Applications of non conventional energy sources

Dr. K. CHITHAMBARAIAH SETTY, P PEDDA REDDY

Assistant professor. & Head of EEE Dept., Assistant professor.,

Department of EEE

St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract— *This paper reviews the potentialities of available renewable strength resources in conjunction with numerous private and authorities future mission plans to include renewable power assets and its potentials in angle of Bangladesh. In an arising u . s . Like Bangladesh call for energy might be burgeoning. Modern, in Bangladesh dearth of power is ubiquitous and close to about 70% of its populace is excluded from access to power and bulk of the people are dwelling in rural areas. Among several renewable power resources, the utility of sun photo Voltaic (PV) is renowned despite the fact that the largest plant based on renewable energy goes into hydroelectricity. Additionally, wind, biogas, mini hydro and tidal are also well known. A plan has been initiated by the authorities of Bangladesh (GOB) to generate five% of the total strength from renewable strength assets inside 2015 and 20% with the aid of the yr of 2020. through the authorized renewable strength coverage, the GOB is dedicated to facilitate funding in both public and private sectors in renewable energy initiatives to substitute contemporaneous non-renewable strength assets and increase the contributions of renewable electricity primarily based electricity technology. With this context, evaluate of latest activities on concurrent renewable electricity assets is imperative in addition to to discover potentials of the resources. but, no longer all renewable energy sources are suitable to install indiscriminately in all areas, as a substitute there are sure parameters to select a source of RER for efficacy. After analyzing this paper, an investor gets large statistics about modern-day situation and guidance for destiny involvement of renewable electricity resources in Bangladesh. moreover, this paper could be instrumental to pick greatest efficacious renewable electricity assets for a particular place.*

Keywords— solar PV, biogas, renewable energy, rice husk.

I. INTRODUCTION

Geographically Bangladesh is situated in the north-eastern part of South Asia between 20.840 & 26.8380 North Latitude and 88.8010 & 92.8410 East Longitude. The total population is about 160 million with an average population density near about 1050 per sq. km (among the highest in the world) [1]. 70% of the population live in the rural areas of Bangladesh is seriously deprived of the access to electricity. As because the expansion of grid is inordinately expensive in the rural areas; already initiatives have been taken to popularize the use of renewable energy sources. The prospect, trend, utilization and its technology as well as reviews of the policy, institutions and opportunities based on renewable energy technology towards sustainable development and climate change mitigation has been investigated in paper [3]. A contemporary scenario of the renewable energy associated activities in Bangladesh is presented in this paper [4].

Furthermore comparing with other countries of Asia, energy consumption level is lower in Bangladesh although crisis is intense. Due to perpetual failure of power, development and welfare of the citizens have been inhibited, so the government is compelled to move into contractual agreements at high cost and adopt expedient solutions of purchasing rental

power and small IPP on an emergency basis based on diesel or liquid fuel. In Bangladesh the per capita energy consumption is one of the lowest in the region. On an average in Bangladesh per capita energy consumption is 160 kg oe (Kilogram oil equivalent) compared to 530 kg oe in India, 510 kg oe in Pakistan, 340 kg oe in Nepal and 470 kg oe in Sri Lanka [5]. The average energy consumption in Asia is 640 Kg oe. It has therefore, evinced clearly that per capita average consumption of energy in Bangladesh is lower than any other country of Asia. Long term strategy has been devised by the government for the melioration of existing debilitated energy situation in order to extenuate the financial problems. The strategy has created equilibrium approach regarding both supply increase and demand management aspects of the energy market. Energy options from the domestic sources need to be complimented with possible options for energy trade. Specifically the strategy would try to determine what can be done by the government about gas and power and to explore for various options to diversify the fuels for power generation.

II. ENERGY DEMAND AND GENERATION CAPACITY SCENARIO AND FUTURE PROJECTS

In Bangladesh, installed generation capability (June 2014) has reached to 10416 MW [2] and the maximum generation is 7500MW where the maximum demand is 8500MW. Nearly 77% of the total generation is obtained from natural gas [2] besides the only renewable part of the generation which comes from hydro and which is around 2.45%. In contrast, around 3 million [6] IDCOLs

A study of the nature of RUSKIN BOND's writing's

[1]**S MERCY SWARUPA , Assistant Professor, H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist.).**

[2]**E VENKATA RAMI REDDY , Assistant Professor, H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist.).**

Abstract:

This research project has been done in order to investigate and evaluate the style of Ruskin Bond's short tales about nature. Any appraisal of Ruskin Bond as a nature lover must to take into consideration the genre of his short storey writing, which has developed the fragrance of nature in its many forms. The Himalayan Mountains are in this region. Bond's imagery and sensuality are not overpowered by the other characters. any portrayal of nature that is metaphorical in character. They develop as a consequence of his affection for and concern for them. a dedication to the environment He does not suffocate the spontaneity of natural images by using a camera. associated with a second layer of significance or as a demonstration of his understanding Stunningly beautiful and He is stirred by the spectacular vibrations of nature, which he enjoys sharing with his readers. Nature, the Himalayan region, exploration, and imagination are some of the key phrases.

Introduction

Ruskin Bond, a writer who has lived in Mussoorie for more than thirty years, has incorporated the Himalayas into his life and writing as a result of his residence there. HeThe trees provide an unending supply of fodder for storytelling.wildflowers, birds and animals, rocks and rivers, and other natural featuresHill people are simple people who are an important component of the community.mountains. Through his poetry, articles, and other works of art,Writings of fiction and autobiography for children and adolescentsBond investigates his own and his father's backgrounds.shifting nature of the characters' connection with theFrom the freedom of youth to the depths of adulthood, the Himalayas have it all.The feelings of love and connectedness with the different expressions ofnature.DiscussionsRain in the Mountains1 is a diary that documents the effects of rain on the mountains., he saysextols the virtues of the mountains and high peakswith a great deal of enthusiasm Ruskin Bond is an Indian novelist who has written a number of books.Despite the fact that he writes in English, he is not well recognised.outside of the Indian subcontinent This, however, does not seem to be the case.not worry him, and he is pleased to compose little passagesHis tales are set in little communities around his favourite Himalayan region.foothills; this collection is a good representation of his whole work.work.

With the help of the scent of roses in your imaginationHis short narrative Rain in the Valley was inspired by the newly soaked land.Mountain is one of those books that reads like a novel.a dozen tranquillizer pills A compilation of poetry and proseMr. Bond's life is chronicled in poetry; it spans 30 years of his life.Spending time in the hills, with his closest pals,Nature and his adoptive family have become his second home. His writing follows the path he has taken.the road that leads back to India Once again, the writing is straightforward.a beautiful design that encourages us to take some time offto get away from our hectic life and get to know the ordinary folksbecause of the hillsLeopards are mentioned in this diary by him.After nightfall, the couple is seen strolling around the streets of Mussoorie.Meerut gets its first precipitation of the monsoon season, which deliversIt brings with it a commotion of fresh life, the song of insects at the beginning of summer.Ancient banyan trees may be seen outside his window at twilight.as well as the short-lived cosmos flower, a wayward bat, and so forthentered his room, making the night a little less lonely. Thisbook demonstrates, once again, that for the sake of quiet and tranquillyHis romanticism in his language, as well as his cutting but compassionate toneRuskin Bond is unique in that he has few peers in terms of vision. This has happened before.

writer from Mussoorie captivates with his collection of nature pieces Sunday Midday. Ruskin Bond, the old man of the mountains2 , came to live in Mussoorie in 1963 after many frustrating years in the plains. As he is fond of natural beauty, he depicts the charm of nature and its loveliness. His stories are generally set in a small, lonely Himalayan town or village which still retains its "inherited values of basic honesty, faith and love for the family and neighbors". Parents do not worry about the safety of their children who roam freely without fear of brutality or crime because people from the hills are quick to smile, hospitable, and trusting. Against such a kind atmosphere, Bond envisions his own and his protagonists' childhood as a long summer afternoon of gaiety, play, and carefree abandon. His characters swim in forest pools, take naps under shady trees with

"A STUDY ON CASH RECEIVABLES MANAGEMENT" IN RELIANCE

G.THOUSEEF AHAMED, S.ANEEL AMRUTHA RAJU,.
Assistant professor. Associate Professor & head of MBA Dept,
Department of MBA.
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT:

The study focused at trade credit and the ideas utilized by firms to manage account receivables in Ghana's diverse sectors since account receivables make up a major portion of current assets in manufacturing and wholesale enterprises. As a consequence, the study was able to discover examined the benefits and drawbacks of Ghanaian companies' accounts receivable procedures. provide an approach that is both cost-effective and efficient Some of the terminology used in this article are account receivable management, account receivable policy, trade credit, and finance.

INTRODUCTION

Financing is properly defined as each company's key and nerve core. It is due to blood flow, which is an essential process for living and living inside the human body. Funding is essential for a clean company entry. Each enterprise strives to maintain and achieve its goals in its operations regardless of duration and kind.

Working capital refers to the company's short-term capital funding, i.e. fast-term currencies and securities.

Cash management

Cash management is a vital area of operational capital administration regardless of the leanings of the most current cash assets; cash is a common denominator which, with significant liquid properties alternatives, may cut all modern properties by buying quotas and ultimately becoming currencies.

The term 'cash' refers to cash management in the intended meaning. Agilely speaking, kilometers are often spent on foreign currency discs, usually family cash equivalents, checks, drawers and bank deposit requirements.

The handling of cash deals with:

1. Cash flows inside and outside the company.
2. Cash flows inside the company and
3. Cash balance at a time when the surplus cash shortfall is being used by the business.

It can be described as a coin control cycle. Cash surplus should be invested, even with a debt deficit. Cash control is intended to obtain the lowest value in this cycle. It also looks for cash and handling simultaneously.

The company needs to extend the appropriate technology to four cash management planners to solve uncertainty about cash flow forecasts and lack of synchronization between receipts and accounts.

Cash inflows and cash withdrawals must be structured to prepare for each planning period a surplus or coin deficit. The cash budget should be prepared for surplus or coin deficit allocation.

Management of cash flow

Cash flows should be good, cash flows should be raised and cash flows should be reduced in foreign currencies to the maximum degree possible.

Optimum cash level

The company must choose the appropriate period of monetary stability. The value of cash surplus and risk reduction should coincide in order to determine the most qualified stage for cash balance.

Cash excess investment

Excess cash balance must be appropriately invested in order to make a profit. The firm must determine if cash levels should be managed between various short-term investment options, bank deposits or negotiable or inter-company loan values.

The key elements of cash management

Good monetary management may play an important role in the average management of capital. Currencies control contains the essential elements:

REVIEW OF LITERATURE

Accounts receivable are a key factor in advanced ownership of the business. The time period that consumers are required to obtain from the sale of the products or offers is characterized as "debt to the company" in the group's normal operation.

Computational Fluid Dynamics Simulation of Surface-Applied Air and Water as a Collant Medium

AG.MALLIKARJUNA, Associate Professor & Head of H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.). E_mail Id: mallipraveena1023@gmail.com

S VEERA REDDY, Associate Professor & Head of H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.)
E_mail Id: veerakuppagallu@gmail.com

Abstract: The two-dimensional isothermal heated surface was investigated numerically (Computational Fluid Dynamics) using the Ansys programme. A comparative investigation of boundary layer development, including velocity, thermal boundary layer, and others, was conducted using air and water at free stream velocity. The results indicate that water transfers heat more efficiently than air across an isothermally heated surface. Heat transfer is primarily determined by initial conduction between fluid particles, and variations in surface heat transfer and pressure drop are a direct result of velocity gradients.

Index Terms: CFD, Boundary layer, Convective diffusion.

I. INTRODUCTION

By using Computational Fluid Dynamics (CFD) in gas turbine engines and thermal system designs in general, it is now possible to see, monitor, and adjust the flow of air and other parameters like thermal sluggishness, and velocity and pressure with ease [1]. The removal of air from the compressor and subsequent loss in thermodynamic efficiency are the most prevalent reasons for adding coolant air [2]. It's an excellent workout as long as you don't sacrifice thermodynamic efficiency for letting the ideal quantity of air escape. It was discovered via a series of experiments that, under hot gas circumstances, the blowing ratio had the greatest influence on the total cooling efficacy on a flat plate and that as coolant concentration increased, this effect diminished [3]. An analysis of the cooling performance of a gas turbine combustor liner using Matlab and Ansys software (conjugate heat transfer analysis) found that the effectiveness of the combustor liner increases with the increase in blowing ratios (0.5 - 2.5) and also, claims that an increase in density ratio leads to a decrease in the overall cooling effectiveness.

Heat transfer is studied on a porous plate utilising air as a hot gas stream and water as a coolant medium in another research project The researchers observed that when the Reynolds number increased, the surface temperature of the porous plate rose and the plate's cooling effectiveness dropped [5]. Using Matlab, Ehab Bani-Hani [6] studied the boundary-layer theory of fluid flow through a flat plate and compared the Matlab codes to the results published in the literature. According to another study, the Nusselt number rises with an increase in Reynolds number when an incompressible chevron jet impinges on a smooth plate at any given nozzle-to-plate distance (z/d) [7]. This was observed in another CFD simulation. On the other hand, in another paper, researchers studied the hydrodynamic response of two flat plates slamming together and found

that the numerical investigation with experimental data for force components, local peak pressure, and peak pressure propagation velocity was in good agreement [8]. In addition to the aforementioned studies, there have been several investigations into the thermodynamic performance characteristics of flat plate solar collectors using numerical and analytical methodologies [9, 10]. It is the goal of this study to examine how the dynamics of the fluid flow (velocity, pressure, and boundary layer growth) alter when air or water is utilised as a coolant and applied to an isothermally heated surface. For the aforementioned coolant medium, there has been extensive research on boundary layer signatures using CFD simulation software (academic version). There is considerable relevance in the findings that may assist scientists and engineers in the development of heat exchangers, cooling systems for solar panels, and turbine blades, and they may be used for the creation of any kind of thermal system.

II. METHODOLOGY

A. Analysis Details

An investigation of boundary layer formation is carried out, including the velocity and thermal boundary layer, convective heat transfer coefficient, Nusselt number, heat flux and skin friction. Free-stream constant velocity was maintained and applied from the leading edge of the cooling medium, which included air and water.

QUANTIZED THERMAL CONDUCTANCE IN METALLIC HETEROJUNCTIONS

R.MAHARANI, Assistant Professor H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.).

S VEERA REDDY,Associate Professor & Head of H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.)

ABSTRACT

It is critical to understand how charge and heat are transferred at the nanoscale in order to create next-generation electronics and high-efficiency energy-harvesting devices for future applications. When it comes to probing the quantum limitations of transport, metallic atomic-size contacts are perfect systems. Several recent studies have shown that the thermal conductance and electrical conductance of gold atomic contacts may be quantized at room temperature. However, the quick breaking dynamics of metallic junctions at room temperature, which might surpass the average reaction time of the thermal measurement, represents a significant experimental barrier in such studies. An integrated heater that also serves as a thermometer is used in this break-junction arrangement, which combines Scanning Tunnelling Microscopy with suspended microelectromechanical systems with a gold-covered membrane. Other metals, including as Pt, PtIr, and W, were used as tip materials instead of gold to demonstrate heat transfer measurements across single gold atomic contacts. The relationship between thermal conductivity and contact size is investigated as a function of the contact size and the materials employed. In our experiments, we have discovered that by utilising Pt and Pt-Ir tips, we may increase the mechanical stability and likelihood of creating single Au atomic connections. In the next section, we demonstrate the quantization of electrical and thermal conductances, followed by a demonstration of the Wiedemann-Franz law at the atomic scale. We anticipate that these discoveries will expand the flexibility of experimental methodologies for examining heat transport in metallic quantum point contacts, as well as the ability to investigate the thermal characteristics of molecular junctions.

Introduction:

The investigation of the heat transport characteristics of nanoscale metallic contacts is of critical importance for the scaling of electrical interconnects because of their small size and low resistance. Metallic atomic-scale contacts represent the absolute size limit and have been employed as ideal systems to test electrical conductance quantization over the last several decades1. Meanwhile, they were used as electrodes to make contact with single organic molecules and investigate the charge transport capabilities of such molecules. 2

It is possible to see quantization effects when the size of the conductor is equivalent to the wavelength of the charge carriers (F). Due to the fact that the typical transversal size of about a few atoms is on the order of the Fermi wavelength of the metal (F = 0.5 nm1) and the length (up to few nm in the case of atomic chains) are both well below the electron mean free path (10–100 nm) at room temperature, metallic atomic contacts are classified as quantum one-dimensional ballistic systems in this context. 1,3 Charge transport in this regime is often characterised using the Landauer-Büttiker formalism4, which connects the electrical characteristics of the mesoscopic conductor with the quantum mechanical transmission and reflection probabilities of the electron wavefunctions.4

Break-Junction methods, such as Scanning Tunnelling Microscopy with Break Junctions (STM-BJ) or Mechanically Controlled Break Junctions (MCBJ), have been used extensively to investigate the quantization of electrical conductance in atomic junctions (MCBJ).

2 In these approaches, the electrical conductance is measured by repeatedly creating and breaking nanoscopic metallic contacts while the electrical conductance is measured. As a result of the quantization effects and atomic rearrangements, the breaking process is characterised by a gradual

Layout Optimization of Mechanical components using an enhanced teaching-learning based totally Optimization set of rules with Differential Operator

G.MD.JAVEED BASHA, M.RAVI SANKARA VARAPRASAD,.
Assistant professor., Associate Professor & Head of ME Dept.,
Department of MECHANICAL
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract:

TLBO is a differential operator-based technique to solving mechanical component optimization problems (training-learning based mainly optimization). This article goes into great detail on the origins and current state of TLBO. Like most other approaches to addressing an issue, you may use a large population of responses to arrive at the global solution. The TLBO features a strong differential operator to identify better solutions. To test the method's efficiency in addressing common optimization problems, an open coil helical spring is used initially, followed by a hollow shaft. affirmation was given. Simulation findings show that the suggested strategy outperforms current optimization techniques in terms of discovering better options (mechanical components).

INTRODUCTION

Conventional methods have to be used to reduce the capacity of a closed coil helical spring. Graphs were utilised to solve a set of constraints in a hollow shaft circumstance. Reddy and his colleagues used geometric programming to reduce the weight of a belt-pulley drive. Engineers often keep optimization in mind when designing mechanical systems since it is so important. A complicated objective function with numerous design variables and many restrictions is needed to optimise a whole mechanical system, on the other hand [4–6]. Instead of optimising the whole system, it's common practise to concentrate on optimising specific components or intermediary assemblies. Optimising centrifugal pumps without motors and seals is far simpler than doing it with pumps that have both a motor and a seal in place. Engineering calculations have typically used analytical or numerical methodologies to estimate the extremes of a function. Traditional optimization approaches may be useful in many cases, but they may fall short in increasingly complicated design circumstances. Typically, real-time optimization (design) issues include a large number of design variables that have a complex (nonconvex) and nonlinear effect on the objective function to be optimised.. We need an appropriate global or local maximum in order to achieve our desired function [7, 8]. In order to get the best possible outcome in any given situation, an optimization aim is needed. There should be no compromise on efficiency when it

comes to mechanical components. Machine components may be optimised to increase production rates and reduce material costs [9–12]. As a result, optimization strategies may be fully used.

output rates are maintained at a high level Several approaches for enhancing a project have been discussed in the literature. There are several ways to search for information, including direct and gradient approaches. Although the function value is sufficient for a simple direct search, gradient-based methods need the gradient information in order to establish the search's general direction and target location. In the following paragraphs, we'll discuss the drawbacks of traditional optimization approaches. Traditional procedures have been used for a long time to deal with these issues. Certain optimization issues may be better addressed using newer, more diverse ways if existing strategies have several constraints. In order to solve these issues, traditional approaches (such as gradient methods) are ineffective since they only identify local optimum values. This means mechanical engineers must continue to apply efficient and effective optimization techniques. Natural heuristic strategies have been more popular because of their superiority over deterministic optimization methods [13–16]. This evolutionary optimization approach, known as the genetic algorithm, is the most widely employed (GA). Complex problems with several variables and limitations might, nonetheless, have a near-optimal solution identified. The difficulty in identifying optimal values for factors like as population size, crossover frequency, and mutation frequency is an essential consideration to keep in mind.. The performance of the algorithm may be affected by adjusting its settings. Inertia, social and cognitive traits, and others are all used by PSO. Like ABC [17]'s stress on optimising the number of bees, this is comparable to ABC [17]. (workers, scouts, and bystanders). For HS to be effective it demands an abundance of improvisations and a high rate of harmony memory consideration. If you want your algorithm to work, you need to keep creating new optimization techniques that aren't dependent on parameters. This is something to keep in mind when

DESIGN OF CI ENGINE

M.RAVI SANKARA VARAPRASAD, DR.V.VEERANNA,.
Associate Professor & Head of ME Dept., Professor & Principal,.
Department of MECHANICAL
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract:

Despite technical advancements in the industry, heavy-duty vehicle cooling systems have not kept pace with the advancements. Fuel combustion has also been a major concern for the automobile industry as well as researchers in academia. Internal combustion engines are not given enough consideration when it comes to heat control. Performance, lubrication, emissions, and fuel economy all rely on the ability of this system to be properly regulated. The temperature and flow rate of the engine cooling fluid must be monitored and controlled. This project aims to develop and design a temperature management system for internal combustion engines. A DC motor-controlled valve and an electric coolant pump are both inputs to the control system. A lumped parameter engine cooling system model is also provided. An engine cooling strategy comparison using exhaust emission data will be completed in the near future.

Among the topics covered are combustion engines, cooling mechanisms, and control systems.

INTRODUCTION:

The piston is a critical component of a reciprocating engine. Pneumatic cylinders and pneumatic valves are two examples of system components that aid in the conversion from chemical energy to useable (work) mechanical power. Gas expansion travels via the connecting rod from cylinder to crankshaft through this channel. As a moving part of the combustion chamber, a piston is used. The piston is a cylindrical plug, as its name suggests. Cranks the cap up and down in the cylindrical shape. With the aid of piston rings, the cylinder wall and piston are well-sealed. Internal combustion (IC) engines are becoming more popular as a technique of absorbing side forces from obliquity and bearing and guiding the connecting rod's tiny end. The vast bulk of engine research published in academic publications and books was devoted to the creation of power and the burning of fuel. Heat transmission in internal combustion engines is often overlooked since they are focused on power output. A number of benefits may be gained from internal combustion engines that have strong heat transfer capabilities. Consumption of fossil fuels has increased as a result of the increased usage of these fuels in everyday consumer activities. Subsurface carbon stores were depleted as a result of fossil fuels' intensive use and subsequent extraction. In response, there has been an upsurge in the quest for alternative fuels that take into consideration manufacturing, long-term development, energy efficiency, and environmental preservation. There is a worldwide shortage of underground carbin

resources, and biofuels might be used as a replacement. CO2 emissions from SI and CI engines are mostly responsible for the problem. Researchers from all around the globe are attempting to develop a more ecologically friendly alternative to gasoline and diesel. Rudolf engine technology has been patented. As a result of Rudolf's decision to use just diesel as a fuel source, the current fuel system exists. COX emissions are a byproduct of the burning of fuels. They cannot be avoided. This challenge has been issued to C.I. engines to develop a trifuel system that does not need additives in order to produce biofuel and minimise emissions pollutants. The findings and conclusions are discussed in-depth.

The motors' materials prevent overheating.

Engine performance and efficiency both improve, resulting in less fuel use.

• Engine lubricant quality has been improved

Internal combustion engine emissions are reduced.

A deeper knowledge of internal combustion engine cooling systems requires consideration of the system's controllability, heat transfer capacity, the engine's noise level and reliability, as well as the system's overall cost and maintenance.

Around one-third of the total energy created by combustion is lost to the engine cooling system, another third is lost via exhaust, and the remaining third is discharged through mechanical energy. (25 percent for gasoline and 38 percent for diesel engines). Therefore, it is probable that considerable heat will be created. When the engine is running, it generates a lot of heat. This heat is then stored in different sections of the engine. The oil film burns and the oil layer loses its lubricating properties if certain engine components are overheated, which may cause major damage to the engine.. Overheating and transient thermal behaviour may be affected by the cooling system as well.

In contrast, future engine development should focus on improving fuel efficiency and reducing emissions. Because coolant flow and engine material temperature have a significant impact on both fuel

Analysis of Pulse Power for Electromagnetic Accelerator Design

Dr. K. CHITHAMBARAIAH SETTY, Associate Professor & Head of EEE Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist. E_mail Id: dr.kcsetty@gmail.com

M SHIVA KUMAR, Assistant Professor ., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.). E_mail Id: machani.shiva02@gmail.com

Abstract:

Inductors and capacitors with high voltage energy storage are used in this article to simulate a pulse-forming network. Over a very long period, these devices store electrical energy and then release it in an approximately square pulse for pulsed power application. For Electromagnetic Accelerators and Electromagnetic weapons, a broad range of power supply options is being examined as they go from fundamental research to the development of systems for particular applications. When it comes to improving the Electromagnetic Launching system for effective mass acceleration, the most pressing issue is finding a reliable source of primary energy and keeping the armature's current steady during the whole shot duration, both of which are critical. This problem still hasn't been resolved. The methodology for storing and transferring pulse power presented in this research has been simplified and improved. Thirty capacitors are organised into six sub-banks in this variant. There are five identically rated capacitors in series in each sub-bank to maximise voltage. An inductor is put across the sub-banks to connect the capacitor banks in series. A total of 2000 volts is applied to the bank as a whole. A starting voltage of 2000 volts and a discharge time of 258 microseconds result in a 1000V, 20000A (20kA) square pulse in the 49m load resistor that represents the power source. The network's transmitted energy is 5.2 kJ, and the model's pulse power is 20 MW.

Keywords: pulse network, pulse current, pulse power, electromagnetic accelerators, railgun

1. Introduction

Energy may be stored for a long period before being released suddenly, boosting its immediate power. Pulsed power is the phrase used to describe this science and technology. The stored energy is released in a brief period.

A significant quantity of peak power may be given to a load through (a procedure known as energy compression). There are a variety of applications for pulsed power technologies including radar, particle accelerators, ultra-strong magnetic fields, nuclear fusion research, electromagnetic pulses and high-power pulsed lasers. Energy efficiency is a major problem for pulse discharge network users. [1][2]

Using pulse forming network (PFN) for the design of Electromagnetic accelerators and railguns, some preliminary research has shown that the limited number of meshes (a combination of a primary energy store and an inductor) used in the pulse forming network topology could not produce a smoother current pulse. On the pulse current curve, ripples may restrict the effective current, which affects the velocity of the rocket. [3] [4] [5].

This study focuses on the usage of capacitors in pulse power network architecture to generate particular energy for electromagnetic accelerator design purposes. It is my goal to utilise PSpice simulation software to create a pulse power network utilising the capacitance values obtained in my surroundings. Based on these ideas, the model's pulse current and power output may be analysed.

Effective Charging Circuit Parameters

Figure 1 depicts the schematic for the RC charging case. A 1000 V power source is used to charge the capacitor (starting state = 0 volts) in this particular type. The charging current is limited to 1A by a 1000 ohm series resistor, and the switch closes at roughly time zero. When using the 1 uF capacitor and 1000 ohm resistor, the circuit's time constant is one millisecond (ms).

Designing of Circular Micro-Strip Patch Antenna by WI-MAX

K.Sudhakaru, S.Ahmed Basha
Associate Professor , Associate Professor
Head of ECE Dept.,
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.).

ABSTRACT: Micro strip antennas have become very popular in the fields of cell and cell communications, following RFID programs with the appearance of various simulation devices. Novice MSA prototypes are being practiced in considered one-of-a-kind patch configurations, thought at known microwave frequencies of interest regarding exceptional substrate or high-quality strate mixtures. The overall efficiency patterns of the 3.5 GHz round patch micro strip reported antenna suitable for Wi MAX packages are investigated in this research. Antenna, Microstrip, Mobile, and so forth.

1. INTRODUCTION

In propagation, the antenna acts as a transducer by converting electric power currents to em-waves, and when a sign is acquired, the antenna works as a transducer by converting em-waves to electric currents. Antennas are very important in the function of contact. Antenna types include the parabolic reflector, patch antenna, slot antenna, folded dipole antenna, and others. Each antenna type is suitable for its intended purpose and location.

There are several various kinds of antennas in use these days, including the spherical micro strip patch antenna. CMP A is made up of a circular shape that radiates information on one portion of the substrate with an amazing aspect of the floor plane. CMPA has been fed with a rich resource of methods such as feeding elements and feeding coaxial probe. CMPA has been developed to utilize Rogers RT/duroid5880 (r= 2.2, h= 1.588 mm), Rogers RT/duroid5880 (r= 2.2, h= 2.87 mm), and FR4 epoxy substrates (r= 4.4, h= 2.87 mm) independently for each feeding method. The round patch antenna cavity model is evaluated in text books[1-4], and Anders G. Derneryd[2] backs it up. At 10 GHz, Manoj singh et al[6] used a substratum material with a relative permittivity (r) of 3.02 and a thickness (h) of 0.762 mm in a micro strip line feed (place feed) spherical patch antenna design. The constructed antenna has a crossover absence of -24 dB (measured) at 10 GHz. The antenna recorded a return deficit of -29.29 dB at 10.022 GHz after being designed and simulated using an HFSS method using comparable measurements, as stated in the literature[6]. F.A bound et al[8] presented a hole position model assessment of the circular patch antenna supplied by coaxial probe method, CMPA resonant frequencies found utilizing substrate material with.65 relative permittivity and 1.5875 mm thickness, and remarkable radius values. DebatoshGuha[9] reported theoretical and experimental values of

CMPA resonant frequencies (supplied by probe feed) using a substrate material with a relative permittivity of.65 and a thickness of one.5875 mm with remarkable radius values. The CMPA was designed and simulated with the assistance of HFSS, utilizing substrate fabric with a relative permittivity of.65 and a thickness of 1.5875 mm, fed with probe feed, and the antenna simulation results are almost identical to those found in the literature[9]. The round patch antennas fed by coaxial probe were simulated with the help of HFSS, and the simulated results of the above antennas are provided, including skip again failure, VSWR, radiation types, and a benewiwireless comparison between element feeding and spherical patch antenna coaxial probe feeding.
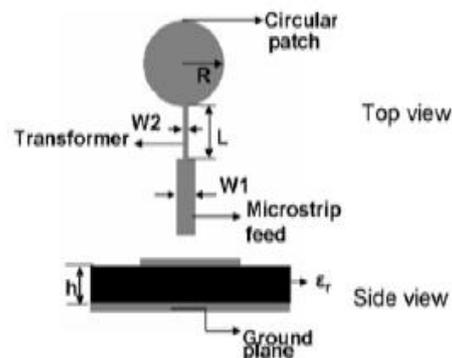

Figure. 1 Edge feeding of CMPA
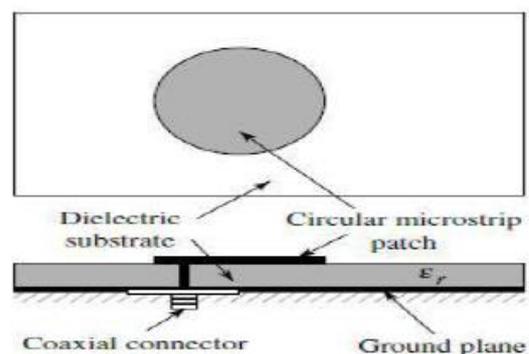
Figure. 2   Coaxial probe feeding of CMPA

In the whole space model assessment, the spherical patch antenna designs the parameters of the circular micro strip patch antenna for the dominating TM11 mode. The parameters are [1, 7-11]. Radius of the Patch (a) In the CMPA setup, the patch radius is the simplest parameter to monitor the resonant frequency. The radius of a patch (a) may be

A Review Paper on the Financial Management

C. Ramshesh, Assistant Professor, MBA Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.). E_mail Id: sairamshesh@gmail.com
S. Aneel Amrutha Raju, Associate Professor & Head of MBA Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.). E_mail Id: aneelamrutharaj@gmail.com

ABSTRACT

Organizational strength is impossible without financial resources. In today's economic climate, fund management is a critical component of every company's operations. Fund management that is both active and competent includes both the application of and the usage of funds. Funds must be used in such a manner that they increase the company's earnings. Idol funds may sometimes create the worst possible conditions for a firm. Funds will be raised by looking at possible sources. Financial managers have the responsibility of making decisions on how, when, what, and how much money should be used. A competent financial professional is needed to distribute the funds in a way that ensures the timely and correct fulfilment of financial obligations. Liquid and long-term investments should be made available in equal proportions. liquid funds devoted to short-term obligations, such as paying for day-to-day costs, paying suppliers, and remitting taxes to the government, and capital funds assigned to long-term liabilities, such as remitting debentures, equity shareholders, and long-term loans, are both types of funds.
Keywords: Financial management, financial manager.

OBJECTIVES

> ➢ To optimise the organization's worth, plan to use the funds wisely. The process of allocating resources in such a way that they produce income for the business at the lowest possible cost and promptly.

> ➢ Finance Management - What Is It? Effective and efficient financial management establishing, managing, coordinating, directing, and effectively controlling the financial transaction.

> ➢ Financial management plays a critical role.

> ➢ Organizations must first determine their goals and then maximise the wealth of their investors when it comes to financial management.

It aids in making financial decisions for the management. Investing money in such a manner that no ideal or surplus funds are obstructed. To begin, a financial manager should be familiar with the company's risks, as well as the nature of the firm and any competitors it may have.

Each transaction in the company's financial system is scrutinised by the company's financial management to ensure it adheres to and implements an efficient financial system. As a company grows, its internal control system becomes more important. Take a look at the following financial aspects: What is the best way to handle money? How do you manage your finances? What is the best time to manage your finances?

The following is how the finance manager has decided to invest the funds:

MULTI-TRAFFIC SCENE PERCEPTION BASED ON SUPERVISED LEARNING

Y.NARASIMHA REDDY, P.VEERESH,.

Associate Professor, Associate Professor & Head of CSE Dept,
Department of CSE
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT

Wet days, evenings, rainy seasons, rainy seasons, ice, and days without street lights are all high-risk traffic accident scenarios. The Present Situation The support systems are intended to be employed in ideal weather conditions. Classification is a method for identifying the optical characteristics of more effective vision expansion procedures. Improve computer vision in the most unpleasant way possible Weather contexts, a multi-class weather categorization system, many weather features, and supervision made learning possible. The first step is to extract basic visual properties. When additional traffic images are taken, the function is revealed. The team has eight different dimensions. There were also five supervisors. Instructors are educated in a variety of ways. According to the extracted features, the image accurately portrays the maximum recognition of etymology and classmates, based on the accuracy rate and adaptive skills. The suggested technique of promoting invention through prior vehicle innovation is laid forth here. The night light alters on an ice day, and the view of the driving field expands. Picture feature extraction is the most efficient way for simplifying high-dimensional image data, and it is the most important step in pattern recognition. Because it's tough to extract specific information from the M N 3-dimensional image matrix. As a result, crucial information from the image must be obtained in order to evaluate a multi-traffic scenario.

INTRODUCTION

As a consequence of automotive accidents on the highway, a significant number of lives and properties are lost. The deployment of modern driver assistance systems has the potential to decrease traffic accidents by a substantial amount (ADAS). In the case of extreme weather, a multi-traffic display of the circumstances might be valuable to humanitarian organisations. When it comes to increasing visibility, there are a variety of options available, each of which is based on the situation.

This will aid in the acceleration of the implementation of ADAS. Until recently, little attention was devoted to the difficulties that car cameras have while operating in adverse weather. The contrast between images taken on the inside and photographs taken on the outside is distinguished by the intensity of the edges. Concentration curves are utilised to produce four various degrees of fog, which are generated using a neural network. It is necessary to develop a novel way to discriminating between different climates. This collection of towns includes Milford as well as a plethora of smaller communities. View-based mapping and localization are currently being employed in external environments that are constantly changing. Continue to

Risk Management At ICICI Prudential

S.ANEEL AMRUTHA RAJUSC.RAMSHESH,
Associate Professor & head of MBA Dept, Assistant professor.
Department of MBA.
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT

The purpose of this research was to find out how Indian life insurance firms report on risk management and risk governance in their annual reports. The framework for risk management, risk governance, the independence and profile of the chief risk officer, risk policies articulated, and quality certification received were all elements taken into account when evaluating the quality of the disclosure. Despite the fact that each business adhered to the identical corporate governance requirements issued by the Insurance Regulatory and Development Authority of India, the research found a vast range in the substance of their disclosures (IRDAI).

INTRODUCTION

This section provides an outline of the concepts of risk management. ISO Guide 73 'Risk Management' defines the risk management terminology. Vocabulary.'

The priority method takes account first of all of risks with the highest losses (or impacts) and probabilities for optimal risk management, and subsequently reduces risks with lower probabilities and losses. In reality, the entire risk assessment process may be complex and balance resources with high risk mitigation frequently misinterpreted in comparison to a large risk of loss, but less likely to occur.

Intangible risk management discovers a new kind of risk which is 100% certain but which is disregarded by the business due to lack of identification. For example, if insufficient knowledge is applied to a situation, there is a danger to knowledge. If there is insufficient collaboration, there is a risk of relationships. When inefficient operational procedures are utilised, the risk of participating in processes may be troublesome. These risks instantly decrease knowledge workers' productivity, influence on cost-effectiveness, profitability, service quality, reputation, brand value and profit quality. Intangible risk management allows risk management to be implemented immediately by detecting and eliminating hazards that decrease output.

Risk management also confronts issues with resource allocation. This is the concept of the cost of the opportunity. Risk management resources might have been focused on more profitable activities. Again, effective risk management lowers cost (labor or other resources) and also decreases unfavorable risk outcomes.

The Risk Management to Business Success

Risk management is an essential component of corporate planning. The risk management method attempts to minimize or eliminate the risk of specific types of business occurrences.

A CAMSHAFT FOR MULTI-CYLINDER ENGINE DESIGN

M.RAVI SANKARA VARAPRASAD, G.MD.JAVEED BASHA,.
Associate Professor & Head of ME Dept., Assistant professor.,
Department of MECHANICAL
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT

The cam shaft and its associated parts control the opening and closing of the two valves. The associated parts are push rods, rocker arms, valve springs and tappets. It consists of a cylindrical rod running over the length of the cylinder bank with a number of oblong lobes protruding from it, one for each valve. The cam lobes force the valves open by pressing on the valve, or on some intermediate mechanism as they rotate. This shaft also provides the drive to the ignition system.

In this work, a camshaft is designed for multi cylinder engine and 3D-model of the camshaft is created using modeling software Solidworks with different materials aluminum alloy, forged steel &cast iron.

Present using the cast iron material for camshaft, we are replaced with aluminum alloy & forged steel.

Modeling done on Solidworks software.

INTRODUCTION

A cam is a rotating or sliding piece in a mechanical linkage used especially in transforming rotary motion into linear motion or vice versa. It is often a part of a rotating wheel (e.g. an eccentric wheel) or shaft (e.g. a cylinder with an irregular shape) that strikes a lever at one or more points on its circular path. The cam can be a simple tooth, as is used to deliver pulses of power to a steam hammer, for example, or an eccentric disc or other shape that produces a smooth reciprocating (back and forth) motion in the follower, which is a lever making contact with the cam.

Overview

The cam can be seen as a device that translates from circular to reciprocating (or sometimes oscillating) motion. A common example is the camshaft of an automobile, which takes the rotary motion of the engine and translates it into the reciprocating motion necessary to operate the intake and exhaust valves of the cylinders. The opposite operation, translation of reciprocating motion to circular motion, is done by a crank. An example is the crankshaft of a car, which takes the reciprocating motion of the pistons and translates it into the rotary motion necessary to operate the wheels.

Cams can also be viewed as information-storing and -transmitting devices. Examples are the cam-drums that direct the notes of a music box or the movements of a screw machine's various tools and chucks. The information stored and transmitted by the cam is the answer to the question, "What actions should happen, and when?" (Even an automotive camshaft essentially answers that question, although the music box cam is a still-better example in illustrating this concept.) Certain cams can be characterized by their displacement diagrams, which reflect the changing position a roller follower would make as the cam rotates about an axis. These diagrams relate angular position to the radial displacement experienced at that position. Several key terms

Overview of the CLEF 2010 medical imageretrieval track

T.Chakrapani,B.Venkatesh

Associate Professor, Associate Professor

ECE Dept.,

St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.).

Abstract:

It was decided to hold the seventh round of the ImageCLEF medical retrieval assignment in 2010. Like the collections in 2008 and 2009, the 2010 collection includes photographs and captions from the Radiology and Radiographics journals published by the RSNA (Radiological Society of North America) as well as other sources (Radiological Society of North America). Three sub–tasks were completed under the auspices of the medical task: modality identification, image–based retrieval, and case–based retrieval, all of which were completed under the auspices of the medical task. The goal of the modality identification task was to ascertain the mode of acquisition of the images in the collection by utilising visual, textual, or a combination of approaches to identify them. When performing an image–based retrieval task, the goal was to return an ordered set of images from the collection that best met the information need specified as a textual statement and as a set of sample images, whereas when performing a case–based retrieval task, the goal was to return an ordered set of articles (rather than images) that best met the information need specified as a description of a "case." The number of research organisations registering for the medical task has increased to 51 from the previous number of registrants. The number of groups submitting runs, on the other hand, has remained constant at 16, with the total number of submitted runs increasing to 155. Ad hoc runs made up 51 of them, while case–based runs made up 48 and modal–ity classification runs made up the remaining 46 (see table below). The best results for the ad–hoc retrieval themes were obtained via the use of mixed approaches, with textual techniques also providing satisfactory results. For the case–based topics, textual means were unquestionably preferable. While textual and visual tactics alone were somewhat successful in the modality de-tection test, it was the combination of these approaches that proved to be the most effective.

1 Introduction

It is currently known as labs, and it is made up of a set of pre-planned evaluation tasks that are carried out. 2 Participation, data sets, tasks, and ground truth are all critical considerations in every project. This section goes into great depth on how the medical retrieval task was set up and how I was able to participate in it over the year 2010. Participation is encouraged (paragraph 2.1) ImageCLEF received registrations for its four sub–tasks from a new record number of 112 research groups in 2010, representing a decline from the seven sub–tasks that were registered in 2009. It was a record-breaking 51 people who registered for the medical retrieval task, and 16 of the participants produced results to the tasks, which was approximately the same number as in

Design and Fabrication of Automated Hacksaw Machine

N.FRANCIS S.KAMALESH RAO,
Assistant professor., Assistant professor.,
Department of MECHANICAL
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT

It is the goal of this project to automate a standard power hacksaw machine in order to increase the productivity of workpieces by utilising a Microcontroller. Two inputs are needed from the user to operate the automated cutting machine: the number of pieces to be cut and the length of each piece. To be slashed. Using a keypad and an LCD display, the user may enter the information they need. check the information he has provided. In order to cut the work-piece, the operator does not need to measure its length or to put it into the machine. unloading the chuck each time after cutting a new piece. As soon as we get the two inputs we need from them, we're ready work-length specified by the user is automatically fed into the machine. A chuck is used to hold the component in place as it is chopped. There have been a lot of cuts made. With the use of a conveyor, the machine feeds the work-piece. An IR sensor and a DC motor guarantee that the feeding stops when the appropriate length has been achieved. When cutting, a cylinder is utilised to keep the workpiece in place. It's done using an AC motor. Workpieces must be cut using a reciprocating action. The reciprocating mechanism has a self-weight linked to it. Hacksaw blade penetration mechanism to give the appropriate downward power needed for the workpiece. An automatic limit switch will be activated after one piece of material has been sliced, which is detected by the self-weight mechanism. The microcontroller will restart the cycle process if the required number of workpieces have not been cut.

AUTOMATION; POWER HACKSAW; MICROCONTROLLER; RELAY; and LCD

INTRODUCTION

Metal and plastic shafts and tubes can be cut using power hacksaws. With a hand-held hacksaw, cutting solid shafts or rods with diameters more than fifteen millimetres is very difficult. Consequently, a power hacksaw machine was designed in the United States in the 1920s to do the tough and time-consuming operation. Figure 1 shows a power hacksaw machine that is called an automated machine since the user does not have to manually operate it. The reciprocating motion and downward force on the workpiece must be provided by you in order to cut it. Once the operator is on the scene, however, the workpiece has been put into the machine to the desired length, and the machine is now running. The piece of art has been entirely dismantled.

Fig 1.Power Hacksaw Machine

One of the reasons we decided to automate work-piece feeding was to eliminate the need for the operator to manually feed the piece into the vice to the desired length. In addition, the operator must unload the workpiece and advance the remainder of the workpiece to the desired length repeatedly until the end of the workpiece is reached after a shaft has been cut once. Despite this, the Power hacksaw machine is able to cut through the shaft or rod without a problem cutting does not need any human effort, but it does necessitate a human interaction to feed the workpiece several times.

Measurements are obtained prior to feeding each time. As a result, it became necessary to fully automate. And now we have a suggestion that would help remove the work of those who are involved in chopping it down.

A. Defining the Issue

There is a drawback to power hacksaw machines that are controlled by humans, like as the ones discussed above. Repeatedly removing and re-installing the workpiece These devices are used in pump-making factories to cut material. The shafts of the motors to the desired dimensions. Having to cut a large area will be challenging for the operator.Each time he has to cut a motor shaft, he has to count the number of shafts he has in stock. Because humans aren't as adaptable as other animals, we can't compare ourselves to them. There is a chance that machines might be inaccurate. In addition, if there is a short gap between each session, it will be much better may

Artificial Intelligence HealthCare Chabot System

P.VEERESH,Y.NARASIMHA REDDY,.
Associate Professor & Head of CSE Dept, Associate Professor,
Department of CSE
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract:

Through chat bots one can communicate with text or voice interface and get reply through artificial intelligence. Typically, a chat bot will communicate with a real person. Chat bots are used in applications such as ecommerce customer service, call centers and Internet gaming. Chatbots are programs built to automatically engage with received messages. Chatbots can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning to adapt their responses to fit the situation. A developing number of hospitals, nursing homes, and even private centers, presently utilize online Chatbots for human services on their sites. These bots connect with potential patients visiting the site, helping them discover specialists, booking their appointments, and getting them access to the correct treatment. In any case, the utilization of artificial intelligence in an industry where individuals' lives could be in question, still starts misgivings in individuals. It brings up issues about whether the task mentioned above ought to be assigned to human staff. This healthcare chatbot system will help hospitals to provide healthcare support online 24 x 7, it answers deep as well as general questions. It also helps to generate leads and automatically delivers the information of leads to sales. By asking the questions in series it helps patients by guiding what exactly he/she is looking for.

Keywords: Artificial Intelligence, Prediction, Pattern matching, Disease, Query processing

Introduction:

Artificial Intelligence, also referred to as Machine Intelligence, is an intricate innovation smoothly gearing up to revolutionize our lives forever. The stimulation of human intelligence using contemporary computers that imitates cognitive functions is changing the ways of problem-solving. And with cutting-edge disciplines such as AI and Chat bots, researchers are leading the way to a great transformation. Apart from all other ways of demonstrating an impact, the role of AI in health. To lead a good life healthcare is very much important. But it is very difficult to obtain the consultation with the doctor in case of any health issues. The proposed idea is to create a medical chatbot using Artificial Intelligence that can diagnose the disease and provide basic details about the disease before consulting a doctor .To reduce the healthcare costs and improve accessibility to medical knowledge the medical chatbot is built. Certain chat bots acts as a medical reference books, which helps the patient know more about their disease and helps to improve their health. The user can achieve the real benefit of a chatbot only when it can diagnose all kind of disease and provide necessary information. A text-to-text diagnosis bot engages patients in conversation about their medical issues and provides a personalized diagnosis based on their symptoms. Hence, people will have an idea about their health and have the right protection. are industry is particularly ground-breaking.

Emotion Recognition And Drowsiness Detection Using Python

T.ABDUL RAHEEM,M.ERAMMA,.

Assistant Professor, Assistant Professor,.

Department of CSE

St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract:

The natural expressions of human emotions are those that individuals enjoy making without exerting any conscious effort, and which are followed by the reflexing of face muscles rather than any deliberate effort on the part of the individual. Among the most basic feelings that a human face might express depending on the scenario in which one finds himself or herself are: happiness, grief, surprise and wrath, to mention a few examples: stability, joy, and stability, among others (normality). As part of this work, we present software that detects and recognises faces, as well as providing a wealth of additional information about that individual. This information can be used to solicit feedback from customers, or to determine whether a person requires an incentive to engage in certain behaviours. The ultimate goal of the project is to build a product that is both cost-effective and efficient in terms of operation and maintenance. AI and DIP technologies were employed in the development of the system, which was written in Python and implemented using Artificial Intelligence. When it comes to avoiding an accident or tragedy, the ability to recognise eye blinking is vital in a variety of situations, such as driving or in security vigilance scenarios. The fact that the system also recognises the identification card makes this a fundamental function. As a result of the training provided, the camera that has been installed initially focuses on the card and recognises its form and colour before going on to the next item.

1. INTRODUCTION

A growing number of people are becoming involved in the fields of artificial intelligence (AI) and digital image processing (DIP) all over the globe. The usage of deep learning-based artificial intelligence (AI) methods and applications is increasing across a broad variety of industries, with many of them relying on deep learning as their foundation. The project might be performed for marketing and improvement purposes, as well as with the objective of creating a completely new item from the ground up. Please let us know if you have any product development projects that we should be aware of that you would want to share with us. Because of this, it is able to offer an accurate and detailed assessment of the implications. While the features of artificial intelligence technologies are simple to implement and understand in the most common systems, they can also be installed in a cost-effective and efficient manner in schools, colleges, and any other area where surveillance is required; however, a lack of funding is the most significant factor causing difficulties in the development of artificial intelligence technologies. Monitoring might be included into the project, which would aid in the maintenance of a regular health check,

A STUDY OF HOUSING FINANCE

G.THOUSEEF AHAMED, S.ANEEL AMRUTHA RAJU,.
Assistant professor. Associate Professor & head of MBA Dept,
Department of MBA.
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT:

Experiences in India's Housing and Housing Financing Professor Madhu Bharti, CEPT University, India. Abstract It has been more than half a century since India gained independence, and the makeup of its urban population presently stands at 32 percent. The state's response has been to implement a variety of programmes to deal with the rising population's needs. A function of service provider was first assumed by the government, but over time, the government has permitted the private sector to play a bigger role. These developments have led to massive construction of private dwellings for the wealthy, but many of these remain empty or unsold while a major portion of the population (particularly in cities like Mumbai) remains in slums and poorly maintained neighbourhoods. Since a lack of success has been shown in government attempts to get the private sector engaged, wealthy people are moving into exclusive cities with no involvement or room for the poor. The government's goal of providing affordable housing to everyone by 2022 is a lofty one. A number of measures have been done to introduce private money and transparency to the industry in the last year or so. State sector involvement in urban issues is the focus of the full abstract on 'Housing and Housing Finance in India: Recent Experience'.

INTRODUCTION

A loan is a financial asset transfer between the lender and the borrower that occurs over time. The lender gives the borrower a large sum of money that they must repay in monthly payments, albeit this is not always the case. The lender is frequently charged for this service, and the fee is deducted as interest from the debt. A loan principle is one of the most crucial functions for financial organizations. A common source of loan financing is deposits for other institutions that issue debt instruments such as bonds.

As basic needs rise, home loans from a variety of banks are becoming increasingly important in aiding people to achieve their goals. They come in handy when we need or want to buy something but don't have enough money to do so.

Home loans are a greater option as compared to consumer durable loans. In fact, we should hunt for a home loan before taking out a consumer durable loan because it takes a little longer but has a lower interest rate. The flexibility of home loans in terms of tenure and the number of programs available make them enticing.

It's a type of general-purpose loan that doesn't require any form of collateral, such as a car, a house, stocks, or any other asset.

Bevel Gear Design and Material Selection

M.RAVI SANKARA VARAPRASAD,G.MD.JAVEED BASHA,.
Associate Professor & Head of ME Dept.,Assistant professor.,
Department of MECHANICAL
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT

Computer technology has touched all areas of today's life, impacting how we obtain railway tickets, shop online and receive medical advice from remote location. Computer-based design analysis is nowadays a common activity in most development projects. Traditionally, the design field has been identified with particular end products, e.g., mechanical design, electrical design, ship design. In these fields, design work is largely based on specific techniques to foster certain product characteristics and principles

The scope of this work includes, to design, to model the bevel gear, to select gear materials, to detailed factor safety in design and to analysis bevel gears. Gears are toothed elements that transmit rotary motion from one shaft to another. Gears are generally rugged and durable and their power transmission efficiency is as high as 98%. Gears are usually more costly than chains and belts. Bevel gears are gears where the axes of the two shafts intersect and the tooth bearing faces of the gears themselves are conically shaped. Bevel gears are most often mounted on shafts that are 90 degrees apart, but can be designed to work at other angles as well. The pitch surface of bevel gears is a cone. Two bevel gears in mesh is known as bevel gearing. In bevel gearing, the pitch cone angles of the pinion and gear are to be determined from the shaft angle, i.e., the angle between the intersecting shafts. The bevel gear has many diverse applications such as locomotives, marine applications, automobiles, printing presses, cooling towers, power plants, steel plants, railway track inspection machines, etc.

1. Introduction

Bevel gear

Bevel gears are gears where the axes of the two shafts intersect and the tooth-bearing faces of the gears themselves are conically shaped. Bevel gears are most often mounted on shafts that are 90 degrees apart, but can be designed to work at other angles as well. The pitch surface of bevel gears is a cone.

Two important concepts in gearing are pitch surface and pitch angle. The pitch surface of a gear is the imaginary toothless surface that you would have by averaging out the peaks and valleys of the individual teeth. The pitch surface of an ordinary gear is the shape of a cylinder. The pitch angle of a gear is the angle between the face of the pitch surface and the axis.

The most familiar kinds of bevel gears have pitch angles of less than 90 degrees and therefore are cone-shaped. This type of bevel gear is called external because the gear teeth point outward. The pitch surfaces of meshed external bevel gears are coaxial with the gear shafts; the apexes of the two surfaces are at the point of intersection of the shaft axes.

The use of a genuine bevel gear has even greater importance for the reliability of the axle than any other spare part. Bevel gears that have pitch angles of greater than ninety degrees have teeth that point inward and are called internal bevel gears.

Implementation of Transient Current Testing for Faults in SRAM

S.AhmedBasha, H.Devanna
Assistant Professor, Assistant Professor
ECE Dept.,
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.).

Abstract:

In recent years, as memory devices have risen in popularity, a higher quantity of memory has been packed into each chip, and fierce market competition has upped the quality standards that are expected of the memories that are produced. The notion that failure analysis and device testing methodologies are becoming increasingly important as a result of the rising demand for dependability has been emphasised repeatedly. It has been more popular to study and research memory devices in recent years, particularly in the context of novel failure models, fault detection methodologies, and new memory architectures that have all been developed and implemented. A direct effect of this experience is that the March test is now frequently used to identify and avoid similar problems from occurring in the future. The organisation believes that some vulnerabilities in SRAM cells may go undetected during the normal March testing. In order to determine whether or not there are defects in the CMOS SRAM, a time-consuming procedure has been implemented. It is as a result of this decision that the most recent testing process is selected for usage. As part of this research effort, IDDT is being used to test for faults and issues in CMOS SRAM cells, and it is also being used to test for flaws and issues in CMOS SRAM cells as part of a separate study of the same name. In either case, a transient current pulse generated during a transition write operation or a transition read operation may be monitored for system failures, allowing them to be discovered and remedied. For the purpose of detecting and measuring the transient current pulse, it is required to design a circuit for monitoring current.SRAM, memory testing, the March algorithm, the IDDT, and the current sensor circuit are just a few of the terms that appear in this document.

I. INTRODUCTION

In order to get higher performance in order to meet the demands of today's and tomorrow's applications, today's systems on chips (SoCs) are changing from being dominated by logic to being dominated by memory. [1] [2] Memories are expected to account for 90 percent of all semiconductor chip area by 2013, according to the International Technology Roadmap for Semiconductors (ITRS), with static random access memory (SRAM) accounting for the vast

HEAVY WEIGHT LIFT MACHIEN DESIGN

DR.V.VEERANNA, M.RAVI SANKARA VARAPRASAD,.
Professor & Principal, Associate Professor & Head of ME Dept.,.
Department of MECHANICAL
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT

With the increasing levels of technology, the efforts being put to produce any kind of work hasbeen continuously decreasing. The efforts required in achieving the desired output can be effectively and economically be decreased by the implementation of better designs.. Weight after certain limits cannot be lifted by a person, in such cases we are in need of jack. When it is motorized it becomes more convenient. In order to implement this idea, we have designed and developed a system called motorized jack operating through switch by having full control of the jack, we can easily lift it up and down by using the on/off .this helps to reduce the burden of the worker. The main reason to fabricate the motorized screw jack is to avoid the fatigue of human during lifting of the load. The project is less cost and good efficient for operating.

A jack, screwjack or jackscrew is a mechanical device used as a lifting device to lift heavy loads or to apply great forces. A mechanical jack employs a screw thread for lifting heavy equipment. A hydraulic jack uses hydraulic power. The most common form is a car jack, floor jack or garage jack, which lifts vehicles so that maintenance can be performed. Jacks are usually rated for a maximum lifting capacity (for example, 1.5 tons or 3 tons). Industrial jacks can be rated for many tons of load.

Here we study the fabrication of a mini hydraulic jack that uses hydraulic power to operate the jack in vertical movement. Our system consists of a smartly designed hydraulic jack that is capable of lifting relatively heavy weights as compared to its size. The system consists of a lifting jack mechanism made out of light weight but strong materials. This mechanism is then powered by a syringe in a way as to achieve the most weight lifting mechanism as compared to its size. The system consists of a bed mounted on top of the mechanism where the car or weight to be lifted is to be placed.

INTRODUCTION

An automotive jack is a device used to raise all or part of a vehicle into the air in order to facilitate vehicle maintenances or breakdown repairs. The use of jack is not new. It has developed to its present sophisticated state over many years. There are two main types of automotive jacks: Hydraulic and screw jacks. These two categories also have many subcategories of jacks. A screw jack is a type of jack which is operated by turning a lead screw. In this jack, a small force applied in the horizontal plane is used to raise or lower large load [1, 2]. Of the screw-type mechanisms, there are scissor jacks, common in newer cars, and bumper

DETECTION AND PREDECTION OF AIR POLLUTION USING ML MODELS

P.VEERESH. Y.NARASIMHA REDDY,.
Associate Professor & Head of CSE Dept, Associate Professor,
Department of CSE
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract
Governments in both developed and developing countries are fully aware that air quality control is a crucial responsibility that must be completed. Conditions such as weather and traffic congestion, fossil fuel burning, and industrial features such as power plant emissions all have a substantial impact on environmental contamination and are thus considered to be environmental polluting factors. In terms of influence on air quality, particulate matter (PM 2.5) is the most significant of all the particulate matter that can be measured, and it deserves more attention than it now receives. Human health may be negatively affected when there is an excess of ozone in the air, which is conceivable when the amount of ozone is high in the atmosphere. No amount of emphasis can be placed on how vital it is to monitor its concentration in the atmosphere on a regular basis in order to effectively control it. In this study, logistic regression is used to determine if a data sample is contaminated or not polluted, based on the distribution of the data sample data. It is possible to estimate future levels of PM2.5 using authoregression, which is a statistical method that is based on previously gathered data. Being aware of the amount of PM2.5 that will be present in the air in the following years, months, or weeks allows us to work toward lowering its concentration to levels lower than those considered to be hazardous. Based on a data collection that includes daily atmospheric conditions in a certain city, this technique was developed to attempt to anticipate PM2.5 levels and identify air quality in a given place.
Keywords — Pollution detection, Pollution Prediction, Logistic Regression, Linear Regression, Autoregressio

1. INTRODUCTION

Throughout the history of our planet, air has been regarded as the most important characteristic asset for the survival and existence of all life, and it is absolutely necessary for the survival and presence of all life. Today, air is considered the most important characteristic asset for the survival and existence of all life. Aerial oxygen is required by all forms of life, including plants and animals, for their essential endurance and presence in order to live and to be present in their surrounding environment. As a result, in order to thrive, all living things require a large amount of clean, fresh air that is free of harmful gases in order to sustain their existence. An alarming

Standard Stability improvement using Particle Swarm Optimization Power System Stabilizer

SYED SAHAB, E.RAVI TEJA,
Assistant professor., Assistant professor.
Department of EEE
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract-- In this paper the dynamics of a single device related to limitless bus electricity machine is analyzed. Such evaluation calls for a sure degree of gadget modeling. the main gadget components fashions are the synchronous gadget, excitation machine and the strength gadget Stabilizer. The Matlab/Simulink is used as a programming tool to research the gadget performance. in keeping with the device performance a right design for the energy gadget Stabilizer (PSS) using Particle Swarm Optimization (PSO) is achieved. Then the designed PSS is carried out in the model and the dynamic machine reaction is analyzed. for the reason that simulation effects without the PSS showed unacceptable machine response, the gadget response with the PSS has advanced and the PSS succeeded to stabilize an volatile device.
Index Terms—Power System Stabilizer, Particle Swarm Optimization, Dynamic Stability.

I. INTRODUCTION

Power System Stability is concerned as one of the main factors that affect the power system in its three main sectors: generation, transmission and distribution. There are several factors that can affect the stability of the system such as sudden load change, fault and generator shaft speed change. The instability problem is resulting in scillatory behavior that, if undamped may eventually build up. Even undamped oscillations at low frequencies are undesirable because they limit power transfers in transmission lines and induce stress in the mechanical shaft. With proper design and compensation, the excitation system can be an effective means of enhancing stability in the dynamic range as well as in the first few cycles after a disturbance. The compensation by adding damping to the generator rotor oscillations is related to an auxiliary stabilizing signal and the device used to generate this signal is called Power System Stabilizer (PSS). Stability can be controlled by controlling the excitation of the generator or its speed. In addition, the excitation can be controlled using Automatic Voltage regulator AVR. Nowadays, PSS becomes one of the main solutions to the instability behind the AVR. PSS is a device which provides additional supplementary control loops to the automatic voltage regulators system and/or the turbine governing system of a generating unit. It is considered as one of the most common ways of enhancing both small signal (steady-state) stability and large-signal (transient) stability. PSS are often used as an effective and economic means of damping such oscillations. The automatic voltage regulator (AVR) regulates the generator terminal voltage by controlling the amount of current supplied to the generator field winding by the exciter. It is mainly used to damp any oscillations accrued to the power system when load is changing. It keeps the terminal voltage of the generator constant so that the voltage on the load side will remains almost constant even the load is vary with time. Next section will present the motivation on this paper. Section three will discuss the system modeling. Then PSS design will be discussed in section four. Finally implementation and simulation will be discussed in section five.

II. MOTIVATION

The stability problem is concerned with the behavior of the synchronous machines after they have been perturbed. If the perturbation does not involve any net change in power, the machines should return to their original state. If an unbalance between the supply and demand is created by a change in load, in generation, or in network conditions, a new operating state is necessary. In any case the synchronous machine should remain in synchronism with other machines and they should operate in parallel as well as at the same speed. The transient following a system perturbation is oscillatory in nature and such oscillations could affect power generation significantly. Those oscillations differ in magnitude according to the disturbance. Small random changes in the load or generation are an example of small disturbance. However any disturbance small or large can affect the synchronous operation and may lead the machine to run out of stability. Nevertheless those oscillations due to such disturbances have to be damped to improve power system stability. This paper will investigate; how to solve the dynamic stability of the single machine connected to infinite bus during small disturbances using PSS. The main objective of this work is to design and implement a power system stabilizer for single machine connected to infinite bus power system to stabilize the system and improve the system response during small disturbances or changes in the system.

Text Mining Based on Tax Comments as Big Data Analysis Using XGBOOST and Feature Selection

G.VISWANATH, T.ABDUL RAHEEM,.
Associate Professor, Assistant Professor,.
Department of CSE
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract - *With the quick improvement of the Internet, enormous information has been applied in a lot of use. Be that as it may, there are regularly excess or unessential highlights in high dimensional information, so include determination is especially significant. By building subsets with new highlights and utilizing AI calculations including Xgboost and so on. To acquire early notice data with high dependability and constant by applying large information hypothesis, systems, models and techniques just as AI strategies are the unavoidable patterns later on. this examination proposed the fast choice of highlights by utilizing XGboost model in dispersed circumstances can improve the Model preparing proficiency under conveyed condition.*

GBTs model dependent on the inclination streamlining choice tree was superior to the next two models as far as precision and continuous execution, which meets the necessities under the large information foundation. It runs on a solitary machine, just as the conveyed preparing structures Apache Hadoop, Apache Spark.

We can utilize inclination plummet for our slope boosting model. On account of a relapse tree, leaf hubs produce a normal inclination among tests with comparative highlights. Highlight determination is a basic advance in information preprocessing and significant research content in information mining and AI assignments, for example, order.

Keywords:

XGBoost method, Software program, Support vector machines, python, data Mining, decision tree, XGBoost algorithm, random forest, correlation mining, KNN.

Introduction

With the fast improvement of the Internet and data innovation, the size of information that can be prepared by different ventures has been ceaselessly created, and issues, for example, 'dimensional debacles' have been achieved. Highlight determination is a basic advance in information preprocessing and significant research content in information mining and machine learning tasks such as classification.

Highlight choice is to successfully decrease include measurement and improve arrangement exactness and effectiveness by erasing insignificant and repetitive highlights in informational indexes. It additionally has the capacity of denoising and forestalling AI model from over-fitting .

Highlight determination is generally in the pursuit space made out of all mixes of information highlights, through the component subset search calculation, to discover a subset of highlights that are profoundly connected with design acknowledgment issues, (for example, order learning issues), and dependent on the got ideal highlights. Subsets to improve the acknowledgment execution of learning calculations are recognized by the element subset assessment technique.

The outfit include determination calculation has preferable dependability and power over other component choice calculations when managing high-dimensional information with various ideal element subsets. On the high-dimensional informational collection, the most extreme data coefficient and chi-square are first utilized. The element

DEEP POSE AND HUMAN POSE ESTIMATION VIA NEWRAL NETWORK

Y.NARASIMHA REDDY, P.VEERESH,.
Associate Professor, Associate Professor & Head of CSE Dept,
Department of CSE
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT

Deep Neural Networks are used to assess an individual's posture, and we present a technique for doing so. Deep Neural Networks are used to assess an individual's posture (DNNs). Regarding the subject's body joints, it is argued that the pose estimation problem may be conceived of as a DNN-based regression problem in terms of the subject's posture. In this paper, it is proven how to design a cascade of such DNN predictors, which leads in high precision position predictions for the target location. Pose reasoning can be completed in its entirety with the help of this technique, which has a clear yet strong formulation that takes advantage of the most current breakthroughs in deep learning technology to do this. Using four academic benchmarks with diverse real-world photographs, we present a complete empirical analysis that reveals state-of-the art or higher performance on four academic benchmarks, as proven by the findings of four academic benchmarks.

1. INTRODUCTION

Recent years have seen a substantial increase in interest from the computer vision community in the problem of human posture estimation, which may be described as the difficulty of localisation of human joints. On the other hand, some of the issues associated with this issue can be detected, such as forced articulations, tiny and hardly visible joints, occlusions, and the necessity to capture the surrounding environment. Based on historical evidence, it is clear that the vast majority of research into this subject has been motivated primarily by the first difficulty: the need to search over the vast space of all possible articulated positions in order to obtain meaningful findings. Model

articulations are easy in part-based models, and a variety of models that are capable of efficient inference have been developed during the last several years. This trade-off must be acknowledged, even though the aforementioned efficiency is achieved at the expense of limited expressiveness – the use of local detectors, which in many cases only reason about a single part; and, most importantly, the modelling of only a small subset of all interactions between body parts – in order to achieve the aforementioned efficiency. In spite of this knowledge, as indicated by the example, ways for thinking about posture in a holistic approach have been offered, with only sporadic success in

A Study And Analysis Of Financial Strength Performance And Liquidity Of Syndicate Bank

C.RAMSHESH,. S.ANEEL AMRUTHA RAJU,
Assistant professor. Associate Professor & head of MBA Dept,
Department of MBA.
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT
The banking business in India is the backbone of the country's economy. The Indian banking sector includes cooperative, commercial, nationalised, private, and internationalised banks. The goal of this study is to apply the CAMEL model to analyse the Syndicate Bank's financial performance. The CAMEL model is a widely used method for evaluating the performance of banking units in the United States and throughout the globe. Outside the subcontinent of India In the United States, the CAMEL rating system was developed to categorise supervisory rating systems.The overall status of the bank This model evaluates the performance of financial institutions (approximately). On all main factors such as capital adequacy, assets, and liquidity, 8,000 entities (primarily banks) were evaluated. The first five components are quality, management efficiency, earning quality, and liquidity, with market risk as the sixth. It was added in 1997. The study is based on secondary data from the annual reports of Syndicate Bank. The data from FIVE years is analysed with the purpose of assessing it by calculating various ratios. Average, standard deviation, coefficient of variation, and other statistical tools, according to the CAMEL rating. A correlation is also calculated. The Syndicate bank's total capital adequacy level was found. The managerial effectiveness was also excellent. However, the bank's total earning capacity was excellent. The liquidity position was bad in general.

Keywords: Banking, Efficiency, Camel Model, Financial Performance

INTRODUCTION

Finance is defined as money supply when needed. Every company requires financing to start and operate. Finance is an organization's vital blood. Finance should thus be properly handled.

In all contemporary financial systems, banks play a key role. Banks must be safe and regarded as such to do it successfully. The only major guarantee is that the economic value of a bank's assets considerably exceeds its obligations. The difference is a cushion of "capital" to offset any type of loss. However, the current financial crisis highlighted the significance of a second kind of buffer, the "liquidity" of unintended cash withdrawals, by banks. A bank may be solvent, having in economic and accounting manner assets that surpass its obligations, yet nevertheless suffer a sudden death if its depositors and other funds lose faith in the organization.

Liquidity of a bank is a measure of its capacity to find easily the cash needed to fulfill its needs. Liquidity may be obtained through direct cash holdings in currency or on the Federal Reserve or other central bank account. It is more usual to own securities that can easily be sold with little losses. This usually implies highly credible assets with short-term maturities, especially government bills. The bank may just wait for them to repay the principal at

Green and highly efficient route for the synthesis of α,α|-bis-(substituted-benzylidene) cycloalkanones using CuO nanoparticles as a recyclable and heterogeneous nanocatalyst under solvent-freeconditions

A G.RAMAKRISHNA , Assistant Professor, H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist.)

P BASHA , Assistant Professor, H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist.)

Abstract :- *In order to synthesize cycloalkanones with high yields, a green and highly efficient method is described for the reaction of cycloalkanones with aromatic aldehydes using copper oxide nanoparticles (NPs) as a catalyst, which were prepared in a biological process using Rosa canina fruit's water extract as the catalyst. Catalytic efficiency was not significantly reduced when the Nano catalyst was reused and recovered numerous (5) times..*

Keywords : *Green Chemistry, α,α|-bis-(substituted-benzylidene) cycloalkanones, Heterogeneous nano catalyst, Cupper oxide*

I. Introduction

The α,α|-bis-(substituted-benzylidene) cycloalkanones are useful intermediates for the synthesis of bioactive pyrimidines,[1] agrochemicals, pharmaceuticals and perfumes[2] liquid crystalline polymers,[3] and bis-pyrrolidines.[4,5] Generally, benzylidene cycloalkanones are prepared by cross-aldol condensation of cycloalkanones with aldehydes in the presence of strong acids or bases. However, these protocols often suffer from reverse and side reactions and therefore give low yields of products.[6] Variety of catalytic procedures[7] using different complexes of metal (II) ions is reported to give low yields (38%) of enone products. In other cases, TMSCl/NaI,[8] LiOH,[9] I_2,[10] KF-Al_2O_3,[11] BMPTO,[12] $Mg(HSO_4)_2$,[13] Cp_2TiPh_2,[14] polymer-supported sulphonic acid,[15] $InCl_3.4H_2O$,[16] $FeCl_3$,[17] aqueous micellar media,[18] have also been used. However, in most cases the yields are good at high temperatures and some of the reagents require longer reaction times and complicated purification procedures. Use of $Yb(OTf)_3$,[19] $Cu(OTf)_3$,[20] $RuCl_3$,[21] SmI_3,[22] as catalysts has been reported with good yields. But all these procedures demand reactions to be carried out in sealed tubes at high temperatures. Therefore, there is still scope to develop a more efficient method for the preparation of these compounds.

As by convention, a great quantity of metal oxide and metal nanoparticles were regularly procured via a variety of chemical and physical procedures.[23,24] However, in a majority of instances, these procedures have proved to be toxic, expensive, with high pressure and energy needs, potentially unsafe and difficult removal. The biosynthetic practices applied in the metal nanoparticles preparation have revealed to be more useful over other synthetic approaches
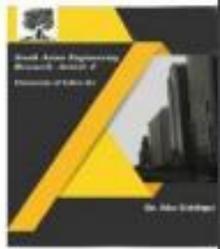
Experiments on the properties of concrete strength and durability by partially replacing fine aggregate with copper slag and cement with eggshell powder for M30 and M40 concrete grades

C.NAGARAJU, M.MUJAHID AHMED,
Assistant professor, Assistant professor & Head of CE Dept.,,
Department of CIVIL
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract:
Concrete is always expected to be stronger and more durable than in the past while beingcost and energy efficient. Moreover the major advantages that concrete possesses over theconstruction materials have to be conserved. The possibility of being fabricated practicallyanywhere, the ability to make the form imposed by the shape of a mould and a low cost ofcomponents and manufacture. These factors have driven advances in improving the performance of concrete over years and continue to do so the need for improving the performance of concrete and concern for the environmental impact arising from the continually increasing demand for concrete has lead the growing use of alternative material components.

An experimental investigation will be conducted to study the properties of concrete containing copper slag as a partial replacement of fine aggregates in the concrete mix design. Various durability tests will be conducted on such concrete of M30 grade and M40 grade to know the compressive strength, split tensile strength by varying proportions of copper slag (CS) with fine aggregates by 0%, 5%, 10%, 15%, 20% and 25% and Egg shell powder(ESP) as cement by 0%, 5%, 10%, 15%, 20%, 25% by weight. The obtained results will be compared with the conventional concrete, there by knowing the changes in the properties of concrete containing copper slag as a partial replacement of fine aggregates.

Key words: Copper Slag,EggshellPowder,Compressive Strength, Split Tensile Strength

I. Introduction

Throughout the field of construction, cement and concrete production is facilitated by the use of industrial waste or secondary materials. Different companies produce new by-products and waste materials. Waste materials processing or disposal is causing environmental and safety issues. Recycling waste materials in the concrete sector therefore represents a great opportunity. By-products like fly ash, silica fume and slag have been considered waste materials for many years. Concrete prepared with these materials demonstrated improved workability and durability over normal concrete and was used for fuel, chemical plants and underwater structures. Intensive research to investigate all possible forms of recycling have been undertaken in recent decades. Building waste, explosive furnace, steel slag, ash of coal fly and low ash, as alternative aggregates in soil, highways, flooring, foundations and building, as raw substances for development of the ordinary Portland cement, as pointed out by Teikthyeluin et al (2006) have been accepted in many areas.

Copper slag is a material from an industrial by-product created by the copper process. About 2.2 tons of copper slag are produced for each ton of copper output. The copper industry in the world is estimated to produce about 24.6 million tons of slag (Gorai et al 2003). While copper layer is widely used in the sand blasting and abrasive tool manufacturing, the rest is disposed of without further recycling or reuse. The copper layer is mechanically and chemically defined as a component replacement for portland cement or as a substitute for aggregates for the material that is to be used in concrete. Copper slag for example has a variety of favourable mechanical characteristics for combined use, such as good soundness, good abrasion resistance, and recorded stability (Gorai et al 2003). Copper slag also has pozzolanic characteristics as it has low CaO. When activated by NaOH, cemented properties may be shown and can be used to substitute Portland cement either partially or completely. Copper slag has the double benefit of minimizing waste disposal costs and reducing the costs of concrete by using them for applications such as Portland concrete replacement or as a primary material.

II .Literature review

The experimental studies of Gowsika et al. (2014) on powdered eggshell (ESP) as partial replacement for cemented concrete. At 28 days of curing time ESP was substituted in 5, 10, 15,20, 25,30 percent by weight of cement and a mixing proportion of 1:3 by a chemical composition and strength properties of ESP in cements mortier. For compression, over and above 5 percent of ESP replacement, admixtures such as saw dust ash, fly ash and microsilica have been

Zero-Voltage and Zero-Current-Switching Full-Bridge PWM Converter Using Auxiliary Active Clamp

M.SHIVA KUMAR, Dr. K. CHITHAMBARAIAH SETTY,
Assistant professor., Assistant professor. & Head of EEE Dept.,
Department of EEE
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

Abstract— Another zero-voltage and zero-current-exchanging (ZVZCS) full-connect (FB) pulsewidth balance (PWM) converter is proposed to improve the presentation of the recently exhibited ZVZCS FB PWM converters. By including an optional dynamic cinch and controlling the brace switch reasonably, ZVS (for driving leg switches) and ZCS (for slacking leg switches) are accomplished without including any lossy parts or the saturable reactor. Numerous preferences including basic circuit topology, high effectiveness, and ease make the new converter alluring for high-voltage and high-power (>10 kW) applications. The rule of activity is clarified and dissected. The highlights and structure contemplations of the new converter are likewise represented and checked on a 1.8-kW 100-kHz protected entryway bipolar transistor (IGBT)- based exploratory circuit.
Index Terms— conversion of DC–DC power.

I. INTRODUCTION

Insulated gate bipolar transistors (IGBT's) are widely used in switching power conversion applications because of their distinctive advantages such as easiness in drive and highfrequency switching capability. The performance of IGBT's has been continuously improved, and the latest IGBT's can be operated at 10–20 kHz without including any snubber circuit. Moreover, IGBT's are replacing MOSFET's for the several or several tens of kilowatts power range applications since IGBT's can handle higher voltage and power with higher power density and lower cost compared to MOSFET's. The maximum operating frequency of IGBT's, however, is limited to 20–30 kHz [1] because of their tail-current characteristic. To operate IGBT's at high switching frequencies, it is required to reduce the turn-off switching loss.

Zero-voltage switching (ZVS) with a substantial external snubber capacitor or zerocurrent switching (ZCS) can be a solution. The ZCS, however, is deemed more effective since the minority carrier is swept out before turning off [6]. ZVS full-bridge (FB) pulsewidth modulation (PWM) converters have received considerable attention in recent years [2]–[5]. This converter is controlled by a phase-shifted PWM technique which enables the use of all parasitic elements in the bridge to provide ZVS conditions for the switches. Distinctive advantages including ZVS with no additional components, and low-device voltage/current stresses make it very attractive for high-frequency high-power applications, where MOSFET's are predominantly used as the power switches. The IGBT's, however, are not suited for the ZVS FB PWM converter because the ZVS range is quite limited unless the leakage inductance is very large. In addition, several demerits such as duty-cycle loss and parasitic ringing in the secondary limit the maximum power rating of the converter. To apply IGBT's for a high-frequency converter, a ZVZCS FB PWM converter was presented [7]. IGBT's with no antiparallel diodes are used for all primary switches. During the freewheeling period, the primary current is reset by using reverse avalanche-breakdown voltage of the leading-leg IGBT's, which provides ZCS condition to lagging-leg IGBT's. However, it has some drawbacks as follows. The stored energy in the leakage inductance is completely dissipated in the leading-leg IGBT's. There is parasitic ringing in the primary during the freewheeling period. The maximum controllable duty cycle is limited since the reverse avalanche-breakdown voltage is low (15–30 V) and fixed. Therefore, the overall efficiency will be deteriorated unless the leakage inductance is very low. Another approach for ZVZCS FB PWM converter was presented [8]. By utilizing a dc blocking capacitor and adding a saturable inductor in the primary, the primary current during the freewheeling period is reset, which provides ZCS condition to the lagging-leg switches. Meanwhile, the leading-leg switches are still operated with ZVS. The stored energy in the leakage inductance is recovered to the dc blocking capacitor and finally transferred to the load. By increasing the blocking capacitor voltage (i.e., by reducing the capacitance of the blocking capacitor), wide duty-cycle control

A STUDY ON AWARENESS OF MUTUAL FUNDS AMONG FINANCIAL INVESTORS IN IIFL

S.ANEEL AMRUTHA RAJUC.RAMSHESH.
Associate Professor & head of MBA Dept, Assistant professor.
Department of MBA.
St.Johns College of Engineering and Technology, Yemmiganur, Kurnool (Dist).

ABSTRACT:

Indian investors have a variety of options for investing their money. Individual investors have a variety of investing alternatives, including mutual funds. Despite the fact that mutual fund investments are riskier than post office savings and bank fixed deposits, they provide investors with the benefits of stock market investing. Mutual funds collect money from a variety of investors and invest it in stocks and shares of various companies through the stock market, based on the mutual funds' investing objectives. A typical investor may lack the resources and expertise necessary to invest in the stock market. This is where mutual fund companies come into play. They combine the funds of a large number of small investors, and skilled fund managers strive to provide the best possible return to these investors. Mutual funds come in a variety of shapes and sizes. Equity funds, debt funds, balance funds, tax-saving funds, index funds, and so on are examples of these. Index funds are mutual fund schemes that invest in the same shares indexed in a certain index at the same weightage of the shares that make up the index. The research investigates investors' awareness of mutual funds and their preference for them over alternative investment options. The survey goes on to look at how well-informed investors are about various mutual fund schemes, including index funds. Mutual funds, index funds, investor awareness, and investor preference are all key words.

INTRODUCTION

The project dealt with the study of economic investors' knowledge of the mutual budget in Hyderabad. A design of analytical and descriptive research is used in this examination. Data have been collected via surveys and interviews. The length of the sample collected for the business was 43. The greatest number of responders having access to the mutual budget was found. Nevertheless, they were more interested in doing business afterwards with mutual funds. Some had previously worked and carried out a business insurance firm as a part-time job.

Therefore, they have no time to create a successful mutual budget business in this distressing timetable. Some other people who were interested in conducting joint-price activities did not wish to submit the review of the Mutual Fund Association in India (AMFI) in writing today. While 72 percent of the respondents had access to mutual financing, the AMFI test was passed by the 3 percent most effective. The responders must thus be persuaded to write the AMFI examination. A wider range of mutual fund operators may thus be needed to conduct business.

USING PYFOAM TO AUTOMATE THE CFD STUDY OF A REEFER TRUCK

R.MAHARANI, Assistant Professor H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.). E_mail Id: rematamaharanireddy@gmail.com
AG.MALLIKARJUNA, Associate Professor & Head of H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.). E_mail Id: mallipraveena1023@gmail.com

Abstract: For example, CFD is used in the automobile and food sectors to create and evaluate products. The small-scale firms don't want to spend a lot of money on open source solutions nowadays. In terms of commercial and industrial CFD OpenFOAM software, it is capable of handling a multi-physics challenge. For instance, the OpenFoam solver is a C++ encoded numerical tool for solving diverse fluid flows and heat transfer under a large number of differential equations where the analyser needs to scratch his head to acquire the results. An OpenFoam CFD model of a Reefer truck chamber with variable temperatures and velocities was created and analysed in the current research. Different intake angles and duct placements are tested in the truck chamber. PyFoam, a Python scripting interface included in OpenFoam, is used to automate the whole CFD process by allowing suppliers or customers to directly enter the coolant temperature and intake angle. The python code was used to verify the inlet angles of 20 and 45 degrees for the reefer truck CFD simulation.

Keywords: CFD, Heat transfer, OpenFoam, PyFoam, Reefer truck.

INTRODUCTION

There has been a dramatic rise in global food production due to the growing global population and increasing wealth [1]. An continuing strategy for dealing with food product transportation is to use new transportation technologies and ways of conveyance.

A problem that had to be dealt with One of the most basic electrical devices, the local fridge is used to keep food fresh and sanitary on manufacturing lines and in homes. nourishment waste. Buyers frequently believe that food is sheltered when kept in fridges with 4°C temperature specification [2]. Be that as it may, nourishment can at present ruin and can possibly cause foodborne diseases when delivered unchilled.

A. Research Objective

We've noticed that scholars have automated just the solver component of analysis, according to several papers cited. Automated preprocessing, solution, and postprocessing are all part of this paper's scope. Using python scripting, we've made it so that customers and clients may apply boundary conditions without having to scratch their heads. Salome is used to extract the python script used for the geometry automation.

B. Reefer Truck

Perishable goods and other temperature-sensitive items are transported in "reefers," which in the trucking industry are refrigerated trailers that are attached to semi-trucks. For optimal food safety and long-term utilisation, these vehicles must maintain a constant temperature within a few degrees of the food's breaking points [3]. There are a variety of ways to keep the vehicle cool, including:

CO2 ice in the form of a cryogen coolant keeps the material cold.

In addition, there are diesel-powered generators that are connected to the chamber that is being

Analyses of the Experimental and Finite Elements of a Concentric Tube Heat Exchanger

VASA RAGHU, a Research scholar of Rayalseema University, KURNOOL, Associate Professor & H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.).KURNOOL. E_mail Id: sairaghugss9@gmail.com

AG.MALLIKARJUNA, Associate Professor & Head of H&S Dept., St.Johns College of Engineering and Technology, Yemmiganur, Kurnool(Dist.). E_mail Id: mallipraveena1023@gmail.com

Abstract: This article discusses concentric tube heat exchangers constructed of galvanised iron and copper. Three alternative L/D ratios (157.89mm, 98.91mm, and 63.33mm) were used in this work to analyse parallel and counterflow processes. The theoretical calculations are performed using ANSYS FLUENT 14.5 software, as are the inlet temperature, velocity, and pressure decreases. These calculations are beneficial for validating the concentric pipe heat exchanger's efficiency and also for determining how these values differ from one another. The output temperature of both counter and parallel flow heat exchangers is calculated using computational fluid dynamics. Finally, the findings were compared to those obtained from counter and parallel flow heat exchangers to determine which was the most efficient.

Keywords: Heat exchangers, Parallel flow, Counterflow, Concentric Tube, CFD Analysis.

I. INTRODUCTION

Heat exchangers are mechanical devices that are used to transfer heat between several fluids. The fluids may be separated by a solid surface and may come into touch or mix. They are extensively used in refrigeration, air conditioning, and space heating, as well as in petrochemical and chemical industries, power plants, and natural gas operations. Heat exchangers are the most often used piece of equipment in enterprises. Heat exchangers are used to transmitting heat between several process streams. Any process that includes heating, boiling, evaporation, cooling, or condensation will necessitate the use of a heat exchanger. Typically, process fluids are chilled or heated before performing a process of experiencing a state transition. Numerous heat exchangers are used in their various applications.

Two pipes may be found on a standard coordinate tube heat exchanger. One pipe is often installed inside, while another with a large diameter and the appropriate fittings is used to guide the flow from one location to another. One fluid enters the intrinsic pipe, while the other enters the annulated space. Concentric tube heat exchangers may be configured in a variety of parallel and counter-flow configurations to suit requirements for mean temperature difference and mean pressure drop. Concentric pipe heat exchangers are a rather common form of the conductive - convection heat exchanger. It is composed of Two concentrically adjusted tubes, each conveying one of the fluids (hot or cold), are used in a concentric tube heat exchanger. There are two conceivable flow configurations: counterflow and parallel flow. The direction of flow of hot fluid will be identical to that of cold fluid. The flow directions of cold and hot fluids are opposed.

Sneha et al. [1] studied "Computational Fluid Dynamics (CFD) is utilised to determine the various pipe materials and perform parallel and counterflows." Additionally, locate the most Using the Ansys workbench, this Ansys fluid programme is used to locate twin-pipe heat exchangers and also to locate the most difficult one is 5%. Folaranmin et al. [2] examined the LMTD method for determining the total heat transfer coefficient. Mayank et al. [4] studied the research deals with CFD simulation of a concentric tube heat exchanger is utilised to determine the Ansys findings for steel and also to determine the finite element analysis utilising finite element tools. contrasted the heat exchanger's design and parallel flow. Suresh et al. [5] compared experimental and numerical results for a concentric tube heat exchanger in the experiment and built a numerical simulation to study heat transfer enhancement in a modified convergent-divergent concentric tube heat exchanger. Deepa

Chemical Bath Deposited Cadmium Sulphide Thin Film Structural Analysis

SK ABDUL RAHEEM , Research schloar SK UNIVERSITY .ANANTHAPURAMU Associate Professor & H&S Dept., St.Johns College of Engineering and Technology E_mail Id: rahim286@gmail.com

S SRIDAR. Associate Professorf H&S Dept., St.Johns College of Engineering and Technology,E_mail Id: rahim286@gmail.com

Abstract— Chemical Bath Deposition was used to deposit a thin coating of Cadmium Sulphide. Deposition of thin films using the Chemical Bath Deposition Approach is the simplest, most straightforward, and most cost-effective method available. The Cd^{+2} ions came from Cadmium Sulphate, whereas the S^{-2} ions came from Thiourea. The pH of the reaction mixture was maintained with aqueous ammonia, and the complexing agent triethylamine was added. A 484 nm thick yellowish-orange CdS film was deposited. The deposited thin film's X-ray diffraction pattern exhibited a hexagonal/cubic crystal structure combination. The observed d values and the conventional d values coincided quite well.

Keywords-Chemical bath deposition, Cadmium sulphide, Thiourea, X-ray diffraction.

I. INTRODUCTION

CdS are the chemical formula for the inorganic compound cadmium sulphide. It has a yellow hue and functions as an electrical semiconductor. Light-dependent resistors and solar cells both use CdS. Piezoelectric transducers made from thin films of Cadmium Sulfide may operate at frequencies in the GHz range. [1] Cadmium sulphide might be employed in thin-film solar cells in the future. Future electrical and photonic devices may benefit from semiconducting nanostructures. Optoelectronic devices may be built using their distinct physical and chemical features. [2,3,4,5].

Semiconducting materials may be deposited using a variety of physical and chemical methods. Material to be deposited, substrate type and thickness, application, and so on all play a role in determining which method to utilise. Physical and chemical methods are both employed in the deposition of semiconducting materials. In comparison to physical approaches, chemical ones are less expensive and simpler.

To deposit thin films of composite materials, the chemical bath deposition (CBD) procedure is employed as a solution growth process. The precipitation of chalcogenide from a metal complex aqueous solution happens under particular conditions when combined with a chalcogen-bearing compound aqueous solution. Controlling the precipitation ensures that the chemical is deposited on the container wall and the substrate surface. Binary and ternary deposits using the CBD approach have been successful.

semiconductors. The deposition process is controlled by factors such as temperature, pH, ion concentration, the nature of the substrate, and the nature of the complexing agents and salts utilised. The CBD method is easy and inexpensive. In the CBD technique, aqueous solution thin films are either deposition by passing a current or deposition by chemical reaction under proper circumstances are applied to the substrate. Simple processes generate stable, adherent, thin coatings with high repeatability. Several factors influence the thickness of thin films, including deposition time, solution composition and temperature, as well as substrate topography and chemical composition.

II. EXPERIMENTAL METHOD

CdS were deposited on a thin glass slide as a substrate. The glass slides were cleaned in a solution of Chromium trioxide by boiling for 1-2 hours. Double-distilled water and acetone were used to wash the boiling substrates, which were subsequently dried. CdSO4 was utilised as a source of Cd^{+2} ions, Thiourea as a source of S^{-2} ions, TEA as a complexing agent, and liquid Ammonia to keep the reaction mixture's pH at 10.5. It is common practice to use a complexing agent to regulate the reaction rate to achieve the required thin film growth. Double-distilled water was used to create 10 ml of a 1M CdSO4 solution. Then, 10 ml of 1M Thiourea solution in double-distilled water was made. A reaction mixture was formed by mixing 10 ml of 1M CdSO4 solution with 10 ml of 1M Thiourea solution with steady stirring. To this, a 2.4 ml solution of triethylamine (TEA) was gradually added while swirling constantly. To keep the pH level at 10.5, 18 ml of Ammonia solution was slowly added to the reaction mixture.