters of the earth's surface. However, only about 3% of all water sources is potable. Less than 1% fresh water is within human reach and the rest is ice. Even this small fraction (ground water, lakes and rivers) is believed to be adequate to support life and vegetation on the earth. 30% of all fresh water is under-ground, most of it in deep, hard-to-reach aquifers. Lakes and rivers together contain just a little more than 0.25% of all fresh water; lakes contain most of it. Most of the region in our country depends upon the underground water for drinking. However the underground water contains more salts. The salt concentration varies with the area in the country. The water which contains high salt concentration is called as hard water or brakish water. In such cases, fresh water has to be either transported for long distances or connected with an expensive distribution water network at extremely high cost for a small population. Nowadays pollution in rivers and lakes by industrial effluents and sewage disposal has resulted in scarcity of fresh water in many big towns and cities around the world [1]

Table 1- The IS Specification IS: 10500 for drinking water are given in below table

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review Paper on Chairless Chair

Mr.Jagtap Vinayak[1] Mr.Vyas Mahesh[2] Mr. Mahajan Chetan[3] Mr. Soni Vijay[4] Mr. Bonde Pankaj[5], Prof. Talha Ahmed[6].

[1,2,3,4,5]*Students*
GF's Godavari College Of Engineering ,Jalgaon ,India , 425001
Assistant Professor[6]
GF's Godavari College Of Engineering ,Jalgaon ,India , 425001
[2]*Email:- mahesh.vyas20495@gmail.com*

Abstract *– It's an innovative and forward-thinking concept, the ability to sit anywhere and everywhere with the aid of a chairless chair. It's like a chair that isn't there, but magically appears whenever you need it. It's called the chairless chair and you wear it on your legs like exoskeleton , when it's not activated , you can walk normally or even run. Like a chair that is now there.*
Standing for hours or end causes a lot of distress to lower limbs, but most works get very few breaks and chairs are rarely provided , because they take up too much space. So the best idea was to strap an unobtrusive chair directly to yourself. So it was decided to have this innovative concept in reality, to help workers who work for hours on production line in standing position and tired

.***Keywords-*** *Chairless Chair, Exoskeleton, Ergonomics*

INTRODUCTION

It's an innovative and forward-thinking concept the ability to sit anywhere and every-where with the aid of a chairless chair. The concept was first conceived two years ago by Keith Gunura, co-founder and CEO of noonee, and since then the company has de-veloped its Chairless Chair and entered talks with a number of leading manufacturers. Designed for static and dynamic industrial market applications, the Chairless Chair aims to increase user's health, comfort, and productivity. It's like a chair that isn't there, but magically appears whenever you need it. It's called the Chairless Chair and you wear it on your legs like an exoskeleton: when it's not activated, you can walk normally or even run. Like a chair that is now there.Standing for hours on end causes a lot of distress to lower limbs, but most workers get very few breaks and chairs are rarely provided, because they take up too much space. So we thought that the best idea was to strap an unobtrusive chair directly to you.

The device never touches the ground, which makes it easier to wear, a belt secures it to the hips and it has straps that wrap around the thighs. A variable damper engages and supports the bodyweight, which is directed towards the heels of the shoes. These are specially designed and part of the mechanism, but an alternate version works with any footwear and touches the ground only when in a stationary position.The 'chairless chair', which Audi has further developed together with a Swiss start up company, is an exoskeleton that is worn on the back of the legs. It is fastened with belts to the hips, knees and ankles. Two leather covered surfaces support the buttocks and thighs while two struts made of carbon fiber reinforced plastic (CFRP) adapt to the contours of the leg..

LITERATURE REVIEW

The Chairless Chair then locks into that configuration, directing their weight down to the heels of their shoes, to which it is attached it also attaches to the thighs via straps, and to the waist using a belt. There are as many different types of chairs as there are types of people. It is an object that is available to most everyone. In its different embodiments it can be humble or regal, made of traditional wood or high-tech polymers, simple in con-cept or highly charged with meaning. Fundamentally, the requirements for a chair are few. It is essentially a horizontal surface at a logical distance from the ground meant to support the human body while sitting. A vertical surface is provided for back support.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review on Automatic Tyre Inflation System

Patil Tejas Sanjay[1], Patil Dhanraj Gulabrao[2], Nikum Mayur Chandrakant[3],

Pawar Rohit Shamkant[4], Pingale Mayur Suresh[5], Dr. V H Patil [6]

[1,2,3,4,5]B.E. Student
GF'S Godavari College Of Engineering Jalgaon, India 425003
[6] Head of Department of Mechanical Engineering
GF'S Godavari College Of Engineering Jalgaon, India 425003
[1]*Email:- tejas6753@gmail.com*

***Abstract* –** Driven by studies that show a drop in tyre pressure by just a few PSI can result in the reduction of gas mileage, tire life, safety and vehicle performance, we have developed an automatic, self-inflating tire system that ensures that tyre are properly inflated at all times. Our design proposes and successfully implements the use properly compressor that will supply air to all four tyre via hoses and a rotary joints fixed between the wheel spindle and wheel hub at each wheel. The rotary joints effectively allow air to be channeled to the tyres without the tangling of houses. With the recent oil price hikes and growing concern of environmental issues, this system a potential improvement in gas mileage; tyre wear reduction; and an increase in handling and tyre performance in diverse conditions.

Keywords- Automatic Tyre Inflation System, Manual Tyre Inflation System etc.

INTRODUCTION

The "**Automatic tyre inflation system**" is a Mechanical device which is widely used in automobile works. The manual work increases the effort of the man power (operator) during the air checking in vehicles. The Air Maintenance Technology system developed through this project replenishes lost air and maintains optimal

tire cavity pressure whenever the tire is rolling in service, thus improving overall fuel economy by reducing the tire's rolling resistance. Automation can be

achieved through computers, hydraulics, pneumatics, robotics, etc., of these sources, pneumatics form an attractive medium for low cost automation.

Today automobile sector plays a big role in the economics of all the countries in the world and lots of researches have been carried out to improve the efficiency of the vehicle one the techniques to improve the efficiency of an automobile is inflate the tyre regularly. As its well-known, one of the most serious problem that the large motor vehicle have whether they are for the transportation of passenger or cargo and especially those used for middle or longer distance travel, resides the ensuring the correct performance of the tyres. This means making sure that tyre are inflated and stay inflated for the right amount of pressure for the load being carried and for road condition this way one can ensure not only the preservation of outer covering of the tyres, but also the correct operation of vehicle without any risks.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

A Review on Manufacturing of Cooling Tower

Mr. Aakash Shinde[1], Mr. Danish Khan[2], Mr. Pawan Deore[3], Mr. Kunal Sonawane[4], Mr. Rehan Shaikh[5], Dr. V. H. Patil[6]

[1,2,3,4,5]*Students*
GF's Godavari College Of Engineering, Jalgaon, India, 425001
[6]*Associate Professor*
GF's Godavari College Of Engineering, Jalgaon, India, 425001
[1]*Email:- aakashshinde299@gmail.com*

Abstract – *Study on the performance of the cooling tower in steam power plant by using Cussons technology steam plant to conduct on experiment and analyze the effect of flow rate control and water make up control to the cooling tower. This simply investigated the flow floe rate of water from cooling tower effect the condensate time, the condensate flow rate and the efficiency of steam turbine by using three different flow rate of cooling tower for 12,000 L/hr 10,000 L/hr and 8,000 L/hr. Then it is separated for two types , one is for two nozzles fully open and other is three nozzle fully open. Comparison between them is performing in the analysis. An was made for analyzing the effect of tower make-up control to performance of cooling tower but due to technical problems there are no data taken regarding the make-up water.*

Keywords- Cooling tower, Flow rate control, Nozzles, performance.

INTRODUCTION

In comparison with most other industrial equipments, the water cooling tower is a simple device, based on the direct contact of two of the earth's most common substances: air and water; yet a surprising number of misconceptions on its design, operation and behavior prevail. Cooling basics and important misconceptions are discussed herein, with the goal of helping to achieve the most economical and beneficial application, design, and operation of this important heat transfer device to the maximum extent.

LITERATURE REVIEW

This paper has the research from other people regarding the performance of cooling tower. The explanation of types, and the theory involving cooling tower are described thoroughly as the cooling tower used in industry. Without cooling tower, big facility or building temperature might not stable at it will increased the heat to the people in the building. There are also some explanation about the system and the theory on heat transfer between air and water in the cooling tower.

- S.V. Bedekar, P.Nithiarasu and K.N. Seetheramu have studied the performance of fluidized-bed cooling tower: ignoring the higher pressure drop compare to other film and flash type tower, there performance was excellent. Sisupalan and Seetharamu examined the performance variation of a fluidized-bed cooling tower for different static bed heights.
- Al-Waked and Masud Behenia made research about computational fluid Rafat dynamics (CFD) simulation of bed cooling tower. Heat and mass transfer inside a natural draft wet cooling tower (NDWCT) have been investigated numerically under different operating and crosswind conditions.
- J.C. Kloppers and D.G. Kronger has studied the influence of temperature inversions on wet cooling tower performance. Normal temperature inversion has detrimental effect on the performance of natural draught wet cooling towers. The effect of temperature

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-06 ACTIVE ZIGBEE AND GPS BASED PRECISE DEVICE TRACKING SYSTEM

Mr. Prasad Rajendra Joshi (MTech)
Branch :Computer Sci & engg
Godavari college of engineering, Jalgaon
Email: prasadjoshi469@gmail.com
Mobile.no: +917350346623

***Abstract*—GPS is one of the technologies that are used in a huge number of applications today. One of the applications is tracking various Portable Devices and keeps regular monitoring on them. This tracking system can inform you the location of Equipment which is embedded this hardware, and that information can be observed from any other remote location. This system enables us to track target in any weather conditions. This system uses GPS and Zigbee technologies. A method for tracking Device using a terrestrial system similar to GPS is presented. With GPS and public Google Map API functionalities, global location and sensor information are sent over networks to an cell-phone embedded with a simplified Zigbee technology used to track device, in addition combination of these technologies resulting feasible and efficient tracking of various devices.**

To develop a prototype project that can help to assist user in detect a missing Device. To create a pair of device used Zigbee and GPS technology that can detect each of devices which is will emit a Message and latitude & longitude coordinates when it reach the distance limit. To help user to guide to find stolen device from any location and aware from any lost occur in limitation distance.

Virtually anything on the world can be mapped, and anyone can create a map, given the knowledge of the location of attractions relative to the latitude and longitude boundaries. This can be useful not only for vehicles lost or stolen on any place, but for cars, bicycles and key-chains etc. This product may have a high potential market for many people with their many loved devices want to ensure the safety of their devices.

Keywords— Transmitter,Receiver,Tracking device ,GPS, Zigbee,GSM

I. INTRODUCTION

GPS is one of the technologies that are used in a huge number of applications today. One of the applications is tracking Mobile or Any Portable Device and keeps regular monitoring on them. This tracking system can inform you the location and route travelled by Equipment which is embedded this hardware, and that information can be observed from any other remote location. This system enables us to track target in any weather conditions. This system uses GPS and Zigbee technologies. A method for tracking Device using a terrestrial system similar to GPS is presented. This system enables simultaneous tracking of thousands of Equipment's with transmitters that are lighter, longer lasting, more accurate and cheaper than other automatic positioning tags. An open architecture for Device tracking systems using various sensors built into a compact prototype, easily embedded in any Device.

With GPS and public Google Map API functionalities, global location and sensor information are sent over networks to an Cell phone, embedded with a simplified Zigbee technology used to track device when closing by with an adaptive alert Message to the receiver for monitoring and searching. In addition, to efficiently save the battery power and cost of the tracking system, and then implemented resulting in feasibility and efficiency of battery power and data transmission.

Now a day's technology is growing higher and higher pick level, because of this the common people are ready to absorb these technology facilities in their daily life. In their day to day life peoples are demanding to protect their instruments, devices etc. by using the available resources. Hence this project is made on the platform of this demand. Problem statements:

- People's difficult to monitor their devices when they are busy or at public area.
- The disappearance of the device at the public's attention often occurs.
- Difficulties in finding the device which stolen from them.

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-07 Medical Imaging using Deep Learning

Jayashri J. Patil
M.Tech. Student Department of Computer Engineering
Mr. Rahul Gaikwad
gaikwad005@gmail.com
Asst. Professor Department of Computer Engineering
GF's Godavari College of Engineering
Jalgaon -425003, Maharashtra, India

***Abstract*—*The role of data analytics in medical imaging has grown rapidly in the last decade. This has also prompted increasing interests in the generation of analytical, data driven models based on machine learning in medical imaging. Deep learning, a technique with its foundation in artificial neural networks, is emerging in recent years as a powerful tool for machine learning, promising to reshape the future of artificial intelligence. Rapid improvements in computational power, fast data storage, and parallelization have also contributed to the rapid uptake of the technology in addition to its predictive power and ability to generate automatically optimized high-level features and semantic interpretation from the input data. This article presents a comprehensive up-to date review of research for deep learning in medical imaging providing a critical analysis of the tumor detection.*

***General Terms* —** *deep learning, Tumor detection, Diabetic Retinopathy.*

I. INTRODUCTION

In 1895, the German physicist, Wilhelm Röntgen, showed his wife Anna an X-ray of her hand. "I have seen my death," she said. Medical imaging broke paradigms when it first began more than 100 years ago, and deep learning medical applications that have evolved over the past few years seem poised to once again take us beyond our current reality and open up new possibilities in the field. Artificial intelligence (AI) deals in imaging and diagnostics are peaked in 2015 and have continued to hold steady. One third of healthcare AI startups raising venture capital post January 2015 have been working on imaging and diagnostics, and 80 percent of the funding deals took place thereafter. For instance, Enlitic, a startup which utilizes deep learning for medical image diagnosis, raised $10 million in funding from Capitol Health in 2015.

IBM researchers estimate that medical images currently account for at least 90 percent of all medical data, making it the largest data source in the healthcare industry. This becomes an overwhelming amount on a human scale, when you consider that radiologists in some hospital emergency rooms are presented with thousands of images daily. New methods are thus required to extract and represent data from those images more efficiently.

Though one of the most common early healthcare machine learning applications was actually in medical imaging, it's only recently that deep learning algorithms have been introduced that are able to learn from examples and prior knowledge. Though we haven't yet arrived at scale, such technologies are bringing society closer to more accurate and quicker diagnoses via deep learning-based medical imaging.

Current Deep Learning Medical Applications in Imaging

1] Tumor Detection

Over 5 million cases are diagnosed with skin cancer each year in the United States. The most commonly diagnosed cancer in the nation, skin cancer treatments cost the U.S. healthcare system over $8 billion annually.

Melanoma (the deadliest form of skin cancer) is highly curable if diagnosed early and treated properly, with survival rates varying between 15 percent and 65 percent from early to terminal stages respectively. Proper treatment can even produce a 5-year survival rate of over 98 percent.

One of the most promising near-term applications of automated image processing is in *detecting* melanoma, says John Smith, senior manager for intelligent information systems at IBM Research. To detect the tumor, the DL algorithm learns important features related to the disease from a group of medical images and then makes predictions (i.e. detection) based on that learning.

Enlitic, the Australian-based medical imaging company referenced earlier, is considered an early pioneer in using DL for tumor detection, and its algorithms have been used to detect tumors in lung CT scans. Jeremy Howard, CEO of Enlitic, says his company was able to create an algorithm capable of identifying relevant characteristics of lung tumors with a higher accuracy rate than radiologists.

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-08 Software for Training and Placement

Ganesh Chavan[1], Supriya Pawar[2], Rahul Patil,[3] Abhishek Somwanshi, Roshni Patil

Student, Computer Engineering, Gf's gcoe, jalgaon1,2,3,4,5

ganesh024@gmail.com

1 Assistant Professor Dept. of Computer science , Godavari College of Engineering, Jalgaon, India

[2] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India.

[1] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India

[2] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India.

[3] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India

ABSTRACT- *This project is aimed at developing a Training and Placement Cell of the college. The system is an online application that can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an application for the Training and placement officer (TPO) of the college to manage the student information with regards to placement. Students logging should be able to upload their information in the form of a Resume. Visitors/Company representatives logging in may also access or search any information put up by Students. The management of Training and Placement is supported by paper-based systems, databases, spreadsheets and E-mail communications. The aim of this project is Automation of Training and Placement. The project will include minimum manual work and maximum optimization, abstraction and security. This is a web application which will help students as well as the administration authority to carry out each and every activity in this department.*

I .INTRODUCTION

In the present day's world everyone is travelling for jobs after Completion of their graduation. It has became need for each and every students ,but for that they need to travel worldwide in searching of jobs.For simplicity of this whole hectic procedures we had proposed Online Training and Placement System because of earlier system is totally done manually by maintaining records,time consuming and very difficult to maintain coordination between student and companies.

In our proposed you will save time as well as money as its web based application. We can collect information of all college students and fetch them according to criteria given by company. We have three modules Admin/Training and Placement Officer(TPO),Student, Company. Admin has full access reserved over the system. Student's can mainly upload their CV and can download resources by Admin/TPO and Company .Company can register and give their criteria for placement.

II .LITERATURE SURVEY

This system can be used as an application for the Training and Placement Officers(TPO) of the college to manage the student information with regard to placement. Students logging should be able to upload their information in the form of a CV. The key feature of this project is that it is a onetime registration. The application provides the facility of maintaining the details of the students. It also provides requested list of candidates to recruit the students based on given query. Administrator logging in may also search any information put up by the students. This project will aid colleges to practice full IT deployment. This will also help in fast access procedures in placement related activities. This led to a unique web-based placement management system developed specifically by the placements practitioner and the software programmer to become Online Training and Placement System.

III. PROPOSED SYSTEM

The Proposed system is a browser which is completely related to internet browsing. The web enabled information recruitment system designed to automate the entire operations of a modern. This maintains and controls the online learning and recruitment details and does online operations and generates various reports.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-09 Campus Navigation Android Application

Iqbal S. Malik,KinjalMali,BhushanBarapatre,MinalPawar

Student B.E Computer

Mr. Rahul Gaikwad

gaikwad005@gmail.com
Asst. Professor Computer Engineering Dept.
GF's Godavari College Of Engineering, Jalgaon, India, 425001

Abstract *–Global Positioning System is the most important contribution in determining position of user and in direction-finding him to his target. This system uses satellites to triangulate the position of the device. Though this system has made a good impression in terms of accuracy and is the preferred location based system for outdoor positioning, when it comes to indoor environment, GPS has proved to be incompetent. The reason for its inadequacy is that in order for GPS to perform a triangulation, the appliance needs to be in line-of-sight from the satellites. Moreover, GPS system has a low eminence which make it not appropriate for indoor areas. Therefore, when it comes to indoor positioning system, other alternatives such as Bluetooth, Wi-Fi, RFID and Infrared are more pleasing. This project proposes to implement a mobile application which will be able to estimate the position of a user within a building using WiFi technology.*

The Indoor Navigation Framework we have proposed allows any wheelchair user to be guided to a desired location on his own, as long as the building itself is adopted to the novel system. Unlike the state of the art, where no automation exists for guiding a wheelchair in modern buildings.

Keywords**:*****Framework, Indoor, Localization, Mapping, Navigation, Robotics***.

INTRODUCTION

1.1 Project Context

Within living memory the domain of navigation is of great interest and was regular researched and further developed. Nowadays, navigation and the possibilities provided by it have only very little in common with the orientation at landmarks and simple maps back then. Prerequisite for the development of navigation systems are sophisticated positioning methods which are able to provide the current location of a user or device with an adequate accuracy for a given context. Various technologies are available for different fields of application. The accuracy of these technologiesrange from several meters, up to a some centimeters, depending on the specific context.With the Global Positioning System (GPS), the Galileo system and other satellite navigation systems, several globally operating positioning technologies are availablenowadays.These systems already proved its suitability for daily use in various products,such as car navigation systems and smart phones, or will do so soon. In most environments the globally operating positioning systems work well. However, in specific areas, such as urban neighborhoods (so called urban canyons) and indoor environments, these systems operate unreliably or, in the worst case, not at all. Various technologies are available to determine the location of a user or device in a local manner. These technologies are often based on optical, acoustic, or radio methods. Depending on the area of application and the specific environment thesesystems have various advantages and disadvantages.As Lorenz and Ohlbach [LO06, p. 102] state, "car navigation systems are becoming amore or less standard commodity nowadays [... and ...] the problem of navigating carsthrough large road networks has been well investigated and the solutions are mature".Less investigated is the domain of navigating pedestrians through indoorenvironments. An actively assisted indoor navigation system would be beneficial,especially in large buildings, such as airports, hospitals, supermarkets, and officebuildings.Due to the wide distribution of smart phones and the numerous possibilities that thoseprovide, this device class represent

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-10 Improved Data Mining Based Prediction of User Behavior through Sessions

Mr Tushar Kolhe, Mr Nilesh Y Choudhary, Mr Ashfaque Shaikh Rafique

1TusharKolhe

GF'S Godavari Engineering College India,425001
[2] Mr Nilesh Y Choudhary , Assistant Professor,
cont.nilesh@gmail.com
GF'S Godavari Engineering College India,425001
3 Mr Ashfaque Shaikh Rafique *, Assistant Professor,*
sk.ashfaque.shaikh@gmail.com
GF'S Godavari Engineering College India,425001

Abstract –
Users are increasingly pursuing complex task-oriented goals on the web, such as making travel arrangements, managing finances, or planning purchases. To this end, they usually break down the tasks into a few codependent steps and issue multiple queries around these steps repeatedly over long periods of time. To better support users in their long-term information quests on the web, search engines keep track of their queries and clicks while searching online. In this paper, we study the problem of organizing a user's historical queries into groups in a dynamic and automated fashion. Automatically identifying query groups is helpful for a number of different search engine components and applications, such as query suggestions, result ranking, query alterations, sessionization, and collaborative search. In our approach, we go beyond approaches that rely on textual similarity or time thresholds, and we propose a more robust approach that leverages search query logs. We experimentally study the performance of different techniques, and showcase their potential, especially when combined together.

Keywords
Energy efficient algorithm; Manets; total transmission energy; maximum number of hops; network lifetime

.

1. INTRODUCTION

AS the size and richness of information on the web grows, so does the variety and the complexity of tasks that users try to accomplish online. Users are no longer content with issuing simple navigational queries. Various studies on query logs (e.g., Yahoo's and AltaVista's) reveal that only about 20 percent of queries are navigational. The rest are informational or transactional in nature. This is because users now pursue much broader informational and task oriented goals such as arranging for future travel, managing their finances, or planning their purchase decisions. However, the primary means of accessing information online is still through keyword queries to a search engine. A complex task such as travel arrangement has to be broken down into a number of codependent steps over a period of time. For instance, a user may first search on possible destinations, timeline, events, etc. After deciding when and where to go, the user may then search for the most suitable arrangements for air tickets, rental cars, lodging, meals, etc. Each step requires one or more queries, and each query results in one or more clicks on relevant pages

One important step toward enabling services and features that can help users during their complex search quests online is the capability to identify and group related queries together. Recently, some of the major search engines have introduced a new "Search History" feature, which allows users to track their online searches by recording their queries and clicks. For example, a portion of a user's history as it is shown by the Bing search engine on February of 2010. This history includes a sequence of four queries displayed in reverse chronological order together with their corresponding clicks. In addition to viewing their search history, users can manipulate it by manually editing and organizing related queries and clicks into groups, or by sharing them with their friends. While these features are helpful, the manual efforts involved can be disruptive and will be untenable as the search history gets longer over time. In fact, identifying groups of related queries has applications beyond helping the users to make sense and keep track of queries and clicks in their search history. First and foremost, query grouping allows the search engine to better understand a user's session and potentially tailor that user's search experience according to her needs. Once query groups have been identified, search engines can have a good representation of the search context behind the current query using queries and clicks in the corresponding query group. This will help to improve the quality of key components of search

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-11 Survey on Predicting Instructor Performance using Data Mining Technique

Priya s. Patil[1], Nilesh Choudhary[2], Renuka Deshpande[3]

[1] PG Student
patilspriya2012@gmail.com
GF's Godavari COE Jalgaon (MS), India, 425001
[2] Assistant professor
cont.nilesh@gmail.com
GF's Godavari COE Jalgaon (MS), India, 425001
[3] Assistant professor
GF's Godavari COE Jalgaon (MS), India, 425001

Abstract – *Data mining applications are becoming a more common tool in understanding and solving educational and administrative problems in higher education. Generally, research in educational mining focuses on modeling student's performance instead of instructors' performance. One of the common tools to evaluate instructors' performance is the course evaluation questionnaire to evaluate based on students' perception. In this study, instructor's performance is based on student feedback and instructor feedback. classification algorithm of Naïve Bayes, K-Means clustering and C5.0 are used to build classifier models. Their performances are compared over a dataset composed of responses of students to a real course evaluation questionnaire, instructor feedback to a subject related questionnaire and students final examination results using accuracy, precision, recall, and specificity performance metrics. Although all the classifier models show comparably high classification performances, Naïve Bayes classifier is the best with respect to accuracy, precision, and specificity.*

Keywords-*Performance evaluation, students final examination results, C5.0, Naïve Bayes classifier, K-Means Clustering.*

INTRODUCTION

Nowadays Data Mining (DM) has attracted a lot attention in data analysis area, and it became recognizable new tool for data analysis that can be used to extract valuable and meaningful knowledge from data. DM offers promising ways to uncover hidden patterns within large amounts of data. These hidden patterns can potentially be used to predict future behavior. Accordingly, DM has been adopted by many researchers to solve real-world problems in various domains such as marketing, stock market, telecommunication, industrials, health care, medical and customer relationship. Recently a reasonable number of researches have been conducted to apply DM techniques in the education area in ordered to classify and predict student performance in numerous education institutes. Employing DM techniques in education is promising because of the tremendous opportunities in this area[2]. Recent national policies on higher education mandating high stakes evaluation of instructors and the learning system coupled with the quest for an optimal algorithm for evaluation of instructors' performance in higher institutions of learning especially in the developing countries are primary motivation for this work.

Higher education institutions are interested in predicting the paths of students and alumni, thus identifying which students will join particular course programs and which students will require a large number of debates. Nowadays, one of the biggest challenges that educational institutions face is the sudden growth of educational data and to use this data to improve the quality of managerial decisions. Data mining techniques are analytical tools that can be used to extract meaningful knowledge from these large data sets[4]. Moreover, education systems claim new approaches which improve quality, efficiency, and achievement. Mostly DM is utilized in education to investigate the impact of pedagogical strategies on students, and how students understand the course. The academic

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-12 Analysis of Multiple Link Failures in MPLS Network

PranitaShankhpal
M.Tech Student Department of Computer Engineering
Mr.RahulGaikwad
gaikwad005@gmail.com
Asst. Professor Department of computer Engineering
GF's Godavari College of Engineering
Jalgaon-425003, Maharashtra, India

ABSTRACT

MPLS stands for Multiprotocol Label Switching (MPLS). It provides significant benefits by fast forwarding packets.In MPLS, there is no admission control for nodes and it is connection-oriented network which makes network more reliable. if the network link is overloading with traffic or node leave network, failure can be occur at any point of timethen there is need to establish a new label switched path (LSP) and then forward the packets to the newly established LSP. From this survey analysis of various recovery mechanisms of MPLS based on some performance parameters. The parameters consider for analysis such as resource requirement, fault recovery time, packet loss ratio, packet re-ordering, complexity, optimal path option selection. The forwarding of failed link traffic to different or backup path this may leads LSP get more congested. Here some mechanisms used for to tolerate these link failures in MPLS network. The main focus to analyze the various mechanisms used for tolerates the link failure in MPLS based on the Quality of Service (QoS) parameters. The expected result from this thesis, the network should maintain connectivity after multiple failures without causing congestion.

INTRODUCTION:

The MPLS domain can be divided into MPLS core and MPLS edge. Multiprotocol Label Switching (MPLS) is an improved method for forwarding Internet Protocol (IP) packetsthrough a network using information contained in labels. Nowadays IP based networks uses MPLS as backbone network for fast forwarding and switching of IP packets.The labels are inserted between the Layer 3 (network) header and the Layer 2 (data link layer) header, so it is also called 2.5 layer networks. Also Frame Relay (FR) and Asynchronous Transfer Mode (ATM) networks have many disadvantages in the management operation of large networks such as cost, security, scalability and flexibility; this can be overcome in MPLS network.

The nodes in the MPLS domain are called as LSRs (Label Switch Routers). The nodes in the core are called transit LSRs and the nodes in the MPLS edge are called LERs (Label Edge Routers). If a LER is the first node in the path for a packet travelling through the MPLS domain this node is called the ingress LER, if it is the last node in a path it's called the egress LER. This depends on the direction of traffic flow in the network, one node can therefore be both ingress and egress LER depending on which flow is considered in the network. The terms upstream and downstream routers are also used to indicate in which order the routers are forwarding the traffic flow. If a LSR is upstream from another LSR, traffic is passed through that LSR before the other (downstream). A schematic view of the MPLS domain is shown as follows.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018) Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

BLOCKCHAIN TECHNOLOGY- A SURVEY

Poonam P Patil
M.Tech. Student Department of Computer Engineering
Mr. Rahul Gaikwad
gaikwad005@gmail.com
Asst. Professor Department of Computer Engineering
GF's Godavari College of Engineering
Jalgaon -425003, Maharashtra, India

Abstract *– Blockchain is being termed as the fifth disruptive innovation in computing. In simplest words, it is a distributed ledger of records that is immutable and verifiable. Since its advent in 2008, blockchain as a concept has been used in various ways. The largest impact or application is seen as a multitude of cryptocurrencies that have sprung up. However, with time, it has become clear that blockchain as a technology is likely to have an impact much wider than just the cryptocurrency domain and much deeper than simple distributed ledger storage. This detailed survey intends to bring together all the key developments so far in terms of putting blockchain to practice. While the most common adoption of blockchain is in finance and banking domain, there are experiments being conducted by many big players in various other domains. This paper will explore the various domains where blockchain has had an impact and where future implementations may be expected.*

General Terms-*Blockchain*
Keywords-*Blockchain, Cryptocurrency, Distributed Ledger*

INTRODUCTION

Blockchain technology or the distributed, secure ledger technology has gained much attention in recent years. This paper presents a detailed survey of blockchain technology literature and its applications. The sources of blockchain literature examined for this survey include research papers, books and book chapters, journal papers, specific cryptocurrency sites and wikis, conference papers, company 'Point of View's (PoVs), whitepapers published by various

organizations implementing and experimenting in Blockchain. Blockchain being a much hyped and experimented technology a lot of literature is found in content hosted on proprietary forums such as company websites, web articles, etc. This survey is extensive and covers the various aspects of blockchain including consensus algorithms and their variations as well as currently implemented and possible future applications. This survey will not cover the details of technical aspects of blockchain, however, references that cover these aspects may be found in bibliography.

BLOCKCHAIN OVERVIEW

- **Blockchain Technology**

The blockchain is the core mechanism for the Bitcoin. Blockchain was first proposed in 2008 and implemented in 2009. Blockchain can be regarded as a public ledger, in which all committed transactions are stored in a chain of blocks. This chain continuously grows when new blocks are appended to it. The blockchain technology has the key characteristics, such as decentralization, persistency, anonymity and auditability. Blockchain can work in a decentralized environment, which is enabled by integrating several core technologies such as cryptographic hash, digital signature (based on asymmetric cryptography) and distributed consensus mechanism. With blockchain technology, a transaction can take place in a decentralized fashion. As a result, blockchain can greatly save the cost and improve the efficiency.

Although Bitcoin is one of the most famous blockchain applications, blockchain can be applied into diverse applications far beyond cryptocurrencies. Since it allows payment to be finished without any bank or any intermediary, blockchain can be used in various financial services such as digital assets, remittance and online payment.

BLOCKCHAIN ARCHITECTURE

Blockchain is a sequence of blocks, which holds a complete list of transaction records like conventional public ledger. Figure 1 illustrates an example of a blockchain. Each block points to the immediately

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-14 Android Based Waste Food Management Using Sustainable Food Prevention Strategies

Ashwini Ahirrao[1], Shital Patil[2], Kanchan Mali[3,] Kajal Patil[4], Priya Patil[5], Ashfaque Shaikh[6]

[1,2,3,4] Student
GF's Godavari COE Jalgaon (MS), India, 425001
[5] Lecturer
patilspriya2012@gmail.com
GF's Godavari COE Jalgaon (MS), India, 425001
[6] Assistant professor
sk.ashfaque.shaikh@gmail.com
GF's Godavari COE Jalgaon (MS), India, 425001

Abstract *–The mobile devices are very vast in used in now a days android mobile in today's market come in very cheap rate and offerable for many people and now a days it become prime need for the people in many countries around the world face striving problem also in many situation like a family function or at restaurant there is lots of foods wastage happens. Here we playing to develop an app which will form a like between the striving and people those who have food waste in this project we communicate through the app and bridge the requirements of food donators and needy people through food wastage donation. The use of sustainable food prevention strategies which add some constraints to food testing in case of food making time is more. This project is used to manage wastage foods in a useful way. Every day the people are wasting lots of foods. So we have to reduce that food wastage problem through online. If anyone have wastage foods they are entering their food quantity details and their address in that application and then the admin maintain the details of food donator. The donator can create the account and whenever they are having wastage food they can login and give request to the admin. And the admin also maintain the needy People's details too and the admin collect foods from donator through their nearby agent then provide to nearest orphanages or poor people. After receiving the food from the agent by admin and give alert message to that donator. If the donator needs any detail about the orphanage with helping thought they can give request to the admin and collect the orphanage details. This paper is food redistribution is an enormously successful social innovation that tackles food waste and food poverty. The user's details are maintained confidential because it maintains a separate account for each user.*

1. INTRODUCTION

Now days many people around the world have wastage of food in their home and daily life, or in some programs and parties and other many so many situations are there where food is wasted. If anyone have extra food because of any function in their home it will become waste because instantly there is no way to share that food with anyone. Even if they want to give that extra food to any orphanage or poor people they don't have time or don't have an idea about that there for we came in this paper with idea of food wastage reduction. There are so many research papers available for wastage of food prevention but in this paper we deal with some food prevention strategies which will be used to secure food donation if food is fresh and have the quality to be donated to the needy people then it will donated otherwise it is donated to decomposition department. These strategies are imposed to increase safety and donating good quality food. The food redistribution is an enormously successful social innovation that tackles food waste and food poverty. We can add NGO's to the admin who will collect foods from donator through their nearby agent then provide to nearest orphanages or poor people. After receiving the food from the agent by admin and give alert message to that donator through this way we can reduce food wastage problem. Also we can have

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-15 A Review on Retinex based Image Enhancement Techniques

Priyanka B. Waghmode[1]
[1]*Student Computer Engineering,*
[1]*GF's Godavari College of Engineering, Jalgaon-India*
Mr. Nilesh Vani[2]
nileshvani@gmail.com
[2] *Assistant Professor in Computer Engineering*
[2]*GF's Godavari College of Engineering, Jalgaon-India*

Abstract :*Retinex is a method of bridging the gap between images and the human observation of scenes. Retinex theory is a model of lightness and color perception of human vision proposed by Edwin Land in 1986. While the retinex theory was actually aimed at providing explanation of human color perception, it has led to various image enhancement algorithms called as retinex algorithms, which are usually used to enhance local image contrast. This paper presents a review of several image enhancement techniques based on retinex model.*

Keywords:*Retinex, image enhancement, single-scale, multi-scale, illumination estimation, Color Restoration.*

1. INTRODUCTION

Retinex is the theory of human color vision proposed by Edwin Land to account for color sensations in real scenes. Color constancy experiments showed that color does not correlate with receptor responses. In real scenes, the content of the entire image controlsappearances. A triplet of L, M, S cone responses can appear any color. Land coined the word "Retinex" (the contraction of retina and cortex) to identify the spatial image processing responsible for color constancy. Further, he showed that color sensations are predicted by three lightness's observed in long-, middle-, and short-wave illumination. Retinex is also used as the name of computer algorithms that mimic vision's spatial interactions to calculatethe lightness's observed in complex scenes.

Edwin H. Land, the inventor of hundreds of film patents, was struck byexperiments showing that color sensations in real complex images depend on scene content. Film responds to the light falling on each tiny local region. Land realized that vision's mechanisms were very different from film. His early experiments studied the color's observed in red and white projections. He realized color appearance required both the cone responses to a local region and the neural spatial processing of the rest of the scene. He proposed the Retinex Theory.

Land coined the word Retinex to describe three independent spatial channels. In 1964 he wrote: "We would propose that all of the receptors with maximum sensitivity to the long-waves in the spectrum, for example, operate as a unit to form a complete record of long-wave stimuli from objects being observed. (For convenience of reference, let us call this suggested retinal-cerebral system a "retinex."). It is the word that describes the mechanism that performs the comparison of scene information to create the array of sensations of lightness in three channels.

2.RETINEX IN IMAGE PROCESSING

Land described that the fundamental challenge of color vision shifted to the ability to predict lightness; that is, the spatial interactions found in post-receptor neural processes. In 1967 Land and McCann proposed a computational model for calculating lightness from the array of all scene radiances. The model compared each pixel with every other pixel in an image. The goal was to calculate the sensation of image segments that equalled what observers saw. In the past 50 years, there have been many implementations and variations of this process. They are called Retinex algorithms. It is curious that Land reserved the use of the term "Retinex" to describe three independent lightness channels. Today's usage of the word includes a much wider range of computer

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-16 Priority based Algorithm for Automatic Question Paper Generation

Mr.Aditya p Kulkarni[1], Mr.Mayur Kakade [2], Mr. Shaikh Ashfaque[3]

[1] Student
GF's Godavari COE Jalgaon (MS), India, 425001
[2] Student
GF's Godavari COE Jalgaon (MS), India, 425001
[3] Assistant professor
sk.ashfaque.shaikh@gmail.com
GF's Godavari COE Jalgaon (MS), India, 425001

Abstract *–Now a days, education is the supreme significant way of accomplishing success. When we deal with the education, the traditional and best suitable way to analyze the impact of education is by conducting the examination. But the world is growing faster and use of ICT is too common everywhere. Examinations make students to let them prepare in their quest for understanding. The traditional method and wost widely used method is by generating the paper manually. In this technique definite official's workout and writes the question paper or type the paper. But this technique is inefficient because it is time consuming and unsecured because the leak of paper may happen by simply guessing the paper and its format. Because the officials are limited hence they can easily know which kind of questions they can have. Hence we have proposed and algorithmic based automatic question paper generation system. We have proposed an automated process of Question Paper Generation which is fast and greedy algorithm based algorithmic solution for selection problem. It is secure and randomized algorithm which can be suitably applied to select the questions from the given set and subsets of questions. This system is fully automatic hence there is no problem security threats anymore. Meanwhile this system is fully secured, robust and can select best suitable questions for question paper generation. This system assigns priorities to question depend on the wattage of syllabus and importance of topics to the questions and depend on the priority randomly questions are selected as mentioned above it greedy algorithm based solution which finds the suitable n selections and depend on the priority one is selected.*

Keywords— *question paper generation; paperless; automation; randomization; information communication technology (ICT)*

1. INTRODUCTION

Education is the tedious and important aspect of being able to do something now a days There is a countless affluent in e-learning in the area of technology-enhanced Intelligent Tutoring Educational Systems where excellent virtual instructors/teachers which guide their learners/students. Growth has been made, addressing a variability of educational needs, ranging from enhancements to existing "traditional" courses, to complete on-line programs. Despite all this effort, hype, and even product development, most of the courseware material available for use at the educational level is still not judged to be as effective as a teacher lecturing and leading discussions with students.

However, it is difficult to make a fair online evaluation of how well the students understanding. There are several disturbances for realizing fair grading such as mere duplication of answers between the students or illegally pretending to be other persons to answer the exam.

An online question bank and examination system is a relatively new and rapidly expanding system. Although it is an effective solution for mass education evaluation, the fairness of the evaluation is still a big concern. Most of the present systems were designed to grade students based on how well they have done on their examination.

These systems were designed with the concept of traditional paper based examination in mind. There is

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-17 Finger Matching Using Ratio Of Relational Distances & point Matching

Anil K.Jain[1], Tasneem Bakerywala[2], Rahul Gaikwad[3], Pramod Gosavi[4]

[1,2]Student
GF's Godavari COE Jalgaon (MS), India, 425001
[3]Lecturer
gaikwad005@gmail.com
GF's Godavari COE Jalgaon (MS), India, 425001
[4]Assistant professor
gosavi.pramod@gmail.com
GF's Godavari COE Jalgaon (MS), India, 425001

Abstract – *We present a fingerprint matching algorithm that initially identifies the candidate common unique (minutiae)points in both the base and the input images using ratios of relative distances as the comparing function. A tree like structure is then drawn connecting the common minutiae points from bottom up in both the base and the input images. Matching score is obtained by comparing the similarity of the two tree structures based on a threshold value. We define a new term called the 'M (i) - tuple' for each minutiae point which uniquely encodes details about the local surrounding region, where i = 1 to N, and N is the number of minutiae. The proposed algorithm requires no explicit alignment of the two to-be compared fingerprint images and also tolerates distortions caused by spurious minutiae points. The algorithm is also capable of comparing and producing matching scores between two images obtained from two different kinds of sensors, hence is sensor interoperable and also reduces the FNMR in cases where there is very little overlap region between the base and the input image. We conducted evaluations on the FVC-2000 [1] datasets and have summarized the results in the concluding section Fingerprint matching has been successfully used by law enforcement for more than a century. The technology is now finding many other applications such as identity management and access control. The authors describe an automated fingerprint recognition system and identify key challenges and research opportunities in the field. A fingerprint verification system based on triangular matching and dynamic time warping is proposed which provides better results especially for poor quality fingerprint images. An existing reference fingerprint image must validate the identity of a person by means of a test fingerprint image acquired online and in real time using minutiae matching. The matching system consists of an information extraction block and matching block.*

1. INTRODUCTION

A fingerprint is the pattern of ridges and valleys on the surface of the finger. The uniqueness of a fingerprint can be determined by the pattern of ridges and furrows as well as the minutiae points. Minituae points are local ridge ending. Even identical twins having same face and genes are said to have different fingerprint. Among all the biometrics fingerprint based identification is one of the most mature and proven technique. Fingerprint is an impression formed through deposit of minute ridges and valleys when a finger touches a surface. Facts exist that the ridges and valleys do not change throughout lifetime no matter what happens and in a case of injury or mutilation, they reappear within a short period. The five commonly found fingerprint ridge patterns are arch, tented arch, left loop, right loop and whorl (Figure 1) [1 - 6]. Fingerprint has proved to be a very reliable human identification and verification index and has enjoyed superiority over other biometrics such as ear, nose, iris, voice, face, gait and signature [7]. The uniqueness of the ridges and valleys makes it immutable and therefore serves a strong mark for identity. Fingerprint based biometric authentication and verification systems have gained immense popularity and acceptance ever since their inception. This is primarily because of the ease of operation, installation and easy acquisition of the biometric feature, which in this case is a fingerprint. Matching two fingerprints can be unsuccessful due to various reasons and also depends upon the method that is

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-18 Internet of Robotics Things

MsAshwini B. Lokhande, MrRahul Gaikwad

1Ashwinilokhande

GF'S Godavari Engineering College India,425001
[2] MrRahul Gaikwad ,Assistant Professor,
gaikwad005@gmail.com
GF'S Godavari Engineering College India,425001

Abstarct:

Day to day The Internet of Things (IoT) concept is evolving rapidly and influencing new developments in various application domains, such as the Internet of Mobile Things (IoMT), Autonomous Internet of Things (A-IoT), Autonomous System of Things (ASoT), Internet of Autonomous Things (IoAT), Internet of Things Clouds (IoT-C) and the Internet of Robotic Things (IoRT) etc. are progressing/advancing by using IoT technology. This IoT paper focus on the IoRT concept, technologies, architectures and applications and to provide a comprehensive coverage of future challenges, developments and applications.

Keywords: Internet of Robotic Things
, artificial intelligence, machine learning, IoT platforms

Introdcution

Internet of Robotic Things Concept

Robotics systems traditionally provide the programmable dimension to machines designed to be involved in labour intensive and repetitive work, as well as a rich set of technologies to make these machines sense their environment and act upon it, while artificial intelligence and machine learning allow/empower these machines to function using decision making and learning

algorithms instead of programming. The combination of these scientific disciplines

opens the developments of autonomous programmable systems, combining robotics and machine learning for designing robotic systems to be autonomous.

The IoT technologies and applications are bringing fundamental changes in individuals' and society's view of how technology and business work in the world.

Citizen centric IoT open environments require tackling new technological trends and challenges. In this context, the future developments where IoT infrastructure and services intersect with robotic and autonomous system technologies to deliver advanced functionality, along with novel applications, and new business models and investment opportunities, requires new IoT architectures, concepts and tools to be integrated into the open IoT platforms design and development.

The concept of IoRT goes beyond networked and collaborative/cloud robotics and integrates heterogenous intelligent devices into a distributed architecture of platforms operating both in the cloud and at the edge. IoRT addresses the many ways IoT today technologies and robotic "devices" convergence to provide advanced robotic capabilities, enabling aggregated IoT functionality along with novel applications, and by extension, new business, and investment opportunities not only in industrial domains but in almost every sector where robotic assistance and IoT technology and applications can be imagined (home, city, buildings, infrastructures, health, etc.).

At the technology side, the proliferation of multi-radio access technology to connect intelligent devices at the edge has generated heterogeneous mobile networks that need complex configuration, management and maintenance to cope with the robotic things. The artificial intelligence (AI) techniques enable IoT robotic cognitive systems to be integrated with IoT applications almost seamlessly for creating optimized solutions and for particular applications. Cognitive IoT technologies allows embedding intelligence into systems and processes, allowing businesses to increase efficiency, find new business opportunities, and to anticipate risks and threats thus IoRT systems are better prepare to address the multiple requirements in the expected more IoT complex environment as it is depicted in

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-19 Computer and Network Security

Prof. Vasanti U. Mahajan[1], Prof. Pooja S. Dani[2], Prof. Rais Khan[3]
[1,2] *Assit Prof.,* [3] *Asstt. Prof.*
[1,2] *Dept of Computer Science, Annasaheb G. D. Bendale Mahila Mahavidyalaya, Jalgaon, Maharashtra, India*
[3] *Computer Engg. dept, GF's Godavari College of Engineering, Jalgaon, Maharashtra, India*
[1] *vasantimahajan94@gmail.com, 3 khanrais.khan42@gmail.com*

Abstract:
Computer security is the continuing effort to protect electronics data and computer system from unwanted instruction. The goal of computer security is to protect electronic information both in transit and at rest. Our aim with this research is to check the awareness level of cybercrime and security majors and to suggest necessary steps which can really be helpful in making the environment secure, robust.

It is critical we consider what implications current and future technologies have for security and privacy. Requirements for further research, we explore how security and privacy might involve over the next decade. Computer network security is the first line of defense to accomplish information assurance. The computer network is at risk without a well-designed and flawless implemented network security policy. The main problem is that network administrators are not able to verify the network security policy. Although further research has been carried out, it mainly concerns small specific parts of the overall system

Introduction:

Network Security is the most vital component in information security because it is responsible for securing all information passed through networked computers. Network Security refers to all hardware and software functions, characteristics, features, operational procedures, accountability, measures, access control, and administrative and management policy required to provide an acceptable level of protection for Hardware and Software , and information in a network.

Network security problems can be divided roughly into four closely intertwined areas: secrecy, authentication, non repudiation, and integrity control. Secrecy, also called confidentiality, has to do with keeping information out of the hands of unauthorized users. This is what usually comes to mind when people think about network security. Authentication deals with determining whom you are talking to before revealing sensitive information or entering into a business deal. Non repudiation deals with signatures.

Network security starts with authorization, commonly with a username and a password. Network security consists of the provisions and policies adopted by a network administrator to prevent and monitor unauthorized access , modification in system, misuse, or denial of a computer network and network-accessible resources. Basically network security involves the authorization of access to data in a network, which is controlled by the network admin. It has become more important to personal computer users, and organizations. If this authorized, a firewall forces to access policies such as what services are allowed to be accessed for network users. So that to prevent unauthorized access to system, this component may fail to check potentially harmful content such as computer worms or Trojans being transmitted over the network. Anti-virus software or an intrusion detection system (IDS) helps detect the malware. Today anomaly may also monitor the network like wire shark traffic and may be logged for audit purposes and for later on high-level analysis in system. Communication between two hosts using a network may be uses encryption to maintain privacy policy.

Network security:

System and Network Technology is a key technology for a wide variety of applications. It is a critical requirement in current situation networks, there is a significant lack of security methods that can be easily implemented. There exists a "communication gap" between the developers of security technology and developers of networks. Network design is a developed process that is depends on the Open Systems Interface (OSI) model. The OSI model has several advantages

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-01 Public Cloud For Academic Stuff

Reshma Attarade, Chetna Savdekar,Jagruti Badgujar,Kartik Malviya

Student,C.S.E. Department,G.C.O.E. Jalgaon,
Prof. Pramod B. Gosavi
gosavi.pramod@gmail.com
HOD,C.S.E. Department,G.C.O.E. Jalgaon,

Abstract *- Public clouds are made available to the students by a service provider who hosts the cloud infrastructure. Generally, public cloud providers like Amazon AWS, Microsoft and Google own and operate the infrastructure and offer access over the Internet. With this model, customers have no visibility or control over where the infrastructure is located. It is important to note that all customers on public clouds share the same substructure group with limited formation, security protections and availability variances.Some peoples have their own collections like articles, document, video, audio, etc. They have not any way to present their collection they cannot present to general public.We Providing storage for students to sharing their educational data publicly ,such as Pdf's,word document,Audio Video,Images.*

Keywords – Cloud computing, services, Search engine, Server, Privacy, Virtual machine monitors.

I. INTRODUCTION

A public cloud can be defined as an emerging computer prototype where data and services reside in parallel scalable data centers in cloud and we can accessed these data from any connected devices over the Internet. Public cloud is a way of providing various services on virtual machines. And virtual machines allocated on top of a large physical machine pool which resides in the cloud. We have lots of compute power and storage capabilities which residing in the distributed environment of the cloud. The basis of public cloud is to create a set of virtual servers on the available huge resource pool and give it to the clients. Through virtual servers any web enabled devices can be used to access the resources. Based on the client's need, the client can be scaled up or down the infrastructure.

In this type an organization rents cloud providers provides cloud services on-demand basis. Using utility computing model services provided to the users.. In traditional main stream public cloud or external cloud describes cloud computing. Public clouds are run by third parties, and applications from different customers are mixed together on the cloud's servers, storage systems, and networks. A public cloud provides some cloud services.

Public cloud is Internet-based computing, which shared resources, software, and Information are provided to computers and other devices on-demand basis.

Public cloud computing model is Internet based computing model where virtual shared servers provide software, infrastructure, platform, devices and other resources Users can access these types of services available on the "Internet cloud" without knowing -how on managing the resources involved. Therefore, to manage their business processes users can concentrate more on their core business processes rather than spending time and gaining knowledge on resources needed Customers of the public cloud do not ownthe physical infrastructure; rather they rent the usage from a third-party provider. This is helpful them to avoid huge.

Public Cloud customers benefit from economies of scale, because infrastructure costs are spread across all users.store the our data publically.

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018 www.ijies.net

CSE-02 Survey on a Secure Health Care Technology Based on BSD Care

Rajshri Surdas[1], Mayuri Kathade[2], Rupali Borole[3],Kalyani Bagul[4],Prof. Nilesh Chaodhry[5]

[1 234] Student
[5]Assistant Professor
cont.nilesh@gmail.com
GF's Godavari COE Jalgaon(MS),India,425001

Abstract *– Advances in data and communication technologies have diode to the coming out of net of Things (IoT). Within the latest thing health care atmosphere, the usage of IoT technologies brings convenience of physicians and patients since they're applied to varied medical areas (such as period observation, patient data management, and tending management). The body detector network (BSN) technology is one in every of the core technologies of IoT developments in attention system, where a patient area unit usually monitored employing a collection of small powered and lightweight wireless device nodes. However, development of this new technology in attention applications whereas not considering security makes patient privacy weak. Throughout this text, at first we have a tendency to tend to focus on the most important security desires in BSN based smart attention system. After, we have a tendency to tend to propose a secure IoT based tending system pattern BSN, called BSN-Care, which may with efficiency accomplish those desires.*
.

Keywords- Data Privacy, Android, IOT, Security, BSN,
Classification, ECG

NOMENCLATURE TABLE

Sr. No.	**Short Form**	**Description**
1	IoT	Internet of Things
2	GPS	Global Positioning System
3	BSN	Body Sensor Network
4	SE	Self Encryption
5	API	Application Program Interface
6	SQL	Structural Query Language
7	RFID	Radio Frequency Identification
8	SDK	Software Development Kit
9	LPU	Local Processing Unit
10	ECG	Electrocardiograms

I INTRODUCTION

Internet of Things (IoT) has become one of the foremost powerful communication paradigms of the 21th century. inside the IoT atmosphere, all objects in our everyday of living become a vicinity of the online because of their communication and computing capabilities (including little controllers, transceivers for digital communication). IoT extends the construct of the online and makes it loads of enveloping. IoT permits not to be faulted interactions among different types of devices like medical detector, observance cameras, home appliances so on. Because of that reason IoT has become loads of productive in several areas like health care system. In health care system, IoT involves many sorts of low value sensors (wearable, implanted, and environment) that modification aged people to consider stylish medical health care services anywhere, any time. Besides, it to boot greatly improves aged peoples quality of life. The body detector network (BSN) technology is one of the leading very important technologies used in IoT-based stylish health care system. It's basically a crowd of low-power and lightweight wireless detector nodes that square measure comfortable monitor the frame

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST-2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-03 Android Based Smart Attendance System

Miss.MadhuriZawar
zawarmadhuri0@gmail.com
Vishakha Dandage[1],Yogita Patil[2],Ashwini Mahajan[3],Shubhangi Sapkal[4]
[1]Student, of computer dept Gf"s GCOE, Jalgaon

Abstract:

An Education complex in India wil become so advanced in future due to the development of the internet based technical knowledge. Smart class, video conferencing are some of the examples of modern technology in educational system. These applications help the institute to move forward quickly, fulfil their vision and accomplish their goals, E-way. The kernelidea of research project have to implement Android based application for attendance management system for advancement of institution and education system. The proposal project will be implemene in applications such as online study material, notices,and online indicator of exam, online attendance record, achievement record, and parent intimation system using Android based applications. This system helps teacher to take attendance through smart phone and keep record of students for their progressive assessment. This system gives a ahead intimation to student as soon as their attendance goes down the detailed attendance threshold in the form of an SMS.

Keywords: Android, Attendance management, E-learning, GPRS, smart phone, etc.

I. INTRODUCTION

Nowadays, mobile devices have become approach of life for students particular in higher education. Computers are now replaced by compress smart mobile phones that can be fit into pocket and can be carried anywhere. The rapid progress in mobile technology has created a new area which is known as mobile learning. Mobile aquire information is the next generation of e-learning that leads attractive way of knowledge delivery especially used in teaching and learning process. With development of this Android application the student preferred to use mobile devices as technology supported educational tool. This system is designed because notes dictation in the class is difficult considering semester duration, student might miss the exam and important
notice show due to innocence, errorness marking of attendance is more due to more paper work and manual attendance entry, evaluation and report generation is tedious and delay job. Decades to parent are not accessible. With this system teacher can upload notes, time tables, assignment on server and broadcast it to the registered mobile numbers so that it is easily accessible to student by their own smart phone. This system enables student to learn anywhere, anytime and at their own advancement s. This system makes students to alive, responsive while learning their academic. Another application that is provided by this system is smart attendance evaluation and report generation. Smart phones are based on operating systems like blackberry, I OS and Android. To design proposed project, smart phones with Android operating system are chosen because penetration rate of Android OS is 70 percent. It is open expert and free ware.
An education system in India has become so advance in previous decade due to the development of the technology class,video conferencing are some example of modern in education system. This system helps teachers to take attendance through a smart phone and keep record of student for their increasingappraisal.

II. LITERATURE SURVEY

Next conventional systems are utilized to be able to mark working the training method. Some sort of. Guide work process Is it doesn't conventional method connected with taking work by simply contacting names or even deciding upon in writing but it is dysfunctional owing to be able to more likelihood of not working and much more

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-04 ACADEMIC TEACHING PLAN

Rupal More[1], Disha Jamdade[2], Varsha Chaudhari[3], Suvarna Patil[4], Prathmesh Joshi[5]

Student, Computer Engineering, Gf's gcoe, jalgaon1,2,3,4,5
rupalmore@gmail.com
[1] Assistant Professor Dept. of Computer science , Godavari College of Engineering, Jalgaon, India

[2] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India.

[1] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India

[2] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India.

[3] Student, Dept. of Computer science , Godavari College of Engineering, Jalgaon, India

---

Abstract: A academic teaching plan is a teacher's detailed description of the course of instruction for a syllabus. A daily lesson plan is developed by a teacher to guide class learning. Details will vary depending on the preference of the teacher, subject being covered, and the needs of the students. There may be requirements mandated by the college system regarding the plan. A academic teaching plan is the teacher's guide for running a particular lesson, and it includes the goal (what the students are supposed to learn). And it also include student attendance record and there marks details. Teacher also include there personnel information regarding there college record.

INTRODUCTION

In the current system all the activities are done manually. Academic teaching System deals with various activities related to students, teachers. It is very difficult and time consuming to retrieve the information of the individual student from the database. Academic teaching plan is a large database system which can be used for managing college's day to day activities. Academic teaching plan allows users to store almost all of their student's information electronically, including information of students, teachers etc. Most importantly, this information can be easily shared with authorized users, records can be easily searched, and reports can be easily generated. Academic teaching plan software is helpful for college authorities. Academic teaching plan provides following facilities- Students information All the necessary data about the student such as NAME,DOB, ADDRESS, TELEPHONENO etc. Teaching & Student info. To keep all the record of all the teaching and NAME, MOBLIE NO, ADDRESS, and SALARY, DATE OF JOINING.

LITERATURE SURVEY

Academic teaching plan incurs such application software designed for educational establishments to manage collage data. Academic teaching plan provide capabilities for entering student test and other assessment scores, building student schedules, tracking student attendance as well as managing many other student-related data needs within the institution univer Thus, many of these systems applied in the Philippines can b scaled to different levels of activity and can be configured by their home institutions to meet local needs. M ver, before universities have created their own bespoke stude record system but with growing complexity in the business of educational establishments, organizations now choose to buy customizable within the shelf software. It can be that, modern Academic teaching plan are usually server-based, with the application residing on central computer server and are being accessed by client applications at various places within and even outside the school. During the year 1990s,

Academic teaching plan have been changing and are fast adopted through the presence of a web medium as a channel for accessing without any hassle upon viewing student details and information. Ideally, educational institutions are under constant pressure to demonstrate both willingness and capacity to incorporate the latest developments in Academic teaching plan along with communications technology supporting various teaching ways. As Liao et al., (2007) asserts that SIS process within such technological sophistication does create precise knowledge edge, that such SIS application can be appealing to students and to the academic faculty as well as the parents. Thus, believing that technology is the repository of the bulk of the information that underpins society's major enterprises and concerns and the

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

CSE-05 STUDENT INFORMATION MANAGEMENT SYSTEM

N.S.Vani[1],P.R.Patil[2], A.D.Vadnere[3], A.S.Patil[4], R.M.Shaikh[5], L.B.Ghate[6]

Assistant Professor,Computer Engineering Department,
nileshvani@gmail.com
GF' s Godavari College of Engineering, Jalgaon , India, 425001
Student of Computer Engineering Department,
GF' s Godavari College of Engineering, Jalgaon , India, 425001
Student of IT Engineering Department,
GF' s Godavari College of Engineering, Jalgaon, India, 425001

Abstract*:-Student Information Management System provides a simple interface for sequence of database of student information.We made system information management system for educational institutes or colleges to maintain the details of students easily. The creation and management makes accurate, up-to-date information according to a student's academic profession is main in the university as well as colleges. Student information system deals with all kind of student details, academic related information, college details, course details, curriculum, batch details, placement details and other source related details too. The student information management system tracks all the details of a student from the starting date to the end of the semester or course which is used for all reporting purpose, tracking of attendance, progress in the course, to completed semesters, years, coming semester year curriculum details, project or any other assignment details, exam result and all these information will be available through a safe way. It will also have faculty details, batch execution details, students' details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitate us explore all the activities occurrence in the college, Based on huge options related to student batch, course, faculty, exams, semesters, certification and even for the entire college different reports and queries will be generated.*

Keywords-Student Information System, Database, HTML,SQL,Apache,DFD.

INTRODUCTION

The design and implementation of a complete student information system and user interface is to replace the current paper work .College Staff are able to directly access all information of a student's academic growth through a secure, online interface embedded in the website. The system use user permission, displayingonly information necessary for an individual's. Furthermore, each sub-system has verification allowing authorized users to create or update information in that system. All data is thoroughly reviewed and validated on the server before actual record change occurs. In addition to a staff user interface, the system plans for student user interface, allowing users to access information and submit requests online thus reducing process time. All data is stored securely on servers and ensures maximum possible level of security. The system features a difficult logging system to track all users access and ensure conventionality to data access rule and is expected to increase the correctness of the student record management thereby reduced the work time needed to fetch and transport student information to users[2].

Previously, the college relied closely on paper records for this idea. While paper records are a fixed way of managing student data there are several drawbacks into this. First, to transmit information to the students it should be displayed on the notice board and the student has to visit the notice board to check that information. It takes a very long time to communicate the information to the student. Paper records are difficult to manage and store[3]. The physical effort or work required to retrieve, change, and re-file the paper records are all non-value added activities. This system provides a simple interface for the maintenance of student data. It can be used by educational institutes or colleges to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information is spotted, can be redundant and collecting relevant information may be very time consuming. All

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Solar Powered Water Dispencer

Darshan Patil [1], Mayur Patil [2], Vishnu Shirsagar [3], Apurva Nemade [4], Gaurav kolte [5], MaheshPatil [6]
[1,2,3,4,5] *Students,* [6] *Assistant Professor*
[123456] *Electrical engineering*
[123456] *GF's Godavari College of Engineering, Jalgaon, India, 425001*

[6] *mhpatils@gmail.com*

Abstract *– The present water cooling methods are evaporative coolers, compressor, fans and dehumidifiers. But running these products need a source called electricity. The producing of electricity is ultimately responsible for hot and humid conditions i.e. global warming. In hot and humid conditions the need to feel relaxed and comfortable has become one of few needs and for this purpose utilization of systems like refrigeration has increased rapidly. These systems are most of the time not suitable for villages due to longer power cut durations and high cost of products. Solar power systems being considered as one of the path towards more sustainable energy systems, considering solar-cooling systems in villages would comprise of many attractive features. This technology can efficiently serve large latent loads and greatly improve water cooling quality by allowing more ventilation while tightly controlling humidity. Despite increasing performance and mandatory energy efficiency requirements, peak electricity demand is growing and there is currently no prevalent solar air cooling technology suited to residential application especially for villages, schools and offices. This project reviews solar powered air cooler for residential and industrial applications*

Keywords- solar energy, solar inverter, water cooler dispenser

INTRODUCTION

This paper reveals the comfort conditions achieved by the device for the human body. In summer (hot) and humid conditions feel uncomfortable because of hot or normal water . So it is necessary to maintain thermal comfort conditions. Thermal comfort is determined by the drinking cold water. comfort. Relative humidity (RH) is a measure of the moisture in the water, compared to the potential saturation level. Warmer water can hold. When you approach 100% cooling The hot normal water in a building is based on the outside temperature and sun loading plus whatever heating or cooling is added by the HVAC or other heating and cooling sources.. Need of such a source which is abundantly available in nature, which does not impose any bad effects on earth. There is only one thing which can come up with these all problems is solar energy.

PRESENT PROBLEM

The producing of electricity is ultimately responsible for hot and humid conditions i.e. global warming. As in below shown chart it is clear that major quantity of electricity is produced by coal (fossil fuel).
Fossil fuels also contain radioactive materials, mainly uranium and thorium, which are released into the atmosphere, which contribute to smog and acid rain, emit carbon dioxide, which may contribute to climate change. Longer power cut durations in villages and high cost of cooling products.[4]

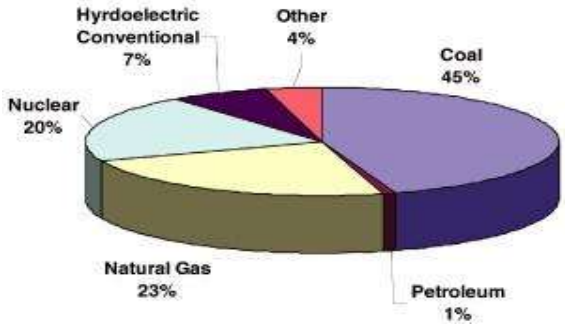


Fig.1 Production of electricity from different sources

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Automatic Power Factor Correction

Sachin Maheshri[1], SonuWarkhade[2], Sagar Chaudhari[3],Diptee Patil[4], Harshal Pawar[5]
[1] *Assistant Professor Of Electrical Department*
[2,3,4] *Student, Electrical Department*
GF's Godavari College of Engineering, Jalgaon, India, 425003
sachinmaheshri@gmail.com

Abstract –*In the present technological revolution power isvery precious. So we need to find out the causes of power loss and improve the powersystem. Due to industrialization the use of inductive load increases and hence powersystem losses its efficiency. So we need to improve the power factor with a suitablemethod. Whenever we are thinking about any programmable devices then theembedded technology comes into force front. The embedded is now a day very muchpopular and most the product are developed with Microcontroller based embeddedtechnology.Automatic power factor correction device readspower factor from line voltage and line current by determining the delay in the arrival ofthe current signal with respect to voltage signal from the function generator with highaccuracy by using an internal timer. This time values are then calibrated as phase angleand corresponding power factor. Then the values are displayed in the 2X16 LCDmodules. Then the motherboard calculates the compensation requirement and accordinglyswitches on different capacitor banks. This is developed by using 8051 microcontroller.*

Keywords- Microcontroller, LCD display module, Capacitor bank, SCR, Optocoupler, Transformers, Voltage regulator

INTRODUCTION

Unlike Director Current Circuits, where only resistance restricts the current flow, in Alternating Current Circuits, there are other circuits aspects which determines the current flow; though these are akin to resistance, they do not consume power, but loads the system with reactive currents; like D.C. circuits where the current multiplied by voltage gives watts, here the same gives only VA.

Like resistance, these are called "Reactance". Reactance is caused by either inductance or by capacitance. The current drawn by inductance lags the voltage while the one by capacitance leads the voltage. Almost all industrial loads are inductive in nature and hence draw lagging wattles current, which unnecessarily load the system, performing no work. Since the capacitive

Currents is leading in nature, loading the system with capacitors wipes out them. The power factor of an AC electric power system is defined as the ratio of the real power flowing to the load to the apparent power in the circuit, and is a dimensionless number between 0 and 1 (frequently expressed as a percentage, e.g. 0.5 Pf = 50% Pf). Real power is the capacity of the circuit for performing work in a particular time.Apparent power is the product of the current and voltage of the circuit. Due to energy stored in the load and returned to the source, or due to a non-linear load that distorts the wave shape of the current drawn from the source, the apparent power will be greater than the real power.In an electric power system, a load with a low power factor draws more current than a load with a high power factor for the same amount of useful power transferred. The higher currents increase the energy lost in the distribution system, and require larger wires and other equipment. Because of the costs of larger equipment and wasted energy, electrical utilities will usually charge a higher cost to industrial or commercial customers where there is a low power factor.

Linear loads with low power factor (such as induction motors) can be corrected with a passive network of capacitors or inductors. Non-linear loads, such as rectifiers, distort the current drawn from the system. In such cases, active or passive power factor correction may be used to counteract the distortion and raise the power factor.

The devices for correction of the power factor may be at a central substation, spread out over a distribution system, or built into power-consuming equipment.

METHODOLOGY

Power factor is a ratio of real power and apparent power. Ideal power factor is unity. Pure resistive loads have unity power factor. But there is no such load exist. So we always try to make power factor close to unity reactive power is also reason of low power factor. Inductive loads absorb reactive power and capacitive loads provide reactive power.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Solar Based Grass Cutter Machine

Sachin Maheshri[1], Ritesh Patil [2], Hemant Avasrmal [3], Shubham Bhad [4]
[1] *Assistant Professor Of Electrical Department*
[2,3,4] *Student, Electrical Department*
Gf'S Godavari College of Engineering, Jalgaon, India, 425003
1) rdpatil1803@gmail.com 2)shubhambhad76@gmail.com

Abstract – *In today's generation the major problems are the pollutions, cut of power etc. Thus overcome to these problems we have thought about device which can be work efficiently without causing any types of problem. So we work on the project of grass cutter machine which performing fully automated and using renewable source of energy that is solar power. The main object of this project is to invent solar operated grass cutting machine which is operated on the solar power. There is power shortage therefore we decide to work on the device which operated on solar power. And if the somecondition there is solar power will be not done we use the external power supply, for that we make the external power supply circuit. This project working is easy and simple in construction. In this project we use the solar panel which is connected to the battery where the battery supplies the power to the whole arrangement. In this project we connect the four motors where the two motors for moving action and other two motors for the cutter blades. So from this paper we present the daily purpose robot which cuts the lawn.*

Keywords-Solar Plate, Battery,Blades, Atmega8 Microcontroller, Sensors, DC Motor, Voltage Regulator, Sensor.

INTRODUCTION

Solar energy is the form of renewable energy source and this source ischaracterized as either passive solar or active solar depending on how they capture and distribute solar energy or convert it into solar power. Basically solar energy is the free energy source which can be used easily. Then by using this free solar energy, solar based grass cutter machine will be operating automatically. Generally in the market there are many grass cutter machines are available like electrical and gasoline based. The gasoline grass cutter machine fully depends on the fuel means it works on the fuel which increases the air pollution. And the electrical grass cutter machine fully depends on the electricity provide by the electrical motor that is induction motor.

For this cutter machine long wire required for the power supply and due to the high weight of induction motor, it is difficult to operate. If think about these problems, try to make grass cutter machine on fully automated based on the solar power. In this project the 10 watt solar panel used for the power supply and 12V battery used for storing the solar power.

There are four motors are used which are controlled by the Atmega8 microcontroller. Where the two motors are used for the moving action and the other two motors used for grass cutting purpose.For avoiding the obstacles during the operation the ultrasonic sensor is used for avoiding action. There is no need of fuel and any wire extension for the power supply therefore it is pollution less and eco-friendly project.

METHODOLOGY

The solar panel mounted on the grass cutter machine receives the solar power from the sun. This solar power stored in the battery. The battery provides power supply by using the solar charge controller.The main function of the solar charge controller is to increase the current from the panels while batteries are charging, it also disconnects the solar panels from the batteries when they are fully charged and also connects to the panels when the charging in batteries is low [2].

The solar grass cutter machine is start operation by the switch connected on the board which allows the flow of current to the motor which in turn drive the blades used for moving[5]. In this solar grass cutter machine the four dc 12v motors are connected to the both side of the machine, per side two motors are connected in parallel connection so they works as a single unit on both side[1]. Other additional motors are connected at the

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.ne

GSM Based Three Phase Induction Motor Protection and Control

ShubhamChaudhari[1], GirishMali[2], Mahesh Kasar[3], Amar Bagul[4],AtualBarahate[5]

[1,2,3,4]Student, [5]Assistant Professor
[1,2,3,4,5]Electrical engineering
[1,2,3,4,5]GF's Godavari College of Engineering, Jalgaon, India, 425001
atbarhate@gmail.com

Abstract *–This paper provides embedded based solution for a protection and control of three phasesInduction Motor. The proposed system is able to protect motor from various electrical faults like under voltage over voltage overheating and single phasing also as well as this system is also able to control three phase induction motor fro1m mobile phone by using GSM module. The basic idea for the development of this system is to control induction motor from remote areas to make agriculture water pumps more user friendly and to provide safety to motors installed in various industrial application. When any of the mentioned faults occurred in system corresponding relay will trip and motor is detached from fault condition. This system developed by using components like 8051 microcontroller GSM module temperature sensor relay LM-339 OP-AMP etc.*

Keywords- Microcontroller, under-over voltage, overheating, GSM module etc.

INTRODUCTION

Nowadays three phase ac motors are widely used in many industrial applications due to many advantages associated with it like easy maintance rigidity and the main speed control flexibility. These ac motor are also used in agriculture sector for water pumping. So the following system is proposed to protect ac motors from electrical faults like under-over voltage single phasing and overheating etc. which helps to improve reliability of system in which motor is installed and the facility to control motor by using mobile makes it more user friendly. [1]

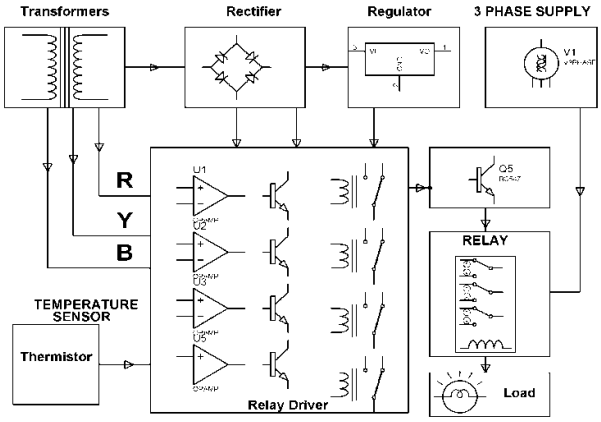
OBJECTIVE

There are two main objective of this system:

1] To protect ac motor from faults like under-over voltage, single phasing, over heating etc.

2] To switch on-off motor through GSM [3]

METHODOLOGY



BLOCK DIAGRAM

There are two main section of this system one is to protect motor from faults and other is to make on-off using GSM. For this purpose system will use 8051 microcontroller, 3 single phase transformer, 4 relay, relay driver, LM-339,

Impact factor: 3.441 e-ISSN: 2456-3463
National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Analysis Of Solar Small Size 100 Va Inverter For 55Watt Led TV

Mahesh H. Patil[1], Tushar S. Patil[2], Shubham S. Patil[3], Madhuri R. Patil[4],
[1] *Assistant Professor of Electrical Department*
[2, 3, 4] *Student, Electrical Department*
Gf'S Godavari College of Engineering, Jalgaon, India, 425003
1)patilt335@gmail.com 2)mwgamers94@gmail.com

Abstract –*In that project we are focusing on the analysis of solar small size 100VA inverter for 55 watts LED TV. We know that the normal 500 VA solar inverters are much heavy near about 8kg to 10 kg. Now this good for other loads.But in case our load is low like LCD or LED TV,laptop. In this case that heavy and bulky inverter is not so good. Then we replace that to 100VA solar inverter and this inverter is light in weight, compact in size and also low cost a means low in cost. And because of using solar inverter then we also save the electrical energy. On that project we will analyze the behavior of inverter by connecting variable loads and variable range of input panels (PV panels) to the inverter.*

Keywords- Solar Inverter, PV panel, Batteries, LCD or LED TV.

INTRODUCTION

In today's climate of growing energy needs and increasing environmental concern, alternatives to the use of non-renewable and polluting fossil fuels have to be investigated. One such alternative is solar energy.

I. Problem statement

The world demand for electric energy is constantly increasing, and conventional energy resources are diminishing and are even threatened to be depleted. More over their prices are rising. For these reasons, the need for alternative energy sources has become indispensable, and solar energy in particular has proved to be a very promising alternative because of its availability and pollution free nature.

Due to the Increasing efficiencies and decreasing cost of photovoltaic cell and the improvement of the switching technology used for power conversion, our goal is to design an inverter powered by PV panels and that could supply stand-alone AC loads.

II. Objective And Scope

The main objective of our project is to design and develop and construct a PV based system that produces electric energy and operates in dual mode, supplying stand-alone AC loads, while minimizing its cost and size.The systems main property is to production of quality electricity from a renewable source to reduce dependence on fossil fuels and the associated emissions of pollutants.Our goal is to design and develop an inverter that will handle the task described.

METHODOLOGY

Solar energy conversion is done by using solar inverter and battery. Because of we used the pure sine wave solar inverter the charge controller is inbuilt on this. Therefore we installed the system as per fig.

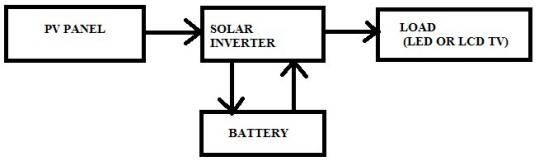


Fig. solar energy conversion process

In this system we used the 100 watt pure sine wave inverter, PV panels as supply and LCD TV as load..

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

PLC Based Object Sorting According To Height

Vijay Choudhary[1], Sagar Kale[2], Shubham More[3], Mahesh Patil[4], Bharat Patil[5]

[1]*Assistant Professor, Electrical Engineering Department*
[2345] *Student, Electrical Engineering Department*
Gf's Godavari Collage of Engineering, Jalgaon, India, 425001
1) sagarkale49@gmail.com 2) moreshubham49@gmail.com

Abstract – *In today's world of technology and due to speed running industries, the production rate has increased tremendously. Here sorting plays an important role. Industrial automation mainly focuses on developing automations having low cost, low maintenance, long durability and to make systems user friendly as possible. This project consists of two parts, first consisting of software which contains ladder logic programming which is used to program PLC that controls the whole process of the project step by step according to input data sequence. Second is the hardware part which consists of conveyors used to transport the objects, sensors used to sense the height.*

The development of a LCA (Low Cost Automation) system to sort objects according to their height has been discuss. This LCA system is controlled by Programmable Logic Controller (PLC). The objects are been sorted according to their respective height. The main conveyor is supported of two branches to load the distinguished object on to the respective one as separated by the electronic system and detected by the laser sensors.

Keywords-Programmable Logic Controller, Manufacturing, Sorting, Low Cost Automation.

INTRODUCTION

In this project, we have developed a Low Cost Automation System for sorting the light weight objects on the basis of height variation. The project mainly focuses on sorting 3 different height objects using photo-electric sensors and DC geared motors interfaced with Programmable Logic Controller (PLC). PLC is programmed with three different logics, each for sorting. Sorting is very important in any type of industry such as manufacturing industry to improve the efficiency of manufacturing processes g different height product. The purpose of this project is to save the time for inspection and to reduce the efforts of the workers in material handling. A sorting machine is more practical and economical method of automation, which transfers material from one point to another.

Conveyor: - A conveyor belt consists of two or more pulleys, with a continuous loop of material which rotates over them. There are two main industrial classes of belt conveyors; The system needs to satisfy industry requisition. This is an industrial automation based application. The problem statement for the project is to create the electronic material handling system which can be used to reduce the efforts of workers as well as to reduce the time spent in inspection of the components, during their manufacturing. It also reduces the efforts in transferring the components manufactured to anther workstation. The most apparent reasons that are associated in installing of automatic system in industry are i. Saving Man Power ii. Improved Quality and Efficiency

LITERATURE SURVEY

Industrial automation and robotics play important role in growth of industry. The main criteria in industry are quality and flexibility of the product. In 80's robot were used to perform tasks like machine tending, material transfer, painting, welding which does not require high accuracy. All height sorters tested used Pulsed Light Emitting Diode (LED) technology to determine the height of material falling from the edge of a belt.

i) Existing System:

In currently existing systems, use of different technology is made according to budget and scope of industry. It

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Brushless Dc Motor Speed Control Using Microcontroller

Vijay Chaudhary[1], Mohd Adil Pinjari[2], Shaikh Nadeem[3], Rahul Badgujar[4],Rahul Lokhande[5]

[1]*Assistant Professor, Electrical Engineering Department*
[2345] *Student, Electrical Engineering Department*
Gf's Godavari Collage of Engineering, Jalgaon, India, 425001
1) nsaikh751@gmail.com 2) badgujarr19@gmail.com

Abstract **–** The hardware project is designed to control the speed of a BLDC motor using closed loop control technique. BLDC motor has various application used in industries like in drilling, lathes, spinning, electric bikes etc. The speed control of the DC motors is very essential. This proposed system provides a very precise and effective speed control system. The user can enter the desired speed and the motor will run at that exact speed.

Keywords- Hall position sensors, Brushless DC motor, Microcontroller.

INTRODUCTION

Permanent -magnet excited brushless DC motors are becoming increasingly attractive in a large number of applications due to performance advantages such as reduced size and cost, reduced torque ripples, increased torque-current ratio, low noises, high efficiency, reduced maintenance and good control characteristics over a wide range in torque–speed plan.In general, Brushless DC motors such as fans are smaller in size and weight than AC fans using shaded pole or Universal motors. Since these motors have the ability to work with the available low voltage sources such as 24-V or 12-V DC supply, it makes the brushless DC motor fans convenient for use in electronic equipment, computers, mobile equipment, vehicles, and spindle drives for disk memory, because of its high reliability, efficiency, and ability to reverse rapidly. Brushless dc motors in the fractional horsepower range have been used in various types of actuators in advanced aircraft and satellite systems torque null regions are reduced significantly [8, 11]. In this paper, a brushless DC motor with distributed winding and a special form of PM-rotor with special stator periphery are described. Which develop a speed control system for a BLDC motor by closed loop control technique

. PRESENT PROBLEM

The producing of electricity is ultimately responsible for hot and humid conditions i.e. global warming. As in below shown chart it is clear that major quantity of electricity is produced by coal (fossil fuel).
Fossil fuels also contain radioactive materials, mainly uranium and thorium, which are released into the atmosphere, which contribute to smog and acid rain, emit carbon dioxide, which may contribute to climate change. Longer power cut durations in villages and high cost of cooling products.

PROPOSED SOLUTION

Need of such a source which is abundantly available in nature, which does not impose any bad effects on earth. There is only one thing which can come up with these all problems is solar energy.

OBJECTIVE THE PROJECT

Pulse-width modulation (PWM) is a commonly used technique for controlling power to an electrical device, made practical by modern electronic power switches. The average value of voltage (and current) fed to the load is controlled by turning the switch between supply and load on and off at a fast pace The desired speed can be obtained by changing the duty cycle. The PWM in microcontroller is used to control the duty cycle of DC motor.

Average Voltage=D * Vin

Impact factor: 3.441 e-ISSN: 2456-3463
National Conference on Current Trends in Engineering, Science and Technology (NACCTEST-2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Grid Synchronized Voltage Source Inverter Controlled By Using PI Controller

[1]*Sushil Kale* , [2]*Pankaj Bari,* [3]*Nikita Dhake,* [4]*Dipak Patil,* [5]*Atul Barhate,* [6]*Amit Borole 1,2,3,4,Students, 5,6Assistant Professor, GF's Godavari college of engineering, North Maharashtra university, Jalgaon, Maharashtra, India, Pin- 425003*
amit2010borole@gmail.com

Abstract *- Over the years, power converters have found wide application in grid interfaced systems, including distributed power generation with renewable energy sources. In distributed energy systems like solar, hydro or any diesel generation where the output of the system is DC and is expected to be converted in AC, an inverter is used. There are various modes to have a controlled output of inverter. The paper consists of the study of three phase Voltage Source Inverter in grid connected mode. In PI control, the stationary reference frame is used to transfer the feedback quantities, where the decoupling of component requirement increases some complications. The main advantage with this controller is the reduction in steady state DC error. The PI controller is adopted in the most familiar dqo reference frame. The three phase system is simulated in the matlab-simulink environment with both the controllers and experimental results are given to prove the correctness and feasibility of the system.*

Keywords—*PI controller; d-q reference frame; reference tracking; Grid synchronization*.

INTRODUCTION

Due to rapid depletion of fossil fuels and the rising demand of electricity power, the interconnection renewable energy sources (RES) including wind turbines, photovoltaic (PV), and other distributed generation etc., has raised concern in the last few years. Hence it became general trend to increase the electricity production using renewable power systems. According to the survey, in the last few years there is a great increase in the use of solar and other renewable energy systems. This increase is nearly from 5% to 20% of the total energy used. Also in the year 2008 - 2009 there is a drastic increase in use of solar energy compared to the last decade [1]. In order to control these renewable energy sources more effectively and fulfill power quality requirement, micro-grid concept is proposed more recently. A micro-grid is a cluster of RES and loads, which can operate in both grid-connected mode and islanded mode. All the renewable energy sources are parallel connected to an ac common bus through inverters or ac-to-ac converters, the common bus is then connected to the utility/grid. The key functional element of an AC Micro-Grid system is a Voltage Source Inverter (VSI). The different Renewable Energy Sources (RES) within the Micro-Grid system can operate independently or interconnected to a common DC link which supplies constant input to the VSI. These systems are to be properly controlled in order to provide the reliable power system to the utility network [1]. Fig. 1 shows the block diagram of the photovoltaic grid interfaced system. It gives the general idea of distributed generation system consisting a boost converter and inverter. The renewable energy source used is photovoltaic system. As the output of Photovoltaic system is very low as compared to the grid utility voltage, the boost converter is required to boost the low level output of PV system. The output of the Boost converter is thus fed to the three phase voltage source inverter.

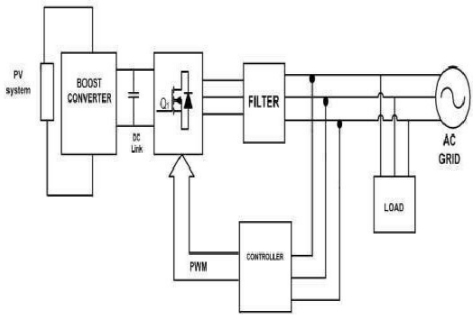


Figure 1. Block diagram of grid connected RE System

The output of the inverter is given to the grid utility through the filter. The control block, as shown in

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Electrical Hoist

Dinesh Sangle[1],BhushanGunjal[2], PankajShelake[3], Rahul Rajput[4] ,Mahesh Patil[5],
[1,2,3,4,] *Student ofElectrical Department*
[5] *Assistant Professor ofElectrical Department*
Gf'S Godavari Collegeof Engineering, Jalgaon, India, 425003

maheshpatils@gmail.com

Abstract *–Material handling plays vital role in any industry. The main object of this project is to invent Electrical Hoist with dynamic braking. A problem for shifting of light weight objects around 25 Kg to a height of about 30 meters from ground has been discussed here. To solve this issue across Godavari college of Engineering, an idea of using small electrical Hoist is presented. It basically involved design calculation for hoist motor and required accessories for it.*

Keywords-dc series motor, rope,drum, dynamic braking.

INTRODUCTION

The Hoist mechanism shall include a driving motor, a gear reduction unit, two rope drums, ropes, shafts, gears, couplings, brakes, emergency manual arrangements, limit switches, gate position indicator (both analogue and digital), covers etc., all mounted on a fabricated steel frame. Electrical controls and all necessary electrical and mechanical accessories shall be provided for the satisfactory operation of the hoist. The hoist shall be capable of fully opening/closing the gate. Sufficient space shall be provided around the hoist components for repair/maintenance.A hoist is a device used for lifting or lowering a load by means of a drum or lift-wheel around which rope or chain wraps. It may be manually operated, electrically or pneumatically driven and may use chain, fiber or wire rope as its lifting medium. The most familiar form is an elevator, the car of which is raised and lowered by a hoist mechanism. Most hoists couple to their loads using a lifting hooksontic sensor is used for avoiding action. There is no need of fuel and any wire extension for the power supply therefore it is pollution less and eco-friendly project.

METHODOLOGY

The single phase supply is given to the hoist through power supply converter ,since we are using dc motor ac power is converted in dc by rectifier and filter in power supply and the output is applied to the motor is forward or reversed by the switch as the power applied to motor it runs.

The shaft of motor is coupled the pulley is coupled to the spur gear pulley with the help of chain. The spur gear arrangement runs according to the speed of the motor. As motor is switched ON, the wire or rope is wound or released as per direction selected by the control switch .

The rope is supply by a wire tare. The tare is rotating which is mounted on bearings to the frame stand by two end bearings, so that it will run freely according to the speed of the rolling shaft.

The rolling shaft is rotated when the motor switched ON. The spring wire is rolling in the rolling shaft due to the rotation of the rolling shaft. The length of the rolling rope is decided by the operator. The required length of the rope is rolled the motor is switched OFF.

Types of Braking in a DC Motor

The different types of motors that are available today and in this article, I shall discuss about the various techniques used to stop a DC Motor or to bring it to rest as we cut off the supply. Kindly see that the braking preferred to stop a DC Motor is Electrical Braking and not Mechanical Braking. In other words, the motor is stopped by the voltage and current action in the circuit rather than the mechanical friction brakes on the rotor.

Impact factor: 3.441 e-ISSN: 2456-3463

National Conference on Current Trends in Engineering, Science and Technology (NACCTEST- 2018)
Organized by GF's Godavari College of Engineering, Jalgaon
International Journal of Innovations in Engineering and Science, Special Conference Issue, 2018
www.ijies.net

Design of Three Phase Induction Motor with Pole Change Array

Hitesh Patil[1], Manoj Thelari[2], Devendra Chaudhari[3] ,Bhushan Patil[4] , Atul Barhate[5]

[1 234]Students, Electrical Engineering Department, [5]Assistant Professor, Electrical Engineering Department Gf's, GCOE Jalgaon, Maharashtra, 425001
atbarhate@gmail.com.

Abstract – *Three Phase induction motor are employed in almost all industry because of its simple construction and easy operation. Efficiency of induction motor is affected by its fix losses and variable losses which mainly defense upon input supply voltage and load current respectively .And attempt is made to minimize the iron losses using the perment magnet ferrite .A new three phase induction motor using return pole technology is proposed in this paper whose stator consist of two three phase winding accommodated in the same core and rotor is use as squirrel cage rotor with ferrite material on its periphery. Shaft lode are categorized as low, medium and high, stator winding are energized through control based and lode demand when compare to convention to induction motor, the motor efficiency and power factor are improve. Another approached of this machine is that ferrite layer on the rotor periphery will reduce the motor loss which result improving the motor efficiency.*

INTRODUCTION

Induction motors are the most widely used motors for appliances, industrial control, and automation hence, they are often called the workhorse of the motion industry. They are robust, reliable, and durable. When power is supplied to an induction motor at the recommended specifications, it runs at iterated speed. However, many applications need variable speed operations. Historically, mechanical gear systems were used to obtain variable speed. Recently, electronic power and control systems have matured tallow these components to be used for motor control in place of mechanical gears. These electronics not only control the motor's speed, but can improve the motor's dynamic and steady state characteristics. In addition, electronics can

reduce the system's average power consumption and noise generation of the motor. Induction motor control is complex due to its nonlinear characteristics. While there are different methods for control, Variable Voltage Variable Frequency or Volts/Hertz is the most common method of speed control in open loop. This method is most suitable for applications without position control requirements or the need for high accuracy of speed control.

However, AC motor speed control requires either varying the magnetic flux or changing the number of poles on the motor. Even decades after the induction motor gained widespread use, changing the frequency for speed control remained an extremely difficult task and the physical construction of the motor prevented manufacturers from creating motors with more than two speeds.

As a result, DC motors were necessary where accurate speed control and significant power output were required. In contrast to AC motor speed control requirements, DC motor speed control was achieved by inserting a rheostat into the low-power DC field circuit, which was feasible with available technology. These simple motor controls varied the speed and torque, and were the most economical way to do so for a number of decades. some electrical devices which need variable frequency than the fixed

supply frequency. The induction motors are one of the best example for variable frequency drives.

ISBN: 978-81-962241-6-5
Chapter No-20, PP. 81-85

Fire Fighting Robot Using RaspberryPico

Darpan Chaudhari[1], Hitesh Chaudhari[2], Pravin Kumar Barela[3], Sonal Naphade[4], Mahesh N. Patil[5]

[1,2,3,4]UG students,[5]Assistant Professor
[1,2,3,4,5]Department of Electronics & TeleCommunication Engg., GF's Godavari College Of Engineering, Jalgaon, Maharashtra

darpanchaudhari121@gmail.com[1]

Abstract: *It's necessary and very dangerous work to fight against flames. The implementation of this project is automatized as well as manualized. This project uses ARM7. In sectors such as nuclear power plants, petroleum refineries, gas tanks, chemical plants and other large-scale industries, the majority of fire incidents occurs, which results to complex situations. More number of people have lost their lives because of such incidents. Weare mounting a Wi-fi module (Node MCU) for mobile communication and many other sensors to detect the fire and smoke. We use the BLYNK/TCP terminal program for mobile control of the robot. The size of the robot is around 20 cm long and 10 cm tall, capable of carrying an extinguisher (gas). 12V 1.3Ampere hours ofbattery power. Keil M Vision 4, Flash Magic and Embedded C are the applications used for this project.*

Keywords*:- Fire Fighter Robo,Rpico,Flame sensor, Gas sensor, Wi-Fi module, DC motor*

I. INTRODUCTION

The robot presented here is an embedded device in real time. C language is the software used to implement this type of robots. During automatic mode the robot tracks the environment to detect fire accidents. This robot uses IR sensors and output of this electrical sensors is fed to amplifier transistor. This signal is later fed into the micrcontroller's INpin. When a fire is observed, the microcontroller drives the motors andtriggers the actuators. A water reservoir is mounted on the frame which has 10rpm DC pump motor. The water reservoir is attached to the hose and the end of which isplaced on the robot's head . The water is sprayed to the flames in order to eliminate the fire. This paper alsoshows us how a robot is voice controlled. The robot is operated through the speech system. The commands are given to the robot in order to make them operated. The advantage of this type of robot is , hand free operation and fast data input. Disadvantage is the robotis affected by the environmental or external noise. The tank robot is made of a mixture of acrylic, plastic, aluminum and iron. There are two servo motors for each wheel, two DC motors for two flame extinguishing fans, there are many other sensors like ultrasonic, compass, flame thermal array and many other. The robot is switched on by the sound and a sound activator circuit is mounted on it. The audio activation circuit consists of a Dual Tone Multi Frequency receiver and transmitter. Microcontroller AVR ATMega16 receives data from a sound activation circuit, an infrared and photodiode circuit as a white detector, a micro switch sensor as a furniture detector, UVTRON and TPA81 as flame detectors and thermal detectors, CMPS03 as navigation detectors, SRF04 as ultrasonic sensors. Microcontroller processes signal inputs and delivers signal outputs to theservo motor (GWS S03 4.8V) on the front-left wheel andthe front-right wheel, and the DC motor to spin the fanto extinguish the flame

II. LITERATURE REVIEW

The tank robot is made of a mixture of acrylic, plastic, aluminum and iron. There are two servo motors for each wheel, two DC motors for two flame extinguishing fans, there are many other sensors like ultrasonic, compass, flame thermal array and many other. The robot is switched on by the sound and a sound activator circuit is mounted on it[1,2]. The audio activation circuit consists of a Dual Tone Multi Frequency receiver and transmitter. Microcontroller AVR ATMega16 receives data from a sound activation circuit, an infrared and photodiode circuit as a white detector, a micro switch sensor as a furniture detector, UVTRON and TPA81 as flame detectors and thermal detectors, CMPS03 as navigation detectors, SRF04 as ultrasonic sensors[3,4]. Microcontroller processes signal inputs and delivers signal outputs to the servo motor (GWS S03 4.8V) on the front-left wheel and the front-right wheel, and the DC motor to spin the fan to extinguish the flame.There are 2 types of remote

ISBN: 978-81-962241-6-5
Chapter No-17, PP. 68-71

Smart Medicine Box Using Raspberry Pi

Neha dhake[1], Nayana Chaudhari [2], Sayali Ravate[3], Sawapnil Shele[4], Hemraj.V.Dhande[5]

[1,2,3,4]UG students,[5]Assistant Professor
[1,2,3,4,5] Department of Electronics & TeleCommunication Engg., GF's Godavari College Of Engineering, Jalgaon, Maharashtra

hellonehaa1211@gmail.com[1] , chaudharinayana05@gmail.com[2] , sayliravate2000@gmail.com[3], swpanil29497@gmail.com[4], hemrajd99@gmail.com[5]

Abstract: *A smart medicine box using raspberry is an innovative and technologically advanced solution designed to enhance medication management and improve patient adherence to prescribed regimens. It combines traditional pill containers with intelligent features, leveraging modern technologies such as Raspberry pi connectivity, sensors, and data analytics.*
The smart medicine box is equipped with compartments that can hold different medications, each with its own monitoring system. The system records medication intake, tracks pill inventory, and provides reminders for scheduled doses.

Keywords- *Pill box,raspberry pi 3, Buzzer, LED, Resistor.*

I. INTRODUCTION

Our project is to build a raspberry pi based smart medicine box. Our smart medicine box is designed for people who need to take medications or vitamin supplements regularly, as well as for nurses who care for older adults or patients.

The smart medicine box is like a special container that can be programmed by nurses or users to set how many pills should be taken and at what time each day. It has seven smaller compartments inside, so information can be set for seven different pills. Once the pill quantity and serving time are set, the medicine box will remind users or patients to take their pills using sounds and lights. There is a display on each compartment that shows the exact number of pills that need to be taken.

Compared to traditional pillboxes where users or nurses have to fill the box every day or week, our smart medicine box reduces the burden of constantly refilling pills for patients or users.

Furthermore, the smart medicine box can be synchronized with a mobile application or connected to a cloud-based platform, allowing patients, caregivers, and healthcare providers to remotely monitor medication adherence and receive real-time updates. The application may offer additional features, such as medication information, personalized reminders, and the ability to request refills.

By integrating technology into medication management, the smart medicine box aims to reduce medication errors, prevent missed doses, and improve overall treatment outcomes. It promotes patient medication regimens, and enhances communication between patients and healthcare providers.

II. LITERATURE SURVEY

According to the World Health Organization, more than 80% of people above the age of 60 are prescribed medicines that need to be taken 2-4 times a day. With the rise in cardiovascular diseases and diabetes among this age group, regular administration of medication has become necessary [1]. However, among these individuals, 40-60% face issues related to forgetting to take their medicines at the right time.

Currently, the common techniques used in the market for medication reminders include normal alarms along with a pill box 2]. However, this method does not address concerns related to overdosing or taking the wrong dosage. It only reminds the patient to take the medication. The clock in the smart medicine box

ISBN: 978-81-962241-6-5
Chapter No-18, PP. 72-75

Vehicle Monitoring and Safety Driving

Pramod Dhamadhikari [1], Shubhangi More [2], Kalpesh Chaudhary [3], Manisha Patil [4], Prof. V.D. Chaudhari [5]

[1,2,3,4] UG student , [5]Assistant Professor, Dept. of Elctronics & Telecommuicationl Engineering, Godavari college of engineering, Jalgaon, Maharashtra, India.

shubhanginimore1999@gmail.com[1], vinuda.chaudhari@gmail.com[5]

Abstract *— Accidents are major issues these days. There are 2 basic reasons: Several accidents occur due to rash driving caused by drunken drivers. The second kind of accident occurs due to the sleepy-eyed condition of the person driving while driving long distances in the dark while not taking correct sleep. The eye blink sensor monitors the sleep state of a person and alerts the driver using a buzzer when an uncommon sleep state is detected. Accidents because of the associate degree alcoholic state of the person can be controlled and prevented with the assistance of an Alcohol sensing element assembled on a steering wheel. Accidents may be detected employing a vibration sensing element and a vehicle can be located by a GPS module. Accident alerts are then sent to the rescue team.*

Keywords: *Raspberry pi, Eyeblink sensor, Alcohol sensor, GPS, GSM, Accident, Location, Drowsy, Vehicle safety.*

I –INTRODUCTION

One of the main reasons for the cause of accidents in this modern world is due to carelessness of drivers. Many statistics say that most of the accidents are caused by drivers either due to consumption of alcohol or due to drowsiness of the driver. There are many technologies available in order to overcome those incidents. IoT is trending technology implemented in various sectors now-a-days. By this method we can monitor the current status of anything from anywhere through internet. Using various sensors we can monitor the details of the driver. From the output of these sensors the owner of the vehicle can monitor the current condition of the driver. Arduino is used to process the details from the sensors. Then this information is transmitted to the webpage by visiting the particular webpage anyone can know the condition of the driver at present.

II- LITERATURE REVIEW

[1] 2012, Sawant Supriya C, Dr. Bombale U. L., Patil T.B proposed a paper on “An Intelligent Vehicle Control and Monitoring Using Arm”. In this paper ARM 7 microcontroller is used where programming is a tedious process when compared to arduino programming. ARM uses more memory and it is complex to operate for this small specific application hence it is costlier than arduino. In [2] 2013, K.U.G.S. Darshana, M.D.Y. Fernando, S.S. Jayawadena, S.K.K. Wickramanayake proposed a paper on “Intelligent Driver Monitoring System”. This method uses bio-physiological data of the driver such as brain wave patterns, respiratory dynamics and heart rate variations. This intrusive nature of these systems reduces its usability in real time. In [3] 2012, Girma S. Tewolde proposed a paper on “Sensor and Network Technology for Intelligent Transportation Systems”. This paper reviews the technology deployed to support intelligent transportation systems with the aim to reduce cost and power consumption with wireless sensor networks. This has a disadvantage of using video technology for capturing eye movements and sign of fatigue which is being a time consuming process and also of more cost. In [4] 2016, Tariq Jamil, Iftaquaruddin Mohammed and Medhat H. Awadalla proposed a paper on “Design and

Analysis of Managing The Traffic on Highway Passing Through City

Vijay Dattatray Chaudhari
Research scholar (Electronics Engg),
KBC NMU, GF's Godavari College of Engineering, Jalgaon

A. J. Patil
Professor,
Samarth College of Engg., Aalefata, Pune-Mumbai highway, India

K. P. Rame
Professor,
KCE College of Engg& IT, Jalgaon, India

Abstract -

The purpose of our work is to set traffic signal time in dynamic manner so that traffic count & waiting time will be uniformly distributed for particular intersection. The vehicle count is observed and analysis of its consecutive effect of arrival of these vehicles on preceding intersections is going on. This will probably help us in future to determine the congestion distribution strategy among various intersections we are going to consider in our work.

In this paper we had tried to study the parameters for some other default values. We had tried to observe and analyze traffic related parameters requirements by considering vehicle count on highway intersections, vehicle speed & time required for various vehicles to depart and to arrive between the consecutive intersections

Keywords - Traffic Management, Highway Intersection, Traffic Parameter Simulation, SUMO

Introduction -

In this paper we are considering the configuration taken from OpenStreetMap or Google for the to understand and to get the location of the vehicles exactly on the highway and the will use tools like SUMO simulator app, OMNET++ language, VEINS and NetEdit software and co-ordination among them.SUMO requires various configuration files which are mostly of type .xml or .sumocfg[4].The node, edge, connection and types file are together bundled into a single configuration file with extension .netc. This file is responsible for defining the various input, output and settings files which are going to be used in the simulation. Along with this, the additional input file which contains the definition of vehicles, their routes and the corresponding stops is combined. On compiling this, another SUMO configuration file is generated which can be used to run the actual simulation in SUMO-GUI.

Schematic of existing intersections on highway -

We have considered three intersections,AjjinthaChowk, IcchadeviChowk, AkashvaniChowkas shown in figure 1.1 below.

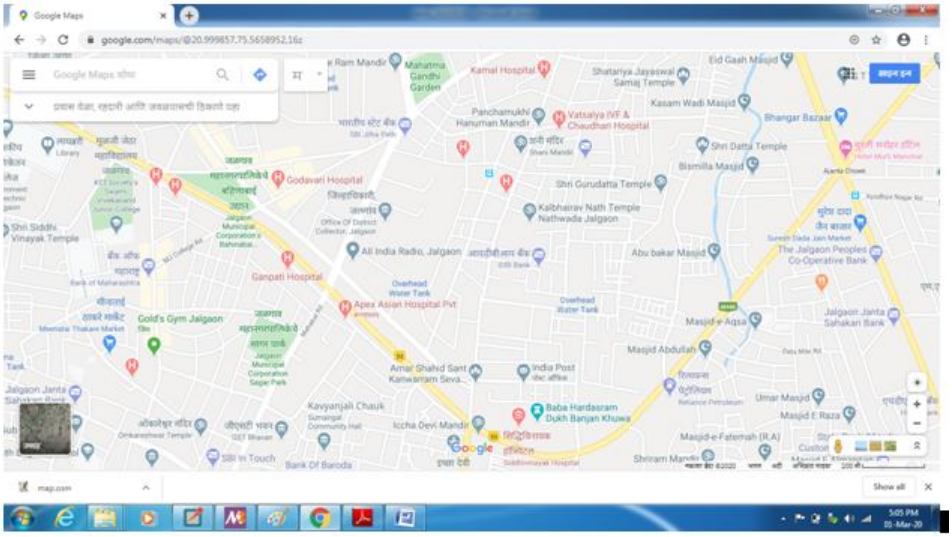


Fig. 1.1 The scenario of 03 chowk in Jalgaon city taken from Google mapOut of which we are focusing on Ajinthachowk, Icchadevichowk and Akashvanichowk for our study. The data from the other two intersections

3rd International Conference on
Computing, Communication and Signal Processing
January 26-27, 2018
ICCASP 2018
175 YEARS Springer

Analysis of Face Recognition Algorithms for Uncontrolled Environments

S. S. Gangonda[1], P. P. Patavardhan[2] and K. J. Karande[3]

[1] Research Scholar, SKN Sinhgad COE, Pandharpur, Maharashtra, India.
[2] Professor, KLS Gogte Institute of Technology, Belagavi, Karnataka, India.
[3] Professor, SKN Sinhgad COE, Pandharpur, Maharashtra, India.

[1]sgangonda@gmail.com; [2]prashantgemini73@gmail.com; [3]kailashkarande@yahoo.co.in

Abstract: Face recognition is a challenging problem in biometric systems, which has received a lot of attention in the last two decades as it has numerous applica- tions in computer vision and pattern recognition. There is remarkable progress in the face recognition systems under controlled conditions8, but they degrade for un-controlled conditions like pose, illumination, expression and occlusion etc. In this paper, we discussed different algorithms like PCA, DCT, LDA, ANN, ICA, HMM and Wavelet with its pros and cons. The different face database used for face recognition is discussed. It also discusses various challenges and possible future directions for face recognition task.

Hostel Rooms Power Management and Monitoring Using Internet-of-Things

Meenakshi Patil[1], V. D. Chaudhari[2], H. V. Dhande[3] and H. T. Ingale[4]

[1]PG Scholar, VLSI & ESD, E&TC dept, GF's Godavari CoE, NMU, Jalgaon, INDIA
[2,3,4]Asstt. Prof., E&TC Engg dept, GF's Godavari CoE, NMU, Jalgaon, INDIA

[1]meenakship1407@gmail.com; [2]vinuda_chaudhari@yahoo.co.in; [3]hemrajd99@gmail.com; [4]hetui@rediffmail.com

Abstract: Power saving is the important issue now-a-days and it is more critical in hostels because of some irresponsible students who leave the room without switching OFF the tubes-lights and fans. So, for controlling this wastage of electricity in hostels, we have tried here to develop this system that helps in monitoring and managing the electrical power requirement. In this system IR Sensors sensed the presence of students in the room with the help of counter. When it counts one, it means students entre the room, this counter increases and so on. When the student leaves the room, it decreases the count and when it reaches up to zero, this indicate, no one present in the room. At this time after few second switches will automatically OFF if it is ON and this information will be sent to the server/cloud where the authorised person can see or watch all the activities in the room. Here, we need only Internet for watching the online process. This will be in the form of notification where it will show the room number, OFF time. The other feature of this system is, when such notifications will be seen on the screen, one SMS will be sent to the student about Rs.100/- penalty or punishment. Internet-of-Things plays vital role in this system. This promotes students to become responsible about careful utilization of electricity.

Critical Review and Scope of Intelligent System for Traffic Regulation

Vijay D. Chaudhari*, Dr. Anil J. Patil
Kavayitri Bahinabai Chaudhari North Maharashtra Univeristy,
Jalgaon-425001, Maharashtra, India
*Corresponding Author's E-mail: vinuda.chaudhari@gmail.com

Abstract: Traffic congestion is a major problem in all major cities in developing countries. Conventional system has many limitations. There are three major goals need to consider that are 1. To provide variable time slot as per traffic density, 2. To provides free corridor for emergency vehicles, 3. To provide zero waiting time to a car at a junction if all other roads are empty. The purpose of this paper is to do thorough comprehensive survey on traffic control and management systems which are developed by the researchers throughout the world. The survey of the timely improved hardware systems and the intelligent and creative control logic that are till now simulated, developed, tested and validated are mentioned here. Generally Vehicular traffic intersects at the junctions of the road and controlled by the traffic signals. Traffic signals need a good coordination and control to ensure the smooth and safe flow of the vehicular traffic. During the rush hours, the traffic on the roads is at its peak. Also, there is a possibility for the emergency vehicles to stuck in the traffic jam. Therefore; there is a need for the dynamic control of the traffic during rush hours. Finally the new essential and possible way of intelligent traffic control is proposed.

Keywords: Vehicular traffic, city road and highway intersections, WSN, Raspberry Pi, Android, Python language.

1. INTRODUCTION

Traffic load is highly dependent on parameters such as time, day, season, weather and unpredictable situations such as accidents, special events or construction activities. If these parameters are not taken into account, this creates bottlenecks and delays in traffic monitoring. A traffic control system that solves these problems by continuously sensing and monitoring traffic conditions and adjusting the timing of traffic lights according to the actual traffic load is called an intelligent traffic control system. Figure 1 shows traffic congestion at intersection.

Traditional traffic monitoring technologies consist of on the road sensors, which are necessary but not sufficient because of their limited coverage and expensive costs of implementation (including time needed to lay the sensors on target roads) and maintenance. In general traffic can be counted using two methods: the non-intrusive (e.g. video camera and Radar/Ladar) and intrusive (e.g. inductive and capacitive/magnetic devices, need to be buried in the road), as traffic sensors.

Traffic control systems may also be classified as saturated or unsaturated, depending on whether they were designed for a saturated or unsaturated network. In an unsaturated network, it is desired to minimize the mean delay of drivers, while in a saturated network it is desired to serve as many drivers as possible, or in other words, to maximize traffic capacity of the intersection. The problem of capacity maximization is the same as the queue minimization problem. The older system uses weight as a trigger mechanism. Current traffic systems react to motion to trigger the light changes. Once the infrared object detector picks up the presence of a car, a switch causes the lights to change.

An adaptive traffic control system must have the ability to diagnose saturation conditions in the network and change the objective function as desired. In older fixed-time systems, there were multiple timing plans, but now a modern traffic control system can have multiple control strategies.

ISBN: 978-81-962241-6-5
Chapter No-21, PP. 86-89

Android Speech Recognition Notice Board using Wi-Fi, GSM Module

Kalpesh Patil [1], Mayuri bhavsar[2], Sonam mali[3], Devendra Patil[4]. H.T. Ingle[5]

[1,2,3,4]UG students,[5]Assistant Professor
[1,2,3,4,5]Department of Electronics & TeleCommunication Engg., GF's Godavari College Of Engineering, Jalgaon,

kalpeshpatil0222@gmail.com[1], hetui@rediffmail.com[2]

Abstract: *We normally use a simple static LED display screen to convey a message. Earlier, when we want to display large data, we used to change message for every few instances. Now scrolling displays are more preferred to static. By using a pre-programmed controller, we can make LED display in scrolling way. We can also make LED to adoptable by using IOT, so that changing message and intensity of display can be easily done by using android application over internet. Simple Outdoor LED Message Moving or Scrolling Sign Board, Electronic projects using LED Stroller Generator for outdoor digital signs, Marketable LED sign board with Message scrolling are the examples of the scrolling LED display.*

In our project we are using esp8266 base microcontroller with embedded Wi-Fi. Four 8x8 led matrix are to be driven by using popular driver IC MAX7219. An android application is to be develop for controlling display parameters over internet. Also we are using speech output module (aPR33A3) to produce voice notifications.

I. INTRODUCTION

We normally use a simple static LED display screen to convey a message. Earlier, when we want to display large data, we used to change message for every few instances. Now scrolling displays are more preferred to static. By using a pre-programmed controller, we can make LED display in scrolling way. We can also make LED to adoptable by using PC controller based system. Simple Outdoor LED Message Moving or Scrolling Sign Board, Electronic projects using LED Stroller Generator for outdoor digital signs, Marketable LED sign board with Message scrolling are the examples of the scrolling LED display.

II. LITERATURE SURVEY

An extensive literature survey has been carried out on different techniques that have been implemented for the lighting system till date. In [1], the authors describe about automated lighting system with visitor counters. This System needs no manual operation for switching ON / OFF when a person enters or exits from a room. The PIR Sensors with the IR transmitter and receiver are placed at the entrance of the room doors in such a way that the sensor senses a person entering / exiting the room. This can also be done by using a laser. A Microcontroller is a circuit which helps in controlling the lights and fans in a room and keeps track of number of persons / visitors entered or exit from the room. When a person enters into the room then the counter is incremented by one and the lights in the room will be switched ON and when a person leaves the room then the counter is decremented by one. The lights will only be switched OFF until all the persons in the room go out and the room is unoccupied. A display also shows the total number of persons inside the room. But the limitation is that the room doors should not be wide enough as two or more people should not be allowed to enter at the same time.

Sensor Technology [2] is also used for the same objective of conserving energy. For instance, vacancy

ISBN: 978-81-962241-6-5
Chapter No-19, PP. 76-80

Bus Monitoring and Theft Detection Using Raspberry Pi

Sayyed wasim[1], Bhagyashri mandawade[2], Bhagyashiri choudhari[3], Krutika walzade[4], Ishwar S. Jadhav [5], V. D. Chaudhari[6]

[1,2,3,4] UG student , [5]Assistant Professor, Dept. of Elctronics & Telecommuicationl Engineering, Godavari college of engineering, Jalgaon, Maharashtra, India.

bvmandawade25@gmail.com[2]

Abstract: *The main objective of the project is to introduce an innovative and facile device that could be installed in bus stops that would facilitate the users with the bus location, bus vacancy and ticket booking. The user will be able to receive information of the bus routes according to his destination. This system would effectively reduce the average time a passenger has to wait in a bus stop. It also omits the inconvenience caused during payment as the money will get detected from the RFID. As the system is user-friendly it would encourage more citizens to use public transport which would ultimately contribute to the development of the state and reduces road traffic and toxic vehicle emission. The project also uses screen displays that could be placed in bus stops which would displaythe bus routes, bus timings and vacancies. This display is designed using raspberry pi which is a credit-card sized computer which is used to access the entire system. This would help the passenger to get the bus information such as timings, vacancies and locations.*

1. INTRODUCTION

The most important asset of man today is time. It happens many a times that people wait in queues for a long time and ultimately miss out on their desired bus and the next choice bus arrives at a few streets away from their current location. If passengers had an easy way to see which bus is near to their location and approximate time it would take to reach the stop, in real-time, they could make a more accurate, informed decision of whether or not to wait at the stop. The GPS and GSM based Real Time Bus Monitoring system will provide pedestrians Convenience. Not only would the GPS and GSM based Real Time Bus Monitoring system be a new product for Best Transportation, it would also be an improvement to the transportation service already addressing the dissatisfaction with current wait times of the buses. If we have a mobile device that can provide busarrival information with bus tracking based on the users current location, and suggest alternative bus route to the same destination, it will definitely help the user to manage their time properly. Users can decide if they have to keep waiting at their bus stop or go across a few streets to wait for another bus instead. In case thereis only one bus going from users current location to their desired destination, then this application will show the approximate time the bus will take toreach the users place. In this way the user does not have to unnecessarily stand at the bus stop. In addition, user candetermine whether they have to run or walk to the bus stops when they are near to the potential bus stops. Recent advances in automatic vehicle location (AVL) systems based on the global positioning system (GPS) have provided the transit industry and public transport enterprises with tools to monitor and control the operation of their vehicles and manage their fleets in an efficient and cost effectiveway

II -LITERATURE REVIEW

In countries like Japan and Mauritius, GPS Trackingsystems have gained importance in the last decade. In the metro cities of India like Mumbai, Delhi, Bangalore, Chennai, Kolkata etc. successful implementation of such a system is yet to be done.

Crowd Analysis and Mask Detection using Raspberry Pi-3

Pratiksha Sonar[1*], Bhushan Rokade[2], H.T. Ingale[3], Dr. A. J. Patil[4]
[1]PG(M.Tech VLSI & ES) Student, [3]Faculty E&TC Enggdept, [4] Professor
[1,3] E&TC Enggdept, GF's Godavari College of Engineering, Jalgaon

Abstract - *Now a days all world suffering from a pandemic issue of COVID-19 to control these situation and to maintain the safety of ourselves we all have to take care of the two things like do not make a crowd and wear the mask properly. And to achieve this requirement of safety this paper works with the help of fog node and camera. Managing the crowd requires an intelligent monitoring technology. In this project, we propose a method to manage the crowd by counting multiple humans in the scene by head detection. In our study, we develop a system using Raspberry Pi 3 board that detects the human heads and provide a count of humans in the region using OpenCV-Python. A Haar cascade classifier is trained for human head detection.This work also proposes a fog computing-based face mask detection system for controlling the entry of a person into a facility. The proposed system uses fog nodes to process the video streams captured at various entrances into a facility. Haar-cascade-classifiers are used to detect face portions in the video frames. Each fog node deploys two Mobile Net models, where the first model deals with the dichotomy between mask and no mask case. The second model deals with the dichotomy between proper mask wear and improper mask wear case and is applied only if the first model detects mask in the facial image. This two-level classification allows the entry of people into a facility, only if they wear the mask properly The results of the analysis will be helpful in managing the crowd and mask detection in the area with the help of camera.*

Keywords *- Haar-cascade-classifiers, Adobos algorithm, head detection, mask detection and tracking*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.28
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.135-138

Gesture Controlled Mouse Using Arduino

Lomesh Bhirud[1], Nitin More[2], Shoyeb Shekh[3], Hemraj V. Dhande[4]
[1,2,3] UG Student, B.Tech. E&TC Engg,, [4]Asstt. Prof.
[1,2,3,4] E&TC Enggdept, GF's Godavari College of Engineering, Jalgaon
[1]lomeshbhirud212@gmail.com , shoyebshekh7@gmail.com, [4]hemrajd99@gmail.com

Abstract - *In today's era human-machine interaction is becoming widespread. So, with the introduction of new technologies the gap between machines and humans is being reduced to ease the standard of living. Gestures have played a crucial role in diminishing this gap. Thisproject deals with design and implementation of an accelerometer based hand gesture controlled robot controlled wirelessly using a small low cost, 3-axis accelerometer. A novel algorithm for gesture identification has been developed to replace the approach of conventional controlling mechanism of robots via buttons etc. by an innovative hand gesturebased controlling. Using a microcontroller system the program has been written & executed. In the existing system, human hand movements are sensed by the robot through sensors and it follow the same. As the person moves their hand, the accelerometer also moves accordingly sensor displaces and this sensor senses the parameter according to the position of hand.*

Keywords- *Low-Cost Automation (LCA), combination sorting, PLC, ladder diagram*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.36
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.175-177

Crowd Analysis and Mask Detection using Raspberry Pi-3

Pratiksha Sonar[1*], Bhushan Rokade[2], H.T. Ingale[3], Dr. A. J. Patil[4]
[1]PG(M.Tech VLSI & ES) Student, [3]Faculty E&TC Enggdept, [4] Professor
[1,3] E&TC Enggdept, GF's Godavari College of Engineering, Jalgaon

Abstract - *Now a days all world suffering from a pandemic issue of COVID-19 to control these situation and to maintain the safety of ourselves we all have to take care of the two things like do not make a crowd and wear the mask properly. And to achieve this requirement of safety this paper works with the help of fog node and camera. Managing the crowd requires an intelligent monitoring technology. In this project, we propose a method to manage the crowd by counting multiple humans in the scene by head detection. In our study, we develop a system using Raspberry Pi 3 board that detects the human heads and provide a count of humans in the region using OpenCV-Python. A Haar cascade classifier is trained for human head detection.This work also proposes a fog computing-based face mask detection system for controlling the entry of a person into a facility. The proposed system uses fog nodes to process the video streams captured at various entrances into a facility. Haar-cascade-classifiers are used to detect face portions in the video frames. Each fog node deploys two Mobile Net models, where the first model deals with the dichotomy between mask and no mask case. The second model deals with the dichotomy between proper mask wear and improper mask wear case and is applied only if the first model detects mask in the facial image. This two-level classification allows the entry of people into a facility, only if they wear the mask properly The results of the analysis will be helpful in managing the crowd and mask detection in the area with the help of camera.*

Keywords *- Haar-cascade-classifiers, Adobos algorithm, head detection, mask detection and tracking*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.28
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.135-138

Gesture Controlled Mouse Using Arduino

Lomesh Bhirud[1], Nitin More[2], Shoyeb Shekh[3], Hemraj V. Dhande[4]
[1,2,3] UG Student, B.Tech. E&TC Engg,, [4]Asstt. Prof.
[1,2,3,4] E&TC Enggdept, GF's Godavari College of Engineering, Jalgaon
[1]lomeshbhirud212@gmail.com , shoyebshekh7@gmail.com, [4]hemrajd99@gmail.com

Abstract - *In today's era human-machine interaction is becoming widespread. So, with the introduction of new technologies the gap between machines and humans is being reduced to ease the standard of living. Gestures have played a crucial role in diminishing this gap. Thisproject deals with design and implementation of an accelerometer based hand gesture controlled robot controlled wirelessly using a small low cost, 3-axis accelerometer. A novel algorithm for gesture identification has been developed to replace the approach of conventional controlling mechanism of robots via buttons etc. by an innovative hand gesturebased controlling. Using a microcontroller system the program has been written & executed. In the existing system, human hand movements are sensed by the robot through sensors and it follow the same. As the person moves their hand, the accelerometer also moves accordingly sensor displaces and this sensor senses the parameter according to the position of hand.*

Keywords- *Low-Cost Automation (LCA), combination sorting, PLC, ladder diagram*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.36
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.175-177

Comprehensive Literature Review on Raspberry pi based text reading system for visually impaired persons

Leena Patil[1*], V. D. Chaudhari[2], I. S. Jadhav[3], H. T. Ingale[4], A. D. Vishwakarma[5]
[1]PG (VLSI & Embedded System) student ,[2,3,4,5]Asstt. Professor
[1,2,3,4,5]E&TC Engg dept, GF'S Godavari College of Engineering, Jalgaon - 425001
leenapatil5247@gmail.comr[1]

Abstract- *Speech and text is main medium for human communication. a personal needs eyesight access the knowledge during a text. However people that have very poor eyesight can collect information from voice. The proposed system can help the visually impaired persons to read any printed text in vocal form. A specs inbuilt camera is employed to capture the text image from printed text and thus the captured image is analyzed using Tesseract-Opical Character Recognition (OCR). The detected text is then converted into speech employing a compact open source software synthesizer, espeak. Finally the synthesized speech is produced by the headphone by provides an interface between camera, sensor & image processing results, while also performing functions to manage the peripheral units. The programing language is employed is python.*

Keywords *- Raspberry pi 3, Optical character recognition, OpenCV, Text to speech conversion, Python programming.*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.6
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.29-35

A Review on Home Security Embedded Systems Using IoT

Rituparna Ghosh[1], R. V. Patil[2], M. N. Patil[3], H. V. Dhande[4], D. P. Marathe[5]
[1]PG student (M.Tech. VLSI & Embedded Systems, [2,3,4,5] Faculty E&TC Engg. dept
[1,2,3,4,5] E&TC Enggdept, GF's Godavari College of Engg., Jalgaon-425001
[1]rituparnasinha3@gmail.com

Abstract- *Internet of Things (IoT) is used to create the notion of remotely connecting and monitoring actual world objects (things) via the Internet. When it comes to our house, this idea can be aptly included to make it smarter, safer and automated. This IoT venture focuses on building a smart wireless home security machine which sends signals to the owner by the use of Internet in case of any trespass and raises an alarm optionally. Besides, the equal can also be utilized for home automation with the aid of making use of the equal set of sensors. The advantage obtained via preferring this system over the similar form of present structures is that the indicators and the repute despatched by means of the Wi-Fi connected microcontroller managed system can be acquired by using the consumer on his telephone from any distance irrespective of whether or not his mobile smartphone is related to the internet. IoT refers to the infrastructure of connected physical gadgets which is growing at a speedy charge as massive range of units and objects are getting associated to the Internet. Home security is a very beneficial software of IoT and we are the use of it to create an less expensive security gadget for properties as well as industrial use. The device will inform the proprietor about any unauthorized entry or each time the door is opened by sending a notification to the user. After the consumer gets the notification, he can take the vital actions. The security gadget will use a microcontroller recognised as Arduino Uno to interface between the components, a magnetic Reed sensor to monitor the status, a buzzer for sounding the alarm, and a WiFi module, ESP8266 to join and speak the usage of the Internet. The main benefits of such a gadget includes the ease of placing up, decrease charges and low maintenance.*

Keywords: *Home Security, IoT, Arduino, ESP8266, Smart Wireless*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.5
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021,PP 23-28

Comprehensive Literature Review on Raspberry pi based text reading system for visually impaired persons

Leena Patil[1*], V. D. Chaudhari[2], I. S. Jadhav[3], H. T. Ingale[4], A. D. Vishwakarma[5]
[1]PG (VLSI & Embedded System) student ,[2,3,4,5]Asstt. Professor
[1,2,3,4,5]E&TC Engg dept, GF'S Godavari College of Engineering, Jalgaon - 425001
leenapatil5247@gmail.comr[1]

Abstract- *Speech and text is main medium for human communication. a personal needs eyesight access the knowledge during a text. However people that have very poor eyesight can collect information from voice. The proposed system can help the visually impaired persons to read any printed text in vocal form. A specs inbuilt camera is employed to capture the text image from printed text and thus the captured image is analyzed using Tesseract-Opical Character Recognition (OCR). The detected text is then converted into speech employing a compact open source software synthesizer, espeak. Finally the synthesized speech is produced by the headphone by provides an interface between camera, sensor & image processing results, while also performing functions to manage the peripheral units. The programing language is employed is python.*

Keywords *- Raspberry pi 3, Optical character recognition, OpenCV, Text to speech conversion, Python programming.*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.6
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.29-35

A Review on Home Security Embedded Systems Using IoT

Rituparna Ghosh[1], R. V. Patil[2], M. N. Patil[3], H. V. Dhande[4], D. P. Marathe[5]
[1]PG student (M.Tech. VLSI & Embedded Systems, [2,3,4,5] Faculty E&TC Engg. dept
[1,2,3,4,5] E&TC Enggdept, GF's Godavari College of Engg., Jalgaon-425001
[1]rituparnasinha3@gmail.com

Abstract- *Internet of Things (IoT) is used to create the notion of remotely connecting and monitoring actual world objects (things) via the Internet. When it comes to our house, this idea can be aptly included to make it smarter, safer and automated. This IoT venture focuses on building a smart wireless home security machine which sends signals to the owner by the use of Internet in case of any trespass and raises an alarm optionally. Besides, the equal can also be utilized for home automation with the aid of making use of the equal set of sensors. The advantage obtained via preferring this system over the similar form of present structures is that the indicators and the repute despatched by means of the Wi-Fi connected microcontroller managed system can be acquired by using the consumer on his telephone from any distance irrespective of whether or not his mobile smartphone is related to the internet. IoT refers to the infrastructure of connected physical gadgets which is growing at a speedy charge as massive range of units and objects are getting associated to the Internet. Home security is a very beneficial software of IoT and we are the use of it to create an less expensive security gadget for properties as well as industrial use. The device will inform the proprietor about any unauthorized entry or each time the door is opened by sending a notification to the user. After the consumer gets the notification, he can take the vital actions. The security gadget will use a microcontroller recognised as Arduino Uno to interface between the components, a magnetic Reed sensor to monitor the status, a buzzer for sounding the alarm, and a WiFi module, ESP8266 to join and speak the usage of the Internet. The main benefits of such a gadget includes the ease of placing up, decrease charges and low maintenance.*

Keywords: *Home Security, IoT, Arduino, ESP8266, Smart Wireless*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.5
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021,PP 23-28

Analysis of Managing The Traffic on Highway Passing Through City

Vijay Dattatray Chaudhari
Research scholar (Electronics Engg),
KBC NMU, GF's Godavari College of Engineering, Jalgaon

A. J. Patil
Professor,
Samarth College of Engg., Aalefata, Pune-Mumbai highway, India

K. P. Rame
Professor,
KCE College of Engg& IT, Jalgaon, India

Abstract -

The purpose of our work is to set traffic signal time in dynamic manner so that traffic count & waiting time will be uniformly distributed for particular intersection. The vehicle count is observed and analysis of its consecutive effect of arrival of these vehicles on preceding intersections is going on. This will probably help us in future to determine the congestion distribution strategy among various intersections we are going to consider in our work.

In this paper we had tried to study the parameters for some other default values. We had tried to observe and analyze traffic related parameters requirements by considering vehicle count on highway intersections, vehicle speed & time required for various vehicles to depart and to arrive between the consecutive intersections

Keywords - Traffic Management, Highway Intersection, Traffic Parameter Simulation, SUMO

Introduction -

In this paper we are considering the configuration taken from OpenStreetMap or Google for the to understand and to get the location of the vehicles exactly on the highway and the will use tools like SUMO simulator app, OMNET++ language, VEINS and NetEdit software and co-ordination among them.SUMO requires various configuration files which are mostly of type .xml or .sumocfg[4].The node, edge, connection and types file are together bundled into a single configuration file with extension .netc. This file is responsible for defining the various input, output and settings files which are going to be used in the simulation. Along with this, the additional input file which contains the definition of vehicles, their routes and the corresponding stops is combined. On compiling this, another SUMO configuration file is generated which can be used to run the actual simulation in SUMO-GUI.

Schematic of existing intersections on highway -

We have considered three intersections,AjjinthaChowk, IcchadeviChowk, AkashvaniChowkas shown in figure 1.1 below.

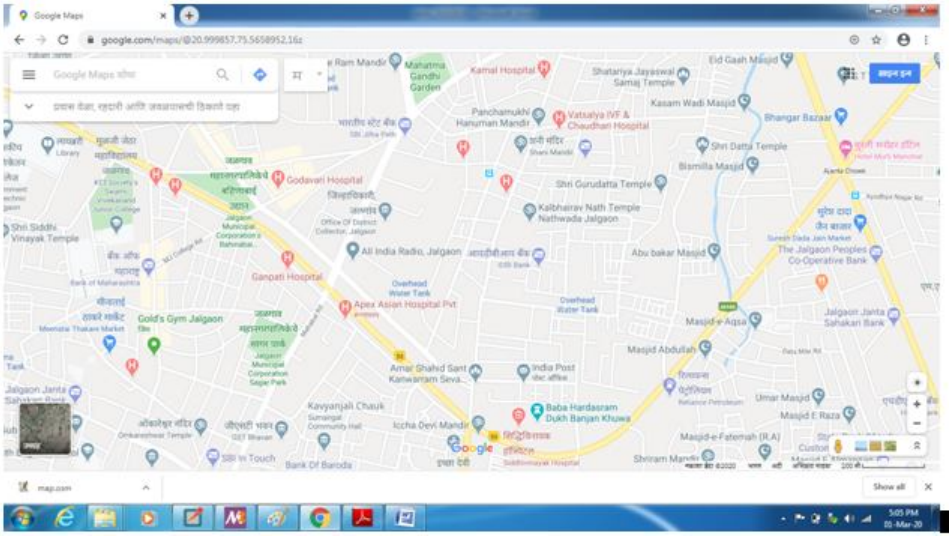


Fig. 1.1 The scenario of 03 chowk in Jalgaon city taken from Google mapOut of which we are focusing on Ajinthachowk, Icchadevichowk and Akashvanichowk for our study. The data from the other two intersections

3rd International Conference on
Computing, Communication and Signal Processing
January 26-27, 2018
ICCASP 2018
175 YEARS Springer

Analysis of Face Recognition Algorithms for Uncontrolled Environments

S. S. Gangonda[1], P. P. Patavardhan[2] and K. J. Karande[3]

[1] Research Scholar, SKN Sinhgad COE, Pandharpur, Maharashtra, India.
[2] Professor, KLS Gogte Institute of Technology, Belagavi, Karnataka, India.
[3] Professor, SKN Sinhgad COE, Pandharpur, Maharashtra, India.

[1]sgangonda@gmail.com; [2]prashantgemini73@gmail.com; [3]kailashkarande@yahoo.co.in

Abstract: Face recognition is a challenging problem in biometric systems, which has received a lot of attention in the last two decades as it has numerous applica- tions in computer vision and pattern recognition. There is remarkable progress in the face recognition systems under controlled conditions8, but they degrade for un-controlled conditions like pose, illumination, expression and occlusion etc. In this paper, we discussed different algorithms like PCA, DCT, LDA, ANN, ICA, HMM and Wavelet with its pros and cons. The different face database used for face recognition is discussed. It also discusses various challenges and possible future directions for face recognition task.

Hostel Rooms Power Management and Monitoring Using Internet-of-Things

Meenakshi Patil[1], V. D. Chaudhari[2], H. V. Dhande[3] and H. T. Ingale[4]

[1]PG Scholar, VLSI & ESD, E&TC dept, GF's Godavari CoE, NMU, Jalgaon, INDIA
[2,3,4]Asstt. Prof., E&TC Engg dept, GF's Godavari CoE, NMU, Jalgaon, INDIA

[1]meenakship1407@gmail.com; [2]vinuda_chaudhari@yahoo.co.in; [3]hemrajd99@gmail.com; [4]hetui@rediffmail.com

Abstract: Power saving is the important issue now-a-days and it is more critical in hostels because of some irresponsible students who leave the room without switching OFF the tubes-lights and fans. So, for controlling this wastage of electricity in hostels, we have tried here to develop this system that helps in monitoring and managing the electrical power requirement. In this system IR Sensors sensed the presence of students in the room with the help of counter. When it counts one, it means students entre the room, this counter increases and so on. When the student leaves the room, it decreases the count and when it reaches up to zero, this indicate, no one present in the room. At this time after few second switches will automatically OFF if it is ON and this information will be sent to the server/cloud where the authorised person can see or watch all the activities in the room. Here, we need only Internet for watching the online process. This will be in the form of notification where it will show the room number, OFF time. The other feature of this system is, when such notifications will be seen on the screen, one SMS will be sent to the student about Rs.100/- penalty or punishment. Internet-of-Things plays vital role in this system. This promotes students to become responsible about careful utilization of electricity.

Analysis of Managing The Traffic on Highway Passing Through City

Vijay Dattatray Chaudhari
Research scholar (Electronics Engg),
KBC NMU, GF's Godavari College of Engineering, Jalgaon

A. J. Patil
Professor,
Samarth College of Engg., Aalefata, Pune-Mumbai highway, India

K. P. Rame
Professor,
KCE College of Engg& IT, Jalgaon, India

Abstract -

The purpose of our work is to set traffic signal time in dynamic manner so that traffic count & waiting time will be uniformly distributed for particular intersection. The vehicle count is observed and analysis of its consecutive effect of arrival of these vehicles on preceding intersections is going on. This will probably help us in future to determine the congestion distribution strategy among various intersections we are going to consider in our work.

In this paper we had tried to study the parameters for some other default values. We had tried to observe and analyze traffic related parameters requirements by considering vehicle count on highway intersections, vehicle speed & time required for various vehicles to depart and to arrive between the consecutive intersections

Keywords - Traffic Management, Highway Intersection, Traffic Parameter Simulation, SUMO

Introduction -

In this paper we are considering the configuration taken from OpenStreetMap or Google for the to understand and to get the location of the vehicles exactly on the highway and the will use tools like SUMO simulator app, OMNET++ language, VEINS and NetEdit software and co-ordination among them.SUMO requires various configuration files which are mostly of type .xml or .sumocfg[4].The node, edge, connection and types file are together bundled into a single configuration file with extension .netc. This file is responsible for defining the various input, output and settings files which are going to be used in the simulation. Along with this, the additional input file which contains the definition of vehicles, their routes and the corresponding stops is combined. On compiling this, another SUMO configuration file is generated which can be used to run the actual simulation in SUMO-GUI.

Schematic of existing intersections on highway -

We have considered three intersections,AjjinthaChowk, IcchadeviChowk, AkashvaniChowkas shown in figure 1.1 below.

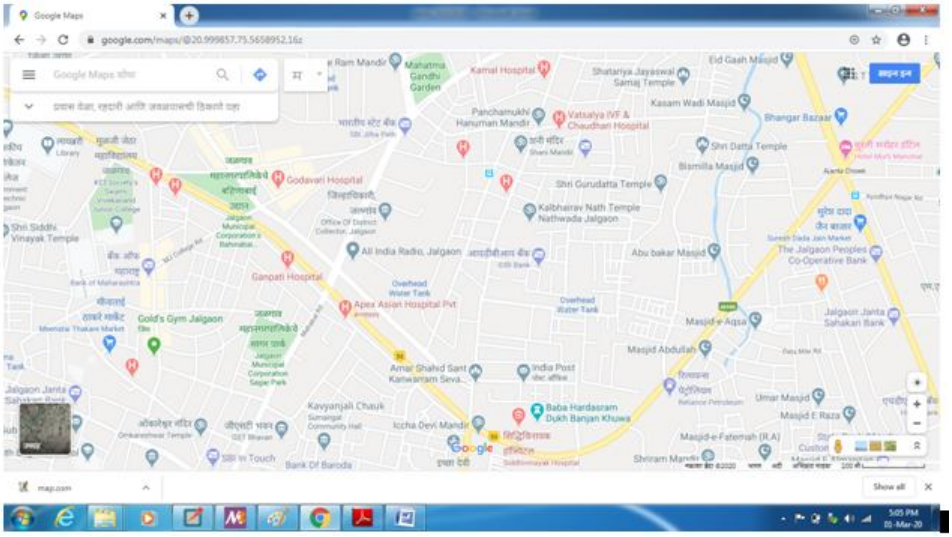


Fig. 1.1 The scenario of 03 chowk in Jalgaon city taken from Google mapOut of which we are focusing on Ajinthachowk, Icchadevichowk and Akashvanichowk for our study. The data from the other two intersections

ISBN: 978-81-962241-6-5
Chapter No-18, PP. 72-75

Vehicle Monitoring and Safety Driving

Pramod Dhamadhikari [1], Shubhangi More [2], Kalpesh Chaudhary [3], Manisha Patil [4], Prof. V.D. Chaudhari [5]

[1,2,3,4] UG student , [5]Assistant Professor, Dept. of Elctronics & Telecommuicationl Engineering, Godavari college of engineering, Jalgaon, Maharashtra, India.

shubhanginimore1999@gmail.com[1], vinuda.chaudhari@gmail.com[5]

Abstract *— Accidents are major issues these days. There are 2 basic reasons: Several accidents occur due to rash driving caused by drunken drivers. The second kind of accident occurs due to the sleepy-eyed condition of the person driving while driving long distances in the dark while not taking correct sleep. The eye blink sensor monitors the sleep state of a person and alerts the driver using a buzzer when an uncommon sleep state is detected. Accidents because of the associate degree alcoholic state of the person can be controlled and prevented with the assistance of an Alcohol sensing element assembled on a steering wheel. Accidents may be detected employing a vibration sensing element and a vehicle can be located by a GPS module. Accident alerts are then sent to the rescue team.*

Keywords: *Raspberry pi, Eyeblink sensor, Alcohol sensor, GPS, GSM, Accident, Location, Drowsy, Vehicle safety.*

I –INTRODUCTION

One of the main reasons for the cause of accidents in this modern world is due to carelessness of drivers. Many statistics say that most of the accidents are caused by drivers either due to consumption of alcohol or due to drowsiness of the driver. There are many technologies available in order to overcome those incidents. IoT is trending technology implemented in various sectors now-a-days. By this method we can monitor the current status of anything from anywhere through internet. Using various sensors we can monitor the details of the driver. From the output of these sensors the owner of the vehicle can monitor the current condition of the driver. Arduino is used to process the details from the sensors. Then this information is transmitted to the webpage by visiting the particular webpage anyone can know the condition of the driver at present.

II- LITERATURE REVIEW

[1] 2012, Sawant Supriya C, Dr. Bombale U. L., Patil T.B proposed a paper on “An Intelligent Vehicle Control and Monitoring Using Arm”. In this paper ARM 7 microcontroller is used where programming is a tedious process when compared to arduino programming. ARM uses more memory and it is complex to operate for this small specific application hence it is costlier than arduino. In [2] 2013, K.U.G.S. Darshana, M.D.Y. Fernando, S.S. Jayawadena, S.K.K. Wickramanayake proposed a paper on “Intelligent Driver Monitoring System”. This method uses bio-physiological data of the driver such as brain wave patterns, respiratory dynamics and heart rate variations. This intrusive nature of these systems reduces its usability in real time. In [3] 2012, Girma S. Tewolde proposed a paper on “Sensor and Network Technology for Intelligent Transportation Systems”. This paper reviews the technology deployed to support intelligent transportation systems with the aim to reduce cost and power consumption with wireless sensor networks. This has a disadvantage of using video technology for capturing eye movements and sign of fatigue which is being a time consuming process and also of more cost. In [4] 2016, Tariq Jamil, Iftaquaruddin Mohammed and Medhat H. Awadalla proposed a paper on “Design and

ISBN: 978-81-962241-6-5
Chapter No-17, PP. 68-71

Smart Medicine Box Using Raspberry Pi

Neha dhake[1], Nayana Chaudhari [2], Sayali Ravate[3], Sawapnil Shele[4], Hemraj.V.Dhande[5]

[1,2,3,4]UG students,[5]Assistant Professor
[1,2,3,4,5] Department of Electronics & TeleCommunication Engg., GF's Godavari College Of Engineering, Jalgaon, Maharashtra

hellonehaa1211@gmail.com[1] , chaudharinayana05@gmail.com[2] , sayliravate2000@gmail.com[3], swpanil29497@gmail.com[4], hemrajd99@gmail.com[5]

Abstract: *A smart medicine box using raspberry is an innovative and technologically advanced solution designed to enhance medication management and improve patient adherence to prescribed regimens. It combines traditional pill containers with intelligent features, leveraging modern technologies such as Raspberry pi connectivity, sensors, and data analytics.*
The smart medicine box is equipped with compartments that can hold different medications, each with its own monitoring system. The system records medication intake, tracks pill inventory, and provides reminders for scheduled doses.

Keywords- *Pill box,raspberry pi 3, Buzzer, LED, Resistor.*

I. INTRODUCTION

Our project is to build a raspberry pi based smart medicine box. Our smart medicine box is designed for people who need to take medications or vitamin supplements regularly, as well as for nurses who care for older adults or patients.

The smart medicine box is like a special container that can be programmed by nurses or users to set how many pills should be taken and at what time each day. It has seven smaller compartments inside, so information can be set for seven different pills. Once the pill quantity and serving time are set, the medicine box will remind users or patients to take their pills using sounds and lights. There is a display on each compartment that shows the exact number of pills that need to be taken.

Compared to traditional pillboxes where users or nurses have to fill the box every day or week, our smart medicine box reduces the burden of constantly refilling pills for patients or users.

Furthermore, the smart medicine box can be synchronized with a mobile application or connected to a cloud-based platform, allowing patients, caregivers, and healthcare providers to remotely monitor medication adherence and receive real-time updates. The application may offer additional features, such as medication information, personalized reminders, and the ability to request refills.

By integrating technology into medication management, the smart medicine box aims to reduce medication errors, prevent missed doses, and improve overall treatment outcomes. It promotes patient medication regimens, and enhances communication between patients and healthcare providers.

II. LITERATURE SURVEY

According to the World Health Organization, more than 80% of people above the age of 60 are prescribed medicines that need to be taken 2-4 times a day. With the rise in cardiovascular diseases and diabetes among this age group, regular administration of medication has become necessary [1]. However, among these individuals, 40-60% face issues related to forgetting to take their medicines at the right time.

Currently, the common techniques used in the market for medication reminders include normal alarms along with a pill box 2]. However, this method does not address concerns related to overdosing or taking the wrong dosage. It only reminds the patient to take the medication. The clock in the smart medicine box

ISBN: 978-81-962241-6-5
Chapter No-20, PP. 81-85

Fire Fighting Robot Using RaspberryPico

Darpan Chaudhari[1], Hitesh Chaudhari[2], Pravin Kumar Barela[3], Sonal Naphade[4], Mahesh N. Patil[5]

[1,2,3,4]UG students,[5]Assistant Professor
[1,2,3,4,5]Department of Electronics & TeleCommunication Engg., GF's Godavari College Of Engineering, Jalgaon, Maharashtra

darpanchaudhari121@gmail.com[1]

Abstract: *It's necessary and very dangerous work to fight against flames. The implementation of this project is automatized as well as manualized. This project uses ARM7. In sectors such as nuclear power plants, petroleum refineries, gas tanks, chemical plants and other large-scale industries, the majority of fire incidents occurs, which results to complex situations. More number of people have lost their lives because of such incidents. Weare mounting a Wi-fi module (Node MCU) for mobile communication and many other sensors to detect the fire and smoke. We use the BLYNK/TCP terminal program for mobile control of the robot. The size of the robot is around 20 cm long and 10 cm tall, capable of carrying an extinguisher (gas). 12V 1.3Ampere hours ofbattery power. Keil M Vision 4, Flash Magic and Embedded C are the applications used for this project.*

Keywords*:- Fire Fighter Robo,Rpico,Flame sensor, Gas sensor, Wi-Fi module, DC motor*

I. INTRODUCTION

The robot presented here is an embedded device in real time. C language is the software used to implement this type of robots. During automatic mode the robot tracks the environment to detect fire accidents. This robot uses IR sensors and output of this electrical sensors is fed to amplifier transistor. This signal is later fed into the micrcontroller's INpin. When a fire is observed, the microcontroller drives the motors andtriggers the actuators. A water reservoir is mounted on the frame which has 10rpm DC pump motor. The water reservoir is attached to the hose and the end of which isplaced on the robot's head . The water is sprayed to the flames in order to eliminate the fire. This paper alsoshows us how a robot is voice controlled. The robot is operated through the speech system. The commands are given to the robot in order to make them operated. The advantage of this type of robot is , hand free operation and fast data input. Disadvantage is the robotis affected by the environmental or external noise. The tank robot is made of a mixture of acrylic, plastic, aluminum and iron. There are two servo motors for each wheel, two DC motors for two flame extinguishing fans, there are many other sensors like ultrasonic, compass, flame thermal array and many other. The robot is switched on by the sound and a sound activator circuit is mounted on it. The audio activation circuit consists of a Dual Tone Multi Frequency receiver and transmitter. Microcontroller AVR ATMega16 receives data from a sound activation circuit, an infrared and photodiode circuit as a white detector, a micro switch sensor as a furniture detector, UVTRON and TPA81 as flame detectors and thermal detectors, CMPS03 as navigation detectors, SRF04 as ultrasonic sensors. Microcontroller processes signal inputs and delivers signal outputs to theservo motor (GWS S03 4.8V) on the front-left wheel andthe front-right wheel, and the DC motor to spin the fanto extinguish the flame

II. LITERATURE REVIEW

The tank robot is made of a mixture of acrylic, plastic, aluminum and iron. There are two servo motors for each wheel, two DC motors for two flame extinguishing fans, there are many other sensors like ultrasonic, compass, flame thermal array and many other. The robot is switched on by the sound and a sound activator circuit is mounted on it[1,2]. The audio activation circuit consists of a Dual Tone Multi Frequency receiver and transmitter. Microcontroller AVR ATMega16 receives data from a sound activation circuit, an infrared and photodiode circuit as a white detector, a micro switch sensor as a furniture detector, UVTRON and TPA81 as flame detectors and thermal detectors, CMPS03 as navigation detectors, SRF04 as ultrasonic sensors[3,4]. Microcontroller processes signal inputs and delivers signal outputs to the servo motor (GWS S03 4.8V) on the front-left wheel and the front-right wheel, and the DC motor to spin the fan to extinguish the flame.There are 2 types of remote

ISBN: 978-81-962241-6-5
Chapter No-19, PP. 76-80

Bus Monitoring and Theft Detection Using Raspberry Pi

Sayyed wasim[1], Bhagyashri mandawade[2], Bhagyashiri choudhari[3], Krutika walzade[4], Ishwar S. Jadhav [5], V. D. Chaudhari[6]

[1,2,3,4] UG student , [5]Assistant Professor, Dept. of Elctronics & Telecommuicationl Engineering, Godavari college of engineering, Jalgaon, Maharashtra, India.

bvmandawade25@gmail.com[2]

Abstract: *The main objective of the project is to introduce an innovative and facile device that could be installed in bus stops that would facilitate the users with the bus location, bus vacancy and ticket booking. The user will be able to receive information of the bus routes according to his destination. This system would effectively reduce the average time a passenger has to wait in a bus stop. It also omits the inconvenience caused during payment as the money will get detected from the RFID. As the system is user-friendly it would encourage more citizens to use public transport which would ultimately contribute to the development of the state and reduces road traffic and toxic vehicle emission. The project also uses screen displays that could be placed in bus stops which would displaythe bus routes, bus timings and vacancies. This display is designed using raspberry pi which is a credit-card sized computer which is used to access the entire system. This would help the passenger to get the bus information such as timings, vacancies and locations.*

1. INTRODUCTION

The most important asset of man today is time. It happens many a times that people wait in queues for a long time and ultimately miss out on their desired bus and the next choice bus arrives at a few streets away from their current location. If passengers had an easy way to see which bus is near to their location and approximate time it would take to reach the stop, in real-time, they could make a more accurate, informed decision of whether or not to wait at the stop. The GPS and GSM based Real Time Bus Monitoring system will provide pedestrians Convenience. Not only would the GPS and GSM based Real Time Bus Monitoring system be a new product for Best Transportation, it would also be an improvement to the transportation service already addressing the dissatisfaction with current wait times of the buses. If we have a mobile device that can provide busarrival information with bus tracking based on the users current location, and suggest alternative bus route to the same destination, it will definitely help the user to manage their time properly. Users can decide if they have to keep waiting at their bus stop or go across a few streets to wait for another bus instead. In case thereis only one bus going from users current location to their desired destination, then this application will show the approximate time the bus will take toreach the users place. In this way the user does not have to unnecessarily stand at the bus stop. In addition, user candetermine whether they have to run or walk to the bus stops when they are near to the potential bus stops. Recent advances in automatic vehicle location (AVL) systems based on the global positioning system (GPS) have provided the transit industry and public transport enterprises with tools to monitor and control the operation of their vehicles and manage their fleets in an efficient and cost effectiveway

II -LITERATURE REVIEW

In countries like Japan and Mauritius, GPS Trackingsystems have gained importance in the last decade. In the metro cities of India like Mumbai, Delhi, Bangalore, Chennai, Kolkata etc. successful implementation of such a system is yet to be done.

ISBN: 978-81-962241-6-5
Chapter No-21, PP. 86-89

Android Speech Recognition Notice Board using Wi-Fi, GSM Module

Kalpesh Patil [1], Mayuri bhavsar[2], Sonam mali[3], Devendra Patil[4]. H.T. Ingle[5]

[1,2,3,4]UG students,[5]Assistant Professor
[1,2,3,4,5]Department of Electronics & TeleCommunication Engg., GF's Godavari College Of Engineering, Jalgaon,

kalpeshpatil0222@gmail.com[1], hetui@rediffmail.com[2]

Abstract: *We normally use a simple static LED display screen to convey a message. Earlier, when we want to display large data, we used to change message for every few instances. Now scrolling displays are more preferred to static. By using a pre-programmed controller, we can make LED display in scrolling way. We can also make LED to adoptable by using IOT, so that changing message and intensity of display can be easily done by using android application over internet. Simple Outdoor LED Message Moving or Scrolling Sign Board, Electronic projects using LED Stroller Generator for outdoor digital signs, Marketable LED sign board with Message scrolling are the examples of the scrolling LED display.*

In our project we are using esp8266 base microcontroller with embedded Wi-Fi. Four 8x8 led matrix are to be driven by using popular driver IC MAX7219. An android application is to be develop for controlling display parameters over internet. Also we are using speech output module (aPR33A3) to produce voice notifications.

I. INTRODUCTION

We normally use a simple static LED display screen to convey a message. Earlier, when we want to display large data, we used to change message for every few instances. Now scrolling displays are more preferred to static. By using a pre-programmed controller, we can make LED display in scrolling way. We can also make LED to adoptable by using PC controller based system. Simple Outdoor LED Message Moving or Scrolling Sign Board, Electronic projects using LED Stroller Generator for outdoor digital signs, Marketable LED sign board with Message scrolling are the examples of the scrolling LED display.

II. LITERATURE SURVEY

An extensive literature survey has been carried out on different techniques that have been implemented for the lighting system till date. In [1], the authors describe about automated lighting system with visitor counters. This System needs no manual operation for switching ON / OFF when a person enters or exits from a room. The PIR Sensors with the IR transmitter and receiver are placed at the entrance of the room doors in such a way that the sensor senses a person entering / exiting the room. This can also be done by using a laser. A Microcontroller is a circuit which helps in controlling the lights and fans in a room and keeps track of number of persons / visitors entered or exit from the room. When a person enters into the room then the counter is incremented by one and the lights in the room will be switched ON and when a person leaves the room then the counter is decremented by one. The lights will only be switched OFF until all the persons in the room go out and the room is unoccupied. A display also shows the total number of persons inside the room. But the limitation is that the room doors should not be wide enough as two or more people should not be allowed to enter at the same time.

Sensor Technology [2] is also used for the same objective of conserving energy. For instance, vacancy

Critical Review and Scope of Intelligent System for Traffic Regulation

Vijay D. Chaudhari*, Dr. Anil J. Patil
Kavayitri Bahinabai Chaudhari North Maharashtra Univeristy,
Jalgaon-425001, Maharashtra, India
*Corresponding Author's E-mail: vinuda.chaudhari@gmail.com

Abstract: Traffic congestion is a major problem in all major cities in developing countries. Conventional system has many limitations. There are three major goals need to consider that are 1. To provide variable time slot as per traffic density, 2. To provides free corridor for emergency vehicles, 3. To provide zero waiting time to a car at a junction if all other roads are empty. The purpose of this paper is to do thorough comprehensive survey on traffic control and management systems which are developed by the researchers throughout the world. The survey of the timely improved hardware systems and the intelligent and creative control logic that are till now simulated, developed, tested and validated are mentioned here. Generally Vehicular traffic intersects at the junctions of the road and controlled by the traffic signals. Traffic signals need a good coordination and control to ensure the smooth and safe flow of the vehicular traffic. During the rush hours, the traffic on the roads is at its peak. Also, there is a possibility for the emergency vehicles to stuck in the traffic jam. Therefore; there is a need for the dynamic control of the traffic during rush hours. Finally the new essential and possible way of intelligent traffic control is proposed.

Keywords: Vehicular traffic, city road and highway intersections, WSN, Raspberry Pi, Android, Python language.

1. INTRODUCTION

Traffic load is highly dependent on parameters such as time, day, season, weather and unpredictable situations such as accidents, special events or construction activities. If these parameters are not taken into account, this creates bottlenecks and delays in traffic monitoring. A traffic control system that solves these problems by continuously sensing and monitoring traffic conditions and adjusting the timing of traffic lights according to the actual traffic load is called an intelligent traffic control system. Figure 1 shows traffic congestion at intersection.

Traditional traffic monitoring technologies consist of on the road sensors, which are necessary but not sufficient because of their limited coverage and expensive costs of implementation (including time needed to lay the sensors on target roads) and maintenance. In general traffic can be counted using two methods: the non-intrusive (e.g. video camera and Radar/Ladar) and intrusive (e.g. inductive and capacitive/magnetic devices, need to be buried in the road), as traffic sensors.

Traffic control systems may also be classified as saturated or unsaturated, depending on whether they were designed for a saturated or unsaturated network. In an unsaturated network, it is desired to minimize the mean delay of drivers, while in a saturated network it is desired to serve as many drivers as possible, or in other words, to maximize traffic capacity of the intersection. The problem of capacity maximization is the same as the queue minimization problem. The older system uses weight as a trigger mechanism. Current traffic systems react to motion to trigger the light changes. Once the infrared object detector picks up the presence of a car, a switch causes the lights to change.

An adaptive traffic control system must have the ability to diagnose saturation conditions in the network and change the objective function as desired. In older fixed-time systems, there were multiple timing plans, but now a modern traffic control system can have multiple control strategies.

Multitasking Human Body Measurement

Meenakshi Amit Chaudhari[1]
[1]*Asst Professor, Vishwatmak Om Gurudev College of Engineering, Electronics and Telecomm dept Mumbai, India,421601*
[1]*meenakship1407@gmail.com*

Abstract - *In my major project we can measure heart rate, pulse rate, blood pressure and body temperature. Heart rate reading will be displayed on LED by measuring the time between the two signal peak values and after that calculating the frequency of beats per minutes. Now a days we frequently visit to the doctor to get their vital signs measured. There is number of tools for non-invasive methods of measurement of these vital signs. The main objective of this proposed project is that to design and implement a reliable, low powered, cheap, non-intrusive, and accurate system that can be used on a regular basis and monitors the vital signs and displays the output to the LCD. This data will easily be obtained by this instrument which is wireless network. This project specifically deals with the data collection and signal conditioning of three vital signs: heart rate, blood pressure, and body temperature. Heart rate is measured through an Electrocardiogram that canobtained by attaching skin surface electrodes on the patient's wrists and fingers. Blood pressure combines the methodologies of Electrocardiography and Photo plethysmography to continuously monitor the systolic and diastolic blood pressure. Body temperature is measured inside the arms with a thermistor.*

Keywords- *Heart sensor, LM35, Blood pressure sensor (NPP301A), LCD.Microcontroller PIC16F877A*

For full length paper refer: https://doi.org/ 10.46335/IJIES.2021.6.10.12
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP. 7-12

Real Time Street Light Automation Using Arduino

Patil Piyush Prakash[1*], **Digvijay Patil**[2], **Rupesh Patil**[3], **Vijay D. Chaudhari**[4], **Dr. A. J. Patil**[5]
[1,2,3]*UG Student,* [4]*Asstt. Prof. ,* [5] *Professor*
[1,2,3,4]*E&TC Enggdept, GF'S Godavari College of Engineering, Jalgaon*
[5] *Samarth Group's College of Engg. Belhe, Punn*
**piyushpatiles19@gmail.com*[1]*, vinuda.chaudhari@gmail.com*[4]

Abstract- *Now-a-days the amount of power consumed by lighting and streets shares a major energy demand. The Street light Automation system helps in reducing the energy consumption. Generally, street lights are switched on for whole night and during the day, they are switched off. But during the night time, street lights are not necessary if there is no traffic. Saving of this energy is very important factor these days as energy resources are getting reduced day by day. To overcome from this problem, a proper energy saving methods and lighting control to be implemented. The proposed work is to have two controls like, one is to switch OFF/Dim lights during no vehicle moments in streets and automatically switch it ON when vehicles arrive and the other modes are to give less intensity light for pedestrian and to switch on bright mode during vehicle moments at sides on the roads. In this work the LED lights are used for street arrangement, LDR is used as decide day night time and IR sensor used vehicle movement. It automatically switches the lights ON when the sunlight goes below the visible region of our eyes. This is done by a sensor called Light Dependent Resistor (LDR) which senses the light actually like our eyes. It automatically switches OFF/Dim lights whenever the sunlight comes visible to the sensor. The control signals of sensors have been fed to Arduino Nano board (ATMEGA328). In the Arduino Nano board the control logic is implemented to control lights based on vehicles and pedestrian moments with bright and dim mode of operation and to switch DIM lights during no vehicles.*

Keywords - *Light Dependent Resistor (LDR), Arduino ATMEGA328, Street Light Automation, RTC*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.26
e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.125-129

Bridge Health Monitoring by Using IOT

Meenakshi Amit Chaudhari[1]

[1]*Asst Professor, Vishwatmak Om Gurudev College of Engineering, Electronics and Telecomm dept Mumbai, India,421601*

[1]*meenakship1407@gmail.com*

Abstract- *On 4th Aug 2016, an old bridge connecting to Mumbai-Goa Highway Collapsed. The bridge collapsed around Midnight. during this accident 29 people were died and 10 vehicles cave in into the river. The searching operation of finding vehicles and dead bodies carried about 15 days. If the proposed system invented earlier to the current accident; we might be ready to save those lives. So, if we've got some new technology to live different style of faults and damages, we will prevent from such dangerous accidents. Here I'm suggesting a way of it.*

Keywords-*Flex sensor, Vibration sensor, Micro load sensor, Ultrasonic Sensor, ARM7, Keil compiler, Embedded C*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.13

e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.60-64

IOT Based Smart Agriculture System

Mohd. Aaquib Mohd Javed[1], **A. D. Vishwakarma**[2], **Shafeeque Ansari**[3], **V. D. Chaudhari**[4]

[1]*PG Scholar, VLSI and Embedded System Design,* [2,3,4] *Faculty, E&TC department*

[1, 2,3,4] *E&TC Engg department, GF's Godavari College of Engineering, Jalgaon, Maharashtra, India*

a.aaquib18@gmail.com[1], *anil18vishwakarma@gmail.com*[2]

Abstract - *In this paper a new kind of device is proposed to an area of farming which is a smart agriculture system using IOT, in a existing system, our farmers uses a traditional methods like manual distribution of seeds, manually gives the water to seeds and also there are the chances of theft, all this leads to low productivity of products. So by using this proposed system our farmers can increase the productivity, avoid the theft chances and increases the quantity and quality of agricultural products. This system uses the various sensors like temperature sensor, moisture sensor, Motion sensor and water level sensor. The data collected from these sensors are provided to the controller, in control section, the received data from various sensors is compared with the threshold values in the program and based on that the controller will take the required action and updating the status of water pump and soil moisture will take place and information will be displayed.*

Keywords- *Temperature Sensor, Moisture Sensor, Motion Sensor, Water Level Sensor, Atmega328P Controller*

For full length paper refer: https://doi.org/10.46335/IJIES.2021.6.10.27

e-ISSN: 2456-3463 Vol. 6, No. 10, 2021, PP.130-134