OBSERVATIONS OF VARIATIONS IN SIGNAL STRENGTH OF COSMIC RADIO NOISE FROM SOUTHERN AND NORTHERN HEMISPHERES

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ABSTRACT

It highlights the latitudinal and longitudinal variations in the signal strength of cosmic radio noise with ten different riometer stations. Ionospheric D-region absorption of cosmic radio noise by riometer is a signal loss relative to the QDC. According to corrected geomagnetic coordinates, all ten stations are divided in the Polar, sub auroral and mid latitude stations in both hemispheres. The cosmic noise detected by riometers shows seasonal variability. Therefore, study of QDC is important for the study of cosmic noise absorption (CNA) relative to the power of cosmic noise signal received under quiet ionospheric conditions. In the present study, we made average of 5 days per month, with $\Sigma Kp \leq 3$. In this chapter, we have studied the variation in the maximum, minimum, range of signal strength. Time interval between maximum and minimum signal strength are also mentioned.

Keywords: Riometer, Quiet Day Curve, Ionosphere etc.

Introduction

The Quite Day Curve (QDC) pattern of cosmic noise power is a function of sidereal time [1]. Our Milky Way galaxy is the main source of it. Kraus [2] reported that, the solar noise at frequencies around 30 MHz during the times of high solar activity,

PERFORMANCE ANALYSIS OF PARABOLIC SOLAR DISH COLLECTOR FOR STAINLESS STEEL AS REFLECTING MATERIALS

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ABSTRACT

In this research work the performance analysis of parabolic solar dish collector is done with the use of stainless steel as reflecting materials. The Parabolic Dish Solar Collector system is made for hot water production. Water is recirculating from the storage tank to the absorber tank with the help of a pump. This analysis is carried out to study variation in temperature of water in the storage tank to a maximum value. An analysis is mainly based on the reflector material. The values of useful heat gain, instantaneous efficiency, hourly thermal efficiency and overall thermal efficiency, are calculated and their variation with solar intensity and time are plotted graphically. Solar intensity is measured by solar power meter.

INTRODUCTION

A solar thermal collector functions by gathering solar energy in the form of heat. It is a crucial part of solar heating systems. In comparison to flat plate collectors, parabolic solar dish collectors can capture more energy per unit surface area.

DETERMINATION MORINGA OLEIFERA SEED TOTAL PHENOLIC CONTENT AND TOTAL FLAVONOID CONTENT

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ABSTRACT

Moringa oleifera is one of the most famous plants in Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. It is known as miracle tree due to the fact of every parts of the plant such as roots, leaves, pods flowers, and seeds containing high nutritional value and medicinal benefits. Moringa oleifera seed's oil extracted incorporates high antioxidants properties and come to be as a valuable sources of amino acids, protein, vitamins, beta carotene, and various phenolic compounds. Extraction of oil and determination of antioxidants in the oil could provide an excellent conceivable for commercialization particularly in pharmaceutical industries due to its pharmacological properties such as antiepileptic, antioxidant, antiflammatory, antihypertensive, antibacterial and antifungal. The purpose of this learn about have been to extract the Moringa oleifera seeds at different extraction time and ratio of seed to solvent and decided the amount of total flavonoid content (TFC) and total phenolic content (TPC) in the methanol extract. The extraction method was once carried out using Soxhlet extraction with methanol as a solvent for different ratio of seed to solvent (1:10, 1:5 and 3:10) and extraction time limit (2, 3, 4, 5 and 6 hours). The best percentages of total phenolic content have been 2027.07 (mg GAE/g of extract) at 3 hours of extraction time and seed to solvent ratio (1:10). However, the TFC values in Moringa oleifera seeds have been 99.72 (mg QE/g of extract weight) at 5 hours of extraction time limit and seed to solvent ratio (1:10). The greater values of TPC and TFC in methanol extract of M.

Keywords: antioxidants, total flavonoid content, Total phenolic content, Soxhlet extraction, Moringaoleifera

INTRODUCTION:

Antioxidants play a necessary function to protect cells in our physique from atom harm which main to quite few physiological and pathological abnormalities like upset, rheumatism, cancer and getting old. Moringa oleifera is one among the species in Moringacae household and often nativeto India and Africa. Different components of Moringa comprise a profile of important minerals and are a correct supply of protein, vitamins, beta-carotene, amino acids and variety phenolics . According to Ojiako et al. (2013), the oil has high antioxidant properties, making it

DETECTION AND NOTIFICATION OF POTHOLES AND HUMPS ON ROADS USING PIC-MICROCONTROLLER

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ABSTRACT

One of the major problems in developing countries is maintenance of roads. Well maintained roads contribute a major portion to the country's economy. Identification of pavement distress such as potholes and humps not only helps drivers to avoid accidents or vehicle damages, but also helps authorities to maintain roads. Previous pothole detection methods that have been developed and proposes a cost-effective solution to identify the potholes and humps on roads and provide timely alerts to drivers to avoid accidents or vehicle damages. Ultrasonic sensors are used to identify the potholes and humps and also to measure their depth and height, respectively. The proposed system captures the geographical location coordinates of the potholes and humps using a global positioning system receiver. The sensed-data includes pothole depth, height of hump, and geographic location, which is stored in the database (cloud). This serves as a valuable source of information to the government authorities and vehicle drivers. An android application is used to alert drivers so that precautionary measures can be taken to evade accidents. Alerts are given in the form of flash messages with an audio beep.

Keywords: Pic-microcontroller, Ultrasonic sensor, GSM, GPS, Mobile app.

INTRODUCTION

Roads are currently the main mode of transportation in India. They transport 65 percent of the nation's freight as well as over 90 percent of the nation's passenger traffic. The majorities

EXISTENCE SOLUTION FOR NONLINEAR FRACTIONAL DIFFERENTIAL EQUATION BY THE METHOD OF LOWER AND UPPER SOLUTION

Published: Jul 3, 2022

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Abstract

In this paper, by the use of lower and upper solutions we prove the existence and Uniqueness of Initial Value Problem containing nonlinear fractional differential equation.

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Section
Articles

DEVELOPMENT AND IMPLEMENTATION OF SMART STREET LIGHT SYSTEM BASED ON LORA AND RADAR TECHNOLOGY

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Abstract

This paper concerned with the development and implementation of Smart Street light control system based using Led lamp and Lora Wireless communication with Radar technology currently, a traditional street lights are automatically turn on or off based on timer or day/night sensor. Recently, the conventional light sources are replaced by Led, which have so many advantages such as: energy savings, long lifetime, high reliability, pure light color, fast response, and friendliness to the environment. Furthermore, the intensity of the LED can be controlled easily. In this paper, the smart lighting system is designed to control and monitor devices via wireless transmission frequencies below 1 GHz.

BARRIERS TO EFFECTIVE COMMUNICATION IN THE WORKPLACE AND MEASURES TO ELIMINATE SUCH BARRIERS FROM THE ORGANIZATION

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ABSTRACT
Communication is a process of transmitting information, knowledge, idea, creativity, emotion, and common understanding from one person to another. Communication helps employers as well as employees to maintain a good relationship. A communication problem may soon become a crisis or it may linger on for years. It also affects the role of the relationship in employer-employee members on the management team Working together in a team effectively accomplishes a decided goal or target, so effective communication is a secret key to opening the door to success. Communication in the workplace is critical to establishing and maintaining the quality of working relationships in organizations. This paper discusses the communication, communication process, and communication barriers, and provides a guideline for administrators to improve communication effectiveness.

Keywords: Communication, Barriers, Effectiveness, Administrators, Workplace, Guidelines.

Introduction

Communication is an action that we can express through an interpretation in such a process that an action in which information, a motive, or viewpoint is exchanged. A person provides to the one to one takes it. Workplace communication occurs mainly between co workers and sometimes with their sovereignty. If there is good communication among the workers at the workplace, it affects the mentality to work together and it has a positive outcome on the excellence of their work. As a result, therefore subsequently the progress of the institution continues automatically. Thus every company expects everyone to have good communication skills. Communication is a major provocation for administrators because they are superintending on providing information, which results in the capability of producing a good and fruitful result. The administration and the workers need to study communication and purposefully enhance its quality in the workplace as it communicates with each other in many forms. This applies that each person communication skills influence both personal and institutional effectiveness. This paper delivers the communication process, the importance of communication, and barriers to the communication at the institution and provides guidelines on how administrators can improve their communication skills and effectiveness

IOT BASED DISEASE DETECTION AND PREDICTION OF POMEGRANATE LEAF

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ABSTRACT

Agriculture is one of the important parts of human life. Precision farming is very essential in today's world. In the process of production of plant food, leaf plays an important role in the growth of plant. Diseases on leaf affects on the food of the plants and quality of the product. Geological condition is extraordinary for farming in light of the fact that it gives numerous good conditions .We have to detect the disease of leaf but it is difficult task to monitor the whole farm. Now a day the use of IOT is increased rapidly. In IOT domain we can collect data from different devices. We can overcome this problem by using the automatic leaf disease detection using IOT. By applying image processing we can easily work on different types of images. By collecting, the information from various types of sensors predicts the diseases that can be affect the leaf. In this thesis we have used four different sensors. 1. PH Sensor, 2. Temperature sensor, 3.Humidity sensor, 4.Soil Moisture Sensor.

We can collect data through Raspberry pi as well as collect plant images through camera. The main goal of the proposed work is to monitor the plant leaf, detect and classify them according to the diseases using the data mining and image processing techniques. By collecting, the information from various types of sensors predicts the diseases that can affect the leaf. We have implemented the classification and clustering algorithm to sort out good quality and bad quality plant detection. Image is first captured from farm of plant leaf and then it passes to further Image processing. Image pre-processing to be does on the acquired images. Image segmentation is used for segmentation of plant leave images and lastly features extracted for detection of diseases for the classification and classification done using the SVM classifier. Our segmentation approach and utilization of support vector machine demonstrate disease classification over 400 images with an accuracy of 90%.

I. Introduction

Agriculture is the main source of employment the large folks in the India and backbone of the national economy. As the large population nation, country needs the large amount of production of crops. Large amount of people dependent on cultivation in India. In India most of the people prefer pomegranate farming. Some people face failure due to lack of knowledge. Diseases on plants cause major production and financial damages as well as decrease in both quality and quantity of agricultural products. The farmer doesn't predict the climate and he cannot control the weather, if weather is changed .Climate automatically affects on plant, which results in decreasing the production. Geological condition is uncertain for farming now days. So there is need to tackle it. Every plant suffers from N number of diseases, if uncertain changes occur in the climate. When plant suffers from some disease then automatically it affect on the production of the food. The leaf plays an important role in the

AUTOMATIC ENERGY BILL SHOWING ON SINGLE PHASE ENERGY METER

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ABSTRACT
This paper presents the way of billing which shows that there is no need of any human being for billing purpose. It can be done automatically with the help of microcontroller program. In this paper a cost effective novel single phase digital energy meter is developed with the help of Microcontroller which is capable of calculating true value of active, reactive, apparent power, power factor and energy consumed. The designed meter is simple, portable and easily reconfigurable according to specific need. The parameters calculated are transmitted to the billing on energy meter display. In this for the we communicate to eliminating the need for the utility personnel calculate meter reading without any manual calculations. This data gets logged in and is used for generating bills and can also be used for analysis in the order to improve the power quality and understand the load and use pattern. The detailed bill generated easily and show to display of single phase energy meter.

Introduction

An electricity meter we are using for the measurement of what quantity of electric energy taken by a residence, business, or an electrically powered device. There are two types of meters- electromechanical and Electronic. The most commonly used electrical energy meter is known as electromechanical induction watt-hour meter. The operation of electromechanical induction meter is to count the number of revolutions of a non-magnetic disc which is electrically conductive. The power can be measured by this device because it is proportional to the speed of rotation. The energy can be measured by number of revolutions because both are proportional to each other. The LCD or LED display is used to show how much energy is consumed by electronic meter. Electronic meters along with billing can also use for record parameters of the load and supply for example current and maximum demand rate, voltages, power factor and reactive power used etc. In these days, the customers are unsatisfied services that are provided by the MSEB. Nowadays, an

OPEN-CIRCUIT FAULT DIAGNOSIS IN VSI BY SIMPLE DIRECT CURRENT METHOD

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ABSTRACT

Failures in the Power device of inverter can be mainly divided as open circuit faults and short circuit faults. This type of failure will not necessarily cause the system shutdown and can remain undetected for an extended period of time. This can cause to another faults in the converter or in the remaining component, resulting total system shutdown and high repairing cost. For these reason, development of online methods that can detect open-circuit fault in voltage source inverter has become important. This paper focus on method of open-circuit fault diagnosis is current spectrum analysis technique which is based on the study of harmonic analysis of load current or output current of the inverter. Zero-order harmonics /DC component present in the signal when open-circuit fault occurs. The amplitude and the argument of each harmonics are used for open-circuit fault detection and localisation.

Keywords- Voltage source inverter (VSI), Simple Direct Current Method.

I. INTRODUCTION

In general, Power device failure in the power electronic system can be broadly classified as short circuit faults and open circuit faults. The protection against short circuit has become standard feature for industrial drives; the open circuit failures have not received so much attention. Open circuit fault will not necessarily cause the system shutdown and can remain undetected for an extended period of time. This may lead secondary faults in the converter or in the remaining drive components, resulting total system shutdown and high repairing cost. This is not desirable for many applications such as military, aerospace etc. Therefore, there is increase in demand of reliability and safety of industrial system against abnormalities or component faults. To prevent the unscheduled shutdown, real-time fault tolerant operation must be implemented.

Some real-time diagnostic technique based on real time depends on complicated artificial fault analysis and some technique based on voltage or current of power electronic device. They are applicable for fault detection of switch component such as IGBT and MOSFET.

Other technique based on artificial intelligence, data driven method such as artificial neural network which diagnosis typical component fault based on measured voltage and current signal and they only applicable for

A REVIEW ON MITIGATION STRATEGIES FOR SUB-SYNCHRONOUS RESONANCE (SSR) STABILITY ANALYSIS OF MODERN POWER SYSTEM UNDER TIME DELAYS

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Abstract

With the advancement in technology of modern power electronic and development of measurement systems such as phase measurement units(PMU)and wide area measurement system (WAMS), modern power system coordinated with sub synchronous oscillation stability issues has been increased. Since there are obvious time delays during the measurements, it is important to properly evaluate the impact of time delays on the power system oscillation stability and the controller design. In this paper,reviewed impact of various controllers design for mitigation of sub synchronous oscillation stability.

How to Cite

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AUTOMATION OF DUPLEX MILLING MACHINE BY USING PLC

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Abstract

The research paper presents a concept which saves a labour cost and increases the operational efficiency. Wherein the manufacture of duplex milling machine by using PLC has designed and can be manufactured in special purpose milling machine.

Software requirement:
1. FBD Software
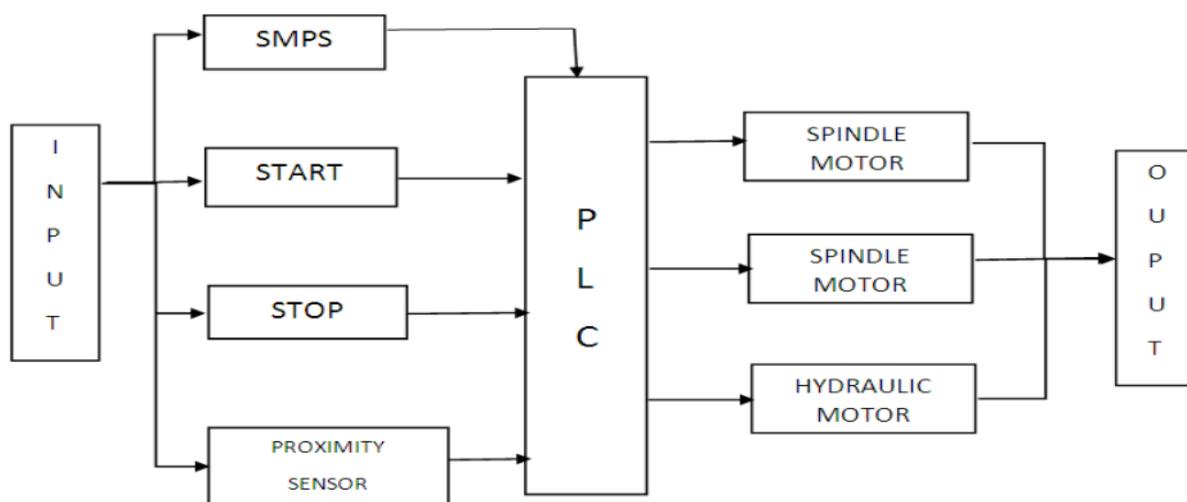2. Ladder software

FUNCTIONAL BLOCK DIAGRAM

Figure1 – Functional Block Diagram

The above block diagram shows that the input is given to the this Block diagram we have input output, SMPS, Start and Stop push buttons, proximity sensor, PLC, Two Spindle motor and Hydraulic motor. We are giving input to PLC through SMPS, start and stop switch and proximity sensor. SMPS is a switched mode power supply SMPS circuit is operated by switching and Proximity sensors detect magnetic loss due to eddy current that are generated on a conductive surface by an external magnetic field. PLC is connected to two spindle motor and hydraulic motor. Spindle is a rotating axis of the machine. Spindle motor is used to rotate the tool of the machine which iscontrolled manually in present but we are also going to control by using PLC. The hydraulic

FUZZY TYPE-1 CONTROLLER BASED PV-HYBRID SERIES ACTIVE POWER FILTER (HSAPF)

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Abstract

Now a day's power quality problem is major issue, due to the wide use of power electronics, industrial and commercial loads pose non-linear characteristics. These nonlinear loads are the major source for power quality issues and produces harmonics. In this paper to eliminate both the current and voltage harmonics, minimize power quality problems and compensates reactive power by using Fuzzy Type-1 based PV-Hybrid series active power filter is used.

How to Cite

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Section

Articles

OPEN-CIRCUIT FAULT DIAGNOSIS IN VOLTAGE SOURCE INVERTER BY PARKS VECTOR APPROACH

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Keywords:
voltage source inverter(VSI),, open-circuit fault, parks vector approach

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Abstract

In this paper, open circuit fault diagnosis is done by normalized parks vector approach. In this method of open-circuit fault diagnosis, parks vector transformation is used to transfer three phase to two phase for easy simplification. This transferred two phase value is further normalized so that become load independent. Further average value and absolute average value of normalized current are used to formulate diagnostic variable. So that normalized Parks Vector approach is robust against false alarm. It detects and localize not only single switch open-circuit fault but also multiple open-circuit fault occur in voltage source inverter.

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Section
Articles

STUDY OF FACT DEVICE UPFC

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Abstract

The complexity of the power demand has been increased with growth in power system generation and transmission which are restricted to resources and environment which lead to transmission system for heavily loading and becoming less secure to ride through outages. Large power flows with inadequate control, excessive reactive power, dynamics swings between different parts of the system and bottlenecks reduce the potential of the transmission interconnections. With the increase in demand for power, has in fact increased the complexity of the power system, greater power system security and quality of supply, with use of Flexible AC Transmission System Technology (FACTS) allows dynamic and flexible control of power system it has much potential to cater to most of the needs of present power system and enables utilities to get the most service from their transmission facilities and enhance grid reliability. An attempt is made in this paper to study UPFC, modeling with SIMULINK, voltage regulation and reactive power and total harmonic distortion aspects.

How to Cite

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Section

Articles

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Solapur, Maharashtra, India.

2ⁿᵈ Online International Conferences on

Advances in Engineering Science and Technology (ICAEST 2022)

29ᵗʰ and 30ᵗʰ April 2022

in association with

Institute of Scholars

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Bringing Ideas into Reality..............

This is to Certify that

Sampath Kumar Bodapatla

has presented the paper titled

Design and Implementation of Ems under Critical Load Condition Using Fuzzy & Adaptive Fuzzy Controller

2ⁿᵈ International Online Conferences on
"Advances in Engineering Science and Technology"
Organized by

Brahmdevdada Mane Institute of Technology
Solapur, Maharashtra, India.

Dr. Babasaheb Manik More
Convener, BMIT

Dr. M. M. Mulkutkar
Principal, BMIT

Nanjesh Bennur
Director, InSc

BUILDING INFORMATION MODELLING IN USE OF SUSTAINABLE BUILDING CONSTRUCTION PROJECT

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Abstract

The construction industry has its own quality of day today construction project work. This factor make the construction industry different from other industry because of the change and development of technology, production and other business have changed their process leaving behind construction industry. The main problem is still remained labour involving a lot of work construction industry in most of the countries including India. The mainly construction industry is still following same traditional process of generating drawing by architects or designers and building erection by the contractors. At the time of contract is set between architects, designers and contractors, the relation begins between them. The more difficulty are change in plan takes long time to correct because of lengthy process involved which adversely affects the productivity and efficiency of the construction industry.

Introduction

Since the early 2000s, the Architecture, Engineering, Construction and Operating (AECO) industry experiences a radical development growth due to the digitization [1]. In the Building Information Modelling (BIM) research field, an exponential increase can be observed in published research since 2010 [2]. By that, it is not a surprise that BIM is increasingly applied by the AECO Industry [3,4]. Even BIM implementation strongly vary on international base due to several challenges and, thus, utilization overall is still low [1], [5]. Especially during the early design process, BIM can improve the building energy performance by design optimizations.

Early design decisions have a high impact on building energy performance and the total building lifecycle compared to its initial costs [5,6]. But it is still common, due to interoperability challenges and the high level of knowledge needed, that building energy optimization is not taking part in the earliest stages of the design process. While interoperability, i.e. the ability to exchange information between two tools is one issue, the correct provision of information within the BIM tool and post-processing is another [8].

In this work, also a synopsis of literature and reports on BIM workflows are reviewed. Most of there viewed studies are scientometric based literature reviews, which are an objective method to analyze and validate the interests of research for a specific domain [9]. Based on tags and catch phrases, scientometric tools like Citespace [10] analyze publications of a certain topic. Clusters can be presented in form of consistently recurring tags, and temporal trends can be visualized on a timeline [9]. These validations represent the most relevant topics in science research. Based on the results of scientometric studies in the field of BIM [9],[2],[11],[12], it becomes remarkably clear that interoperability is nowadays a highly relevant theme in the context of digitalization of the AECO industry. Other subjects in common with interoperability are collaboration, collaborative design, and energy performance analysis [9]. Recurrent inconsistency and lack of semantic, as well as missing exchange data

WATER RESOURCES MANAGEMENT

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ABSTRACT

A comprehensive water resources management is a must for stabilizing, enticing, and revitalizing the agriculture sector. It is a permanent solution to all agriculture sector problems.

OBJECTIVES

The main objectives of water resources management is

1. To supply water for 35 crore acres of agriculture land through canals throughout the year. Toremove inter-state water disputes permanently

2. To minimise floods and consequent crop losses worth thousands of crore rupees annually

3. To ward off famines due to lack of sufficient rains and depleting groundwater level4 To arrest water pollution both on the ground and underground

5. To protect all rivers, ponds, lakes and reservoirs from industrial and urban pollution

6. To provide safe and clean drinking water to 30 crore households in India

7. To protect environment by growing thick forests with high canopy trees

8. To make all seasonal rivers as perennial rivers

9. To make short waterways

10. To make organic farming without chemical fertilizers and pesticides

11. To save 50,000 crores worth of electricity annually that is being used to power agriculture pump sets to draw water from deep bore wells. Every acre of land can be irrigated through canals with **water resources management**. Pump sets on canals and ponds will use only 30% of the power with respect to pump sets that draw water from deep bore wells.

12. To arrest soil erosion, forest degradation, forest fires, and silt accumulation in reservoirs, lakes and other water bodies.

EFFECT OF TEMPERATURE ON FRESHWATER

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ABSTRACT

This study has proposed to determine the effects of water temperature in between 28 and 34 ºC on the growth of cultivable fish Common carp, Cyprinuscarpiofor freshwater aquaculture. Four similar (50 l capacity) dimension aquariums (T1; 28 ºC, T2; 30 ºC, T3; 32 ºC and T4; 34 ºC, respectively) were taken for this 21 days experiment. They were fitted with mechanical and bio-filter, high-performance air compressor aerator, automatic heater with thermostat and alcohol thermometer. Recirculation set up was arranged in all aquariums to maintain identical parameters except the temperature alone. Standard management procedures were adopted such as pre-stocking, stocking and post stocking management. Fishes were slowly acclimatized in their appropriate aquarium temperature before the initial morphometric measurements. Feed percentage was 5% of their total body mass of ten fishes in eachaquarium. The growth parameters such as Totallength, Standard length, BodydepthandBodymassweremeasuredfromtheinitialdaytotheendoftheexperiment period at weekly intervals. Particularly, the body mass growth was governed by morphometric measurement from an initial, T1; 1.8 ± 0.16, T2;2.08±0.20,T3;2.31±0.17andT4;2.69±0.14gtotheendoftheexperiment,T1;2.92±0.79,T2;3.34±0.72,T3;3.33±0.37andT4;3.43±0.21g, respectively. The growth parameters such as Growth rate, Condition factor and Body ratio were calculated. The survival rate was 100%.Based on thegrowth rate statistical analysis (ANOVA), there is no significant (P>0.05) change on their growth rate of body mass. But their body mass growth rate was gradually increased in all aquariums. Based on the observations and results in this study, it is clearly indicated that the temperature in between 28 and 34 ºC did not affect the growth and also this is the optimum range of temperature of Common carp Cyprinuscarpio for fresh water aquaculture.

Keywords: Cultivable fish; Cyprinus carpio; Temperature; Growth rate; Optimum range; Freshwater aquaculture.

1. Introduction

Temperature is an important environmental factor. It plays major role in the growth and metabolism of fish. It affects all forms of life. Further, it influences the various stages of life activities, such as growth, metabolism, reproduction, movement, distribution, behavior, death etc. Each and every organism survives well at a particular range of temperature which is called as optimum temperature. The physiological activities are high at the optimum temperature and hence the organism survives well. The minimum effective temperature is the lowest temperature at which organism can live indefinitely in an active state. The maximum effective temperature is the highest temperature at which an organism can live indefinitely in an active state. The minimum survival temperature is the lowest temperature at which survival is possible. The maximum survival temperature is the highest temperature at which survival is possible (Arumugam, 2010).

Temperatures fluctuate widely in natural environments (Yamanaka et al., 2010). Temperature has

ANALYSIS OF MECHANICAL PROPERTIES OF BAMBOO AND FIBER REINFORCED FOAM CONCRETE

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ABSTRACT

An experimental investigation on bamboo and fiber reinforced foam concrete was carried out in this project. The foam concrete is the introduction of foam in the cement mortar. Cement, M Sand passing through 600µm, water and foaming agent (SLES) were materials for foam concrete. The mix ratio of foam concrete of density 1500 kg/m3 and 1600 kg/m3 and concrete without foam was Cement: M sand of 1:1 and water to cement ratio of 0.5 % of weight of cement. The polypropylene fibers were used in foam concrete of 0.5% of weight of cement. The cubes were cast to measure compressive strength for 7, 14 and 28 days of curing. The cylinders and prisms were cast to measure the tensile and flexural strength for 28 days of curing respectively. The results showed increase of compressive strength, tensile strength and flexural strength when the density increased. Based on the results, three bamboo and fiber reinforced foam concrete of density 1600 kg/m3 and steel and fiber reinforced concrete without foam beams of size 115 x 225 x 1200 mm were cast and cured for 28 days. The bamboo was treated with araldite epoxy resin and the bamboo reinforcement cage were wrapped with hexagonal oven mesh. The hexagonal oven mesh wrapped around bamboo reinforcement cage reduced slippage of bamboo from foam concrete.

Keywords: foam concrete, polypropylene fibers, bamboo, flexural strength.

Introduction

Foam concrete (FC) is a cellular lightweight concrete obtained by introducing foam into cementations matrix. The FC contains voids filled with air that are trapped in mix by a foaming agent. Cement, fine aggregate, and foaming agent are the materials of FC without the inclusion of coarse aggregate. Foam Concrete are high flow ability, low dead weight, excellent heat insulation, and high acoustic resistance. Foam concrete may be used for non-structural elements. Density of foam concrete in the range from $300kg/m^3$-$1850kg/m^3$[17]. FC can be used as insulation from heat and sound and for load-bearing and non-load-bearing members. The constituent materials used are cement, M sand, and foaming agent. Cement is used as binding material which binds fine aggregate and admixtures together. Fine aggregate can be river sand, M sand, fly ash, silica fume, bottom ash, etc. Protein-based and synthetic-based foaming agents has two categories of foaming agents. First one is pre-foaming method and second is the mixed foaming method is the two methods of foam concrete producing. The foaming agents

VALUE ADDITION TO HUMAN RESOURCES THROUGH SHARED EDUCATIONAL ASSETS

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ABSTRACT

India and Israel officially setup diplomatic relations in 1992. Since then they have collaborated on a host of development issues like agriculture, space research, information Technology etc. There has also been a large component of people-to-people interaction. Both nations have a large pool of technically sound man power. Yet, the strengths of their respective technical human resources are not the same. Israel has a certain niche in the technical field, India has another. The idea is to leverage the strengths of both nations and synergize them. This paper proposes institutionalizing Indo-Israeli collaboration in technical areas by opening an IIT in Israel and a Technion University campus in India. Both Indian and Israeli students will graduate together from both these Institutions. This paper discusses the various aspects of such collaboration.

INTRODUCTION

The achievements of IIT graduates are well known globally. IIT (Indian Institutes of Technology) alumni are in senior positions in industry and government across the world. In 2012, it was estimated that IIT graduates controlled budgets of over 885 Billion US Dollars[1]. IITians are thought to have added economic value of around USD 450 billion

COMPOSITE RCC/FERROCEMENT GRID SLAB

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ABSTRACT
A RCC/FERROCEMENT grid slab wherein the grid beams are made up of hollow circular cross sections of preferably mild steel and hollow slabs are repared by using foreign material like HDPE balls/pods and concrete. The said grid slab has strength, impermeability, light weight, good appearance, reversal load carrying capacity, more moment carrying capacity, more shearing capacity, ductility and can be used for large column free area. The skeletal steel can also be used for beams and slabs in the form of alternate triangular trough, trapezoidal trough, rectangular trough, corrugated trough in both the directions of the slab.
The said grid slab which provides fast construction, economical and cost effective along with impartibility and can also be used for residential buildings, public buildings, raft foundations, water tanks, retaining walls etc.

INVENTION:

Present invention provides the novel method of a composite RCC/FERROCEMENT grid slab wherein the grid beams are made up of hollow circular cross sections of preferably mild steel and hollow slabs are prepared by using foreign material like HDPE balls/pods and concrete. The said grid slab have strength, impermeability, light weight, good appearance, reversal load carrying capacity, more moment carrying capacity, more shearing capacity, ductility and can be used for large column free area. The skeletal steel can also be used for beams and slabs in the form of alternate triangular trough, trapezoidal trough, rectangular trough, corrugated trough in both the directions of the slab.

The said grid slab which provides fast construction, economical and cost effective along with impartibility and can also be used for residential buildings, public buildings, raft foundations, water tanks, retaining walls, etc.

INTELLIGENT BLOCKCHAIN (HEALTH CARE) USING AI

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ABSTRACT

Our Invention "Blockchain" is an innovation to tie down adaptable admittance to the medical services data assets (HIR) contained inside electronic wellbeing records (EHR) frameworks and furthermore overseeing access consents with confirmed self-sovereign personalities and dispersed record procedures, HIR might be gotten. The imagined innovation likewise incorporates a patients and different clients might be enlisted to get to a disseminated record, for example, a medical services blockchain, utilized to set, have and arbitrate consents to get to HIR and the approved proprietors and additionally patients with rights to their own HIR might have the option to allow fine-grained and contingent access authorizations to outsiders. The concocted innovation is a data moves and exchanges happening as indicated by these authorizations might be logged inside keen agreements fused in the medical services blockchain. The imagined strategy makes an electronic wellbeing record and breaks down that record to introduce an outline report and the report may alternatively incorporate treatment openings, methodologies, and plans for the doctor and patient. The Block chain innovation is an information handling steps used to make and dissect the record and convey the outline information might incorporate collection, reconciliation, interior approval, clinical approval, assessment, forecast, and correspondence.

FIELD

Our innovation "Blockchain Is identified with a medical care data trade utilizing blockchain-based innovation and furthermore identifies with the field of electronic wellbeing records, and in praiseworthy and to further developed strategies for keeping up with and conveying wellbeing record data.

FOUNDATION

Medical care records containing essential data assets might be created by an assortment of elements, like medical services suppliers, drug stores, patients, and others. These

medical services records, regardless of whether in electronic wellbeing record (EHR) structure, may live in an assortment of areas, and may not be effectively open to an assortment of uses, current partners, and additionally different clients of those medical services records. Simultaneously, various frameworks for putting away medical services records might use their own system for controlling and dispensing the wellbeing data assets (HIR) that are put away inside their different EHRs.

This might create turmoil among patients and different clients of the medical care information, just as trouble in getting to the medical services information itself. As a rule, patients might have practically no control of their EHRs and additionally HIRs that relate to them. Sometimes, new applications improvement that could profit from getting to and overseeing HIR information might be successfully limited inside inheritance EHR conditions.

Besides, because of potential obligation coming about because of resistance with PHI taking care of guidelines, rehearsing wellbeing frameworks (e.g., medical clinics) frequently decide to control the full lifecycle of their EHRs, from birth to annihilation of the HIR information inside them. Hence, the HIRs, or the show thereof, may not be promptly modified or in any case available to patient necessities or the requirements of the clients of the information. Even further, overseers of the medical services information, for example, care suppliers inside medical care frameworks, might be troubled with the risk of overseeing and dispensing medical services information, by and large, diverting those substances from their center capabilities, like giving medical services.

The Electronic Health Record (EHR) is a critical component in endeavors to oversee medical services conveyance. As a rule, the EHR is most important today for the most diseased individuals from our general public—the 10% of the populace that devours 80% of the expense. With various conditions requiring different subject matter experts, numerous incredible prescriptions, various subordinate consideration suppliers and cautious consideration coordination from case and sickness directors, these people are likewise prone to be the most un-capable by and by to convey the intricacy of their narratives and wellbeing status to their next treating doctor.

However, it is by and large that intricacy that perplexes the clinical local area's endeavors to decrease blunders of exclusion and commission and to limit the expense of duplicative and in any case pointless consideration. Extensively talking, there are three wellsprings of medical services data about patients: the actual patients (or their guardians); the patients' doctors, emergency clinics and different suppliers; and the patients' wellbeing plan or other payer.

Most patients have just restricted data about their own consideration and surprisingly less capacity to acquire, hold and store such information. More terrible, a patient's capacity to by and by keep up with their own wellbeing record diminishes with ailment, illness and, regularly, with age. Indeed, even the easiest to understand individual wellbeing record (PHR) frameworks accessible today are rarely utilized and surprisingly less much of the time refreshed on an ideal premise by their proprietors.

Doctors, emergency clinics and different suppliers are legally necessary and expert morals to keep up with critical records relating to the consideration they give. These

suppliers don't either by and large or exhaustively get patient information from the range of different suppliers. Accordingly, clinics may have a profound supply of data in regards to the administrations and tests gave to patients inside the office and, maybe, by the conceding doctor, yet little, assuming any, data from different offices or doctors who have treated those equivalent patients.

A solitary doctor knows and has records of all that the patient has advised him and the treatment he has given, however that supplier knows neither what the patient has been told by different doctors nor what treatment different doctors have given. Convoluting the dispersed idea of the data is that it remains predominantly paper-based and manually written, delivering it incredibly hard to incorporate, examine and additionally communicate viably. Along these lines, there is a requirement for further developed frameworks and techniques for coordinating patient information and giving it in a valuable structure to the individuals who need it.

OBJECTIVES

1. The goal of the development is to an innovation to tie down adaptable admittance to the medical services data assets (HIR) contained inside electronic wellbeing records (EHR) frameworks and furthermore overseeing access authorizations with confirmed self-sovereign personalities and appropriated record methods, HIR might be gotten.

2. The other goal of the development is to a patients and different clients might be enrolled to get to a disseminated record, for example, a medical services blockchain, utilized to set, have and mediate consents to get to HIR and the approved proprietors as well as patients with rights to their own HIR might have the option to concede fine-grained and restrictive access authorizations to outsiders.

3. The other goal of the development is to a data moves and exchanges happening as indicated by these authorizations might be logged inside keen agreements fused in the medical care blockchain and the imagined technique makes an electronic wellbeing record and investigates that record to introduce a synopsis report and the report may alternatively incorporate therapy openings, systems, and plans for the doctor and patient.

4. The other goal of the development is to a data moves and exchanges happening as indicated by these authorizations might be logged inside keen agreements fused in the medical care blockchain. The designed technique makes an electronic wellbeing record and dissects that record to introduce a synopsis report and the report may alternatively incorporate treatment openings, procedures, and plans for the doctor and patient.

SUMMARY

The advancements unveiled in this give usefulness to empowering electronic admittance to ensured wellbeing data (PHI) as per the desires of a patient and additionally other approved gatherings including, however not restricted to, the medical care supplier to whom the medical services information might have a place or is generally approved under existing guideline. The patient or supplier might assign who (e.g., people, elements, applications, and so on) may have authorization to get to their PHI or potentially other wellbeing data assets (HIRs), and may additionally put contingent specifications (e.g., time spans, redactions, areas, number of perspectives,

gadget types, obscurity, and so forth) by which a designee may get to approved PHI as well as other HIRs.

As indicated as a visual cue epitome, electronic medical care records (EHRs) may live at an asset arrangement of an element that has produced the medical care record or has gotten the medical services record, for example, a clinic's asset system(s) for overseeing EHRs. These asset frameworks might be designed to give PHI or potentially other HIRs to an approved client application as per a predefined standard. An application program interface (API) may live on a front-finish of the asset framework to give this predefined organization to granular HIRs to a mentioning and approved client's customer framework.

As indicated as a visual cue epitomes of the exposure, a client (e.g., patient) might be capable, by means of an application executing on their customer framework, set contingent authorizations for their HIR. Through a UI of the application, the client might have the option to assign restrictive authorizations for a specific HIR, or assortment of assets, for example, those commonly contained in a current EHR.

These restrictive permission(s) might be utilized to create a consent award that might be shipped off a circulated record, or medical services blockchain framework, to summon an executable savvy contract inside a medical care blockchain. On the off chance that the client is approved to make consents be composed onto the blockchain' s shrewd agreements, then, at that point the blockchain frameworks might fuse (e.g., hash with earlier squares) another square containing new and additionally changed authorizations, for example, as at least one keen agreements.

Keen agreements contained inside the medical services blockchain may work utilizing any appropriate conventions to settle or potentially empower arrangements between gatherings to execute as per those arrangements as endorsed, determined, classified, confirmed, and additionally implemented. These equivalent shrewd agreements might be both self-executing and additionally self-upholding. In model epitomes, a keen agreement is utilized to decide if admittance to a HIR ought to be conceded to a mentioning party. For this situation, the brilliant agreement might make this assurance dependent on, among different elements, the check of an affirmed self-sovereign personality (CSI) of the mentioning party, a CSI of the party possessing the data, and authorizations recently given by the claiming party.

As indicated as a visual cue epitomes of the exposure, authorizations might be communicated inside at least one shrewd contract(s) in the blockchain that assigns and additionally empowers the permissioning of others, for example, in a contingent way, to get to the HIR for which the consents in the blockchain were produced. Once fused into the medical services blockchain, the shrewd contract(s) may produce as well as send a sign to a customer arrangement of a permissioned party that he, she or it might get to the HIR for which authorizations have been conceded.

In model epitomes, just the latest authorization states, as fused in the medical care blockchain, might have the option to approve access tokens. Subsequently, a changeless record of all action may recorded in the blockchain while saving close to continuous

patient control as well as capacity to address any errors of data move to customer and different frameworks.

It is to be perceived that both the accompanying rundown and the definite depiction are commendable and logical and are planned to give further clarification of the development as asserted. Neither the outline nor the portrayal that follows is planned to characterize or restrict the extent of the innovation to the specific provisions referenced in the rundown or in the depiction. In a commendable exemplification, a strategy makes an electronic wellbeing record (EHR), and investigates that record to introduce treatment openings, techniques, and plans for the doctor and patient in a Patient Clinical Summary report likewise alluded to as a PCS report.

An electronic wellbeing record (EHR) may give clinical data about a singular patient and may remember information from different essential partners for the medical services framework: Payers (insurance agencies and different substances at monetary danger for care), suppliers (doctors, drug specialists, attendants and other clinical experts in intense, walking, nursing home, and home consideration settings), and the actual patients. Information living at payers will be alluded to as a payer-based wellbeing record (PBHR).

The PBHR might incorporate cases, care the executives, drug store, self-studies and different information. Supplier (clinics and doctor workplaces) information will be alluded to as an electronic clinical record (EMR). These records might incorporate clinical discoveries, research center outcomes, radiology pictures, or different information.
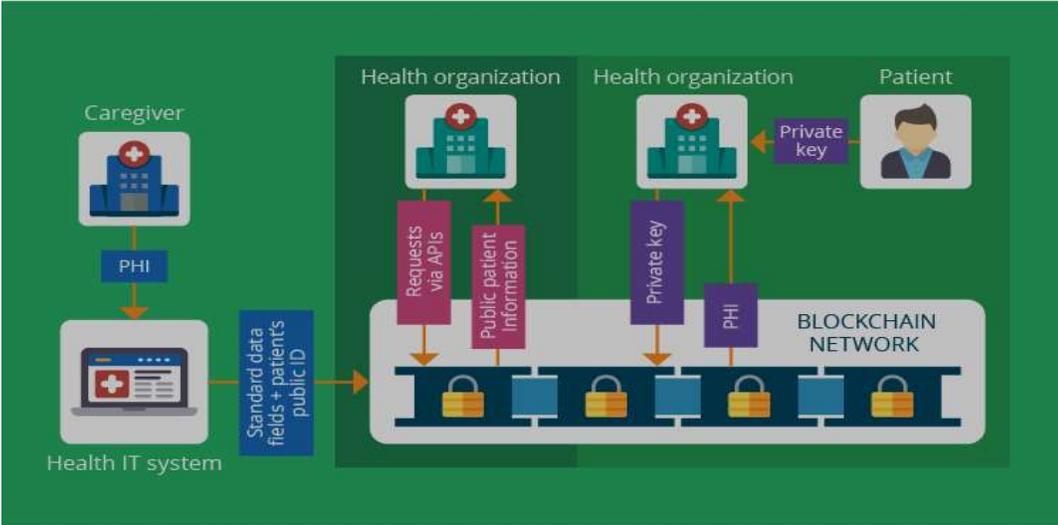
 DIAGRAM

FIG. 1 is a flow chart showing the operation of a disclosed process in an exemplary embodiment.
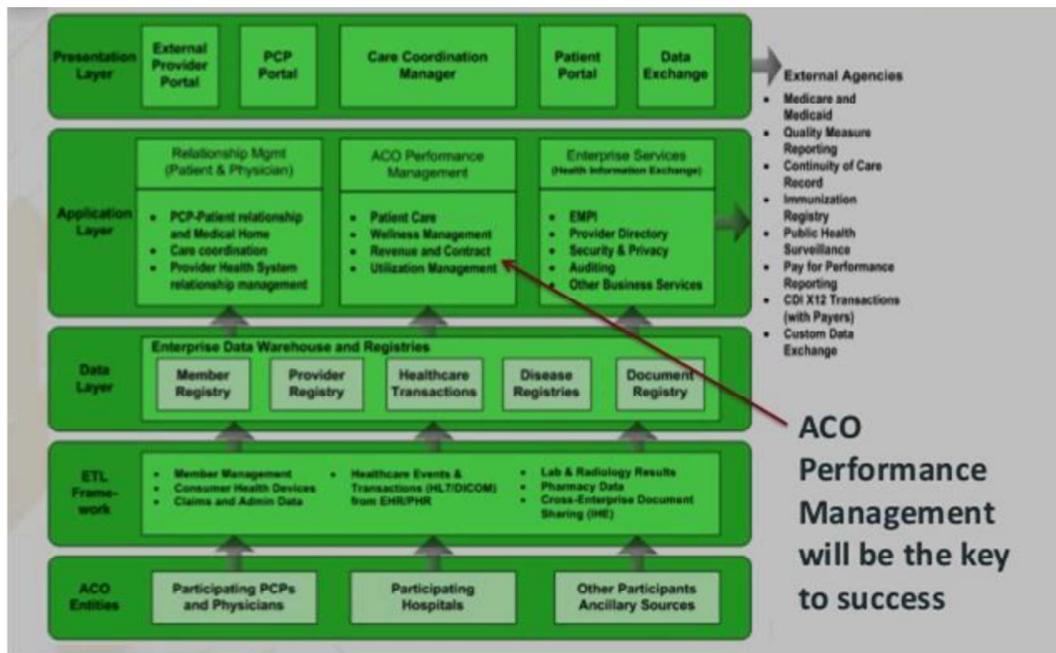
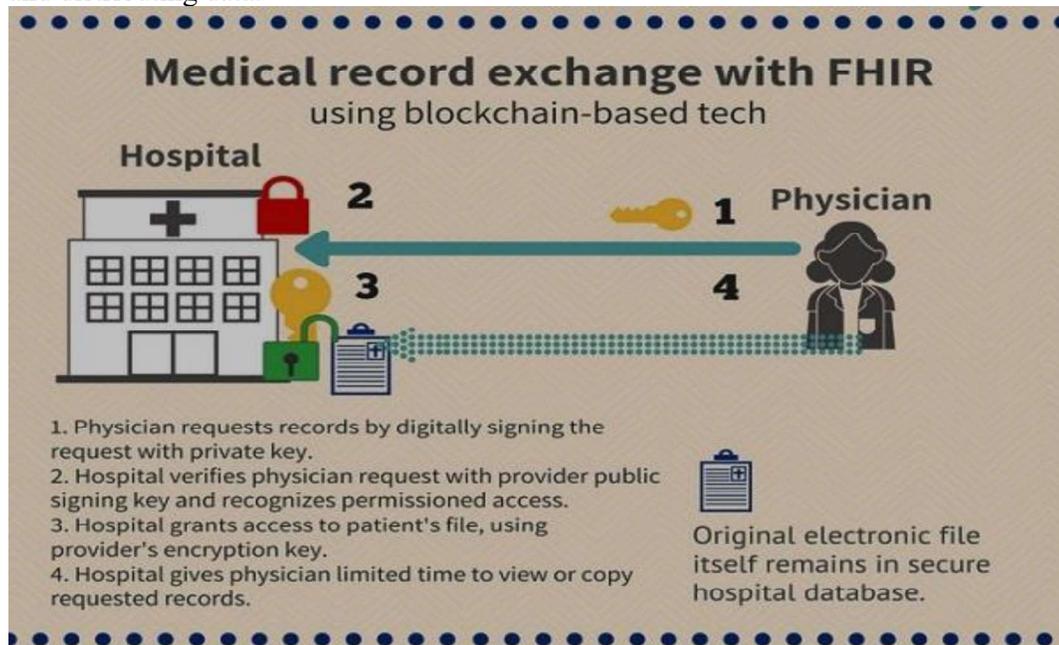FIG. 2 is a block schematic diagram showing an apparatus for collecting, processing and distributing data.

FIG. 3 is a block schematic diagram showing a further embodiment of an apparatus for collecting, processing, and distributing data.

DESCRIPTION

In an excellent encapsulation, a joining cycle inspects the total record for copy and covering information (for example indistinguishable lab results from both the lab and the specialist's office), recognizes that information, disposes of the copy information, and gathers an amended single, solidified record. In an epitome, inward approval measures are performed utilizing different procedures, which might incorporate likelihood evaluation, referential alters, calculations as well as different strategies to confirm that specific key information components in the solidified record are, indeed,

right. For instance, for some ailments, for example, a cardiovascular failure, the "preclude" and "present" codes utilized in certain records might be something very similar.

In this way, it is attractive to give an instrument to determine equivocalness. For instance, inward approval might handle drug information, lab results, doctors' appraisals, and different information components to infer that the condition is or alternately is absent. In the event that, for instance, there is one medical care guarantee that demonstrates a condition, this might be inadequate data to finish up with sureness that the condition truly exits. Assuming, in any case, this cases information are validated by a few doctor experience records or other medical care information diagnosing a similar condition, then, at that point all things considered, the condition exists.

A comparative approval measure is utilized in certain encapsulations to affirm that the patient being referred to is, without a doubt, the right understanding. At the finish of these cycles, in commendable exemplifications, a solitary, coordinated, woven, complete, and solidified clinical history exists on the right tolerant. This record is alluded to as the electronic wellbeing record or EHR. Examination of the collected, coordinated, and approved patient information in the solidified record may then be refined as wanted. In praiseworthy epitomes, this cycle thinks about the solidified patient record to prove based rules and best practices to test for holes in mind and uncover treatment openings. The review interaction might distinguish care being conveyed that isn't suitable just as suggested care. This cycle may likewise incorporate a chain of importance of prompts (cautions, alerts, and expected blunders) that upholds the doctor's dynamic interaction.

In excellent encapsulations, an expectation interaction might utilize different prescient displaying strategies (neural organizations, man-made brainpower, and so forth) to distinguish patients who are at higher danger than others for different conditions. Insightful procedures look for those patients who could require broad clinical benefits and recognize the inexact expense of those administrations.

The forecast cycle then, at that point distinguishes proper treatment systems, plans and activities for the patient. At the finish of the investigation and forecast measures, a synopsis (for instance, a Patient Clinical Summary) of the examined united patient record is made for use by approved people inside the medical services framework. In an encapsulation, the rundown is sent to approved people. Correspondence can be through the web, keen card, fax, or face to face with the presentation medium being a PC screen, PDA gadget, or paper, for instance.

RESEARCH CLAIMS

1) The created innovation is a data moves and exchanges happening as per these consents might be logged inside savvy contracts consolidated in the medical services blockchain. The imagined strategy makes an electronic wellbeing record and breaks down that record to introduce an outline report and the report may alternatively incorporate treatment openings, procedures, and plans for the doctor and patient. The Block chain innovation is an information handling steps used to make and dissect the record and convey the outline information might incorporate

conglomeration, joining, inner approval, clinical approval, assessment, expectation, and correspondence.

2) According to claim1# the development is to an innovation to tie down adaptable admittance to the medical care data assets (HIR) contained inside electronic wellbeing records (EHR) frameworks and furthermore overseeing access authorizations with ensured self-sovereign characters and dispersed record procedures, HIR might be gotten.

3) According to claim1,2# the creation is to a patients and different clients might be enrolled to get to a circulated record, for example, a medical services blockchain, utilized to set, have and mediate consents to get to HIR and the approved proprietors and additionally patients with rights to their own HIR might have the option to give fine-grained and contingent access authorizations to outsiders.

4) According to claim1,2,3# the development is to a data moves and exchanges happening as indicated by these consents might be logged inside shrewd agreements fused in the medical care blockchain and the designed strategy makes an electronic wellbeing record and dissects that record to introduce a rundown report and the report may alternatively incorporate therapy openings, systems, and plans for the doctor and patient.

5) According to claim1,2,4# the innovation is to a data moves and exchanges happening as per these consents might be logged inside shrewd agreements joined in the medical care blockchain. The concocted strategy makes an electronic wellbeing record and breaks down that record to introduce a synopsis report and the report may alternatively incorporate treatment openings, systems, and plans for the doctor and patient.

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6. file:///C:/Users/Dr.%20B.%20K.%20Sarkar/Downloads/electronics-09-00094.pdf

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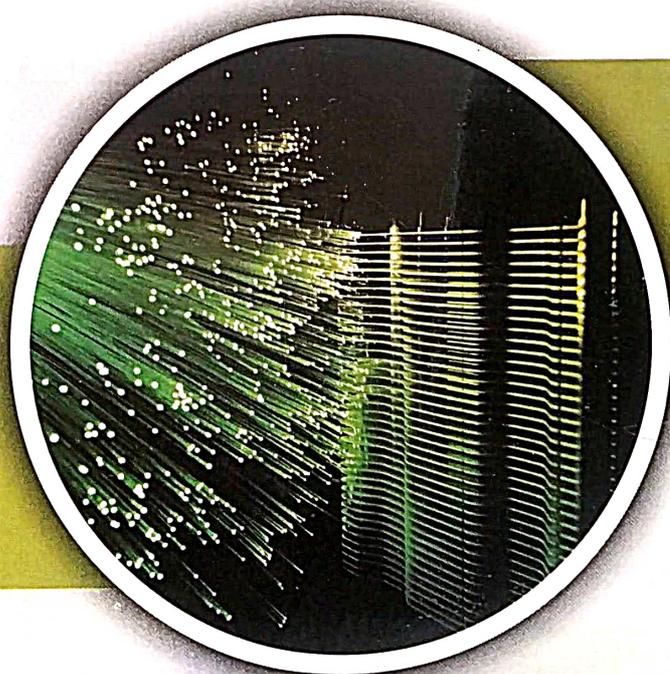
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EXPERIMENTAL AND MICRO STRUCTURAL ANALYSIS OF WELDED JOINTS

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Abstract
Welded joints are widely used in almost every industry, including automotive, commercial roofing, and many more uses. A welding joint is a feature or component where two or more pieces of metal or plastic are attached to one another. They are created by welding or better painting (metal or plastic) parts that are stable and have a specific geometry. The strengths of these joints are of great concern because, in today's world, they play a significant role in the development of systems and device parts. The strength of these joints and welding determines the service life of these structures, protecting them from loss whether it be a human loss, financial loss, or other kind of loss. In this study, we have examined the microscopic and macroscopic behaviour of a few particular and often used corporate joints under a variety of desired forms of loads. In this project, we took 3 welding joints and welded them using 3 different techniques. Then, using a metallurgical microscope, we obtained the microscopic geometry of the joint, tested it on a UTM machine, and used the results to draw power from it. The strengths were then put on a graph to show the best welding technique for a given joint.
Keywords: Material welding, Weld joint, Microstructure Analysis, FEA Analysis.

Introduction
When two or more elements are fused together, either with or without the use of stress and filler material, a permanent bond is created. This process is known as welding. The materials that need to be bonded may be quite similar or extremely dissimilar. Burning gasoline or creating an electric arc are two methods for producing the heat needed for the material to fuse. Due to faster welding, the latter approach is employed more frequently. In fabrication, welding is frequently used as a substitute for casting, forging, as well as for bolted and riveted joints. It can also be used as a medium for repairs, such as to patch a split in steel, gather a little piece that has broken off, such a tool's enamel, or fix a worn floor that has a bearing ground. The most popular method for permanently joining together device components and systems is welding. A production procedure called welding unites materials (metals or thermoplastics).
Arc welding is the name for the process of joining two metals together while using an electric arc. The power source utilized in arc welding the electricity (electric current). the electrical

EXPERIMENTAL/CALIBRATION PROCEDURE OF PLASTIC SHEET TESTING MACHINE

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ABSTRACT
In this work our main objective is to check the quality of plastic sheet paper of different companies and suggest best of one, so that farmers in India should know the quality and get awareness about the plastic sheet paper. This test method may be used to test all plastics within the thickness range described and the capacity of the machine employed. At this checking of tensile strength all size of sheet paper was performed. This tensile test measure the force required to break a specimen and extent to which the specimen stretches or elongate that braking point.

Keywords: Calibration, Machine, Plastic paper, sheet

1. Experimentation
a) First of all calibrate the load cell by using standard weights.

b) Measure the initial dimensions offset specimen. Eg .length, width, thickness.

c) Fix the test specimen between two clamping units.

d) Set the load indicator at zero position by employing a fine & coarse adjustment knob.

e) Mark the initial position of the movable clamping member.

f) Apply the tensile load gradually by employing a lifting mechanism.

g) Record the elongation of test specimen & period of your time elongation is in mm & load is in kg.

Development of Hybrid Electric Bicycle using Stirling Engine

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ABSTRACT

In India, these days, the solicitation for electric bicycles continues expanding step by step. Be that as it may, as indicated by the office foundation and in contemplations of India's best electric bikes, it is nearly difficult to utilize such electric bicycles for long excursions till today. Likewise, such bicycles set aside an excess of effort to get completely energized. To limit these downsides, we will see an idea of the crossover bike utilizing the Stirling Engine in this paper. The fundamental explanation for choosing the Stirling motor is, it is eco-accommodating and doesn't need a particular warmth source as a fuel. In straight words, this idea has a place in the law of energy preservation. This paper includes the concept, functions, and testing of the developed model along with an explanation of various tests performed to calibrate the performance.

Keywords: Electric bikes, Sustainable development, battery charging using Alternator, Stirling engine.

1 Introduction

Electric vehicles are now the future of automobiles. There are numerous automotive manufacturers in India. But very few manufacturers are focusing on the production of electric vehicles, especially bicycles. Whereas, In India, the implementation of electric vehicles has almost done throughout the country. But there are numerous limitations in the context of electric vehicles and infrastructure are available. India is facing many issues for the implementation of total electric infrastructure throughout the country. The hybrid vehicle is a solution till India establishes overall electric infrastructure throughout the country. There are different types of Hybrid Vehicles. Generally, a vehicle that uses two or more different fuels to work successfully is called a hybrid vehicle. Hybrid Vehicles are introduced more than two-decade ago in India. Still, there are limited options available in hybrid vehicles. India's automobile sector is one of the largest sectors in Asian countries. Still, the lack of electric infrastructure is a hurdle for any developing country [1]. The author also focuses on the design and development of a Stirling-based electric hybrid bicycle. In actual practice, no such vehicle exists worldwide. Developing such a vehicle alone was a difficult task for the author. The basic idea of this project has emerged by analyzing the facts and figures of electric bikes available in India today. There are many hurdles and limitations for an electric bike in India. Also, it found, electric bikes in India are not to be suitable for long journeys. Some of the best electric bikes in India have a charge range of 120 km per charge, while the batteries take 7-8 hours to charge fully [2].

With the fast expansion in the Indian Automobile market, Electric Vehicles (EVs) are transforming into a promising channel towards further developing air quality, energy security, and monetary freedom. The public authority of India perceives the earnestness to take a gander at economic portability answers for diminishing reliance on imported fuel sources, decreased ozone depleting substance emissions, and alleviate antagonistic effects of transportation with the addition of an unnatural weather change. Taking prudent steps to lessen the disastrous environmental change that undermines the types of this planet can diminish the carbon dioxide emission. Significant undertakings had taken for insignificant utilization of petroleum derivatives for power age, transport drive, loss in energy utilization, and security of carbon sequestration.

DESIGN, ANALYSIS AND WEIGHT OPTIMIZATION OF LIFT PANEL BY USING COMPOSITE STRUCTURE

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Abstract

The need for bigger, briskly and lighter moving vehicles, similar as vessels, trains, exchanges and motorcars has increased the significance of effective structural arrangements. The two approaches live to develop effective structures either operation of new accoutrements or and minimal weight can be attained. The sandwich structures have implicit to offer a wide range of seductive design results. To attained weight reduction, these results can frequently bring space savings, fire resistance, noise control and bettered heating and cooling performance. Ray- welded metallic sandwich panels offer a number of outstanding parcels allowing the developer to develop light and effective structural configurations for a large variety of operations. These panels have been under active examinations during the last 15 times in the world. The structural models in CATIA can be efficiently imported into ANSYS. Structural analysis is done, outside stress and total deviation is observed.

Keyword: Deformation, Stress, ANSYS, FEA Analysis.

Introduction

This construction has frequently used in feather light operations similar as Lift, EOT crane ray, vehicle body, aircrafts, marine operations, wind turbine blades. In principle two approaches live to develop effective structures either operation of new structural design. A proven and well- established result is the use of sandwich structures. In this way high strength to weight rate and minimal weight can be attained. The sandwich structures have implicit to offer a wide range of seductive design results. In addition to the attained weight reduction, these results can frequently bring space savings, noise control. Use of Ray- welded metallic sandwich panels offers a number of outstanding parcels allowing the developer to develop light and effective structural configurations for a large variety of operations. These panels have been under active examinations during the last 15 times in the world. Outokumpu has been sharing in several cooperative systems in this area. In Finland the exploration related to all steel sandwich panels was initiated in 1988 in the Ship Laboratory of Helsinki University of Technology. Since also in a considerable number of exploration systems in Finland, similar as Shipyard 2000, Weld 2000 and the Kenno – Light Structures Technology Program,

PERFORMANCE ANALYSIS OF PARABOLIC SOLAR DISH COLLECTOR FOR STAINLESS STEEL AS REFLECTING MATERIALS

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ABSTRACT
In this research work the performance analysis of parabolic solar dish collector is done with the use of stainless steel as reflecting materials. The Parabolic Dish Solar Collector system is made for hot water production. Water is recirculating from the storage tank to the absorber tank with the help of a pump. This analysis is carried out to study variation in temperature of water in the storage tank to a maximum value. An analysis is mainly based on the reflector material. The values of useful heat gain, instantaneous efficiency, hourly thermal efficiency and overall thermal efficiency, are calculated and their variation with solar intensity and time are plotted graphically. Solar intensity is measured by solar power meter.

INTRODUCTION
          A solar thermal collector functions by gathering solar energy in the form of heat. It is a crucial part of solar heating systems. In comparison to flat plate collectors, parabolic solar dish collectors can capture more energy per unit surface area.

PERFORMANCE ANALYSIS OF PARABOLIC SOLAR DISH COLLECTOR FOR STAINLESS STEEL AS REFLECTING MATERIALS

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AN EXPERIMENTAL APPROACH FOR DYNAMIC ANALYSIS OF STEEL, COMPOSITE LEAF SPRING

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ABSTRACT

Leaf spring is widely used suspension components, especially in commercial vehicles. Most of the vehicles in the Indian market are overdesigned. This is for the type of usage and road conditions or simply to increase factor of safety and prolong product life.

The present paper is the vibration response using the default metal (Steel) leaf springs and then by replacing it with glass fiber springs. A variety of excitation frequencies were used to assess the change in the vibrationresponse. Researches have been made to present experimentation of composite mono leaf spring & steel leaf spring for vibration and compare its results. Experimentation is carried out using FFT (Fast Fourier Transform) analyzer dynamic analysis.

From the study, it is seen there is also significant increase in zeta value of composite spring as compared to steel spring. With increased vibration damping rations offer superior ride comfort.

Keywords - Glass Fiber Reinforced Plastic (GFRP); Static load condition; Ride comfort; Static analysis; Dynamic analysis; Suspension system; Natural frequency.

INTRODUCTION TO DAMPING RATIO, (ZETA):-

Damping ratio expresses that response as a ratio between the actual damping of the automobile system and the critical damping coefficient (C_C).

It is expressed as follows:

$$\zeta = \frac{C}{C_C}$$

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Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere
Accredited with B++ Grade by NAAC

Publications

National Conference on

"Relevance of Engineering and Science for Environment and Society"

R{ES}^{2}, 2021

Certificate of Participation

This is to certify that, **Prof. S. A. Pawar** of **FTC, COER, Sangola** has participated in National Conference on **R{ES}^{2}, 2021** organized by **Karmayogi Engineering College, Shelve, Pandharpur** on Sunday, 25th July 2021 and presented a research paper titled **"Development of Hybrid Electric Bicycle using Stirling Engine"**

Ms. P. B. Jadhav
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Ms. J. K. Hipparkar
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AIJR
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