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3.3.2 Number of books and chapters/papers published in national/ international conference proceedings per teacher in the year 2018-19

. No	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	National / International	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Dr SK MUZEER	HR Services Rendered from Within the Organization – A Study of Work Life Balance	HR Services Rendered from Within the Organization – A Study of Work Life Balance	HR Services Rendered from Within the Organization – A Study of Work Life Balance	International	978-93-88808-05-7	ESWAR COLLEGE OF ENGINEERING	PARAMOUNT Publishing House
2	Dr SK MUZEER	Impact of Work-Life Balance Issues on Performance of Pharmaceutical Sales Managers - A Study on Selected Areas in AP	Impact of Work-Life Balance Issues on Performance of Pharmaceutical Sales Managers - A Study on Selected Areas in AP	Impact of Work-Life Balance Issues on Performance of Pharmaceutical Sales Managers - A Study on Selected Areas in AP	International	978 93 83038 73 7	ESWAR COLLEGE OF ENGINEERING	SIRI PUBLISHERS AND DISTRIBUTORS PVT. LTD
3	Dr SK MUZEER	Role of the Training and Development and Communication on Quality of Worklife	Role of the Training and Development and Communication on Quality of Worklife	Role of the Training and Development and Communication on Quality of Worklife	International	978-93-87433-48-9	ESWAR COLLEGE OF ENGINEERING	Paramount Publishing House
4	SHAFI SHASHAVAR MIRZA	ADAPTIVE FILTERING PRINCIPLES,CONCEPTS AND APPLICATIONS	FILTERING THORACIC ELECTRICAL BIO-IMPEDANCE ADAPTIVE ALGORITHMS	FILTERING THORACIC ELECTRICAL BIO-IMPEDANCE ADAPTIVE ALGORITHMS	international	978-1-53614-783-4	ESWAR COLLEGE OF ENGINEERING	NOVA SCIENCE PUBLISHERS
5	P Bhramrambavathi	international journal of research in Advaent technology	Power Quality improvement By using Hybrid seven level H-Bridge Inverter Based Power flow coatroller In Distribution system	ICTEC-2019	international	2321-9637	ESWAR COLLEGE OF ENGINEERING	SPECTRUM PUBLICATIONS

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6	N Balakrishna	international journal of research in Advaent technology	Design and implementation of smart home automation system through IOT	ICTEC-2019	international	2321-9637	ESWAR COLLEGE OF ENGINEERING	SPECTRUM PUBLICATIONS
7	VUYYURU MADHAVI	.NET FRAMEWORK ESSENTIALS, 2ND EDITION			International	978-93-6285-853-5	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
8	K.ANIL KUMAR	.NET FRAMEWORK ESSENTIALS, 2ND EDITION			International	978-93-6285-853-5	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
9	G.PARVATHI	.NET FRAMEWORK ESSENTIALS, 2ND EDITION			International	978-93-6285-853-5	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
10	K.Jhansi Rani	Automation in Manufacturing			International	978-93-6285-649-4	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
11	K.Musalaiah	Automation in Manufacturing			International	978-93-6285-649-4	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
12	Sk.Reshma Begum	Automation in Manufacturing			International	978-93-6285-649-4	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
13	J Vishnumurthy	INTRODUCTION TO VLSI AND MOS TRANSISTOR THEORY			International	978-93-6285-260-1	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY

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14	Shaik Mona	INTRODUCTION TO VLSI AND MOS TRANSISTOR THEORY			International	978-93-6285-260-1	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
15	D Rekha	INTRODUCTION TO VLSI AND MOS TRANSISTOR THEORY			International	978-93-6285-260-1	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
16	P.L.SUNITHA	Society and institutions in ENGLISH VOCABULARY			International	978-93-6285-478-0	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
17	P.SRILAKSHMI	Society and institutions in ENGLISH VOCABULARY			International	978-93-6285-478-0	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY

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Role of Training & Development and Communication on Quality of Work Life

(With reference to selected IT companies of Hyderabad city)

Dr.V.POTHU RAJU

, *Professor,Dept, of MBA, Eswar College of Engineering, Narasaraopet, Guntur, Andhra Pradesh,

SHAIK MUZEER,

**PhD Research Scholar, Dept, of MBA, Eswar College of Engineering, Narasaraopet, Guntur, Andhra Pradesh,

D. SATISH BABU

*** Assistant Professor,Dept, of MBA, Eswar College of Engineering, Narasaraopet, Guntur, Andhra Pradesh,

S SALEEM BASHA

****Assistant Professor,Dept, of MBA, Eswar College of Engineering, Narasaraopet, Guntur , Andhra Pradesh,

ABSTRACT

As a result of dynamic changes in work environment, the employees in Information technology companies are seriously affected in quality of work life, it was seen as the latest insurgency in Information Technology sectors that was taking place in the relationship between employees and work. The aim of this paper is to determine the factors affecting quality of work life of the employees in the Information Technology companies and to study the relationship between the Job satisfaction and performance level with the quality of work life. In the present study the researcher has chosen the Information Technology companies in and around of Telangana State, based on the interview with the employees in the organization, a pilot study conducted. The factor contribute to quality of work life includes Work relate pressure, Leadership behavior description, Work life balance, Management Policies, Opportunity to develop and growth, Job security, Adequate and fair compensation, Inter- personal relation and Work culture. The information collected from the survey will be used to develop the quality of work life of the employees in the Information technology companies.

Key Words:*Quality of Work Life- Information Technology (IT) - Job Satisfaction- Factors affecting- Adequate and fair Compensation*

1. INTRODUCTION

There are various factors affecting quality of work life includes Work relate pressure, Leadership behavior description, Work life balance, Management Policies, Opportunity to develop and growth, Job security, Adequate and fair compensation, Inter- personal relation

IMPACT OF WORK-LIFE BALANCE ISSUES ON PERFORMANCE OF PHARMACEUTICAL SALES MANAGERS - A STUDY ON SELECTED AREAS IN AP

Shaik Muzeer[1], Dr. B.Radha[2]

[1]*PhD Research Scholar, Dept, of MBA, Eswar College of Engineering, Narasaraopet, Guntur (District),PIN Code -522601, Andhra Pradesh, E- Mail ID: shaikmuzeer786@gmail.com,*

[2]*Head, Dept, of Commerce, PG studies, VRS & YRN College, Chirala, Prakasam (District), PIN Code-523155, Andhra Pradesh, E- Mail ID: radhab1959@gmail.com,*

ABSTRACT

In terms of Indian context, the concern over work-life balance is gradually becoming a common talk. When employees go back to their homes, they should not carry any organizational stress with them. An individual has two roles to play- personal and professional; each role having different set of demands. When such role demands overlap, multiple problems are faced leading to losses for all concerned: the individual, the family, the organization and the society. In sales job, the performance pressure is considerably high leading to stress and other problems. This exploratory research is an attempt to study the work-life balance issues with reference to area sales managers working in pharmaceutical sector. The results derived from data analysis reveal significant results with respect to work-life equilibrium. The study has wide implications for industry in particular.

Key Words: work-life balance- performance- pharmaceutical- sales job- stress- equilibrium

INTRODUCTION

Sales have been considered as one of the most rewarding and challenging fields of employment in India. This field has its own charm and identity, which is different from other fields of specializations. Due to attractive remuneration package, extensive traveling involved and target-driven performance incentives, many ambitious candidates enter into sales and get success. This field is most suitable for aggressive, extrovert, result-oriented persons, who like extensive traveling and meeting people. This field of employment has been usually dominated by male aspirants. However, due to opening of markets and attraction for sound remuneration, many female incumbents have started entering into sales.

Among all the industry sectors, pharmaceutical sector is known for its unique marketing approach. Barring on-the-counter drugs, pharma companies cannot directly float their advertisements on various channels. They have to depend solely on direct sales. The uniqueness of the pharma sector lies in the fact that the companies do not target the customer or consumer, rather they target the reference person i.e. the medical practitioner. A sales person in Pharma Company has to meet the doctors, explain about the medicines and request for prescriptions. Similarly, he/she has to contact the medicine retailers (medical stores) for ensuring regular supply of company's products. In this manner, the job of sales person in pharma

HR Services Rendered From within the Organization - A Study of Work-Life Balance

SK Muzeer[1], Dr. B. Radha[2]

[1]Ph.D Research Scholar, Dept, of MBA, Eswar College of Engineering, Narasaraopet, Guntur (District), Andhra Pradesh, E- Mail ID: shaikmuzeer786@gmail.com

[2]Associate Professor, Head, Dept. of Commerce, PG studies, VRS & YRN College, Chirala, Prakasam (District), Andhra Pradesh.

Abstract

Sustainability of the organizations largely depends on the employee productivity. Utilization of the employee resources for achievement of better results are based on the commitment of the employees towards organizational goals and personal fulfilling life goals. Rational satisfaction over work and family life are the great challenges to the employees. In the era of globalization, the work life balance has direct impact on the quality of life as well as the quality of the organizational work flow. In view of these emerging issues, the present paper contributes valuable field based observations on employees with reference to the preferences, constraints and cope-up strategies for the work life balance.

Key words: *cope-up strategies, leave v/s leaving, preferences, motivation, stress*

INTRODUCTION

The concept of work-life balance has received huge concern in the present stressful competitive market. The emerging problems including pressure for substantial intensification of work, due to imbalance in personal economical growth, organizational redesigns, modification in the work pattern and changing work culture and increase in the business competition has led to work imbalance. Most of the present day organizations have equipped themselves with three reactive approaches with regard to employees' argument on work-life balance. These include the organizations reacting through emotional situations which include ignoring the employees' problems of their ostrich approach), focusing on the problems when the problem get seviour(just in time approach) and getting well ahead by working on the root causes of the problem before it gets worst. The modern day situations are demanding the complex decision making strategies of the organisations and the employees to tackle with the sensitive emerging problem in the form of work life balance.

CONCEPTUAL FRAME WORK OF WORK LIFE BALANCE

Work is simply an effort which is directed to achieve a specific objective. For organizational context, work is an assignment which requires an effort to get completion. The word 'life' means accumulation of experiences, the opportunity to experiment and learn. Balance in the context

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ELECTRONICS AND TELECOMMUNICATIONS RESEARCH

ADAPTIVE FILTERING

PRINCIPLES, CONCEPTS AND APPLICATIONS

This book titled *Adaptive Filtering: Principles, Concepts and Applications* covers principles, concepts and applications of adaptive filtering. The development of adaptive filtering started in 1976 and widely developed over different application areas. It is certainly not our ambition to cover everything of adaptive filtering principles and applications. Rather, this edited book features the latest methodological, technical and practical progress on promoting the successful use of adaptive filtering principles and applications, which are more useful in the current day scenario. The book contains ten chapters contributed by the experts in the area of adaptive filtering throughout the world. The various applications addressed are MIMO receivers, adaptive exon prediction for DNA analysis, beam steering for smart antennas for mobile applications, telecardiology systems, physiological signal analysis, brain computer interface applications, speech signal conditioning, filtering thoracic electrical bio-impedance, and inter symbol interference cancellation in wireless communication systems. The intended audience of this book will mainly consist of researchers, research students and practitioners in adaptive filtering and applications. The book is also of interest to researchers and industrial practitioners in areas such as algorithm developers, biomedical engineering, biomedical instrumentation, VLSI circuits design, and embedded systems. This edited book will present research outcomes on theoretical and technical issues related to real time applications.

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Chapter 9

FILTERING THORACIC ELECTRICAL BIO-IMPEDANCE USING ADAPTIVE ALGORITHMS

Shafi Shahsavar Mirza[1,*] ***and Khaled M. Almustafa***[2]
[1]Department of Electronics and Communication Engineering,
Eswar College of Engineering, Narasaraopeta, Andhra Pradesh, India
[2]Department of Electronics and Communication Engineering,
The University of Western Ontario, London, Canada

ABSTRACT

Analysis of Thoracic Electrical Bio-Impedance (TEB) facilitates the heart stroke volume in sudden cardiac arrest. In a clinical environment, TEB signal encounters with various physiological and non-physiological artifacts. As these artifacts are non-stationary we propose adaptive filtering techniques to enhance TEB signals. In order to accelerate the filtering capability, we use variable step size techniques rather than fixed step size. This leads to data variable LMS (DVLMS), error variable LMS (EVLMS), time variable LMS (TVLMS) and step-variable LMS

* Corresponding Author Email: shafimirza2@gmail.com.

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Power Quality Improvement By Using Hybrid Seven Level H-Bridge Inverter Based Power Flow Controller In Distribution System

[1]Hothri Ravikindi, [2]Sk.Johny Begam, [3]P.Bhramrambavathi
[2][3]Asst Professor
Department of EEE Tirumala Engineering College JNTUK, Narasaraopet
Department of EEE,Eswar college of engg &Tech JNTUK, Narasaraopet
hothri.ravikindi@gmail.com, jani.eee215@gmail.com, bramara206eee@gmail.com

Abstract: As indicated by advancement of electricity demand and upgraded the numerous quantities of non-linear loads in power grids requiring an adroit electrical power. In this article, enhancement of power quality in distribution systems utilizing hybrid seven level H-bridge inverter (HSLHBI) structure based distributed power flow controller (DPFC) is developed. A DPFC is one of the contemporary FACTS device and its structure is like the unified power flow controller (UPFC). Regardless of UPFC, in DPFC the normal DC-interface capacitor between the shunt and series converters is disposed of and the three-stage serial converter is isolated to many single-phase series distributed converters through transmission line. This at last empowers the DPFC to completely control all power system parameters. DPFC builds the dependability of the device and lessens its expense all the while. The HSLHBI is goes about as voltage source converter (VSC). The MLIs are utilized for high power and high voltage applications. The HSLHBI output voltage delivers a staircase output waveform. this waveform resemble a sinusoidal waveform prompts decrease in Harmonies. The fuzzy logic controller (FLC), proportional integral (PI) controller and multi-carrier sinusoidal PWM method are intended for DPFC to controlling its parameters. The execution of the designed DPFC for distribution system is verified by translating the MATLAB Simulink model. The outcomes are exhibited to demonstrate the execution of the structured DPFC in distribution system with FLC.

Index Terms - FACTS, Power Quality, Multi Level Inverters, Intelligent Controller, Distributed Power Flow Controller.

1. INTRODUCTION

An electrical fault in a power system network is practically difficult to keep away from and it causes the electrical power quality issue has been the fundamental concern of the power organizations [1]. main causes of power quality disturbances might be because of insulation failure, tree falling, fledgling's contact, lightning or a fault on a contiguous feeder [2]. The power quality unsettling influences might be as voltage sag, swells, voltage imbalances, transients, interruptions and harmonies, which can influence the execution of electrical apparatus to the industry [3-4].

These custom power devices are classified as the Distribution Static Compensator (DSTATCOM), Dynamic Voltage Restorer (DVR) and Distributed Power flow controller (DPFC). A DVR is utilized in medium-to-low voltage levels to improve client power quality [12]. The DSTATCOM is a shunt connected device, which deals with the power quality issues in the currents [15]. It comprises of a DC capacitor, three-stage inverter (IGBT, thyristor) module, AC filter, coupling transformer and a control system [16-17]. Inverter circuit is the core of DSTATCOM and different inverter topologies can be used in uses of DSTATCOM, for example, cascaded H-bridge, neutral point braced and flying capacitor [18]. Specifically, among these topologies, cascaded H-bridge inverters are as a rule generally utilized as a result of their moderately and simplicity [19]. Different modulation methods can be connected to cascaded H-bridge inverters. Cascaded H-bridge inverters can also the quantity of yield voltage levels effectively by expanding the quantity of H-bridges. Fuzzy logic controller (FLC) for speed controller of induction motor drive through A.C chopper has been accounted for [20]. From the article, the execution of the motor parameter with FLC has well. Sliding mode controller (SMC), proportional integral(PI) controller, and SMC in addition to FLC for Luo-Converters has been introduced [21-23]. Among these controllers, SMC in addition to PI controller has performed well for converters.

From the above pointed out issues are tackled by structured hybrid seven level H-bridge inverter (HSLHBI) based DPFC in distribution system with FLC. Accordingly, in this article is to propose a HSLHBI based DPFC in distribution system with FLC. The execution of the planned is approved at various working conditions utilizing MATLAB/Simulink programming platform

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Design And Implementation Of Smart Home Automation System Through Iot

Sk.Jakeer[1], K.Gopi Krishna[2], N.Balakrishna[3]
[1,2,3] *Asst.Professor*
Tirumala Engineering College, Narasaropet,
Eswar college Narasaropet,
jak.siddu@gmail.com, gopi52@gmail.com, balakrishnaece5@gmail.com

Abstract: In this era of digitization and automation the life of the human being is getting simpler as almost everything is automatic,replacing the old manual systems. Nowadays humans have made internet as an integral part of their everyday life without which they are helpless.Internet of things (IOT) provides a platform that allows devices to connect,sensed and controlled remotely across a network infrastructure.In this project we focus on home automation using smart phone and computer.The IOT devices controls and monitors the electronic,electrical and mechanical systems used in various types of buildings.

The devices are connected to the cloud server are controlled by a single admin which facilitate a number of users to which a number of sensor and control nodes are connected.The admin can access and control only the nodes to which the user itself is connected.This whole system using iot will allow mobile devices to remotely control all the functions and features of home appliances from anywhere around the world using the internet connection.The system designed is economical and can be expanded as it allows connection and controlling of a number of different devices

Keywords: Iot, Nodemcu Esp8266 ,Blynk,Internet

1. INTRODUCTION:

With nationals getting to be netizens, IoT has turned into a real main thrust in embellishment living basic and innovatively prevalent. In the ongoing years, there has been a developing enthusiasm among shoppers in the keen home idea [1]. IoT represents the shortened form of Internet of Things alluding to the particularly recognizable items and their virtual portrayal in a the internet. IoT is a perfect data handling and gradual addition strategy including RFID, sensor hardware, shrewd innovation, nano-innovation and other mechanical progressions. IoT is definitely not a solitary respectable innovation rather, goes around extensive corresponding specialized advancement give capacities which appropriated together guide to overcome any issues between the virtual and physical world [2]. a few home computerization framework plans has brought about Smart Homes [1]. The turn component in acknowledgment of Smart Home framework is the Home entryway in charge of exchanging diverse conventions and interfacing inward system to web [3]. With the continuous research, different keen home framework plans have been proposed where controlling activities have been executed by means of Bluetooth [4], GSM-based [5], Android Application [6], Internet [7-8], SMS [9] while a few specialists Are centering over usage by means of Speech Acknowledgment [10] and Microcontroller based Voice Acknowledgment [11]. Numerous systems managing decrease of the blackout of remote impedance on a Smart Home control network[12], minimization of vitality utilization of Smart Home [13], mapping gadgets with RFID labels [14, enhancing information trade productivity utilizing JSON information group [15] and advancing the quantity of sensors utilized for gathering information from the physical gadgets which is utilized in checking and control of a Smart Home. A key component in IoT, an amalgamation of calculation, correspondence, insightful calculation , web-administrations and cloud computing, consequently bringing about headways in remote home administration. In the light of above advancements, this paper presents an Controlling of Home appliances through IOT.

2. SOFTWARE IMPLEMENTATION

Introduction Of Blynk

Blynk is a Platform with iOS and Android apps to control Arduino, Raspberry Pi and the likes over the Internet. It's a digital dashboard where you can build a graphic interface for your project by simply dragging and dropping widgets. It's really simple to set everything up and you'll start tinkering in less than 5 mins. Blynk is not tied to some specific board or shield. Instead, it's supporting hardware of your choice. Whether your Arduino or Raspberry Pi is linked to the Internet over Wi-Fi, Ethernet or this new ESP8266 chip, Blynk will get you online and ready for the Internet of Your Things.

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1	**Dr.G.NAGA MALLESWARA RAO**	**AIP conference Procedings**	VIBRATIONAL AND FINITE ELIMENT ANALYSIS OF T-SECTION CANTILEVER BEAM USING ANSYS AND MATLAB	AIP CONFERENCE PROCEEDINGS	**INTERNATIONAL**	978-0-7354-1951-3	ESWAR COLLEGE OF ENGINEERING	AIP PUBLISHING
2	**Dr.G.NAGA MALLESWARA RAO**	Materials Today: Proceedings	Optimization of process parameters by using Taguchi Techniques in abrasive air jet machining of Al2O3 ceramic material	MATERIALS TODAY: PROCEEDING	**INTERNATIONAL**	2214-7853	ESWAR COLLEGE OF ENGINEERING	ELSEVIER
3	R.RAMBABU	INTRODUCTION TO ENGINEERING THERMODYNAMICS			**International**	978-93-6285-082-9	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
4	Dr.G.NAGAMALLESWARARAO	INTRODUCTION TO ENGINEERING THERMODYNAMICS			**International**	978-93-6285-082-9	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
5	D Rekha	Number System and Boolean Algebra And Switching Functions			**International**	978-93-6285-377-6	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY

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6	J Vishnumurthy	Number System and Boolean Algebra And Switching Functions			International	978-93-6285-377-6	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
7	Shaik Mona	Number System and Boolean Algebra And Switching Functions			International	978-93-6285-377-6	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
8	K.SOWJANYA	Atoms and Molecules in Chemistry			International	978-93-6285-339-4	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY
9	SK.RIZWANA	Atoms and Molecules in Chemistry			International	978-93-6285-339-4	ESWAR COLLEGE OF ENGINEERING	AMARAVATHI RESEARCH ACADEMY

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Optimization of process parameters by using Taguchi Techniques in abrasive air jet machining of Al_2O_3 ceramic material

B. Anjaneyulu [a], K. Prahladharao [b], G. Nagamalleswararao [c]

[a] Dept. of Mechanical Engineering, JNTUA Anantapuramu, A.P. 515001, India
[b] JNTUA Anantapuramu, A.P. 515001, India
[c] Eswar Engineering College, Narasaraopet, Guntur, A.P., India

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ABSTRACT

Quality surface finish of Al_2O_3 work piece present variety of issues such as non conventional machine is one of the foremost often times used material process in machining of Al_2O_3 work material to produce outlined surface finish, surface finish associated good characteristics of the work material and input parameters used. The quality of the surface, dimensional precision greatly has an effect and the elements through their useful life. This project introduces a new technique of investigating the P, AFR, SOD and T on abrasive air jet machining of Al_2O_3 work material. Investigating of process parameters was done by Taguchi Technique. Experiments were conducted on Al_2O_3 work piece, the parameters of machining such as P, AFR, SOD and T of SiO_2 particles impinged on the Al_2O_3 Materials are optimized by responded concerns particularly Material removing rate. The optimum levels of parameters investigated by using Taguchi method.

Selection and peer-review under responsibility of the scientific committee of the 1st International Conference on Manufacturing, Material Science and Engineering.

1. Introduction

Nontraditional machining process in producing elements made out of Al_2O_3. Unconventional machining process could be a removing of unwanted metal removed from work piece by energy, during this method no direct contact between tool and work piece, work Material is a form of energy accustomed remove unwanted material on work piece. In any manufacturing industries accuracy and surface finish of the work piece is most vital in this case work piece material as incredibly hard and brittle material, abrasive air jet machining is best technique to produce accuracy and higher glaze the Al_2O_3 material. Abrasive could be terribly small non metallic hard particles, sharp edged irregular shape of particles. SiO_2 particles are strikes to the work material.

N. Jagannatha et al. [1], in this Analysis paper optimized method parameters of abrasive hot air jet machining for glass by using Taguchi Technique, he was consider process parameters are air temperature, feed rate and stand of distance machining is completed on soda lime glass then measure MRR and surface roughness of the work Material. This study finished more significance of the MRR at 100 °C because the temperature is increased surface roughness of the work piece is decreased additionally he observed from micrographs at high temperature there is sufficient evidence of additional plastic deformation.

Nageswar K. Rao et al. [3], in this research paper optimized machining parameters of abrasive jet machining on epoxy glass fiber composites. Optimized machining parameters by victimization box Behnkins methodology and analyzed percentage contribution of machining parameters by victimization Analysis of Variance. He was consider process parameters are pressure, nozzle tip distance and nozzle diameter sic abrasive particles are 60 μm grit size are impinged on epoxy glass fiber composites and measured MRR. Finally he was analyzed effective machining parameters.

2. Make a Al_2O_3 material powder metallurgy technique

2.1. Powder preparation

Smooth fine powders are obtained by using mesh method: I consider mesh size is 10 μm.

2.2. Powder blending

The alumina powder is mixed with lubricant, use of the lubricant as powder is converted as a good fluidity.

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Selection and peer-review under responsibility of the scientific committee of the 1st International Conference on Manufacturing, Material Science and Engineering.

AIP Conference Proceedings

Vibrational and finite element analyses of T-Section cantilever beam using ANSYS and MATLAB

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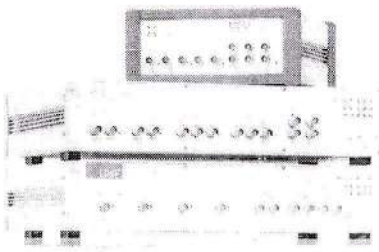
G. Sree Bhavani Charan, and G. Naga Malleswara Rao



Vibrational and Finite Element Analyses of T-Section Cantilever Beam using ANSYS and MATLAB

[1a] G. Sree Bhavani Charan, [2]G.Naga Malleswara Rao
[1] *B. Tech, GPREC, Kurnool, India*
[2] *Professor of Mechanical Engg, Eswar College of Engineering, Narasaraopet, India.*
[1a]Corresponding author: charan.gujjar@gmail.com

Abstract A structural member which is acted upon by a system of forces of external loads in perpendicular to it is known as beam. The beam bends whenever a horizontal beam is loaded with vertical loads. The amount with which a beam depends upon the amount and type of the loads, length of the beam and type of the beam. There are several types such as T, HSS and L shaped beams available to meet industrial and domestic applications. The major problems and failures with beams are fatigue failures, vibrations and improper analyses of various properties. This work discusses the effects of vibrations on T-Section Cantilever beam and frequency modes. Hence, to get an in-detail knowledge about T-Section Cantilever beams, the mode shapes and natural frequencies obtained by carrying out vibrational analysis in ANSYS are validated with the results that are obtained by carrying out the finite element analysis using MATLAB. It is found that, the results obtained by MATLAB may be accurate.

Keywords: *T-Section Cantilever Beam, ANSYS, MATLAB, Vibrational analysis, Finite Element Analysis, modes shapes, Natural Frequency.*

INTRODUCTION

A cantilever beam is a beam whose one end is fixed and another is free. The loads will be placed over the span of the beam. The cantilever carries the load when subjected to a structural load to the support where it is forced against by a moment and shear stress. These types of structures are allowed cantilever construction without external bracing, in contrast to constructions supported at both ends with loads applied between the supports. These are widely found in construction, notably in cantilever bridges and balconies. The T-shaped cross section serves as a flange in resisting compressive stresses.

OBJECTIVE OF THE WORK

- This work focusses on the study of the effect of vibrations on T-Section Cantilever Beam and vibrational analysis is carried out using both ANSYS and MATLAB by giving some free end conditions provided for the beam.
- Three materials, Structural Steel, Mild Steel and Aluminum are taken into consideration in this work and both vibrational and finite element analyses are carried out on those materials.
- The structure's vibration characteristics are determined by using Modal analysis.

METHODOLOGY

Modal analysis of cantilever beam of having length of 2000 mm is studied to determine the natural frequencies and mode shapes by using ANSYS and the results are compared with the results obtained by MATLAB.

For ANSYS, the following steps are performed to carry out this study.

- Beam Model
- Specifications of the Beam (The specifications of the beam under study is given in table1.)
- Modal Analysis with ANSYS Workbench R-15
- Beam Geometry
- Mesh Generation
- Applying Boundary Conditions
- Solution

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Kesanupalli (V), Narasaraopet - 522549. www.eswarcollegeofengg.org

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3.3.2 Number of books and chapters/papers published in national/ international conference proceedings per teacher in the year 2020-21

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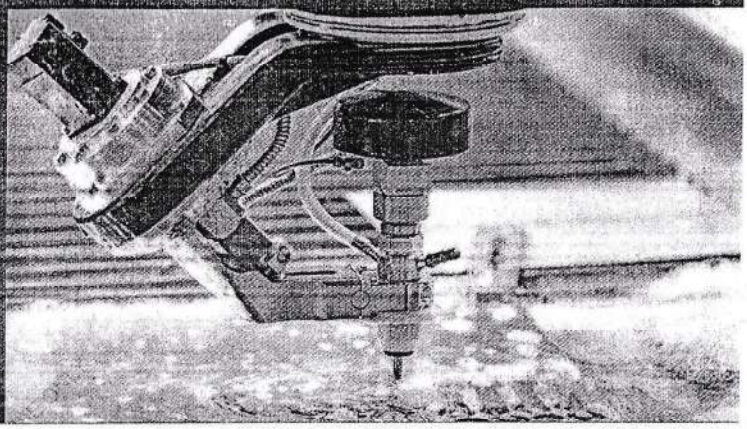
Ceramic is an inorganic non-metallic solid, made up of either metal or non-metal compounds that have been formed and then heated to high temperatures. They are generally hard, corrosion-resistant and brittle materials. The term ceramic is derived from the Greek word keramikos which means pottery. It is related to the older Indo-European language, meaning heat. Ceramic materials are typically produced using clay and other earth minerals or chemically processed powders. Ceramics can be crystalline in nature and are compounds of metallic and non-metallic components such as aluminum and oxygen (aluminum), silicone and nitrogen (silicon nitride) and silicone and carbon (silicon carbide).

MICRO ABRASIVE AIR JET MACHINE

This machining process works on the basic principle of abrasive erosion. If a high velocity abrasive particles strike on a hard or brittle work piece, it removes some metal at the striking surface. This metal removal process takes place due to brittle fracture of metal and also due to micro cutting by abrasive particle.



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EXPERIMENTAL ANALYSIS ON MAAJD

Process Parameters Investigation by using Taguchi on Micro Abrasive Air Jet Drilling on Ceramic Composites

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A Review on Parameters of Composite Materials

A.Pavan Kumar and Shaik Chand Mabhu Subhani

Department of Mechanical Engineering, Narasaraopet Engineering College (A), Narasaraopet, Guntur. A.P, India.

***Abstract*— In the present work Taguchi method is used to optimize tensile strength and hardness of the stir casted LM 26 Al/RHA/RM hybrid composites. Taguchi's L_9 orthogonal array is used for experimental design. Overall performance of the stir casting method is improved significantly by combining the experimental and analytical concepts and the most important parameter is determined on the result response. Hybrid composites are prepared by stir casting technique using three different parameters, stirring time, stirring speed, and weight fraction of the reinforcement particles. Better parameters for highest tensile strength and hardness to the castings are predicted by Taguchi technique and then composites are prepared at these parameters. The experimental and analytical results proved that the Taguchi method was successful in predicting the parameters that give the highest properties. From analysis of variance (ANOVA) test weight fraction is the most influential parameter on the tensile strength and hardness results of castings.**

Keywords: LM 26 Al/RHA/RM hybrid Composites; Taguchi method; ANOVA; Tensile strength; Hardness.

I. INTRODUCTION

Aluminium-based composite exhibit many attractive material properties such as increased stiffness, wear resistance, specific strength and vibration damping and decreased coefficient of thermal expansion compared with the conventional aluminium alloys [Donnell and Looney (2001)]. Al–Si alloys are widely used for various automobile applications owing to their high corrosion resistance, good castability and low density [Hemanth (2005)]. Taguchi technique is a powerful tool for the design of high quality systems [Luangvaranunt *et al.* (2010); Siva Prasad and Rama Krishna (2011)].It provides a simple efficient and systematic approach to optimize design for performance, quality and cost. The methodology is valuable when design parameters are qualitative and discrete. Taguchi parameter design can optimize the performance characteristic through the setting of design parameters and reduce the sensitivity of the system performance to source of variation [Taguchi and Konishi (1997)]. Dingal *et al.* [2004] used Taguchi method to find out the significant factors influencing density, porosity and hardness on selective laser sintering of iron powder. Guharaja *et al.* [2006] made an attempt to obtain optimal settings of green sand casting parameters using Taguchi method. Rama Rao and padmanabhan [2012] used Taguchi method and ANOVA in optimization of process parameters for material removal rate in electrochemical machining of Al/5% SiC composites. Nataraj *et al.* [2005] used risk analysis Taguchi method to find optimum conditions of design parameters. Barua *et al.* [1997] used the Taguchi Method to optimize the mechanical properties of V (Vacuum) casting process. In this paper they consider the effects of the selected process parameters on the mechanical properties of alloy casting and subsequent optimal settings of the parameters, which are accomplished using Taguchi's Parameter Design Approach.

In the present study, the Taguchi method is used to obtain optimum tensile strength and hardness in the casting process of LM 26 Al/RHA/RM hybrid Composites. Finally, ANOVA and confirmation test have been conducted to validate the test result.

II. MATERIALS AND METHODS

A. Experimental work

Fabrication of LM 26 Al, rice husk ash and red mud (LM 26 Al/RHA/RM) hybrid composites were carried out by stir casting equipment as shown in Fig. 1. In the present work red mud was maintained constant at 5 wt% and rice husk ash was varied at 5, 10 and 15 wt% while preparing the hybrid composites.

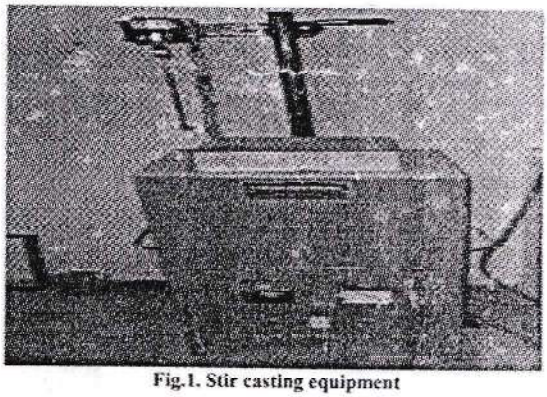

Fig.1. Stir casting equipment

Based on the literature available, the experimental conditions shown in Table 1 are selected as input casting parameters to study the influence of theses parameters on tensile strength and hardness of the fabricated composites. A measured amount of LM 26 aluminium alloy was taken into a graphite crucible and melted in an electric furnace. A measured amount of RHA and RM powder was preheated at 150°C for 20 minutes and then added to the melt. After that, the melt was stirred inside the furnace at different speed and times to make a vortex in order to disperse the particles in the melt. The melt temperature was controlled around 700°C and poured into an EN8 steel die. The dimensions of the resulted castings are 30 mm diameter and 120mm length cylindrical rod. The fabricated composites were observed with scanning electron microscope (SEM). The SEM picture shows the uniform distribution of the RHA and RM particles in the LM 26 Al alloy as shown in Fig. 2. Tensile specimens of hybrid composites were prepared according to ASTM E-8 specification. The tensile test was performed at room temperature on a Universal Testing Machine of 10T (model Dak UTB9103). The hardness of each specimen is measured by using Vickers hardness apparatus type Zwick & Co., Germany.

TABLE 1 CONTROL FACTORS AND LEVELS

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The Analysis on Concentric Pipe Heat Exchanger

Shaik Chand Mabhu Subhani and Pilli Sravani
Department of Mechanical Engineering, Narasaraopeta engineering college (Autonomous),Narasaraopet, Guntur, A.P.

Abstract—**A Heat Exchanger is a device which is used to transfer heat from one fluid to another, whether the fluids are separated by a solid wall so that they never mix, or the fluids are directly in contact. Every year Heat exchanger technology is growing to develop efficient, compact and economical heat exchangers, all over the world. Updating the community for this development needs an interaction. These days concentric tube heat exchangers are used with forced convection for lowering the working fluid's temperature by raising the cooling medium's temperature.**

The purpose of this project is to use ANSYS FLUENT software and practical calculations to analyze the temperature drops as a function of both inlet velocity and inlet temperature and how each varies with the other. Each heat exchanger model was designed and simulated for both parallel flow and counter flow heat exchanger models. The results were compared between parallel and counter flow heat exchangers. CFD analysis was utilized to find the outlet temperatures of parallel and counter flow heat exchangers for the inlet velocity and inlet temperature of the fluid medium used. "Computational Fluid Dynamics (CFD) is a science of predicting fluid flow, heat transfer, mass transfer, and related phenomena by solving the mathematical equations which govern these processes using a numerical processes". These outlet temperature values obtained were used to determine the overall heat transfer coefficient. Theoretical calculations are done by the values obtained through the experiment conducted on the heat exchanger setup for both parallel and counter flow

Keywords— Heat Exchangers, Parallel flow, Counter flow, temperature , CFD Analysis , ansys

I. INTRODUCTION

Today's demand of higher energy consumption and reduced availability of fossil fuel resources increase the impact of thermal performance of heat exchanger day by day. Heat exchangers are very effective for the transfer of heat from one medium to another without even intermixing one fluid with another. One of the most promising devices for heat transfer is the counter flow heat exchanger mostly adapted by the chemical plants, petrochemical plants, oil refineries etc. Reducing the temperature of hot outlet fluid without affecting the cost is a big task for various industries that could be only possible by the proper selection of input. Typically, in a heat exchanger two segregated fluids at different temperature with a solid boundary, exchange thermal energy from one fluid to another via surface without even intermixing. There are numerous configurations of classifying heat exchanger. In context with the flow configuration, there exists three primary types for heat transfer: parallel flow, counter flow and. cross flow. According to Fourier for the conduction states the more the area of heat exchanger, the more will be the heat transfer rate.

By second law of thermodynamics only transfer of sensible heat occurs in the heat exchanger. One of the greatest advantages of the counter flow heat exchanger is higher uniform temperature difference as well as that the mass flow rate and time for the interaction of one fluid with other increases, the heat transfer also goes up as compared to parallel flow heat exchanger. Maximization of surface area and minimization of flow resistance lead to better effectiveness of heat exchanger, which is the main focus for designing. On the contrary, the increase in area increases the space for the installation and correspondingly manufacturing cost will get increased. On the other hand, reduction in flow resistance can be achieved by improving the surface finishing of the heat exchanger. Many experiments have been carried out on the counter flow heat exchanger citing the flow in either laminar or turbulent manner, for achieving its better configuration. However, very limited CFD simulation has been done on the counter flow heat exchanger at different flow configuration to verify the thermo-hydraulic performance or to check the heat transfer and velocity distribution inside the flow domain.

Direction of Flow: According to the relative direction of two fluid streams the heat exchangers are classified into the following three categories:

1. Parallel flow
2. Counter flow
3. Cross – flow

A. Parallel flow heat exchangers:

In parallel flow heat exchangers the fluids both hot and cold travel in same direction. The flow arrangement for hot and cold fluids from inlet to outlet is shown in fig 1.1. In parallel flow heat exchangers the temperature difference from hot to clod fluid decreases. This type of heat exchangers requires large space and hence it is rarely used in practical applications. Eg: Oil coolers, oil heaters, water heaters etc, are examples of parallel flow heat exchanger.

Fig 1.1. Parallel flow heat exchanger

B. Counter flow heat exchangers

In a counter flow heat exchanger, the two hot and cold fluids enter at opposite ends. The flow arrangement and temperature distribution for such a heat exchanger are shown schematically in fig. 1.2. the temperature difference between the two fluids remains more or less nearly constant. This type of heat exchanger, due to counter flow, gives maximum rate of heat transfer f or a given surface area. Hence such a heat exchangers are most favored for heating and cooling of fluids.

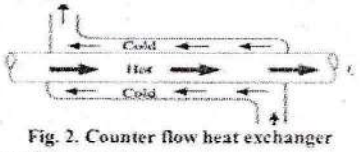

Fig. 2. Counter flow heat exchanger

C. Cross - flow heat exchanger

When two fluids crosses one another in space at right angles such type of heat exchanger is known as cross flow heat exchanger. In cross flow heat exchanger there is no mixing of fluid streams and hot fluid flows in spate tubes and cold fluid is mixes perfectly as it flows through the

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Production of waste plastic oil and its impac on a diesel engine used as a fuel

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Radha Krishna Gopidesi, Gopi Krishna Reddy Kakunuri, J. Yaswanth Manideep, ChPavan Kalyan, and Rajavarapu Rambabu

Production of Waste Plastic Oil and Its Impact on a Diesel Engine Used as A Fuel

Radha Krishna Gopidesi[1,a)], Gopi Krishna Reddy Kakunuri[1,b)], J Yaswanth Manideep[1,c)], ChPavan Kalyan[1,d)], Rajavarapu Rambabu[2,e)]

[1]*Department of Mechanical Engineering, Vignan's Lara Institute of Technology and Science, Vadlamudi, Andhra Pradesh, India, 522213*

[2]*Assistant Professor, Department of Mechanical Engineering, Eswar College of Engineering, Narasaraopet, Andhra Pradesh, India, 522 601*

[*a)] Corresponding Author: krishnaab4u@gmail.com

Abstract. In the present work fabricated the experimental setup for changing over waste plastics into fluid hydrocarbon diesel. Here, the Zeolite catalyst is used for the catalytic Pyrolysis process. Further, blends of Waste Plastic Oils (WPO) are prepared by replacing the diesel fuel. These are without Waste plastic and 100% diesel, 20% Waste plastic, and 80% diesel (W20), 40% Waste plastic and 60% diesel (W40), and 60% Waste plastic and 40% diesel (W60), 80% Waste plastic and 20% diesel (W80), 100% Waste plastic and 0% diesel (W100). The Brake thermal efficiency (BTE) of Waste plastic oil blends shown higher than pure diesel operation. Among the six blends, W40 showed higher BTE and lower Brake specific fuel consumption (BSFC). The increasing of Waste plastic oil in the blend showed the varied of NOx emissions contrast with the diesel fuel. The diesel showed inferior CO emissions and blend B80 showed lower smoke emissions than the other samples. The tip cylinder pressure about 69 bars was acquired at a crank angle (CA) of 358° for W40.

Keywords: waste plastic oil, zeolite, brake power, efficiency, emission

INTRODUCTION

Energy may be a crucial input for the technological, industrial, social, and economic development of a nation [1], [2]. Plastic waste is viewed as a possibly modest wellspring of synthetic substances and vitality. Numerous we have experienced a spread assortment of items that utilization plastic materials today. There are considerable advantages to getting fills from squandering plastic material [3]. Waste plastic is overflowing, and its disposal makes critical issues for the earth. The broad utilization of plastics came about inside the gatherings of eccentric dissipate not local to the protect earth life cycle [4]. In this manner, wastes of current resources are build-up without lively decay and reusing courses in landfills. The rise of oil and petrochemical costs unlock the ways for businesses to take a situation inside the disintegration of plastic wastes to petro products. Radha Krishna et al. [5] worked on a diesel engine fuelled with waste plastic oil as fuel, and from that, they observed enhance BTE for WPO blends than the diesel. Khan et al. [6] investigated fuel characteristics of Pyrolytic Waste Plastic Oil and its diesel blends. from that they noted higher kinematic viscosity, carbon content, and calorific value for the plastic oil than the diesel fuel. The present investigation's uniqueness is the production of WPO by Pyrolysis techniques using the zeolite as a catalyst for faster reaction rate. Further, run the diesel engine fuelled with a mixture of blends of WPO at various loads. It showed the enhanced BTE and drastic reduction of HC and CO emissions than diesel fuel.

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Development, mechanical and tribological characterization of Al_2O_3 reinforced ZrO_2 ceramic composites

B. Anjaneyulu [a,*], G. Nagamalleswara Rao [b], K. Prahlada Rao [c]

[a] Research Scholar, Dept. of Mechanical Engineering, JNTUA, Anantapuramu, AP-515001,India
[b] Professor & Principal, Eswar Engineering College, Narasaraopet, Guntur, AP, India
[c] Professor, Department of Mechanical Engineering, JNTUA, Anantapuramu,AP-515001-India

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Fractional force
Coefficient of friction

ABSTRACT

Alumina reinforced zerconia composite materials are attractive structural fabrics, dental and industrial applications that incorporate high hardness and wear resistance, electrical resistance with additional toughness. In this research work Alumina is matrix material and zerconia is reinforced materials. Composites composite material containing different amount of zerconia added to the aluminum oxide i.e. 5%wt, 10%wt and 15%wt and prepared composite materials by using powder metallurgy milling method. The prepared was checked hardness, wear rate. Electrical resistance and Coefficient of linear thermal expansion. Composites are tested for wear intensity with a pin on the disk wear test machine, hardness for the Rockwell hardness tester, electrical resistance for the electrical resistance meter and coefficient of linear thermal linear thermal expansion is for the dilatometer, to analyze the crack propagation of the composite materials after wear by SEM and revealed a fairly uniform distribution of ZrO_2 particles with a slight agglomeration. The incorporation of Ultra nano zirconium dioxide particles into aluminum particles lead to produce a aluminum composites with increased mechanical and electrical properties. Aluminum reinforced zirconia Ceramic composites work material are the good surface finish. The surface quality, the dimensional precision has a significant effect and the materials have a long life

Selection and peer-review under responsibility of the scientific committee of the International Conference on Newer Trends and Innovation in Mechanical Engineering: Materials Science.

1. Introduction

The increase in demand for composite materials is due to an increase in properties such as Hardness, Electrical resistance and coefficient of linear thermal expansion over the base metal. The alumina reinforced zerconia composites achieved to improve the mechanical and electrical properties. Ceramic based composite materials successfully implementing in automotive industries, dental applications and fabrication of aerospace orbiter. Zirconium materials are mostly used in the space orbiter because it has low coefficient of linear thermal expansion and withstand high temperatures. Two composite materials are formulated on the basis of the weight. ZrO_2 filled with aluminum pellets mechanical properties are improved [2,5,6,9,10,21,23]. Zirconia powder particle having three phases i.e monoclinic, Tetragonal and Cubic. At room temperature zerconia particles are monoclinic phase and heated up to 1100 °C phase change from monoclinic to tetragonal and further heated up to 1450 °C particles are phase change from tetragonal to cubic [1,3,7,9,11,20,22]. The right balance of particle size and grain shape densification of these composites has been enhanced thereby impacting the mechanical properties of ceramics [4,12,14,16,24,25]. As per ASTM Norms Composites selected for investigation composites contains 5%wt, 10%wt and 15%wt Zerconia dioxide (ZrO_2) added in Aluminum dioxide (Al_2O_3) respectively. Mixed powder is placed in closed container made by alumina ceramic material and 5 mm diameters of balls are placed in container and it is placed on milling machine the ceramic container is rotated about 120 rpm in 120 min for proper mixing of powder particles. Mixed powder ware compacted using hydroelectric press in square shaped die under a constant load of 15kN obtained

* Corresponding author.
E-mail addresses: anjan343@gmail.com (B. Anjaneyulu), (G. Nagamalleswara Rao), drkprao54@gmail.com (K. Prahlada Rao).

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Renewable Energy with IoT and Biomedical Applications

EDITORS

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Designing on IoT Based Scrolling Message Display for Scholl and College

Prem Kumar Singuluri, Professor, Department of Computer Science and Engineering, G. Pullaiah College of Engineering and Technology, Pudur, Andhra Pradesh, India, spkkn@gmail.com.

Shaik Lal John Basha, Assistant Professor, Department of Electronics and Communication Engineering, Eswar college of Engineering, Guntur, Andhra Pradesh, India, sk.laljohn@gmail.com.

Shaik Khaleel Ahamed, Assistant Professor, Department of Computer Science and Engineering, Lords Institute of Engineering and Technology, Hyderabad, Telangana, India, khaleelska@gmail.com.

M Nithya, Assistant Professor, Department of Computer Science and Engineering, Sri Sairam Engineering College, Chennai, Tamil Nadu, India, nithya.cse@sairam.edu.in.

ABSTRACT

In our everyday lives, noteboards play a very important role. We may promote the distribution of information in a paperless culture by replacing a traditional analog notice board with a digital notice board. In any institution or public places such as bus stops, train stations, colleges and malls, the Notice Board may be a primary influence. It could be a difficult approach to take multiple notes day by day. This note monitor involves a different user. Our project aims to create a moving message display with a dot matrix using a microcontroller and IOT, where the characters switch constantly from the left to the left. We used ATMega8 microcontroller for this project. An 8-bit microcontroller family ATMega8. The processor frequency is a top graded 16MHz. Thanks to its basic specifications of a 4.5V-5.5V power supply, ATMega8 provides exceptionally successful prototyping. It's around 100MHz shift frequency and has a 3-stage performance storage record, and we've finally used a 16x32 point matrix display. A code was first created. At first and there we have our perfect outcome. This is the advanced wireless notification board prototype. Internet is used to wirelessly transfer the message from the browser to an LED display inside the IOP-based web managed notification board. The key goal of the project is the creation of a wireless update board displaying messages received from the motive application of the customer.

Keywords: IOT, LED, Display, Cloud, Smart phone.

INTRODUCTION

The Notice Board is a vital mechanism for the processing of information in our lives. We see boards in various areas such as classrooms, stations for the subway, shopping malls, bus stations, workplaces, etc. in our every day lives. We may assume that boards of notice are areas where details can be left to the public such as advertisements, events advertisement or to the public. Now it is appropriate to place a different individual on the notification board. That would contribute to time waste and the use of workforce. The paper is the primary medium for transmitting information in traditional analog type boards. We know that there are infinite quantities of details. There is therefore a wide use of paper to display the infinite numbers of details.

With our automated warning board, issues posed by wooden or standard style notice boards are fixed. It will have a much simpler and effective way to move notices around the world. We chose the internet as a media for transmitting information, because of the popularity of the Internet. The IoT is a network of physical computers, vehicles, home appliances and other items, which are integrated electronically. Software to link and share data to these objects. Each computer can be unique in its identification with its own e-mail identification Embedded computing system but can function within the current Internet infrastructure. Therefore only information may be submitted by their respective authority. Raspberry pi is the heart of our framework. A monitor and Raspberry Pi is interfaced. In other words, material

(Scopus Indexed)

Design of Intelligent Control and Monitoring System for Agriculture Based on Renewable Energy and IoT

M Ramasubramanian[1*], TKS Rathish babu[1], V Anantha Krishna[1], and Khasim Syed[2]

[1]Department of Computer Science and Engineering, Sridevi Women's Engineering College, Hyderabad, Telangana, India.

[2]Department of Computer Science and Engineering, Eswar College of Engineering, Guntur, Andhra Pradesh, India.

Email: *mailtoraams@gmail.com

Abstract: As the population rises, agriculture is becoming a big growth field worldwide. Improving production and farm efficiency without constant manual supervision to satisfy the rising demand for food is a major challenge in agriculture. Climate change is also a significant issue for the agriculture industry, aside from the growing population. The research aims to provide the Internet of Things (IoT) with an intelligent agriculture system. Intelligent farming that provides high precision crop management, helpful data collection and automatic farming techniques can be used. This work provides an intelligent framework to track ground moisture and temperature in agriculture. Without human interference, appropriate action is taken after analyzing sensed data dependent on these principles. Temperature & relative humidity are assessed and processed for further data analyses in the Thing Speak Database.

Keywords: IoT, Food, Agriculture, Cloud server, Security.

1. Introduction

The Beecham study "Toward more Smart Agriculture: Farming Using the IoT Sight" suggested that projected global population could grow by 70%, hitting a growth of 10 billion by 2050[1]. It is important to increase farm productivity to ensure good yields and crop production. The biggest challenge in high-quality agriculture is volatile weather, such as rainfall, temperature, humidity etc. Humidity is also having a strong influence on crop turgor, a metric of plant cell water because it is a major environmental parameter in agriculture [2]. If the humidity level is low, sweating happens very easily in plants. Furthermore, plants can be drawn when the plant cells draw too much water due to the high transpiration rates. In comparison, the transpiration rate decreases when both air and temperature moisture are high, which decreases evaporative cooling [3]. A constant manual effort, which is very unreliable and not always practicable, was needed to track certain environmental situations and behavior accordingly [4].

In the implementation of the smart agricultural concept to simplify agriculture, IoT plays a major role. IoT is a contemporary computer and contact paradigm where the ordinary things are sensed by a sensor, a microcontroller and a transceiver [5]. Moreover, the contact with each other or recipient of sensed data becomes an important part of the Internet structure. At IoT, all items used in our daily lives are linked to a special identity, meaning that information can be transmitted across the network without any human participation. Every day IoT grows, and many more objects are related worldwide. IoT is ideal for many fields such as accurate farming, smart grid, environmental control, etc. [6]. The

An Educated Peer Discovery Expanding Blockchain Framework

Prem Kumar Singuluri[1*], Shaik Lal John Basha[2], Shaik Khaleel Ahamed[3], and M Nithya[4]

[1]Department of Computer Science and Engineering, G. Pullaiah College of Engineering and Technology, Pudur, Andhra Pradesh, India
[2]Department of Electronics and Communication Engineering, Eswar College of Engineering, Guntur, Andhra Pradesh, India
[3]Department of Computer Science and Engineering, Lords Institute of Engineering and Technology, Hyderabad, Telangana, India
[4]Department of Computer Science and Engineering, Sri Sairam Engineering College, Chennai, Tamil Nadu, India

Email: *[1]spkknl@gmail.com, [2]sk.laljohn@gmail.com, [3]khaleelska@gmail.com, [4]nithya.cse@sairam.edu.in

Abstract. The key benefit of blockchain Bitcoin-style networks is their immutability and autonomous power. Bitcoin is suffering from scalability problems in spite of its performance. Unless it is rendered more scalable, the promise of blockchain technology cannot be achieved completely. We broaden an earlier study on a fundamental balance between the blockchain system's efficiency and forking rate. We also suggest a system to improve blockchain device efficiency by reducing block spread time. Informed neighbor selection is adopted by the proposed system. Miners detach from neighbors with restricted bandwidth and choose higher bandwidth nodes. To test the efficiency of the proposed system, we construct a Blockchain Interactions Emulator. In standard operations proposed system increases the performance by 20% by ~40%.

Keywords: bitcoin, emulator, bandwidth, technology, network, framework

1. Introduction

As of March 2019, Bitcoin is the most commonly used 'asset with over USD [illegible] market capitalization. In smart contract applications [1], wellbeing [2], supply chain [3], network analysis [4] then data storage [5], Bitcoin's underlying infrastructure, a blockchain, can be regarded. Blockchain's core properties are data immutability and decentralized power founded on peer-to-peer network. A blockchain is made up of ever more connected blocks of data. A block is mined on the basis of job evidence in the Bitcoin-style blockchains.

Calculative or economic efforts are required to mine a stone. These blocks are connected to the previous ones by a cryptographic hash. Block data cannot be changed without all the following blocks needing to be altered. Data in the network can virtually be permanent as long as the blockchain grows. The blockchain is not validated by a single authority. Anyone will obtain data and mine without centralized control to build a blockchain.

The total accounts per second, limits the throughput. Currently, Bitcoin has 7 transactions a second executing every day. The block or mine blocks cannot inherently be extended more rapidly to

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+91 99636 34414
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3.3.2 Number of books and chapters/papers published in national/ international conference proceedings per teacher in the year 2021-22

. No	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	National / International	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	**Dr.G.NAGA MALLESWARA RAO**	**INTERNATIONAL CONFERENCE ON SOFT COMPUTING AND INTELLIGENT TECHNOLOGIES**	FABRICATION AND TENSILE,COPRESSIVE FLEXURAL MECHANICAL TESTING OF ALIMINUM METAL MATRIX COMOSITE REINFORCEMENT WITH TiO2	ICSCIT-2021	**INTERNATIONAL**	978-93-91535-15-5	ESWAR COLLEGE OF ENGINEERING	AR RESEARCH PUBLICATION
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QUALITY OF WORKLIFE AND ITS IMPACT ON JOB SATISFACTION IN BANKING SECTOR– A COMPARATIVE STUDY

Dr. Shaik Muzeer* and Masthan Sharif Shaik **

* Professor & Head, Department of Management Studies, Eswar College of Engineering, Guntur Dist, Andhra Pradesh, India

** PhD Scholar, Department of Management Studies, Andhra University, Andhra Pradesh, India

INTRODUCTION

The service sector, like banks, has gone through an underlying change in the course of recent many years, due to which an ocean change could be seen in the job and duties of bankers combined with pressure and stress. Bank representatives face the most significant work stress in executing on-time service to achieve management goals and to ensure customer satisfaction. Expanded utilization of advanced technology, internet bank exchanges, expanded financial propensities for clients, economic changes, Government and R.B.I.s rules and controls, etc., intensified the issue of representatives' work pressure causing the declined nature of work life. The banking house offers a broad scope of financial products and services to corporate firms and retail clients through various conveyance channels and its specific subsidiaries and members in speculation banking, life, and non-life insurance investment and resources the board separated from the usual financial business. Bank workers have been dealing with incalculable issues in effectively conveying the variety of these items and services to clients. The challenges have additionally disturbed with inferior Quality of work life. Banking hours were expanded to encourage the satisfaction of clients' expectations. In the quickly changing financial climate, the bank representatives' duty broadened further and more than the other corporate workers. The bank representatives who manage cash/account-related items are presented with higher anxiety feelings in the changing workplace. It hurts the representatives' physical and mental wellbeing, bringing about bad Quality of work life. The two businesses and representatives are presently perceiving and valuing the meaning of the nature of work-life in associations.

Nature of Quality of work-life is fundamental to banking business execution. It focuses on two destinations - (I) to improve productivity and (ii) build the fulfillment level of satisfaction of customers. Quality of work life is the nature of the connection among employees and their complete workspace with human measurements added to services' arrangement. Bank workers anticipate a few money-related and non-financial advantages from the bank. Thus, an endeavor is made to contemplate the Quality of bank representatives' work-life considering current real factors.

In the Quality of work-life, personal satisfaction portrays an individual's or group standard of living, general wellbeing, security, and general environmental factors. Conversely, the work-life rate includes things that influence their prosperity, like compensation and advantages. Quality of work life is progressively a critical piece of the complete benefits bundle. The survey on the nature of work-life concerning the banking area, especially of a between sectoral approach, is sparse and not satisfactory to show up at important derivations. The current examination is an endeavor on Q.W.L. in the organized public and private sector banks. It perceives the different elements associated with work-life, work fulfillment, and worker execution in the financial area.

QUALITY OF WORKLIFE

Q.W.L is concerned with making the employee's service time pleasant, giving them sufficient wages and salaries so that his family life may become comfortable. He is given due importance in the organization that his sense of self-respect and pride are satisfied. Now the employees are

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A STUDY ON INDIAN DIRECT TAX STRUCTURE-AN ANALYTICAL FRAMEWORK

DR SHAIK MUZEER
Associate Professor & Head, Dept, of MBA
Eswar College of Engineering, Narasaraopet, Andhra Pradesh

N USHA DEEPA SUNDHARI
Research Scholar, Dept, of Management Studies
VFSTR, Guntur,Andhra Pradesh

ABSTRACT
Tax is one of the major sources of revenue income to the government, the economic development of any country majorly depends on the tax structure it has been adopted. Every government collects its major revenue by way of taxes, which is compulsory charge imposed by the government without rendering any service to tax-payer. The taxes are classified into direct tax and indirect taxes first one i.e., taxes on person income received and indirect taxes i.e., taxes on expenditure incurred to the assessed. A good Taxation Building which is facilitates easy of doing business and having no chance for tax evasion brings wealth to a country's economy. On the other hand, taxation structure which has provisions for tax evasion and the one which does not facilitate ease of doing business slows down the growth of country's economy. A taxation structure plays an important role in country's development. India has a well-developed tax structure. The power to levy taxes and duties is distributed among the three tiers of Government, in accordance with the provisions of the Indian Constitution. Indian taxation structure has gone through many reforms and still it is very far ahead from being a ideal taxation structure. Also, it is seen that there is major dependence on indirect taxes for tax collection than the direct taxes. Both Indirect taxes and Direct taxes have their own advantages and disadvantages.
Key Words: Direct Taxes, Direct Tax Structure of India, Tax Collection

INTRODUCTION
Any Government gets its revenue for expenditure purpose from three different sources i.e., income from taxes, income from services rendered to the general public and various grants and contributions received from foreign countries and international organizations. Usually, the government collects its major revenue by way of taxes, which is a compulsory charge imposed by the government without rendering any service to tax-payer. By taking into account on whom the money burden of the tax will fall, the taxes are classified into direct tax i.e., taxes on income received and indirect taxes i.e., taxes on expenditure incurred. India has a well-developed tax structure. The power to levy taxes and duties is distributed among the three tiers of Government, in accordance with the provisions of the Indian Constitution. The main taxes/duties that the Union Government is empowered to levy are: Income Tax (except tax on agricultural income, which the State Governments can levy), Customs duties, Central Excise and Sales Tax and Service Tax. The principal taxes levied by the State Governments are: -Sales Tax (tax on intra- State sale of goods), Stamp Duty (duty on transfer of property), and State Excise (duty on manufacture of alcohol), and Land Revenue (levy on land used for agricultural/non-agricultural purposes), Duty on Entertainment and Tax on Professions & Callings. The Local Bodies are empowered to levy tax on properties (buildings, etc.), Octroi (tax on entry of goods for use/consumption within areas of the Local Bodies), Tax on Markets and Tax/User Charges for utilities like water supply, drainage, etc.

Component of Direct tax levied by the Union Government and state Government are as follows.

- Corporation tax
- Taxes on income
- Land revenue
- Agricultural tax
- Hotel receipts tax
- Others*

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Fabrication and Tensile, Compressive, Flexural Mechanical Testing of Aluminium Metal Matrix Composites Reinforcement with TiO_2

M.Haripriya[1], Dr. G. Naga Malleshwara Rao[2], Dr.B.Durga Prasad[3]

[1]*Phd Scholor, "Mechanical Engineering Department , JNTUA, Anantapur, AP, India.*
E-mail:mharipriyaphd@gmail.com"

[2]*Principal, "Dept. of Mech Engg., Eswar College of Engg., Narasaraopet, AP, India.*
E-mail:malleshgujjar@gmail.com"

[3]*Professor & Controller of Examinations, "Dept. of Mech. Engg., JNTUA, Anantapur.India.*
E-mail:mukdhajntu@gmai.com"

ABSTRACT:

To enhance the mechanical properties of aluminium alloy we prepared the aluminium metal matrix composite with varying weight percentages of 0%, 3%, 6% and 9% of titanium dioxide and testing their strength limits with all combinations. This work includes the fabrication of pure aluminium with three different weight percentages of titanium dioxide preparing four samples of each weighing 1000gms by using the stir casting process. From each sample three combinations of tensile, compression, flexural, impact, hardness and wear testing specimens were prepared. In this section, this work restricted to tensile, compression and flexural testing to check the mechanical properties of prepared specimens. This work found favourable results of these Al-TiO composites compared with the pure aluminium composite specimens.

Keywords: *Aluminium, Titanium dioxide (TiO_2), Mechanical Properties, Tensile Strength, Compression Strength, Flexural Strength.*

I. INTRODUCTION:

The increasing demands on innovative light in weight designs in transportation promote the marketplace of personalized components such as complex and also multi-phase products. An appealing product combo is actually aluminium and also titanium. While titanium alloys present high mechanical durability and good deterioration protection, aluminium alloys provide lesser density, and subsequently, greater possibility for weight discounts [1] The current job is actually an attempt to study the mechanical behaviour of Aluminium and Titanium compounds made utilizing the rouse casting method [2].

Aluminium matrix composites have formed tremendous rate of interest in assorted applications featuring aerospace and also car elements due to their light-weight, higher strength to body weight ratio, higher rigidity, affordable as well as higher perspective security [4, 6, 9, 11-14].

New developed aluminium based alloys, specifically with titanium, are obtaining even more level of popularity as a result of their excellent homes. The combination of light in weight as well as high endurance

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THE AERODYNAMIC ANALYSIS ON CAR BODY AND DRAG REDUCTION BY MODIFYING THE DESIGN

Shaik. Chand Mabhu Subhani and P. Sravani,
Department of Mechanical Engineering, Eswar college of Engineering, Narasaraopet, *India.*
Department of Mechanical Engineering, Narasaraopeta Engineering College, Narasaraopet, India

Abstract— **This is a case study on the influence of CAR on the global drag characteristics. Reducing overall drag by redesigning the CAR has a potential of almost 20% in the overall drag breakdown, mainly due to the viscous effects and the fluidic interaction of the flow under the car with the typical bluff body flow pattern behind the vehicle. A special parameterization is proposed for the global shape of the sedan car, taking into account most of the specificities of the system. For such a complex interaction, CFD analysis is probably the only efficient tool in order to assess specific design parameterization of a generic car shape. Based on the CFD results, possible strategies to be used in order to reduce viscous drag and global drag characteristics are proposed.**

Aerodynamic drag is one of the main obstacles to accelerate a solid body when it moves in the air. Firstly we analyzed the Sedan car using at a definite velocity to note down the Drag coefficient. We also noted the velocity, pressure and Vortex generation around the car body at a certain velocity. Then we validated our Results with the Issued Research Paper and we were almost nearer to the value of Drag coefficient. Further, we tried to reduce the Drag coefficient by attaching the Vortex generator at the rear end of the roof of the Car body.

I. INTRODUCTION

Aerodynamics is a branch of fluid dynamics concerned with studying the motion of air, particularly when it interacts with a moving object. Automotive aerodynamics is a sub branch dealing with the aerodynamics of road vehicles. Its main goals are reducing drag and wind noise, minimizing noise emission, and preventing undesired lift forces and other causes of aerodynamic instability at high speeds. Air is also considered a working fluid in this case. For some classes of racing vehicles, it may also be important to produce downforce to improve traction and thus cornering abilities by understanding the motion of air around an object.

Aerodynamic drag of racing cars has probably received highest attention over last five decades in using the experimental and practical field of fluid dynamics. Many researchers and authors have described different forms of drag, possible reasons behind them and several ways of minimizing the drag to improve the fuel efficiency of the vehicle.

By defining a control volume around the flow field, equations for the conservation of mass, momentum, and energy can be defined and used to solve for the properties. The use of aerodynamics through mathematical analysis, empirical approximation and wind tunnel experimentation form the scientific basis. External aerodynamics is the study of flow around solid objects of various shapes. Evaluating the lift and drag on an airplane, the shock waves that form in front of the nose of a rocket, or the flow of air over a wind turbine blade are examples of external aerodynamics. On the other hand, internal aerodynamics is the study of flow through passages in solid objects. For instance, internal aerodynamics encompasses the study of the airflow through a jet engine or through an air conditioning pipe and other internal flow

conditions.

The vehicle aerodynamic flow process is fall into three types

(i) Flow of air around the vehicle

(ii) Flow of air through the vehicle body

(iii) Flow of air within the vehicle machinery. Today's fast-moving, highly competitive industrial world, a company must be flexible, cost effective and efficient if it wishes to survive. In the process and manufacturing industries, this has resulted in a great demand for industrial control systems/ automation in order to streamline operations in terms of speed, reliability and product output. Automation plays an increasingly important role in the world economy and in daily experience. Automation is the use of control systems and information technologies to reduce the need for human work in the production of goods and services. In the scope of industrialization, automation is a step beyond mechanization. Whereas mechanization provided human operators with machinery to assist them with the muscular requirements of work, automation greatly decreases the need for human sensory and mental requirements as well.

Automation Control System - system that is able to control a process with minimal human assistance or without manual and have the ability to initiate, adjust, action show or measures the variables in the process and stop the process in order to obtain the desired output.

Chapter 9
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An Overview of Influencing Parameters on Performance of a Mantle Heat Exchanger for a Solar Water Heater – A Simulation Study

G. Naga Malleshwara Rao[1*] and K. Hema Chandra Reddy[2]

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ABSTRACT

Solar domestic hot water systems are used for absorbing solar energy during day time and using it on demand. In open-circuit cycle solar domestic hot water system, fluid inside the collector is directly injected to water inside the tank. In the case of closed-circuit cycle, in order to transfer heat between collector fluid and water inside the tank, a heat exchanger is used. Among all types, mantle heat exchanger is commonly used for solar water heaters.

In this research work, the performance of an innovative collector loop heat exchanger used in solar water heater is investigated experimentally. The heat exchanger evaluated in this work is a narrow gap mantle on a vertical tank. The heat exchanger is assessed for a range of operating conditions to quantify both the mantle side and the tank side heat transfer coefficients and the effect of thermal stratification in the tank. The experiments arte simulated and validated by using CFD tool ANSYS-CFX and a good agreement is obtained between experiments and simulations.

Keywords: Innovative heat exchanger; vertical tank; mantle side heat transfer coefficient; tank side heat transfer coefficient; operating conditions; ANSYS-CFX.

NOMENCLATURES

SDHWS	:	*Solar domestic hot water system*
T_i	:	*Heat exchanger inlet temperature* (^0K)
T_o	:	*Heat exchanger outlet temperature* (^0K)
T_w	:	*Tank wall temperature* (^0K)
T_t	:	*Temperature of fluid in tank* (^0K)
A	:	*Available heat exchange area* (m^2)
h_m	:	*Mantle side convective heat transfer coefficient* (w/m^2K)
h_t	:	*Tank side convective heat transfer coefficient* (w/m^2K)
m	:	*Mantle fluid mass flow rate (kg/sec)*
Q	:	*Heat supplied to the system (W)*
ΔT_{lm}	:	*log-mean temperature difference* (^0K)
T	:	*Time (sec)*
t_w	:	*Tank material wall thickness (m)*
k_w	:	*Thermal conductivity of tank material(w/m.k)*

1. INTRODUCTION

There are many good methods and sources used to store warm thermal energy. These include solar heaters, solar ponds, geothermal storage methods, and many others. The advantage of warm thermal energy storage is that usually, the warm thermal energy storage is obtained from an abundant and

[1]*Department of Mechanical Engineering, Eswar College of Engineering, Narasaraopeta, India.*
[2]*Andhra Pradesh State Council of Higher Education (APSCHE), Vijayawada, India.*
**Corresponding author: E-mail: mallesh@teachers.org;*

Mr. Shaik Lal John Basha

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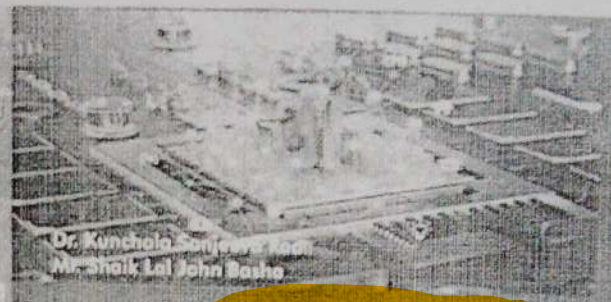
Since this book has been written with considerations that learner has no prior knowledge of embedded system design, before going through all chapters, learners should know what are the key benefits about learning embedded system.

Following five reasons to why one should learn embedded systems

1. Understand the basic concepts of an embedded system and able to follow an embedded system design approach to perform a specific function.
2. The hardware components required for an embedded system and the design approach of an embedded hardware.
3. The various embedded firmware design approaches on embedded environment.
4. Understand how to integrate hardware and firmware of an embedded system using RTOS.

EMBEDDED SYSTEMS



Dr. Kunchala Sanjeeva Rao
Mr. Shaik Lal John Basha

EMBEDDED SYSTEMS

A Unified Approach for Hardware & Software Design

Dr. Kunchala Sanjeeva Rao

IMMORTAL PUBLICATIONS

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9885797377, 6309385400
https://www.immortalpublications.com

Authors

Dr. Kunchala Sanjeeva Rao
Professor and HOD
Department of Electronics and Communication Engineering,
Eswar College Of Engineering,
Narasarao Pet, Guntur(Dt),
Andhra Pradesh, INDIA

Mr.Shaik Lal John Basha
Assistant Professor,
Department of Electronics and Communication Engineering,
Eswar College Of Engineering,
Narasarao Pet, Guntur(Dt), Andhra Pradesh, INDIA

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3.3.2 Number of books and chapters/papers published in national/ international conference proceedings per teacher in the year 2022-23

No	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	National / International	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	N.HYMAVATHI	EMERGING TRENDS IN MECHANICAL ENGINEERING AND INDUSTRAIL AUTOMATION	STERILIZATION OF WATER COURCE CONTRIVANCE	ICETMEIA-2K22	INTERNATIONAL	978-93-91420-07-9	ESWAR COLLEGE OF ENGINEERING	SPECTRUM PUBLICATIONS
2	R.RAMBABU	EMERGING TRENDS IN MECHANICAL ENGINEERING AND INDUSTRAIL AUTOMATION	STERILIZATION OF WATER COURCE CONTRIVANCE	ICETMEIA-2K22	INTERNATIONAL	978-93-91420-07-9	ESWAR COLLEGE OF ENGINEERING	SPECTRUM PUBLICATIONS
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5	SHAIK CHAND MABHU SUBHANI	2023 Global Conference on Information Technologies and Communications	APLLICATIONS OF MACHINE LEARNING AND DEEP LEARNING ALGORYTHMS TO THE PREDICTION OF STOCKMARKET TRENDS	IEEE CONFERENCE	INTERNATIONAL	979-8-3503-0816-7/23	ESWAR COLLEGE OF ENGINEERING	IEEE explore

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6	**SHAIK CHAND MABHU SUBHANI**	**EMERGING TRENDS IN MECHANICAL ENGINEERING AND INDUSTRAIL AUTOMATION**	TRANSIENT THERMAL ANDSTRUCTURAL ANALYSIS OF DISC BRAKE	PROCEEDINGS OF ICETMEIA-2K22	**INTERNATIONAL**	978-93-91420-07-9	ESWAR COLLEGE OF ENGINEERING	SPECTRUM PUBLICATIONS
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TRASIENT THERMAL AND STRUCTURAL ANALYSIS OF DISC BRAKE

R.Rambabu[1], N.Hymavathii[2], Shaik. Chand MabhuSubhani[3]
[1] Asst. Professor & HOD, Department of Automobile Engineering, Eswar college of Engineering, Narasarao pet
[2] Asst. Professor, Department of Automobile Engineering, Eswar college of Engineering, Narasarao pet
[3] Asst. Professor, Department of Mechanical Engineering, Eswar college of Engineering, Narasarao pet

Abstract— **Braking system is a process which converts the kinetic energy of the vehicle into mechanical energy which must be dissipated into the atmosphere in the form of heat. A brake disc usually made of cast iron or ceramic composites is connected to the wheel and/or the axle. Friction material in the form of brake pads is forced mechanically, hydraulically, pneumatically or electromagnetically against both sides of the disc to stop the wheel. The present analysis "transient thermal and structural analysis of disc brake" deals with the heat generation in the different disc brake materials with varying speeds of the vehicle and the dissipation of heat through these materials and also the deformation and the stresses produced in these materials because of the temperature rise is analysed. A comparative study is made between these materials to suggest the best material for the disc brake in the aspect of the problem considered. Modelling of the disc brake has done using CATIAV5 and the complete analysis is done by using Ansys 16.0.**

1. INTRODUCTION

Of all the systems that make car, the brake system is one of the most important. Its function determined the safety of the driver, passenger and also pedestrian. In the olden days it was also one of the simplest. Over the years as improvements have been made, the system that has evolved isn't so simple anymore. Brake system work as hard or harder than any other part of the car, however much energy it takes to get the car up a hill, it takes at least as much energy to stop it at the bottom. In general, there are three main functions of a brake system, to maintain a vehicle's speed when driving downhill, to reduce a vehicle's speed when necessary and to hold a vehicle when in parking. When the brakes were applied, the pads or shoes that press against the brake drum or rotor convert kinetic energy into thermal energy via friction. The cooling of the brakes dissipates the heat and the vehicle slows down. This is all to do with The First Law of Thermodynamics, sometimes known as the law of conservation of energy. This law states that energy cannot be created nor destroyed; it can only be converted from one form to another. In the case of brakes, it is converted from kinetic energy to thermal energy.

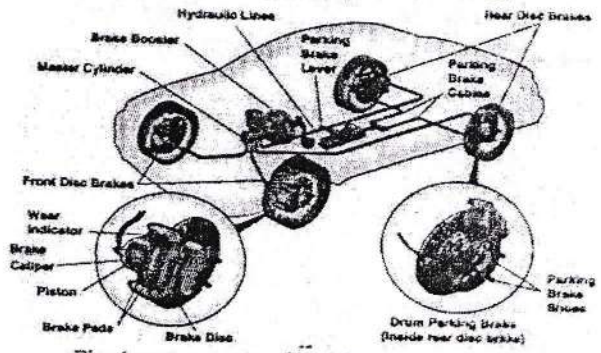

Fig: 1 components of braking system in a car

Typically, there are two types of brakes that were implemented in today's car, drum brake and disc brake. Disc brake is widely used because its design is far superior to that of drum brakes. Disc brakes use a slim disc and small caliper to halt wheel movement. Within the caliper are two brake pads, one on each side of the disc, that clamp together when the brake pedal is pressed. Fluid is used to transfer the movement of the brake pedal into the movement of the brake pads. The disc used in disc brakes is fully exposed to outside air. This exposure works to constantly to cool the disc, greatly reducing its tendency to overheat or cause fading.

1.2 Components of disc brake

A disk brake consists of so many components disk bolted to the wheel hub and a stationary housing called caliper. The caliper is connected to some stationary part of the vehicle like the axle casting or the stub axle as is cast in two parts each part containing a piston. In between each piston and the disc there is a friction pad held in position by retaining pins, spring plates etc. The passages are also connected to another one for bleeding. Each cylinder contains rubber-sealing ring between the cylinder and piston.

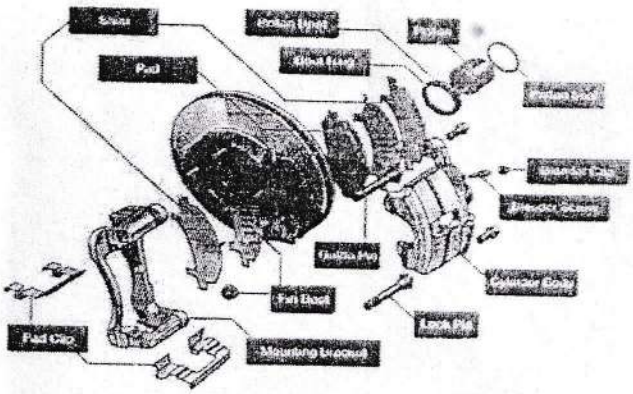

Fig 2: Components of disc brake

The main components of the disk brake are:

- The Brake Pads
- The Caliper which contains the piston
- The Rotor which is mounted to the hub

When the brakes are applied, hydraulically actuated pistons move the friction pads in to contact with the rotating disk, applying equal and opposite forces on the disk. Due to the friction in between disk and pad surfaces, the kinetic energy of the rotating wheel is converted into heat, by which vehicle is to stop after a certain distance. On releasing the brakes the rubbers-sealing rings acts as return spring and retract the pistons and the friction pads away from the disk.

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Simulation of AUW Robotic vehicle body using FEA method

SKCM Subhani[1], Pilli Sravani[2]

[1]Assistant Professor, Department of Mechanical Engineering, Eswar College of Engineering, Narasaraopet, AP.

[2]Assistant Professor, Department of Mechanical Engineering, Narasaraopeta Engineering College (Autonomous), Narasaraopet, AP.

ABSTRACT:

An Autonomous Underwater Robotic Vehicle (AUWRV) is a robot that travels underwater without requiring input from an operator. AUWRVs constitute part of a larger group of undersea systems known as unmanned underwater vehicles, the structure of an Autonomous Underwater Robotic Vehicle (AUWRV), usually composed of a cylindrical shell, may be exposed to high hydrostatic pressures where buckling collapse occurs before yield stress failure. In conventional submarines, welded stiffeners increase the buckling resistance, however, in small AUWRVs, they reduce the inner space and cause residual stresses. The Aim of the project work presents an innovative concept for the structural design of an AUWRV Pressure vessel, proposing the use of sliding stiffeners that are part of the structure used to accommodate the electronics inside it.

Design of AUWRV pressure vessel using Catia software and analysis using Ansys software using sand which beam material in this project taken total 4 cases.

CASE 1: 2mm Steel + 2mm Rubber +2mm Steel

CASE 2: 2.5mm Steel + 1mm Rubber +2.5mm Steel

CASE 3 :2mm Ti64Al + 2mm Rubber +2mm Ti64Al

CASE 4: 2.5mm Ti64Al + 1mm Rubber +2.5mm Ti64Al

Finally concluded the which material is suitable on pressure vessel based on the stresses, strains, deformation, shear stress in static analysis and in modal analysis find out the modes at Total deformation in different Frequency

KEYWORDS: *AUWRV, ANSYS, CATIA,Analysis,Materials*

I. INTRODUCTION

1.1. INTRODUCTION OF AUTONOMOUS UNDERWATER ROBOTIC VEHICLE (AUWRV)

Autonomous Underwater Vehicles (AUWRVs) are programmable, robotic vehicles that, depending on their design, can drift, drive, or glide through the ocean without real-time control by human operators. Some AUWRVs communicate with operators periodically or continuously through satellite signals or underwater acoustic beacons to permit some level of control.

AUWRVs allow scientists to conduct other experiments from a surface ship while the vehicle is off collecting data elsewhere on the surface or in the deep ocean.

Some AUWRVs can also make decisions on their own, changing their mission profile based on environmental data they receive through sensors while under way.

The first AUWRV was developed at the Applied Physics Laboratory at the University of Washington as early as 1957 by Stan Murphy, Bob Francois and later on, Terry Ewart. The term light hull (casing) is used to describe the outer hull of a submarine, which houses the pressure hull, providing hydro dynamically efficient shape, but not holding pressure difference.

The term pressure hull is used to describe the inner hull of a submarine, which holds the difference between outside and inside pressure.

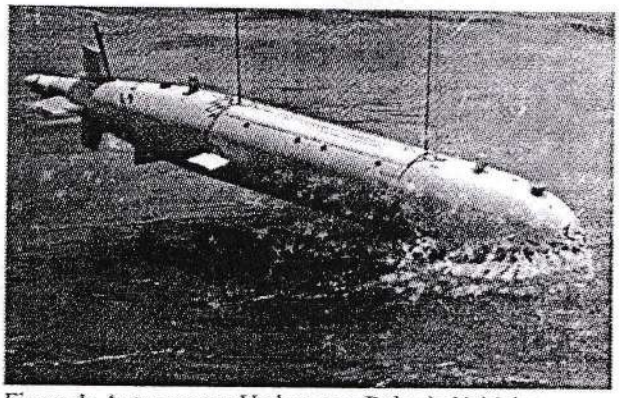

Figure 1: Autonomous Underwater Robotic Vehicles

1.2 PRESSURE HULL

Inside the outer hull there is a strong hull, or pressure hull, which actually withstands the outside pressure and has normal atmospheric pressure inside. The pressure hull is generally constructed of thick high-strength steel with a complex structure and high strength reserve, and is separated with watertight bulkheads into several compartments. The pressure and light hulls aren't separated, and form a three-dimensional structure with increased strength. The inter hull space is used for some of the equipment which doesn't require constant pressure to operate. The list significantly differs between submarines, and generally includes different water/air tanks. In case of a single-hull submarine, the light hull and the pressure hull are the same except for the bow and stern. The constructions of a pressure hull require a high

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STERILIZATION OF WATERCOURCE CONTRIVANCE

R.Rambabu[1], N.Hymavathi[2], D Raghavendra[3]
[1] Asst. Professor & HOD, Department of Automobile Engineering, Eswar college of Engineering, Narasaraopet
[2] Asst. Professor, Department of Automobile Engineering, Eswar college of Engineering, Narasaraopet
[3] Asst. Professor, Department of Mechanical Engineering, Narasaraopet Engineering College, Narasaraopet

Abstract: River is the important source for water the livelihood. Maintaining its purity is very important. Water pollution is the addition of undesirable substance in water such as inorganic, organic, biological, radiological, heat, which degrades the quality of water so that it becomes unfit for use. Also, on the other hand gutter acts as a channel to divert the waste water from the water source, where it again meets the river at the other end. Hence, maintaining the purity of both the river is very important. However, cleaning of waste water by using man power will causes health problems and diseases occurs. To overcome these types of problems we designed an automatic river cleaning machine by using conveyor. The main objective of this project is to cleaning the river to reduce the man power, and time. In this project we have Automatic River cleaning with the help of mechanical conveyor. This project emphasis on cleaning of water. The work has done looking at the current situation of our national rivers which are dump with crore litres of sewage and loaded with pollutants, toxic materials, debris etc. by using conveyor mechanism we can collect all types of unwanted waste from all water bodies with less capital.

1. INTRODUCTION:

Rivers are important part of human lives. But, unfortunately, only few are aware of its importance. The proof tons of trash in rivers and creeks, making it took and smell like a dumpsite. The garbage in rivers is more than just an eyesore because it can possibly contaminate our drinking water, threaten nature, our lives and aquatic animals.

The waste and gases produced from the industries are very harmful to human beings and to the environment. Our proposed system is used to clean and control the water garbage level using automatic conveyor mechanism technique.

The "River cleaning machine" used in that places where there is waste debris in the water body which are to here move. This machine which consists of water wheel driven conveyor mechanism which collects & remove the wastage, garbage & plastic wastages from water bodies. This also reduce the difficulties which we face when collection of debris take place.

A machine will collect the waste debris from the water bodies through the conveyor, this will ultimately result in reduction of water pollution and lastly the aquatic animal's death to reduce these types of problems. Water bodies for clean the surface water debris from bodies. Similarly, they are lots of problems of water pollution under Ganga River, Godavari River, and Nasik which affect the acoustic, human life & beauty of Ganga River.

1.1. Importance of River Cleaning:

The rivers in India play an important role in the lives of the peoples as following below:

- According to a World Bank report titled 'Issues and Priorities for Agriculture', India has about 195 million hectares of land under cultivation.
- Of this, about 63% or nearly 125 million hectares is rain-fed, while remaining 37% or 70 million hectares of the agricultural land depends on irrigation. Generally, rivers around agricultural zones provide much-needed water for irrigation.
- Several wildlife sanctuaries of India are located on banks of rivers and their backwaters.
- They provide potable water, cheap transportation , electricity , and the livelihood for many people nationwide.
- The rivers also have an important role in Hindu Religion and are considered holy by many Hindus in the country
- These national parks are home to several endangered species that feature on Red List of International Union for Conservation of Nature (IUCN). Hence rivers in India are critical to their survival.
- Further, rivers of India also provide livelihood to millions of people including fishermen, sand dredgers and various other professions.

1.2. Causes of Pollution:

1. Oil & Natural Gas Exploration:
2. Chemicals & Effluents:
3. Garbage Dumping:
4. Washing & Sewage:
5. Cremation & Last Rites
6. Sand Dredging:

Possible Consequences of River Water Pollution:

1. Impact on Flora & Fauna:
2. Loss of Livelihood:
3. Food Security:.
4. Drinking Water:
5. Agriculture:
6. Loss of Export Revenue

1.3. Control to Pollution:

Reducing the effluent concentration of the waste input by:

- Wastewater treatment
- Industrial in-plant process control
- Eliminating effluent constituents by pre-treatment prior to discharge to sewer systems or by different product manufacturing for an industry.
- Reducing the upstream concentration by upstream point and non – point source controls.

Reducing the effluent volume by:

- Reduction of direct industrial discharge volumes into the municipal sewer system.
- Reduction in infiltration into municipal sewer systems.

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R.Rambabu[1], N.Hymavathii[2], D Raghavendra[3]
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Rivers are important part of human lives. But, unfortunately, only few are aware of its importance. The proof tons of trash in rivers and creeks, making it took and smell like a dumpsite. The garbage in rivers is more than just an eyesore because it can possibly contaminate our drinking water, threaten nature, our lives and aquatic animals.

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The "River cleaning machine" used in that places where there is waste debris in the water body which are to here move. This machine which consists of water wheel driven conveyor mechanism which collects & remove the wastage, garbage & plastic wastages from water bodies. This also reduce the difficulties which we face when collection of debris take place.

A machine will collect the waste debris from the water bodies through the conveyor, this will ultimately result in reduction of water pollution and lastly the aquatic animal's death to reduce these types of problems. Water bodies for clean the surface water debris from bodies. Similarly, they are lots of problems of water pollution under Ganga River, Godavari River, and Nasik which affect the acoustic, human life & beauty of Ganga River.

1.1. Importance of River Cleaning:

The rivers in India play an important role in the lives of the peoples as following below:

- According to a World Bank report titled 'Issues and Priorities for Agriculture', India has about 195 million hectares of land under cultivation.
- Of this, about 63% or nearly 125 million hectares is rain-fed, while remaining 37% or 70 million hectares of the agricultural land depends on irrigation. Generally, rivers around agricultural zones provide much-needed water for irrigation.
- Several wildlife sanctuaries of India are located on banks of rivers and their backwaters.
- They provide potable water, cheap transportation , electricity , and the livelihood for many people nationwide.
- The rivers also have an important role in Hindu Religion and are considered holy by many Hindus in the country
- These national parks are home to several endangered species that feature on Red List of International Union for Conservation of Nature (IUCN). Hence rivers in India are critical to their survival.
- Further, rivers of India also provide livelihood to millions of people including fishermen, sand dredgers and various other professions.

1.2. Causes of Pollution:

1. Oil & Natural Gas Exploration:
2. Chemicals & Effluents:
3. Garbage Dumping:
4. Washing & Sewage:
5. Cremation & Last Rites
6. Sand Dredging:

Possible Consequences of River Water Pollution:

1. Impact on Flora & Fauna:
2. Loss of Livelihood:
3. Food Security:.
4. Drinking Water:
5. Agriculture:
6. Loss of Export Revenue

1.3. Control to Pollution:

Reducing the effluent concentration of the waste input by:

- Wastewater treatment
- Industrial in-plant process control
- Eliminating effluent constituents by pre-treatment prior to discharge to sewer systems or by different product manufacturing for an industry
- Reducing the upstream concentration by upstream point and non – point source controls.

Reducing the effluent volume by:

- Reduction of [illegible] disposal [illegible] the municipal sewer [illegible]
- Reduction [illegible] infiltration [illegible] municipal sewer systems.

Application of Machine Learning and Deep Learning Algorithms to the Prediction of Stock Market Trends

Publisher: IEEE

Cite This PDF

Shravan Khunti ; Prikshit Kumar ; M. Lakshman Rao ; T Vijay Muni ; Varun Sanjeev Singh ; Shaik Chand Mabhu Subhani All Authors

Abstract: The stock market's inherent volatility poses ongoing challenges for stock traders, as it is subject to a multitude of circumstances that exert influence on its behavior. ... View more

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Abstract:
The stock market's inherent volatility poses ongoing challenges for stock traders, as it is subject to a multitude of circumstances that exert influence on its behavior. This research aims to mitigate the risk associated with forecasting stock market trends through the utilization of deep learning and machine learning techniques. Eleven machine learning models were utilized in this study: random forest, logistic regression, xgboost, naive Bayes, K-nearest neighbors, decision tree and support vector classifier and extreme gradient boosting. Additionally, two powerful deep learning techniques: recurrent neural networks (RNN) and long short term memory (LSTM) were used. From the Tehran Stock Exchange, four market groups were chosen for the experimental estimates. Petroleum, non-metallic minerals, basic metals, and diversified financials are all part of these categories.

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Shravan Khunti
Dept.of Aerospace Eng

Prikshit Kumar
Dept.of Information Tec

M. Lakshman Rao
Dept.of Mechanical Engineering, Madanapalle Institute of Technology & Science, Madanapalle, India

T Vijay Muni
Dept.of Electrical and Electronics Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, India

Varun Sanjeev Singh
Dept.of Aerospace Engineering, Chandigarh University, Ludhiana - Chandigarh State Hwy, Punjab, India

Shaik Chand Mabhu Subhani
Department of Mechanical Engineering, Eswar College of Engineering, Narasaraopeta, India

Contents

The focus of recent business research has been on challenging and time-consuming topics like future stock price estimates. Contrarily, financial data is perceived as being challenging to forecast and anticipate. Business associations, scholars, and interested parties are keen to obtain the stock price projection of stock market trends because they think that knowledge from the past and present influences events that will happen in the future. Fama's efficient market hypothesis (EMH) (1990) shows that forecasting market prices is challenging.

Authors

Shravan Khunti
Dept.of Aerospace Engineering, Chandigarh University, Ludhiana - Chandigarh State Hwy, Punjab, India

Prikshit Kumar
Dept.of Information Technology, JC Bose University of Science and Technology, Faridabad, Haryana, India

M. Lakshman Rao
Dept.of Mechanical Engineering, Madanapalle Institute of Technology & Science, Madanapalle, India

T Vijay Muni
Dept.of Electrical and Electronics Engineering, Koneru Lakshmaiah Education Foundation, Vaddeswaram, India

Varun Sanjeev Singh
Dept.of Aerospace Engineering, Chandigarh University, Ludhiana - Chandigarh State Hwy, Punjab, India

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Department of Mechanical Engineering, Eswar College of Engineering, Narasaraopeta, India

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TRASIENT THERMAL AND STRUCTURAL ANALYSIS OF DISC BRAKE

R.Rambabu[1], N.Hymavathii[2], Shaik. Chand MabhuSubhani[3]
[1] Asst. Professor & HOD, Department of Automobile Engineering, Eswar college of Engineering, Narasarao pet
[2] Asst. Professor, Department of Automobile Engineering, Eswar college of Engineering, Narasarao pet
[3] Asst. Professor, Department of Mechanical Engineering, Eswar college of Engineering, Narasarao pet

Abstract— **Braking system is a process which converts the kinetic energy of the vehicle into mechanical energy which must be dissipated into the atmosphere in the form of heat. A brake disc usually made of cast iron or ceramic composites is connected to the wheel and/or the axle. Friction material in the form of brake pads is forced mechanically, hydraulically, pneumatically or electromagnetically against both sides of the disc to stop the wheel. The present analysis "transient thermal and structural analysis of disc brake" deals with the heat generation in the different disc brake materials with varying speeds of the vehicle and the dissipation of heat through these materials and also the deformation and the stresses produced in these materials because of the temperature rise is analysed. A comparative study is made between these materials to suggest the best material for the disc brake in the aspect of the problem considered. Modelling of the disc brake has done using CATIAV5 and the complete analysis is done by using Ansys 16.0.**

1. INTRODUCTION

Of all the systems that make car, the brake system is one of the most important. Its function determined the safety of the driver, passenger and also pedestrian. In the olden days it was also one of the simplest. Over the years as improvements have been made, the system that has evolved isn't so simple anymore. Brake system work as hard or harder than any other part of the car, however much energy it takes to get the car up a hill, it takes at least as much energy to stop it at the bottom. In general, there are three main functions of a brake system, to maintain a vehicle's speed when driving downhill, to reduce a vehicle's speed when necessary and to hold a vehicle when in parking. When the brakes were applied, the pads or shoes that press against the brake drum or rotor convert kinetic energy into thermal energy via friction. The cooling of the brakes dissipates the heat and the vehicle slows down. This is all to do with The First Law of Thermodynamics, sometimes known as the law of conservation of energy. This law states that energy cannot be created nor destroyed; it can only be converted from one form to another. In the case of brakes, it is converted from kinetic energy to thermal energy.

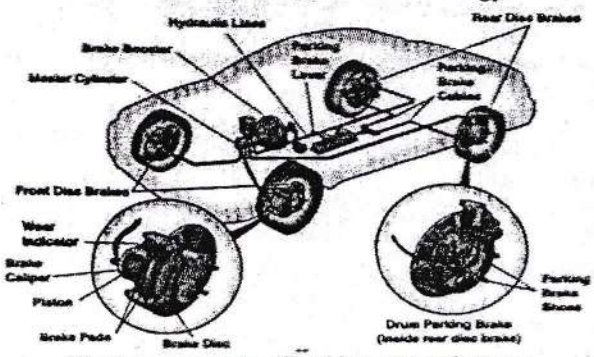

Fig: 1 components of braking system in a car

Typically, there are two types of brakes that were implemented in today's car, drum brake and disc brake. Disc brake is widely used because its design is far superior to that of drum brakes. Disc brakes use a slim disc and small caliper to halt wheel movement. Within the caliper are two brake pads, one on each side of the disc, that clamp together when the brake pedal is pressed. Fluid is used to transfer the movement of the brake pedal into the movement of the brake pads. The disc used in disc brakes is fully exposed to outside air. This exposure works to constantly to cool the disc, greatly reducing its tendency to overheat or cause fading.

1.2 Components of disc brake

A disk brake consists of so many components disk bolted to the wheel hub and a stationary housing called caliper. The caliper is connected to some stationary part of the vehicle like the axle casting or the stub axle as is cast in two part each part containing a piston. In between each piston and the disc there is a friction pad held in position by retaining pins, spring plates etc. The passages are also connected to another one for bleeding. Each cylinder contains rubber sealing ring between the cylinder and piston.

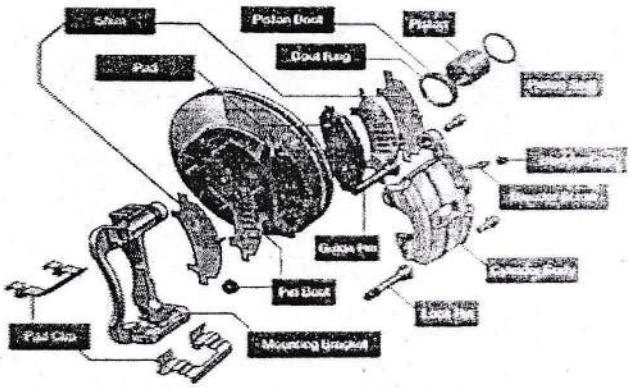

Fig 2: Components of disc brake

The main components of the disk brake are:

- The Brake Pads
- The Caliper which contains the piston
- The Rotor which is mounted to the hub

When the brakes are applied, hydraulically actuated pistons move the friction pads in to contact with the rotating disk, applying equal and opposite forces on the disk. Due to the friction in between disk and pad surfaces, the kinetic energy of the rotating wheel is converted into heat, due which vehicle is to stop after a certain distance. On releasing the brakes the rubbers seal the pistons as return spring and retract the pistons and the friction pads away from the disk.

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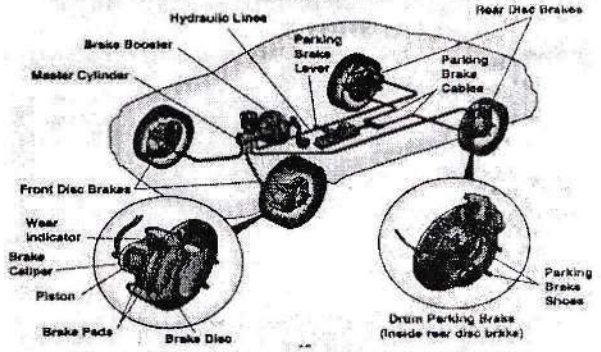

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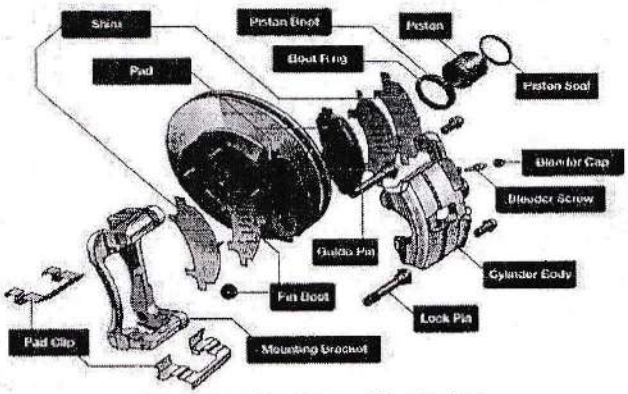

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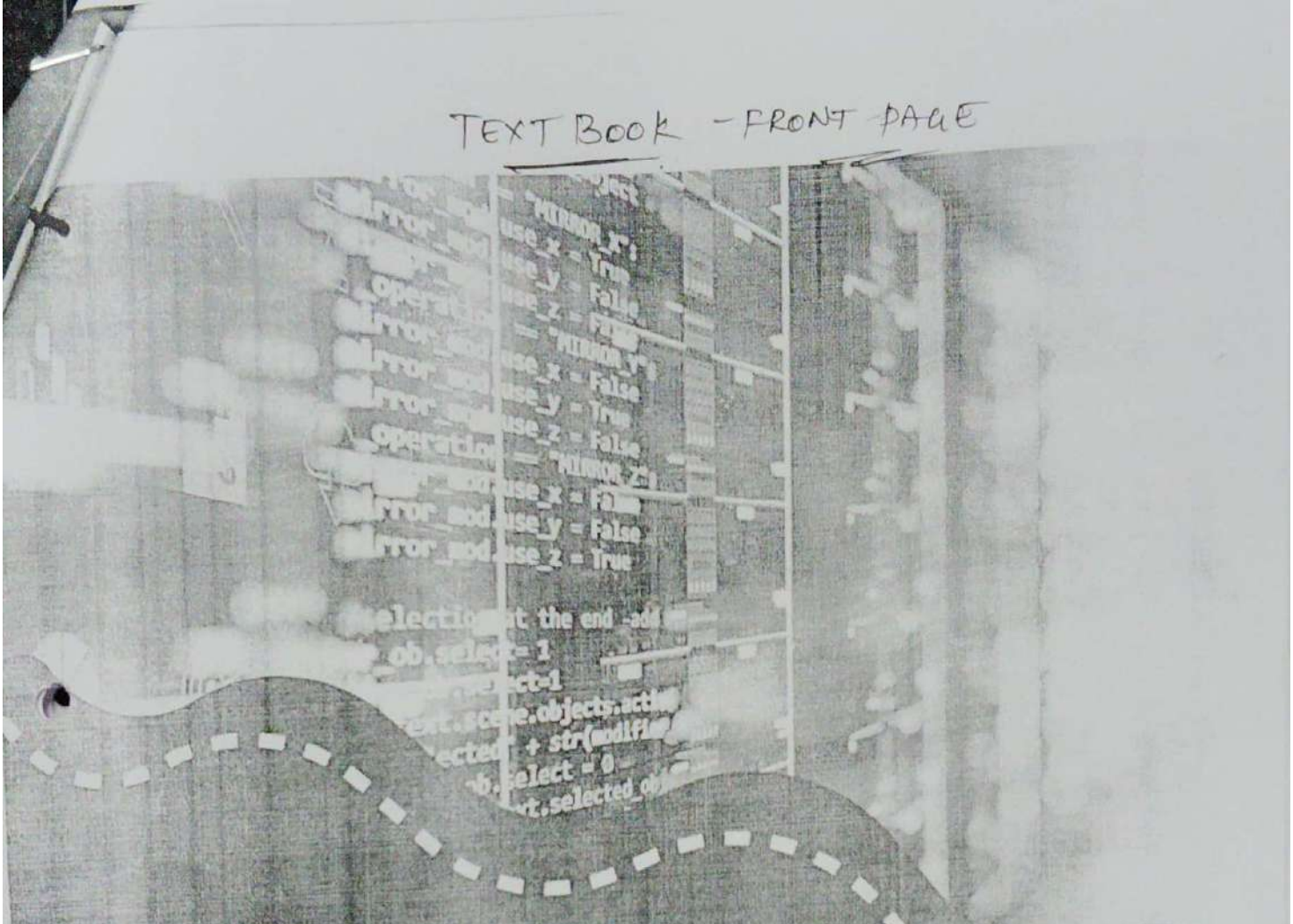

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ESWAR COLLEGE OF ENGINEERING
Chilakaluripet Road,
Kesanupalli (V), NARASARAOPET (MD)
Palnadu Dist, A.P. 522 549

Dr. B. Srikanth
Dr. S[illegible] Lakshmi V Papineni
[illegible] Syed Khasim

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ACCEPTANCE LETTER

Accepted Title: An Efficient Cross-Layered Approach Quality Aware Energy Efficient Routing Protocol for QOS in MANET

Author(s) Name: S. Jayaprada, B. Srikanth, Chokka Anuradha, K. Kranthi Kumar, Syed Khasim, Padmaja grandhe

Paper ID: ICMCSI035

Dear Author(s)

The International Conference on Mobile Computing and Sustainable Informatics would like to congratulate you on your acceptance to the ICMCSI 2022, Springer Conference, which will be held from 27-28, January 2022 at Tribhuvan University, Nepal. Your paper has been officially selected to present in the ICMCSI 2022 conference.

The proceedings of 3rd ICMCSI 2022 will be published by Springer Lecture Notes on Data Engineering and Communications Technologies. As your paper has been formally accepted for publication in ICMCSI 2022 conference, we appreciate, if you could send the final version of your research manuscript at your earliest convenience to ensure a timely publication of your research paper. While submitting the final manuscript, the authors(s) should highlight the changes made according to the review comments in the final submission email.

Thank you for your contribution to ICMSCI 2022.

Sincerely,

Prof. Dr. Subarna Shakya,
Pulchowk Campus,
Institute of Engineering,
Tribhuvan University,
Nepal.

PRINCIPAL
ESWAR COLLEGE OF ENGINEERING
Chilakaluripet Road,
Kesanupalli (V), NARASARAOPET (MD)
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