IEI Epitome

Volume 8 | Issue 6 | June 2023

A Century of Service to the Nation

IN THIS ISSUE ...

announcements ...

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8 Gokhale Road, Kolkata 700020
Telephone : 91-33-40106299/248
E-mail : newsletter@ieindia.org
Website : http://www.ieindia.org

Notification for IEI R&D Grant-in-Aid

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To promote appropriate technology, assist in building up design & research talents and, most importantly, to help in nurturing potential R&D venture amongst engineering students pursuing Diploma/UG/PG/PhD courses. The Institution of Engineers (India) had instituted the R&D Grant-in-Aid program way back in 2001.

Every year, the Institution invites applications for funding industry-oriented R&D projects and research initiatives aimed at improving the life-style of common people from engineering students pursuing full time Diploma/UG/PG/PhD engineering program in AICTE/UGC/NAAC approved Institutions / Colleges / Universities. The application form and guidelines are available in our website https://www.ieindia.org. The projects should be carried out under the guidance of faculty members who are Corporate Members of IEI. Membership criteria for student(s), guide(s) and institution(s) are as follows:

Project Category	Student/Applicant Membership	Guide(s) Membership	Institutional Membership
1. Diploma	Exempted [Membership of Student Chapter is desirable]	AMIE/MIE/FIE	Not Mandatory
2. UG (BE/BTech/ Equivalent)	'Student Member' (SMIE)	AMIE/MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA/NAAC Accreditation or valid NIRF Rank
3. PG (ME/MTech/ Equivalent)	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA/NAAC Accreditation or valid NIRF Rank
4. PhD	AMIE/MIE/FIE	MIE/FIE	Applicant's Institute should preferably be an Institutional Member with NBA/NAAC Accreditation or valid NIRF Rank

The soft copy of the duly filled-up applications (in editable format), as per the proforma available in our website www.ieindia.org, should be sent through email to research@ieindia.org and one printed copy of the same should reach the following address:

Director (Technical)
The Institution of Engineers (India)
8 Gokhale Road, Kolkata 700 020

Kindly go through the guidelines (visit link: **https://www.ieindia.org/webui/IEI-Activities.aspx#RnD-Initiative**) before filling up the application.

Dr Sajan K Jose, FIE
Associate Professor & Head
Department of Civil Engineering, LBS Institute of Technology for Women, Thiruvananthapuram, Kerala
✉ sajankjose@lbsitw.ac.in

Dr Sajan K Jose obtained the **Doctor of Philosophy** in **Civil (Structural) Engineering** on the thesis entitled "**Studies on Foamed Concrete Construction Blocks using Industrial Wastes**" on17 January 2023.

Er Ebin PM, AMIE
Assistant Professor
Chandigarh University, Mohali, Punjab
✉ pmebin74@gmail.com

Er Ebin PM is awarded with **NPTEL Faculty Excellence Award** on **30 April 2023** for his exceptional performance and outstanding progress in year 2022.

WFEO 2023 Awards – Call for Nominations

The WFEO Secretariat is pleased to advise you that the call for nominations is now open for:

- The 2023 WFEO - GREE Women in Engineering Award
- The 2023 WFEO Medal for Excellence in Engineering Education
- The 2023 WFEO - CCC H. J. Sabbagh Prize for Excellence in Engineering Construction

The combined presentation and nomination forms for each of the above mentioned Awards can be downloaded at http://www.wfeo.org/awards.

The awards are open for nominations by any institution, however nominations sent or supported by WFEO member organizations will be highly regarded.

For all three awards, please note that the deadline for nominating for any of those awards is 31 August 2023.

Nominations are to be sent only at wfeo-awards@wfeo.org.

The Laureates will be announced at the forthcoming WFEO World Engineers' Convention and General Assembly meetings in Prague, 9-15 October 2023.

The WFEO Secretariat may be contacted at secretariat@wfeo.org for any queries.

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Books ....

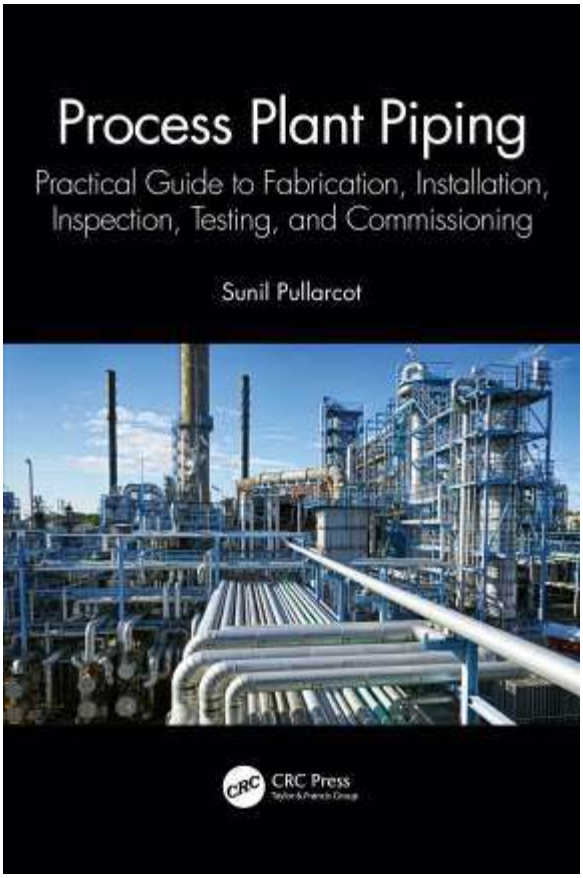
Er Sunil Kumar Narendran Pullarcot, FIE
Former Specialist
Kuwait Oil Company, Ahmadi, Kuwait
✉: sunilpullarcot@gmail.com

PROCESS PLANT PIPING
Practical Guide to Fabrication, Installation, Inspection, Testing and Commissioning

About the Book

Piping is the interconnection used in process plants for transferring process fluid from one equipment (static / rotating) to another, to complete chemical process involved.

Many books are available in the market dealing with many aspects of piping including portions of construction and associated services, whereas one covering all aspects related to construction of piping was not available in the market, especially for reference and guidance to fresh engineers and technicians joining this line of business.



Purpose of this book is to serve as a single point resource providing basic information on all aspects of piping and detailed information on all aspects pertaining to Manufacture, Installation, Inspection, Testing and Commissioning of a process plant construction. In nutshell, the book deals in detail all aspects of construction after engineeringuntil completion and handing over for commissioning. However, this does not mean that the book eludes basic engineering involved in piping. To make the coverage complete and comprehensive, a brief about development of piping documents,starting from basic concept documents to isometrics is also included. For the same purpose, a brief about all commonly used piping elements (pipes, fittings, flanges, bolting, gaskets, valves etc.) are also included in the book even though such basics would be known to most of the novice in the field.

Agencies concerned with safety of operating process plants and industry, together developed standards and specifications for almost all industrial components,and process plant piping was no exception. American Society of Mechanical Engineers (ASMEs) B 31.3 (Process Piping) being one of the standards predominantly used across the world, entire contents of this book are organized in line with requirements of ASME B 31.3 and in sequence of actual work progression at site.

As mentioned earlier, the book is entirely based on practical experience of the author and solutions offered in the book are

simple, straight forward and could be understood even by engineers without much experience. Since methodologies and solutions proposed in the book are well within the requirements of ASME 31.3, it can be safely applied to other piping as well, which are not covered by its jurisdiction such as water piping etc. In addition, book also provides logical explanation to various code requirements and is capable of throwing some light into unexplained side of piping code and this feature of the book makes it really different from other books already on shelves.

The book principally targets beginners in construction industry and it deals with practical tips for manufacture of piping spools, its installation, field welding / joining, inspection, testing and up to commissioning of the plant, including documentation pertaining to piping construction. Many of the tips included in the book are from author's practical improvisation of existing practices within industry, which were proved successful in projects he was involved in.

In conclusion, as in the case of previous two books by the author, "PRACTICAL GUIDE TO PRESSURE VESSEL MANUFACTURING" published by M/s Marcel Dekker Inc. New York in 2002 and "ABOVE GROUND STORAGE TANKS-PRACTICAL GUIDE TO CONSTRUCTION INSPECTION & TESTING" published by CRC Press in 2015, this book also could be considered as an effort to bridge the awareness gap between codes/ standards and the actual constructionpractice followed at construction sites.

At this time of publication of this book, author fondly remember the immense support he got from renowned contractors like Petrofac and various inspection agencies and personnel he worked with, in giving this book the present stature, by way of their valuable opinions and advice.

Description:

ISBN	:	9781032357072
eBook ISBN	:	9781003328124
DOI	:	https://doi.org/10.1201/9781003328124
Edition	:	First, 2023
eBook Published	:	31 March 2023
Publisher	:	CRC Press, Taylor and Francis Group, Boca Raton
Subjects	:	Engineering & Technology

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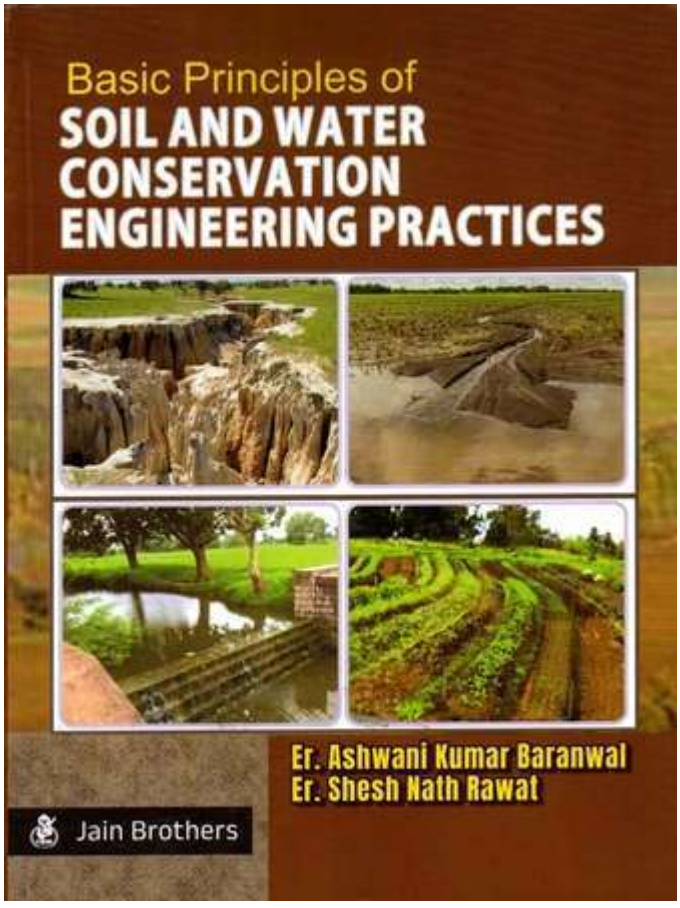
Er Ashwani Kumar Baranwal, MIE
Class II Engineering (Officer)
Department of Agriculture, Soil and Conservation Section, U P Government
✉: sunilpullarcot@gmail.com

BASIC PRINCIPLES OF SOIL AND WATER CONSERVATION ENGINEERING PRACTICES

This book "**Basic Principles of Soil and Water Conservation Engineering Practices**" is designed to introduce basic and applied concepts of soil and water conservation practices for Agricultural Engineering.

It covers principles of Soil and Water Conservation,theory of erosion and mechanics, methods and practices to control the erosion, theory of runoff, engineering and mechanical practices, soil conservation structures, Soil survey, water shed and command area development and land deveiopment.

Especially brief about soil erosion types and mechanics, water and wind erosion mechanics and forms, soil loss measurement, Biological measures for soil and water conservation, Design of Bonds, terraces and vegetated water ways, Gully and ravine reclaimation, Design of wind breaks and shelterbelts and stabilization of sand dunes, Design of soil and water conservation structures like check dams, gully plugs, gabion structures, earth dams, silt detention dams and farm ponds, soil loss estimation methods, criteria of selection of appropriate structures as per soil, land use and climate condition, cost economic of watershed and command area deveiopment projects and their impact.



This book is very useful for Undergraduate, Postgraduate and research for Agriculture Engineering as well as Civil Engineering branch also helpful for competitive examination i.e. GATE, JRF, SRF, IFS, PSC and UPSC and professional working peoples in this field.

Description:

Co-author : Er Shesh Nath Rawat
ISBN : 9789390576111
Edition : First, 2023
Published : February 2023
Publisher : Jain Brothers, New Delhi;
jain_bros@hotmail.com;
www.thejainbrothers.com
Category : Agricultural Sciences and Agricultural Engineering

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Papers published in the Journals / Proceedings ....

Er Ashutosh Kumar, FIE
Former Director (Technical)
Kanodia Cem Pvt. Ltd, Uttar Pradesh
✉: ashutoshkumar1969@gmail.com; ak7688@bennett.edu.in

Title of Paper: Experimental Investigation on a Jeffcott Rotor with Combined Coupling Misalignment using Time-frequency Analysis

International Journal of Turbo and Jet Engines, 2023,Online ISSN: 2191-0332, Print ISSN: 0334-0082
DOI: https://doi.org/10.1515/tjj-2023-0033

Co-authors: Prabhakar Sathujoda & Neelanchali Asija Bhalla

Abstract: *Rotating machinery, such as turbo-jet engines, operate at a high rotational speed and passes through critical zones. The dynamic response of high-speed machines is critical for long-term stability and functioning. In this work, a fast and effective method for detecting coupling misalignment utilising time-frequency analysis (TFA) based on both the adaptive noise added complete ensemble empirical mode decomposition and wavelet-based denoising is presented. This novel and innovative method detect the coupling misalignment feature via the amplitude modulation aspect in the envelope analysis of the fault-containing intrinsic mode function. The Hilbert spectrum analysis provides spontaneous frequency and spectral energy in the time-frequency domain. The experiments were performed for various rotor accelerations and combined parallel and angular coupling misalignments using a laboratory test rig. The suggested approach gives excellent denoising efficiency and can improve misalignment identification accuracy. Additionally, it may be highly helpful for machinery that starts and stops often.*

Keywords: *Coupling Misalignment; Complete Ensemble EMD with Adaptive Noise; Empirical Mode Decomposition (EMD); Ensemble EMD; Hilbert Transform; Vibration Analysis*

Know-Your- Member (KYM)

The Institution of Engineers (India) is updating the database of all its **Corporate Members** along with their achievements for which a **Know-Your-Member** (KYM) form has been introduced.

Every Corporate Member is requested to kindly fill up the form and forward it along with the self-attested copy of photo ID proof to the address given below:-

The Director (Membership)
The Institution of Engineers (India)
8 Gokhale Road
Kolkata 700020
Email: datamemb@ieindia.org

The form is available on IEI Website:

https://www.ieindia.org/WebUI/ajax/Downloads/WebUI_PDF/HIGHLIGHTS_DOCUMENT-3332.pdf

Dr Saadat Ali Rizvi, MIE
Faculty Member
University Polytechnic, Jamia Millia Islamia, New Delhi
✉: saritbhu@gmail.com

Title of Paper: Application of Grey based Fuzzy Logic Algorithm in MIG Welding—a Case Study

Engineering Science and Technology, an International Journal (JESTECH), 42, 2023, Online ISSN: 2215-0986
DOI: https://doi.org/10.1016/j.jestch.2023.101431

Co-author: Wajahat Ali

Abstract: *In this article, a grey-based fuzzy logic algorithm was proposed as a soft computing method to optimize the metal inert gas (MIG) welding process parameters during the joining of stainless steel (AISI) 304. In welding, welding process parameters play a significant role to evaluate the weld quality i.e. mechanical properties. Input parameters selected for examination referred to as welding current, voltage, wire feed speed and gas flow rate were optimized. The grey-based fuzzy logic algorithm was used to obtain a grey fuzzy reasoning grade (GFRG) and it was observed from result that experiment number seven have the highest value of MPCI. In this experimental work arc voltage play a major role on the determination of MPCI and it was also observed that the grey-based fuzzy method is very helpful for the continuous enhancement of the product quality and on fractrography mode of fracture was ductile observed.*

Keywords: *Fuzzy Logic; Grey Relation Analysis; Multi-Performance Characteristic Index (MPCI) and Mechanical Properties*

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Dr Ganesh S Kadam, MIE
Associate Professor
Department of Mechanical Engineering, Bharati Vidyapeeth College of Engineering, Navi Mumbai, Maharashtra
✉: ganeshkadam2020@yahoo.com; ganesh.kadam@bvcoenm.edu.in

Title of Paper: Water Vapour Cutting Fluid Assisted Productive Machining of Inconel 718

Materials and Manufacturing Processes, 2023, Online ISSN: 1532-2475, Print ISSN: 1042-6914
DOI: https://doi.org/10.1080/10426914.2023.2190389

Co-author: Raju S Pawade

Abstract: *High-speed turning of Inconel 718 has been assessed with coated carbide tooling incorporating the minutely explored eco-friendly cutting fluid as water vapour. Effect of total seven parameters, viz. nozzle diameter, stand-off distance, pressure, flowrate, cutting speed, feedrate and depth of cut, has been explored for the resulting machined surface quality in terms of surface roughness and surface alterations; additionally introspection of chip reduction ratio has been done to evaluate cooling/lubrication mechanics of water vapour at tool-work interface. The parameters of stand-off distance, cutting speed, feedrate and depth of cut were dominantly affecting the surface roughness with their contributions being 9.70%, 22.70%, 20.85% and 34.47% respectively. By increasing nozzle diameter, stand-off distance and pressure, around 13.28%, 16.47% and 8.82% reduction in surface roughness is possible respectively on account of enhancement of cooling and lubrication effect; however conversely increasing the cutting speed brought around 40% increment in surface roughness.*

Keywords: *Machining; Turning; Ecofriendly; Surface; Roughness; Cutting; Fluids; Inconel*

IEI Industry Excellence Award 2023

Request for Participation

The IEI Industry Excellence Award has been instituted to recognize industry leaders for their innovation, excellence in engineering operations and thereby, to lead their industry in competitive manner. The benchmarks created by the industries in India have included productivity, quality, safety and performance assurance thereby giving India the rightful place in the global markets. Realizing that such industries can provide the leadership to a large number of other industries in the country, it has been considered appropriate by the IEI Council to institute the IEI Industry Excellence Awards in the year 2008.

Applications in specified format (visit link: ***https://www.ieindia.org/webui/IEI-Activities.aspx#industry-excellence-award***) are invited from prospective applicants for **IEI Industry Excellence Award 2023**. The last date of receipt of application for the Award 2023 is **30 September 2023**.

Interested applicants are requested to send their applications (Two hard copies & One soft copy in Pendrive/CD) to the below mentioned address.

The Director (Technical)
The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700 020

Er Naveed Akhtar Javeed Hasan, MIE
Research Scholar
Veermata Jijabai Technological Institute, Mumbai, Maharashtra
✉: akh0071@gmail.com

Title of Paper: Ecological Footprint and Economic Assessment of Conventional and Geopolymer Concrete for Sustainable Construction

Journal of Cleaner Production, 380, 2022, Online ISSN: 1879-1786, Print ISSN: 0959-6526

DOI: https://doi.org/10.1016/j.jclepro.2022.134910

Co-authors: Tarique Ahmad, Dilawar Husain, Abhaykumar S Wayal, Naveed Husain, Tanwir Alam, Ali Majdi

Abstract: *Cement is the binding material in conventional concrete which involves excess lime quarry and large volume of CO_2 emission during its production. On the other hand, the geopolymer concrete is a cement-less concrete where materials such as fly ash, blast furnace slag, bottom ash, construction, and demolition waste etc. are utilized as binder (precursor) when activated with alkaline solution. In the present study, ecological footprint along with the mechanical properties and the incurred cost of the production of M30 conventional cement concrete prepared according to IS, ACI and DOE code of practices were assessed and compared with that of geopolymer concrete. Cement concrete prepared according to IS, ACI and DOE code of practice had the compressive strength of 41 MPa, 43 MPa and 32 MPa respectively at 28 days. The compressive strength of geopolymer concrete was found to be 48 MPa at 28 days which was higher than that of all the conventional concrete. But the ecological footprint and the cost of geopolymer concrete production was found to be lower than that of conventional concrete. The geopolymer concrete had the lowest ecological footprint or the bio-productive land requirement of 0.0224 gha/ m^3 when compared to that of conventional cement concrete. The conventional cement concrete prepared as per the IS code had the highest ecological footprint of 0.0546 gha/m^3. Heat curing contributed to 44% and the material contributed to 46% in the total ecological footprint of geopolymer concrete. However, burden of energy incurred on heat curing can be further reduced by the use of non-conventional source of energy. The production of geopolymer concrete also provides a sustainable disposal option for industrial waste produced as a by-product. Therefore, geopolymer concrete could be seen as eco-friendly and economical alternate to conventional concrete in the era of sustainable development.*

Keywords: *Cement; Carbon Emission; Conventional Concrete; Fly Ash; Geopolymer Concrete; Ecological Footprint*

IEI Engineering Education Excellence Award 2023

Request for Participation

The IEI Engineering Education Excellence Award has been instituted to recognize leading Engineering Educational Institutions and encourage for better and effective engineering education across the country. Significant development has taken place in the engineering education sector which has created benchmarks for the others to follow. The universities and institutions are no more confined to pedagogy but also diversified to R&D activities , Consultancy, Patents, Publication, Skill Development Programs, Industry interface and introduction of New Education Policy (NEP), thereby giving India the rightful place globally. Realizing that such institution can provide the leadership to a large number of others in the country, it has been considered appropriate by the IEI Council to institute the IEI Engineering Education Excellence Awards.

Applications in specified format (visit link: ***https://www.ieindia.org/webui/IEI-Activities.aspx#engineering-education-excellence-award***) are invited from prospective applicants for **IEI Engineering Education Excellence Award 2023**. The last date of receipt of application for the Award 2023 is **30 September 2023**. Interested applicants are requested to send their applications (Four hard copies & One soft copy in Pendrive/CD) to the below mentioned address.

The Director [Technical (I/C)]
The Institution of Engineers (India), 8 Gokhale Road, Kolkata 700 020

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Dr Deepa Lakshmi B, AMIE
Associate Professor
Department of Electrical and Electronics Engineering,
Ramco Institute of Technology, Rajapalayam, Tamil Nadu
✉: deepalakshmi@ritrjpm.ac.in

Title of Paper: Smart Monitoring and Quality Control in Leather Processing Industry

Proceedings of the International Conference on Cognitive and Intelligent Computing, Springer, Singapore, 2023, pp 631-638, Online ISBN: 978-981-19-2358-6, Print ISBN: 978-981-19-2357-9

DOI: https://doi.org/10.1007/978-981-19-2358-6_57

Co-authors: Bhavani N P G, Sujatha K & Tamilselvi C

Abstract: *There is currently no trustworthy method in place to provide continuous monitoring of all process conditions and leather qualities inside closed reactors during leather production, implying that there is no genuine control. Only by pausing the reactor and sampling the solution and leather can conditions inside the reactors be checked. The leather industry's automation systems are based on a dated centralised architecture, which creates a critical point of failure and an operational bottleneck. To increase the efficiency of the leather manufacturing process, the paper offers a fault-tolerant multi-agent system (MAS) architecture that delivers the high flexibility and agility required by the leather industry's turbulent environment. The quality of leather can be determined by image structure, and the quality can be estimated using image processing.*

Keywords: *Multi-Agent Systems; Leather Processing; Tanning; Leather Industry; Image Processing; Smart Monitoring*

Title of Paper: Impact of CIGS, CdS and I — ZnO Film Thickness, Temperature on Efficiency Enhancement of CIGS Solar Cells

Journal of Ceramic Processing Research, Hanyang University, Korea, 23(6), 2022, pp 878-883; Online ISSN: 2672-152X, Print ISSN: 1229-9162

DOI: https://doi.org/10.36410/jcpr.2022.23.6.878

Co-authors: Rajendran R S, Jackrit Suthakorn & Branesh M Pillai

Abstract: *In an attempt to enhance solar light photon to electron transformation proficiency of copper indium gallium selenide (CIGS) solar cells, computational exploration has been accomplished through numerical simulation. The SCAPS program was utilizedto simulate enactment of CIGS. The electrical, optical properties of CIGS such as band diagram, current density,recombination current, IPCE and current –voltage efficiency was analyzed. The electrical, physical properties, thicknesses ofindividual layers comprising CIGS, CdS and ZnO were optimized along with their operating temperature. The CIGS solarcell efficiency analysis was executed and analyzed in the AM1.5 spectrum. The depth of CIGS, CdS and ZnO layers in CIGSsolar cell determines the efficiency. The simulated optimization of CIGS properties is encouraging for enhancing the CIGSsolar cell proficiency.*

Keywords: *CIGS Solar Cells; SCAPS; CdS and ZnO Layers; IPCE*

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Dr Mukesh Kumar Nag, AMIE
Research Scholar
Department of Mechanical Engineering,
National Institute of Technology Jamshedpur, Jharkhand
✉: nag0859@gmail.com

Title of Paper: Optimization of Cost and Performance of the Material used in the Mechanism Unit of Air Circuit Breaker (ACB) based on Various Analysis Approach

Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, Sage Journals, 2023, Online ISSN: 2041-2975, Print ISSN: 0954-4054

DOI: https://doi.org/10.1177/09544054231168682

Co-author: Parmanand Kumar

Abstract: *Air Circuit Breakers are used for circuit protection from the faulty current that might damage the subsystems of the circuits like motors, transformers, transmission systems, etc. The cost optimization of the component used in the mechanism unit of Air Circuit Breaker (ACB). This can be achieved by replacing the existing material AISI 9260 to equivalent proposed material AISI 4140. This material exhibits the better mechanical properties in all aspects, along with low process cost involved during manufacturing of the components. This paper presents comparative dealing with the properties like hardening & tempering, hardenability, weldability, stamping-ability, endurance limit, and modification factors of the existing material AISI 9260 to proposed material AISI 4140. The proposed steel AISI 4140 is suitable for ACB mechanism parts which exhibits the same reliability and better mechanical properties than presently used AISI 9260 steel. The proposed AISI 4140 steel reduces the cost of the component by elimination and replacing the partial or fully heat treatment cost and wire electric discharge machining (WEDM) cost respectively. Because the component manufactured with AISI 4140 steel shows the desired mechanical properties only in hot rolled conditions with additional localized hardening, wherever the rolling surface is present. The elimination and replacement of heat treatment and WEDM process cost involved in present AISI 9260 steel components, can be achieved by partial induction hardening and stamping process employed on proposed AISI4140 steel respectively. There are three conditions that is, when fully elimination of heat treatment saves 27% of the total process cost, when partial elimination of heat treatment cost saves 25.5% of the total process cost, and when replacing the WEDM to stamping saves 22% of the total component cost. The proposed material and process also maintain the same reliability for the rated 20,000 operations.*

Keywords: *Air Circuit Breaker; Optimization; Cost and Performance; Hardenability; Weldability; Stamping; Reliability; Endurance Limit*

Title of Paper: Active Cooling System Incorporated in a Portable Laptop Cooling Pad

International Journal of Thermal Energy and Applications, 8(2), 2022

URL: https://mechanical.journalspub.info/index.php?journal=JTEA&page=article&op=view&path%5B%5D=1490

Co-author: Parmanand Kumar

Abstract: *Among the modern population, laptops are preferred over desktop computers. It's simple to install anyplace because to its tiny size and portability. Nevertheless, they have a performance cost compared to its large Desktop Systems. The heat produced when more expensive technology consumes large quantities of power is mostly to blame for this. The device's performance declines considerably more when there is a thermal imbalance. A Cooling Pad, which has a similar portable size factor as our laptop, was developed as an active cooling device to address this issue. It controls thermals without sacrificing performance.*

Keywords: *Laptop; Cooling Pads; Peltier Module; Thermals;Folding Hinge Mechanism; Multi-Purpose Ports*

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We would like to thank our erudite members for sharing their professional achievements through the IEI Epitome and making the content more abounding and at the same time inspiring many others to share their accomplishments as well. To streamline the process and make it convenient for the member to give their inputs we would like to obtain the information in a more structured and comprehensive manner. We would request our members to send the details of their achievements as per the appended formats only.

FORMAT FOR ACHIEVEMENT BY MEMBERS

A passport size color photograph (scanned image)

(i)	Prefix (Er/Dr/Prof)	
(ii)	First Name	
(iii)	Middle Name (if any)	
(iv)	Surname (Last Name)	
(v)	Email and Mobile Number	
(vi)	Designation	
(vii)	Organization of affiliation	
(viii)	Membership No (please use the prefix F/M/AM as the case may be)	
(ix)	Details of Award/Achievement#	
(x)	Month & Year of Achievement/ Date of Achievement	
(xi)	Supporting Documents/links [which are clearly indicative of the incumbent's achievement(s)]	

 # Reporting of Award of stipend/fellowship at PG/PhD level and awards from esoteric events/communities may be avoided.

FORMAT FOR PATENT / DESIGNS / TRADE MARKS / GEOGRAPHICAL INDICATIONS BY MEMBERS

A passport size color photograph (scanned image)

(i) Prefix (Er/Dr/Prof)	
(ii) First Name	
(iii) Middle Name (if any)	
(iv) Surname (Last Name)	
(v) Email and Mobile Number	
(vi) Designation	
(vii) Organization of affiliation	
(viii) Membership No (please use the prefix F/M/AM as the case may be)	
(ix) Tick the appropriate BOX	☐ Patent ☐ Designs ☐ Trade Marks ☐ Geographical Indications
(x) Issuing Authority	
(xi) Serial No	
(xii) Patent No	
(xiii) Date of filing (DD/MM/YYYY)	
(xiv) Date of Grant (DD/MM/YYYY)*	
(xv) Patentee	
(xvi) Details of Patent	
(xvii) Term for which the above (ix) has been granted	

** Copy of Certificate of the Grant of Patent*

FORMAT FOR PUBLICATION(S) BY MEMBERS — PAPERS

A passport size color photograph (scanned image)

(i)	Prefix (Er/Dr/Prof)	
(ii)	First Name	
(iii)	Middle Name (if any)	
(iv)	Surname (Last Name)	
(v)	Email and Mobile Number	
(vi)	Designation	
(vii)	Organization of affiliation	
(viii)	Membership No (please use the prefix F/M/AM as the case may be)	
(ix)	Title of Paper	
(x)	Name of Journal/Proceeding/Technical Volume	
(xi)	Volume No (Not required for Indian Engineering Congress)	
(xii)	Issue No (Not required for Indian Engineering Congress/Annual Technical Volumes of IEI)	
(xiii)	Theme (Only for Technical Volumes of IEI)	
(xiv)	DOI: (Not required for Indian Engineering Congress/Annual Technical Volumes of IEI)	
(xv)	ISSN	
(xvi)	Date of Publication (Date-Month-Year)	
(xvii)	Co-authors (if any)	
(xviii)	Abstract in full	
(xix)	5/6 Keywords	
(xx)	Supporting Documents/links [which are clearly indicative of the incumbent's achievement(s)]	

** publications in local seminar, conference and symposia will not be accounted*

FORMAT FOR PUBLICATION(S) BY MEMBERS — BOOKS/ BOOK CHAPTERS

A passport size color photograph (scanned image)

(i) Prefix (Er/Dr/Prof)	
(ii) First Name	
(iii) Middle Name (if any)	
(iv) Surname (Last Name)	
(v) Email and Mobile Number	
(vi) Designation	
(vii) Organization of affiliation	
(viii) Membership No (please use the prefix F/M/AM as the case may be)	
(ix) Title of Book	
(x) Title of Book Chapter	
(xi) Book Chapter Number	
(xii) Publisher Details	
(xiii) ISBN	
(xiv) Date of Publication (Date-Month-Year)	
(xv) Co-authors (if any)	
(xvi) About the book (100-150 words)	
(xvii) Supporting Documents (complimentary copies for IEI Headquarters)/links [which are clearly indicative of the incumbent's achievement(s)]	

** accommodate works published in journals/reputed conference proceedings/books for the last one year*

Notification for Advertisement in IEI Epitome

The Institution of Engineers (India) reserves a coveted privilege in being the largest multi-disciplinary professional body of engineers encompassing 15 engineering disciplines with a Corporate membership of over 2.4 lakhs maintaining a national/international presence through hundred twenty five Centres and six Overseas Chapters, Fora's and Organ (Engineering Staff College of India). The Institution has been disseminating the various information through IEI-Epitome and other publications.

We would like to share with you that we are now providing the facility to advertise engineering / technical products/services, information brochure, recruitment notices etc. in our official publication portal IEI Epitome (12 issues-140000 reach online). Besides, IEI Epitome is also uploaded on our website (www.ieindia.org) on a monthly basis and is accessible to all free of cost. Given its immense footprint in the engineering and technical diaspora spanning the globe, IEI with its distinguished heritage of a century provides you the ideal portal to connect with the National and International Engineering and Technical Community at very competitive rates. We invite you to take this unique and privileged opportunity to advertise and communicate your service and product portfolios under our prestigious banner and make us your brand emissaries in your promotional campaigns.

The booking form containing details of each publication, rates for the advertisements and the advertisement form are appended below.

BOOKING FORM

Publication	Description	Type	Rate (Rs.) including GST	Number of Issues / Volumes	Total (Rs.) including GST
IEI Epitome	Inside Full Page	Colour	30,000		
	Inside Half Page	Colour	15,000		
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Less discount* @ .....%
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- 5% discount for advertisement in 6 consecutive issues of IEI Epitome
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Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)
(IMS [ISO 9001:2015, ISO 14001:2015, ISO 50001:2018, ISO 45001:2018], ISO/IEC 17025:2017 Certified, AICTE & CEA Recognized Institution)

CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES (CPDP) FOR THE MONTH OF JULY 2023

Sl. No.	Name of the Course	Scheduled Dates
1.	O&M of Sewerage network System and treatment plants	03 - 07 Jul 23
2.	Operation, Maintenance and Quality Monitoring of Centrifugal Pumps and Compressors (Includes Screw Compressors)	03 - 06 Jul 23
3.	Planning, Design & Installation of Community Micro Irrigation System	03 - 05 Jul 23
4.	Electrical Safety Procedures & Accident Prevention	04 - 07 Jul 23
5.	Data Analytics & Visualization using Power BI	10 - 13 Jul 23
6.	NDT Level II Certification in Radiography Film Interpretation (RTFI) in Accordance with ASNT Document No. SNT-TC-1A 2011	10 - 14 Jul 23
7.	Effective Management of Organizational Resources in Opencast Mining Projects: Total Productive Maintenance of Machinery, OITDS, Machine Utilization, Enhanced Safety & Productivity, Design of Haul Roads, Tyre-Care, Conservation of POL, Energy Audit, Mine Wastes into Resources ISO-50001:2018 Certification	10 - 14 Jul 23
8.	Engineering Design using AUTO CAD	11 - 13 Jul 23
9.	Study and Preparation of DPR in Engineering Projects	12 - 14 Jul 23
10.	Distribution Automation & SCADA	12 - 14 Jul 23
11.	Corporate Capacity Development Programme on Sustainability	13 - 14 Jul 23
12.	Total Quality in Purchase Process (Including ERP & e-Procurement)	16 - 18 Jul 23
13.	Advanced Construction Materials in Concrete Technology and its applications	17 - 21 Jul 23
14.	Personal and Family Financial analysis and Planning-Skills for Success	17 - 19 Jul 23
15.	Water Conservation, augmentation and Preservation	17 - 19 Jul 23
16.	CERC Regulations Including Tariff Regulations (Online)	18 - 21 Jul 23
17.	Project and Contract Management (along with GEM training) at Lonavala	18 - 20 Jul 23
18.	Faecal Sludge and Septage Management	19 - 21 Jul 23
19.	Cyber Security Best Practices for Managers & Executives	19 - 21 Jul 23
20.	Quality Initiatives in Technical and Higher Educational Institutions (In Compliance with NBA & NAAC Accreditation)	19 - 21 Jul 23
21.	Topology Optimization and Design for Additive Manufacturing	24 - 26 Jul 23
22.	Web Development using Angular 8	24 - 28 Jul 23
23.	Impact of Information and Communication Technology (ICT) in Manufacturing	24 - 26 Jul 23
24.	Advanced Drilling & Blasting Practices- Enhanced Safety & Productivity	24 - 26 Jul 23
25.	ISO 9001:2015 QMS - Lead Auditor Training (CQI - IRCA - UK Certified)	24 - 28 Jul 23
26.	PLC, DCS & SCADA for Power Plants and Process Industries	25 - 28 Jul 23
27.	Leadership Styles and Teambuilding Skills for Organizational Excellence at Mysore	25 - 27 Jul 23
28.	Carbon Markets post Cop26	26 - 28 Jul 23
29.	Design & Optimization of Blasting in Quarries, Opencast Mines & Infrastructure Projects	27 - 29 Jul 23