

IGNITE 2022



A DAILY NEWSLETTER

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STUDENT ACHIEVEMENT

Vignesh Raja P Direct
PhD Admission at IIT
Bombay

3 3128182030... 3:39 PM
to me

Respected Sir,
Greetings,
I, VIGNESH RAJA P (Reg.No. 312818203041), final year student from the department of Chemical Engineering, wish to bring to your kind notice that I have also been finally selected for the Direct PhD Programme in Chemical Engineering at the Indian Institute of Technology, Bombay, after clearing the written test and interview conducted by them. This credit goes to my Institute "Agni"

Letter



Indian Institute of Technology Bombay

ONLINE Application for Autumn Semester - (2022 - 2023)

[Home](#) [Change Password](#) [Application Procedure](#) [Important Dates](#) [Logout](#)

Offer Letter for PhD Admission at IITB:

INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

(Specimen Copy of the I Offer Letter)

No.Acad/Ph.D.- Autumn/Offer/2022-23

Academic Office
Date: 10/06/2022

Admissions to Ph.D. Programme 2022-23 (Autumn Semester)

Reg. No	RCL202210271
Name	VIGNESH RAJA P
Application Id	PW9263519

Dear Candidate,

Congratulations! I am glad to inform you that you are PROVISIONALLY selected for Ph.D. Programme in the Chemical Engineering Department/Centre/School/Interdisciplinary group of the Institute.

To confirm your admission, remit the following fees by **June 16, 2022 (12:00 midnight)** through **SBI Net Banking, Canara Net Banking, PAYU (Net Banking, Google Pay, UPI)**, failing which your offer will stand cancelled AUTOMATICALLY and NO CLAIM against this offer will be entertained thereafter.

For payment of fees, please visit the Ph.D. Admission webpage ["https://www.iitb.ac.in/newacadhome/phd.jsp"](https://www.iitb.ac.in/newacadhome/phd.jsp) and login to "Online application portal" using your email ID and Password and then select the dept/centre/school/ ID group in which you have been offered the admission to pay the fees ONLINE.

Fees for all categories :

Vignesh Raja. P, final year student, Department of Chemical Engineering has got the opportunity to enter **INDIAN INSTITUTE OF SCIENCE, EDUCATION AND RESEARCH, BHOPAL** for the **Direct Ph.D in Chemical Engineering** after clearing the written test and final round interview. He has received the confirmation mail and Offer Letter for the course. Agni takes pride in you.

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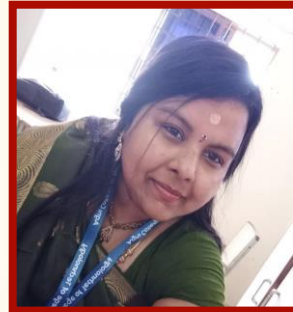


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DARKATHON 2022



S. Gibson, K. Abishek and S. Akash, III year students, Department of CSE have participated in Darkathon 2022 on the title **Advanced Drugsites Crawler** organised by **Narcotics Control Bureau of India**. The team has been shortlisted into the Grand Finale of Darkathon 2022. The team was guided by Dr. Ishwarya M V, AP, Department of CSE.

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STUDENTS INTERNSHIP



V. SABAREESHWARAN, A. KARTHIKEYAN, K. DASHVANTHRAJ and M. SATHISH, IV year students, Department of Mechatronics have undergone an **internship in Electrical Mobility**. They have worked on the project FULL ELECTRIC TWO WHEELER SCOOTER in LEAP Industries, Chennai.

STUDENT ACHIEVEMENT IN PLACEMENT



Santhosh Raj M, IV year student, Department of CSE got placed in TCS with the dream package of **Rs.60,000/month** after clearing TCS Digital Examination held on 7th May 2022.

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FACULTY ACHIEVEMENT



Dr. S. Bharanidharan, Senior Assistant Professor, Department of Science and Humanities (Physics) has received an **Excellence Certificate** for his contribution towards reviewing the Journal of Advances in Medicine and Medical Research.

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FACULTY PARTICIPATION

purushothaman paneerselvam

to me ▼

Wed, 1 Jun, 14:24 (8 days ago)

☆ ↶ ⋮

----- Forwarded message -----

From: Isabel Escobar <onbehalf@manuscriptcentral.com>

Date: Fri, 27 May 2022, 6:59 am

Subject: Thank you for reviewing - Environmental Progress

To: <purushothice2014@gmail.com>

26-May-2022

Environmental Progress & Sustainable Energy: EP-22-306

Dear Mr. Purushothaman,

Thank you for reviewing the manuscript "Experimental investigation of Engine characteristics of CI engine fueled with fatty acid *Milletia pinnata* oil with non-fatty acid *Pinus* oil blended fuel". We greatly appreciate your service to our journal, without which we would not be able to function. Your review is very important to our authors and critical to our success, and the time and effort that you have taken for this very important task is greatly appreciated.

I hope that you will consider publishing your work in our journal, and will look forward to your support in future reviews. Thank you for your assistance.

Martin Abraham

Editor, EP&SE

Mr. P. Purushothaman, Assistant Professor, Department of Mechanical Engineering was greatly appreciated by the Journal of Environmental Progress & Sustainable Energy for reviewing the manuscript on 27th May 2022.

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STUDENT INTERNSHIP



Sabarish Manikandan A, II year student, Department of Mechatronics Engineering has completed a 3 month training and internship at Vaayusastra Aerospace Private Limited, RTBI, IIT Madras Research Park, Kanagam, Taramani, Chennai.

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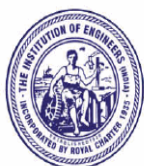


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FACULTY PARTICIPATION- WEBINAR



The Institution of Engineers (India)

8 Gokhale Road, Kolkata - 700020, West Bengal, India
(Established in 1920, Incorporated by Royal Charter 1935)
A Scientific and Industrial Research Organisation

Certificate of Participation

This is to certify that

Vikas Godara

has participated in the IEI Technical Webinar
on the theme

CLIMATE CHANGE IN THE ARCTIC AND BEYOND



organized by West Bengal State Centre of The Institution of Engineers (India) under the aegis of
Interdisciplinary Coordination Committee on 26/05/2022 from 14:30 hr to 16:00 hr.

Maj Gen MJS Syali, VSM (Retd.)
Secretary & Director General

This is an approved CPD programme of The Institution of Engineers (India)

Mr. Vikas Godara, Assistant Professor, Department of Mechatronics Engineering has participated in the IEI Technical Webinar on **Climate Change in the Arctic Beyond** organised by West Bengal State Center of the Institution of Engineers.

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FACULTY PUBLICATION

Journal of Ceramic Processing Research, Vol. 23, No. 3, pp. 1-9 (2022)
(Received: Received in revised form: Accepted)
<https://doi.org/10.3847/jcpr.2022.23.3.1>

Ceramic
Processing Research

Optimization of CO₂ laser welding process parameters on cupronickel alloys using multi-objective techniques

S. Karthick*, V. Paramasivam¹, B. Prabu², P. Ganesan³, K. Raja⁴, V. Mohanavel⁵ and K. Arul⁶

¹Department of Mechanical Engineering, RYS School of Engineering and Technology, Dindigul - 624003, Tamil Nadu, India

²Department of Mechanical Engineering, PSNA College of Engineering and Technology, Dindigul - 624622, Tamil Nadu, India

³Department of Mechanical Engineering, Christian College of Engineering and Technology, Odkanchattam - 624619, Tamil Nadu, India

⁴Department of Mechanical Engineering, Sethu Institute of Technology, Virudhunagar - 626115, Tamil Nadu, India

⁵Department of Mechanical Engineering, University College of Engineering Dindigul, Dindigul - 624622, Tamil Nadu, India

⁶Department of Mechanical Engineering, Bharath University, Chennai - 600 073, Tamil Nadu, India

^{*}Department of Mechanical Engineering, Agni College of Technology, Chennai - 600 130, Tamil Nadu, India

Optimization of process parameters for welding cupronickel alloys using CO₂ laser welding process was investigated in this study. Laser Beam Welding (LBW) process, is one of the beneficial techniques for airplane fastening. Turbine motor components were made up of superalloys because of its high specific, low heat input, high heat focus, high-power density, and low conformation. Using CO₂ LBW process, welding can be done on a wide range of materials, especially alloys which are difficult to weld by conventional welding process. This investigation focuses on optimizing the LBW process parameters of cupronickel alloys utilizing multi criteria decision making (MCDM) methodology and TOPSIS analysis. The input parameters like laser power, welding speed, welding angle and welding current are preferred as the fundamental part to enhance the welding. Welding process is carried out on 16 specimens in order to improve and support mechanical and metallurgical qualities of the welded parts. Welding is made with four input variables in two levels of values. TOPSIS has been employed as a statistical design tool to identify the most significant parameters on the overall Multiobjective function. Among the experiments, the best mechanical properties were observed in welding made with the parameters like Welding current (900 W), Welding angle (90°), Welding speed (1.6mm/min) and Laser power (30 W). This investigation strives to reveal the better process parameters, mechanical properties and energy consumption of CO₂ LBW welded elements of cupronickel alloy.

Keywords: Energy consumption, Laser beam welding, CO₂ laser, TOPSIS, Mechanical properties.

Introduction

The advantages of laser beam welding include low and precise heat input, a restricted heat affected zone, and little distortion. High-speed welding can also be used to automate the process. When compared to other welding techniques, laser welding offers various potential benefits, including deeper penetration, faster welding speed, high precision, dependability, efficiency, and productivity. Due to their mechanical qualities, dissimilar metals such as Austenitic stainless steel and low carbon steel are commonly used in power generating applications [1-4]. The use of different metal combinations allows for a more versatile product design by maximizing the use of each material. Intricate structures and complex joints of thin to thick materials can also be used with laser beam welding. High power welding processes has

become popular in industrial manufacturing in recent years due to their numerous advantages, including minor shape distortions, reduced heat affected zone (HAZ) size, faster welding speed associated with high penetrations, and a high 'depth to width ratio' for the fusion zone (FZ). These include the absence of filler materials, elimination of edge preparation, ability to weld near heat-sensitive elements (e.g. electronic circuits), and presence of a minimum amount of porosity and contaminants [5-8]. Cupronickel alloys are one of the finest materials which are having wide range of applications in recent industrial and manufacturing sectors majority in marine applications. The practical applications of the considered alloys, encourages the researchers and academicians to investigate their characteristics under various conditions [9-12]. Welding of cupronickel alloys gained more attention among research practitioners. However, unexpected failures become more common in welding operations which might be due the impact of various factors like the type of welding, welding environment and its process parameters. Welding of cupronickel alloys with gas

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E-mail: skarthick1480@gmail.com

Dr.Arul Kulandaivel, ASP, Department of Mechanical Engineering has published a research article on **Optimization of CO₂ Laser Welding Process Parameters on Cupronickel Alloys using multi-objective Techniques** in the Journal of Ceramic Processing Research. SCI- Annexature-I.

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FACULTY PARTICIPATION



Mr. Manikandan, Dr. Ishwariya, Ms. Maharasi, Ms. Ishwariya Franklin, Mr. Bargunan, APs, Department of Computer Science and Engineering have participated in the Impact Lecture Series Phase II webinar organised by Institutions Innovation Council, SGC on 10th June 2022.

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STUDENT REPOSITORY



Hariprasath. D, First year student, Department of jni Science and Humanities has portrayed a **spectacular and colourful paper art of a girl.**

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STUDENT REPOSITORY



Keerthika. N, I year student, Department of Science and Humanities showcased her talent by **portraying the pencil sketch of a girl.**

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STUDENT REPOSITORY



Gayathri R, II year student, Department of Civil Engineering has portrayed a **pencil sketch of a tearful and curious eye.**

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