



KPR Institute of Engineering
and Technology
(Autonomous)
Avinashi Road, Arasur, Coimbatore - 641 407



INDIAN WELDING SOCIETY (IWS)

ANNUAL REPORT
ACADEMIC YEAR 2023-24

Indian Welding Society

2023 - 2024

VISION

To be a leading global community linking industry, research and academicians for the advancement of welding Science and Material joining.

MISSION

To advance welding and joining through a worldwide network

Long term Goal

- ✚ To promote education, training and qualification in welding in India in parallel with international standards that are globally recognized and accepted.
- ✚ Foster R&D in welding.
- ✚ Promote health & safety in welding.

Short term Goal

- ✚ To facilitate exchange of ideas, information, development work etc. amongst members; by organizing lectures, workshops, seminars, symposia, conferences and development programs; publish periodicals, books, journals, and magazines; and develop software and educational programs, video films and training packages relating to the objectives of the Society.
- ✚ To provide Training and education of rural youth in welding and help them to settle for a quality life.
- ✚ To promote professional exchange of information, experience and advanced training within and among various countries across the globe.
- ✚ To offer flexible class room/distance learning programs in various aspects of welding & related technology that suit to requirements of various levels.

General Information about IWS – Student Forum

IWS Student Forum inaugurated at KPRIET: **19/9/2015**

Student Members in the academic year 2016-17 = **50**

Student Members in the academic year 2017-18 = **50**

Student Members in the academic year 2018-19 = **47**

Student Members in the academic year 2019-20 = **42**

Student Members in the academic year 2020-21 = **36**

Student Members in the academic year 2021-22 = **55**

Student Members in the academic year 2022-23 = **51**

Student Members in the academic year 2023-24 = **36**

IWS MEMBERS 2023-24**FACULTY MEMBERS:**

S. No.	Name of the Faculty Member	Designation	Department
1	Dr. B.Arulmurugan	AsP	MECH

STUDENT MEMBERS:

S.No	Full Name	Dept	Year	Section
1	Aahash S	ME	IV	A
2	Abhinesh S	ME	IV	A
3	Arulkumar M	ME	IV	A
4	Arun C.D	ME	IV	A
5	Arun Prasath K	ME	IV	A
6	Asharath A	ME	IV	A
7	Athavan P.K	ME	IV	A
8	Bavan Rakesh S	ME	IV	A
9	Brijith Judes S	ME	IV	A
10	Chandranath N.M	ME	IV	A
11	Deepak S	ME	IV	A
12	Deepak S.R	ME	IV	A
13	Dhanushh M.S	ME	IV	A
14	Dharani Dharan C	ME	IV	A
15	Dharani S	ME	IV	A
16	Dhivya Sankar K	ME	IV	A
17	Dinesh A	ME	IV	A
18	Dinesh Kumar P	ME	IV	A
19	Goutham P.D	ME	IV	A
20	Idhayaraja S	ME	IV	A
21	Jayanth S	ME	IV	A
22	Kabilan M	ME	IV	A
23	Kathiravan D	ME	IV	A
24	Kavin Kishore K	ME	IV	A
25	Kavin M	ME	IV	B
26	Kaviya P	ME	IV	B
27	Krishna Kumar G	ME	IV	B
28	Logeshwaran S	ME	IV	B
29	Madhan S.P	ME	IV	B

S.No	Full Name	Dept	Year	Section
30	Madhumithra C	ME	IV	B
31	Manoj VK	ME	IV	B
32	Mathan Prasath S	ME	IV	B
33	Mugilan PST	ME	IV	B
34	Narendransriramoo	ME	IV	B
35	Nithish P	ME	IV	B
36	Premkumar N	ME	IV	B
37	Ragul S	ME	IV	B
38	Sabaree R	ME	IV	B
39	Sabaridharan B	ME	IV	B
40	Sam Sundar K	ME	IV	B
41	Sanjai M	ME	IV	B
42	Santhosh Kumar S	ME	IV	B
43	Sathees Kumar B	ME	IV	B
44	Sathiya Seelan M	ME	IV	B
45	Selvakumar T	ME	IV	B
46	Senthil L	ME	IV	B
47	Sivaganesh K	ME	IV	B
48	Sivanantham S	ME	IV	B
49	Sudharsanan D	ME	IV	B
50	Vasantha Kumar J	ME	IV	B
51	Veeraraghavan V	ME	IV	B
52	Vijai Arawindan SP	ME	IV	B
53	Vinothkumar M	ME	IV	B
54	Vishnu PG	ME	IV	B
55	Vivekanandh SR	ME	IV	B
56	DHAYAHARI MOHAN E	ME	III	A
57	AMAL BABU E S	ME	III	A
58	KAVIN PRABHU S	ME	III	A
59	DANUSH PRANAV A S	ME	III	A
60	Asok narayanan N	ME	III	A
61	Aswinkumar M	ME	III	A
62	Anbu selvan R.K	ME	III	A
63	AHAMED MUYEEZUDEEN M	ME	III	A
64	ANTO MONISH W	ME	III	A
65	DARSHAN G	ME	III	A
66	DERICK ANDROW PRINCE F	ME	III	A
67	BALAJI N	ME	III	A
68	ARUN KUMAR M	ME	III	A
69	HEMACHANDRAN R	ME	III	A

S.No	Full Name	Dept	Year	Section
70	BHARANIDHARAN K	ME	III	A
71	JEEVA M	ME	III	A
72	GOKUL R	ME	III	A
73	DHANUSH S	ME	III	A
74	ARUN V	ME	III	A
75	JAIRAM P	ME	III	A
76	KABEESH C	ME	III	A
77	JAYARAMABHARATHI S	ME	III	A
78	ARUN K	ME	III	A
79	BUVANESH B V	ME	III	A
80	GURUPRASAD S	ME	III	A
81	DHANASU S	ME	III	A
82	ANBU RAJA P	ME	III	A
83	JASHWA ARUN KISHORE S	ME	III	A
84	BALAMURUGAN S	ME	III	A
85	KISHORE R	ME	III	B
86	SUDEEP R	ME	III	B
87	SIVA VISAGAN R K	ME	III	B
88	MANJUNATH J P	ME	III	B
89	SUDARSAN T	ME	III	B
90	VISHNU M	ME	III	B
91	SIBI NANDHAN S	ME	III	B
92	ROHITH S	ME	III	B
93	RAMANEEDHARAN K S	ME	III	B
94	NAINA MOHAMED M A	ME	III	B
95	MITHUN N S	ME	III	B
96	MELVIN INFANT M	ME	III	B
97	VISWANATHAN R	ME	III	B
98	RAGUL KUMAR M	ME	III	B
99	SANJAY N	ME	III	B
100	THIRUVASAKAN	ME	III	B
101	PRAVEEN R	ME	III	B
102	THIANESHWARAN K	ME	III	B
103	RAHUL V	ME	III	B
104	VIGNESH M	ME	III	B
105	REVANTH P	ME	III	B
106	RAGHAV G	ME	III	B
107	NELLAI KATHIRAVAN N	ME	III	B
108	RAGA SHAKTHI KANNAN G	ME	III	B
109	VARUN K	ME	III	B

S.No	Full Name	Dept	Year	Section
110	Abhishek M.S	ME	II	-
111	Ajay krithiksen S	ME	II	-
112	Akash G	ME	II	-
113	Anavind E	ME	II	-
114	Aravind S	ME	II	-
115	Arun kumar T	ME	II	-
116	Dhanush Kumar S	ME	II	-
117	Dinesh K	ME	II	-
118	Dinesh R	ME	II	-
119	George Antony	ME	II	-
120	Gopikisshore S	ME	II	-
121	Harishkumar R	ME	II	-
122	Jayawanth P	ME	II	-
123	Jefrey daniel J	ME	II	-
124	Kannan R	ME	II	-
125	Karthik raja P T	ME	II	-
126	Kishore V.B	ME	II	-
127	Nishanth D	ME	II	-
128	Nishanth S	ME	II	-
129	Rahul V	ME	II	-
130	Praveen C	ME	II	-
131	Sanjay .V	ME	II	-
132	Sanjay M	ME	II	-
133	Sanjyan A	ME	II	-
134	Armaan Shalik A.M	MI	II	-
135	Akilesh. R.A	MI	II	-
136	Andrew manikam. R	MI	II	-
137	Gogulnath. M	MI	II	-
138	Gokulakrishnan. E	MI	II	-
139	Harshavadhan. S	MI	II	-
140	Joel Winfred Gibson S	MI	II	-
141	Karmukil. L	MI	II	-
142	Nishaanth kumar S.S	MI	II	-

IWS Office bearer for Academic Year - 2023-2024

Position	Student Name	Mobile Number	Class
President	Mr. Dhanush M S	7397195037	IV Mech A
Secretary	Mr. Kabilan M	8428688181	IV Mech A
Treasurer	Ms. Madhumithra C	8111089879	IV Mech B
Vice President	Mr.Arunathiyan	9566315514	III Mech A
Joint Secretary	Mr.Balamurugan	8870074831	III Mech A
Deputy Treasurer	Mr.Solaiyappan. K	9514517161	III Mech B

Executive Members

Mr. Dinesh Kumar	9087508608	IV Mech A
Mr. Dinesh	8056576852	IV Mech A
Ms. Dharani S	6380315143	IV Mech B
Ms. Kaviya P	6369391591	IV Mech B
Mr.Mithun.S	9790658856	III Mech B
Mr.Arulkumar	8870074831	III Mech A

EVENTS PLAN FOR THE AY 2023-24

Event No.	Date	Type of Event	Title of the Event
1	4.8.2023	Guest Lecture	Challenges and Opportunities in Robotic welding
2	22.9.2023	Workshop	Non Destructive Testing
3	16.9.2023	Industrial visit	Industrial visit to Kavin Inc., Coimbatore
4	24.12.2023	Guest Lecture	Welding of materials used in Aerospace industry
5	3.2.2024 to 5.2.2024	Hands on training	Industry oriented one credit course on Robotic welding
6	04.03.2024	Workshop	Advances in Additive manufacturing

EVENTS COMPLETED in AY 2023-24

Event No.	Date	Type of Event	Title of the Event	Revenue Generated (Rs.)
1	12.8.2023	Guest Lecture	Challenges and Opportunities in Robotic welding	-
2	11.10.2023	Workshop	Non-Destructive Testing	-
3	27.10.2023 to 06.11.2023	Upskilling week	Hands on training at A Plus NDT & Kavin Welding Inc., Coimbatore	-
4	02.02.2024 to 03.02.2024	Workshop	Two-Days Workshop on AI Tools In Scientific Writing	27,500
5	26.04.2024	Guest Lecture	Thermal Management of Electronic Components	-
6	13.5.2024 to 15.05.2024	One credit course	Introduction to Robotic welding	48,000

**Faculty Co-ordinator****HoD/MECH**

INTRODUCTION TO ROBOTIC WELDING

Event No	ME001
Organizing Department	Mechanical Engineering
Associate Dept. NSC	Indian Welding Society
Date	13/05/2024 to 14/05/2024 (2 Days)
Time	09:00 AM to 03:00 PM
Event Mode	Offline (With in the campus)
Event For	Students
Event Type	One Credit Course (OCC)
Event Level	Dept. Level
Venue	Thanam Hall
Registration Link	https://forms.gle/AaXiCPSAipBYutoTA
Total Participants	97
Faculty - Internal	1
Students - Internal	96

Related SDG



Involved Staffs

Sl	Name	Role
1	Arulmurugan B	Coordinator

Outcome

The 'Introduction to Robotic Welding' is a one-credit course designed to provide foundational knowledge and practical skills in robotic welding technologies. Students will learn the basics of robotic programming, safety protocols, and the operational principles of robotic welding systems. The course includes hands-on training sessions to develop proficiency in setting up and troubleshooting robotic welding equipment. By the end of the course, students will be able to demonstrate the ability to perform basic welding tasks using robotic systems. Additionally, they will understand the advantages and applications of robotic welding in various industries.

Event Summary

The 'Introduction to Robotic Welding' course was successfully conducted over two days, from May 13 to May 14, 2024. This one-credit course aimed to equip participants with essential knowledge and skills in robotic welding technology. The event was marked by enthusiastic participation from students and industry professionals alike. **Day 1: May 13, 2024** The event commenced with an inaugural session graced by the chief guest, Mr. S. Ramanathan, Technical Product Manager at Kavin Inc., Coimbatore. In his keynote address, Mr. Ramanathan emphasized the significance of robotic welding in modern manufacturing and shared insights from his extensive industry experience. His speech highlighted the advancements in robotic welding technologies and the growing demand for skilled professionals in this field. Following the inaugural session, the course kicked off with theoretical lessons covering the basics of robotic welding, including an introduction to various robotic systems, programming fundamentals, and safety protocols. The sessions were interactive, with students engaging actively in discussions and Q&A segments. **Day 2: May 14, 2024** The second day focused on practical training, where participants received hands-on experience with robotic welding equipment. Under the guidance of expert instructors, students practiced setting up robotic welders, programming welding tasks, and troubleshooting common issues. This practical approach helped reinforce the theoretical knowledge gained on the first day. The course concluded with a demonstration of advanced robotic welding techniques and their applications in different industries. Participants showcased their newly acquired skills through a series of welding tasks, demonstrating their ability to operate and manage robotic welding systems effectively. **Conclusion** The 'Introduction to Robotic Welding' course was a resounding success, providing attendees with valuable insights and practical experience in this cutting-edge field. The presence of Mr. S. Ramanathan added significant value to the event, inspiring participants with his expertise and vision for the future of robotic welding. The course achieved its objective of preparing participants to meet the growing demand for skilled professionals in the robotic welding industry.



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TWO-DAYS WORKSHOP ON AI TOOLS IN SCIENTIFIC WRITING

Event No	ME001
Organizing Department	Mechanical Engineering
Associate Dept. NSC	Indian Welding Society
Date	02/02/2024 to 03/02/2024 (2 Days)
Time	08:30 AM to 04:30 PM
Event Mode	Offline (With in the campus)
Event For	Public (Others)
Event Type	Workshop
Event Level	Dept. Level
Venue	HPC Lab
Total Participants	64
Industry Personnel	1
Faculty - Internal	6
Faculty - External	55
Students - Internal	2

Related SDG



Resource Persons

Sl	Type	Name	Designation	Company	Email	Phone
1	Resource Person	Dr KS Sowmia Rani	Founder	Cactus communication	sowmis.aww@gamil.com	9944580436

Involved Staffs

Sl	Name	Role
1	Arulmurugan B	Coordinator
2	Gokulkumar S	Co-convenor

Outcome

Efficient Literature ReviewAdvanced Data AnalysisEnhanced Writing AssistanceAutomated Citation and ReferencingPlagiarism Detection

Event Summary

The workshop on AI tools in research writing, led by Dr. K.S. Sowmia Rani from Cactus Communication Mumbai, showcased the transformative impact of artificial intelligence on scholarly writing. On Day 1, attendees gained valuable insights into the practical applications of AI tools across various research stages, from literature review to manuscript preparation. The event began with a demonstration of AI-powered literature review tools, illustrating their efficiency in identifying relevant literature, extracting key insights, and guiding research directions. Participants were impressed by the speed and accuracy with which these tools navigated vast scholarly databases. Dr. S. Gokulkumar from KPRIET addressed the role of AI-driven writing assistants in improving the clarity, coherence, and grammatical accuracy of research manuscripts. Participants appreciated the real-time feedback and suggestions provided by these tools, aiding in refining their writing style. Additionally, Dr. L. Rajesh Kumar from Asp?MECH, KPRIET discussed research metrics, emphasizing the importance of accuracy and consistency in academic writing. The session on automated citation and referencing tools highlighted the significance of maintaining research integrity, with a demonstration of plagiarism detection software. The final session, conducted by Dr. D. Balaji, focused on integrating patent databases for research writing.



KPR Institute of Engineering and Technology
 Learn Beyond (Autonomous, NAAC "A")

Department of Mechanical Engineering
 is organizing a

**Two Days Workshop on
 AI Tools in Scientific Writing**

02 & 03 February, 2024

The AI Tools in Scientific Writing Workshop equips participants with AI-driven techniques for enhancing research and writing. It focuses on optimizing data interpretation, improving text quality, and ensuring ethical AI use in scientific communications, providing hands-on experience with the latest AI tools for effective research and publication.

The Speaker

Dr. K. S. Sowmya Rani
 Founder, Science_APRN,
 President, NORSO,
 Editor, Doctor Communications,
 Mumbai

Key Highlights

- AI Writing Assistance
- Text Analysis Techniques
- Data Interpretation Models
- Research Tool Integration
- Ethics and Reliability in AI Research

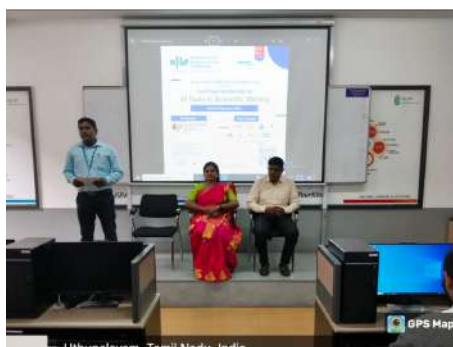
Tools Covered

ResearchRabbit, Claude, Scite, Scopus, Web of Science, JSTOR, Crossref, Paperpal, Litmaps, Connected Papers, Elicit

Who is this course for?

This course is designed for:

- Research scholars
- Faculty members

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Learn Beyond

KPR Institute of Engineering and Technology

(Autonomous, NAAC "A")

Avinashi Road, Arasur, Coimbatore.

Phone: 0422-2635600

Web: kpriet.ac.in

Social: kpriet.ac.in/social

ME001

NBA Accredited
(CSE, ECE, EEE,
MECH, CIVIL)**ONE DAY WORKSHOP ON NON-DESTRUCTIVE TESTING (NDT) AND QUALITY INSPECTION**

Event No	ME001
Organizing Department	Mechanical Engineering
Associate Dept. NSC	Indian Welding Society
Date	11/10/2023
Time	02:00 PM to 04:00 PM
Event Mode	Offline (With in the campus)
Event For	Students
Event Type	Workshop
Event Level	Dept. Level
Venue	Thanam Hall
Total Participants	166
Faculty - Internal	1
Students - Internal	10
Students - External	155

Related SDG**Resource Persons**

Sl	Type	Name	Designation	Company	Email	Phone
1	Resource Person	Arulmurugan	Associate Professor	KPRIET	enggarul@gmail.com	09944301014

Involved Staffs

Sl	Name	Role
1	Arulmurugan B	Coordinator

Outcome

Increased understanding of non-destructive testing (NDT) principles and techniques among participants. Enhanced skills in using NDT tools and methods for identifying defects. Improved workplace safety and quality control through the application of NDT knowledge and practices.

Event Summary

Dr. B. Arulmurugan, Associate Professor in Mechanical Engineering at KPR Institute of Engineering and Technology, led a highly informative and engaging Non-Destructive Testing (NDT) workshop on October 12, 2023. The event drew enthusiastic participation from students from outside colleges. The workshop encompassed a wide range of NDT techniques, principles, and applications, offering valuable insights into the latest advancements in the field. Dr. Arulmurugan's expertise and interactive teaching style ensured that participants gained a deep understanding of NDT methodologies, including ultrasonic testing, radiographic testing, and magnetic particle inspection. He also covered a wide range of NDT methods, highlighting their real-world applications in industries such as manufacturing, construction, and aerospace. His comprehensive approach also delved into the importance of NDT in maintaining safety, quality, and structural integrity in various industries, making it highly relevant for industry professionals. The workshop's success was evident in the active discussions and knowledge-sharing among participants, fostering a collaborative learning environment. Overall, Dr. Arulmurugan's NDT workshop served as a valuable platform for enhancing expertise in this critical field, equipping attendees with the skills and knowledge to make a significant impact in their careers and industries.



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CHALLENGES AND OPPORTUNITIES IN ROBOTIC WELDING

Event No	ME001
Organizing Department	Mechanical Engineering
Associate Dept. NSC	Indian Welding Society
Date	12/08/2023
Time	11:00 AM to 12:30 PM
Event Mode	Offline (With in the campus)
Event For	Students
Event Type	Guest Lecture
Event Level	Department Level
Venue	IV MECH A Class room
Total Participants	75
Faculty - Internal	2
Students - Internal	72
Other Participants	1

Related SDG



Resource Persons

Sl	Type	Name	Designation	Company	Email	Phone
1	Resource Person	Ramanathan	Technical Product Manager	Kavin Inc., Coimbatore	infokavininc@gmail.com	9698609891

Involved Staffs

Sl	Name	Role
1	Arulmurugan B	Coordinator

Outcome

1. Students gained knowledge on How robots can be employed in welding application
2. Students gained knowledge on Different types industrial robots

Event Summary

In collaboration with the Indian Welding Society, the Department of Mechanical Engineering orchestrated an enlightening guest lecture. The subject under focus was 'Challenges and Opportunities in Robotic Welding,' and the esteemed speaker was Mr. S. Ramanathan, a Technical Project Manager at Kavin Inc., Coimbatore. The event was scheduled for August 12, 2023, from 11:00 AM to 12:30 PM. The lecture drew a keen audience of approximately 72 enthusiasts, all eager to absorb the insights shared. Mr. Ramanathan eloquently underscored the imperative of welding automation and its burgeoning significance across industries. He adeptly delved into the diverse array of robots, manipulators, and controllers that find application in the realm of robotic welding for various purposes. Mr. Ramanathan is poised to delve into a comprehensive array of topics in subsequent sessions, which encompass the fundamentals of robotic welding, ensuring robot safety, discerning diverse robot applications, meticulous selection of robots and axes tailored to specific applications, and the intricacies of robot accessories in alignment with varying applications. Moreover, the speaker will delve into the nuances of robot teaching, encompassing TPC (Teach Pendant Control), WOC (Welding Offline Programming), Multi-end effectors, and command logics. The practical dimension will be enriched through hands-on training, familiarizing participants with different types of robot accessories and external axis applications. The usage of simulation software, the art of fixture design, and the application of Robotic add-on software, along with their underlying principles, will also come under the spotlight.



KPR Institute of Engineering and Technology
(Autonomous, NAAC "A")

Department of Mechanical Engineering
Is organizing an Industry Oriented Guest Lecture on

Challenges and Opportunities In Robotic Welding

Resource Person
Mr. S. Ramanathan,
Technical Project Manager
Kavin INC. - Automation & Robotic Technology Center,
Coimbatore.

Coordinator
Dr. B. Arulmurugan, Associate Professor
Convener
Dr. S. Ramesh Babu, Professor & Head
Department of Mechanical Engineering.

**12 AUGUST
2023
11:00 AM**
@ MEA Classroom

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THERMAL MANAGEMENT OF ELECTRONIC COMPONENTS

Event No	ME001
Organizing Department	Mechanical Engineering
Associate Dept. NSC	Indian Welding Society
Date	26/04/2024
Time	09:30 AM to 11:00 AM
Event Mode	Online Event
Event For	Students
Event Type	Guest Lecture
Event Level	Dept. Level
Meeting Medium	Google Meet
Meeting Link	https://meet.google.com/ief-cnnr-gxy
Total Participants	140
Faculty - Internal	2
Students - Internal	138

Related SDG



Resource Persons

Sl	Type	Name	Designation	Company	Email	Phone
1	Resource Person	Dr R Deepakkumar	AP	VIT University Vellore	deepakkumar.r@vit.ac.in	9003693120

Involved Staffs

Sl	Name	Role
1	Arulmurugan B	Coordinator
2	Vignesh Kumar N	Co-convenor

Outcome

Enhanced understanding of modern electronic component cooling strategies. Increased awareness of the importance of thermal management in electronic devices. Acquisition of valuable insights into techniques for improving the efficiency and reliability of electronic components. Empowerment to implement effective thermal management solutions in practical applications. Strengthened collaboration and networking opportunities among students, faculty, and industry experts in the field of electronic engineering

Event Summary

KPR Institute of Engineering and Technology, Coimbatore, hosted a guest lecture on 'Thermal Management of Electronic Components' by Professor Dr. R. Deepakkumar from VIT Vellore. The lecture, held on 26th April 2024, aimed to enhance understanding of cooling strategies for modern electronic devices. Dr. Deepakkumar, renowned for his expertise, elucidated various techniques including heat sinks, thermal interface materials, and liquid cooling systems. The interactive session fostered engaging discussions, addressing emerging trends and challenges in the field. Attendees, comprising students and faculty, actively participated, seeking clarification and insights. The event concluded with gratitude extended to Dr. Deepakkumar for his invaluable contribution. The lecture underscored the significance of effective thermal management in ensuring device reliability and performance. The event concluded with expressions of gratitude extended to Dr. Deepakkumar for his invaluable contribution to enriching the academic experience at KPR Institute of Engineering and Technology. Participants, comprising students and faculty, left the lecture hall with a deeper appreciation for the complexities of thermal management in electronic engineering and a renewed commitment to applying this knowledge in their academic and professional endeavors. KPR Institute acknowledges all participants for their enthusiastic involvement, reaffirming its commitment to academic excellence and knowledge dissemination in engineering and technology.



KPR Institute of Engineering and Technology
Learn Beyond (Autonomous, NAAC "A")

DEPARTMENT OF MECHANICAL ENGINEERING

GUEST

Dr. R.Deepak Kumar
AP/ SMEC,
Vellore Institute of Technology, Vellore



Guest Lecture on

"Thermal Management of Electronic Components"

26/04/2024 | 9:30 am
III MECH A & B

Google meet id: meet.google.com/bsa-anc-ig

kprnet.edu.in | KPRiE Timeline

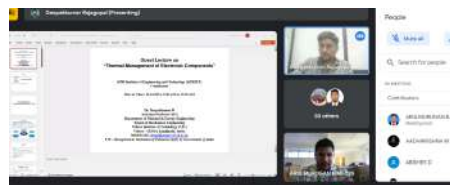
4 MINUTE PRESENTATION



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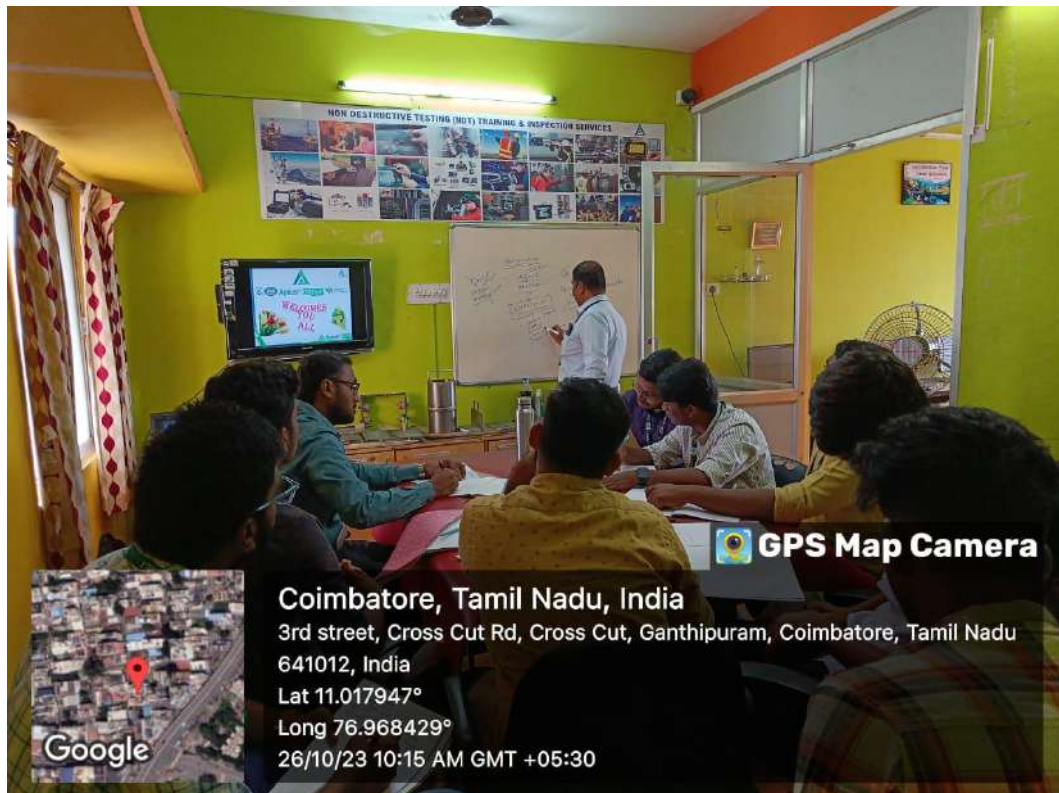
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Department of Mechanical Engineering in association with IWS
organizes
UPSKILLING WEEK REPORT
NON-DESTRUCTIVE TESTING

VENUE : APLUS NDT, GANDHIPURAM, CBE – 641012

DAY 1:

- Introduction to Non – destructive testing & applications
- Certification body levels of NDT
- Methods of NDT Inspection
- Placement opportunities of material testing
- Courses offered in Aplus NDT
- Introduction to MEP
- Scopes of mechanical engineers in NDT

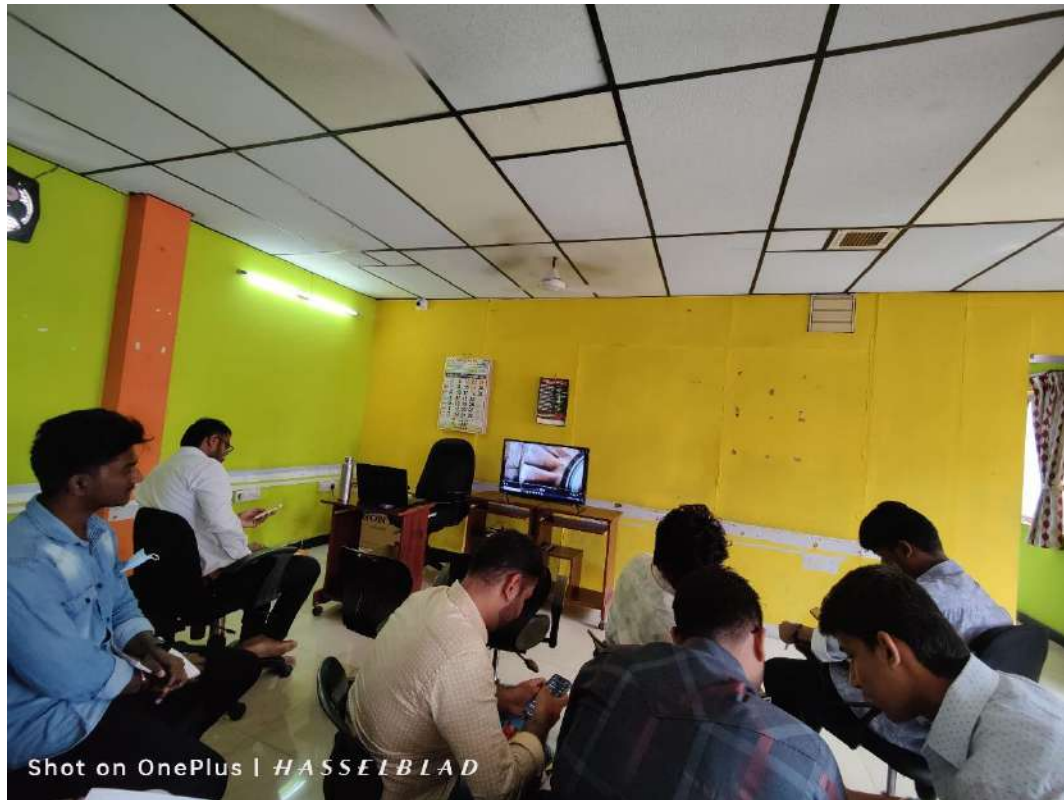




DAY 2 :

- Revising methods of NDT
- Visual testing (procedure, application, advantages & disadvantages)
- Liquid penetrant test (LPT) / Dye penetrant inspection
- Procedure, application, advantages & disadvantages of LPT
- Principle of LPT
- Tools required for LPI/LPT
- Magnetic particle testing (MPT)
- Procedure, application, advantages & disadvantages of MPT

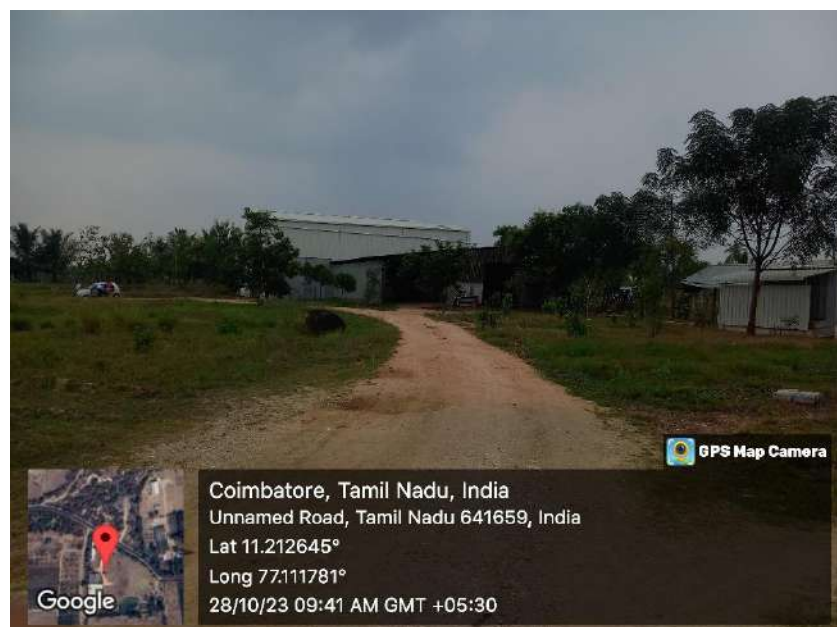
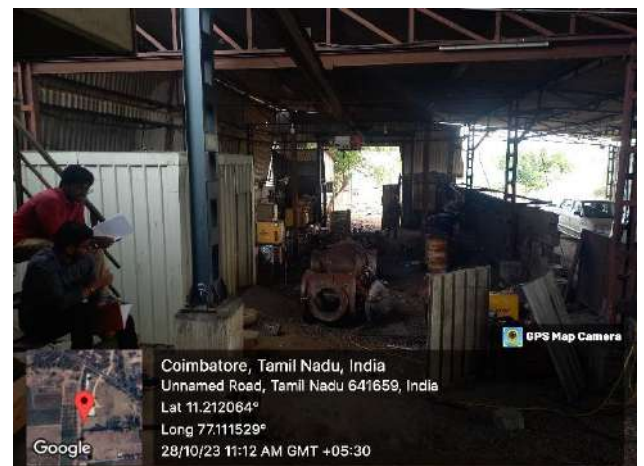




DAY 3 :

VENUE : HAASEE INSPECTION SERVICES ENGINEERING,
ANNUR, CBE – 641653

- Introduction to Ultrasonic Testing
- Principle, Procedure, Application, Advantages, Disadvantages of UT
- Introduction to Radiography inspection (RT)
- Types of Rays
- Stages of developing negative films to identify the defects
- Types of electrodes & its specifications
- Cobalt type & Iridium type Radiography
- Application, advantages, disadvantages of each type of radiography
- Identifying defects and Categorising accordingly.



DAY 5 :

VENUE : APLUS NDT, GANDHIPURAM, CBE – 641012

- Defectology (types & solution)
- American society for Mechanical engineering
- Material science
- Revising all previous topics
- Assessment for 40 marks
- Refreshments from Aplus institution for our students
- Group photo session

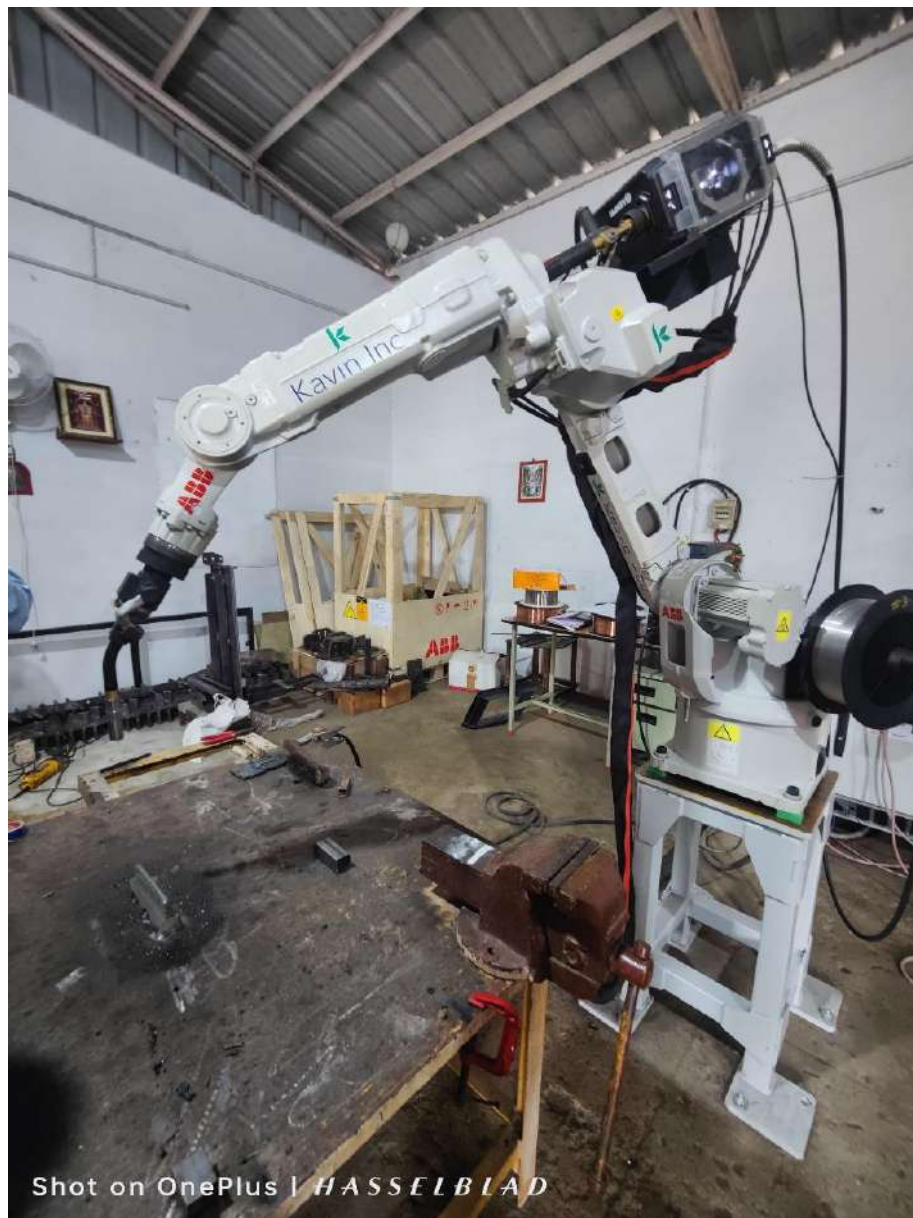


UPSKILLING REPORT FOR ROBOT WELDING

VENUE : KAVIN INC., Chinthamanipudur, CBE - 641103

DAY 6 :

- Introduction to Robotic Welding
- Robot Name : Articulated Welding Robot
- Application, types, merits, demerits of robotic welding
- Filler materials used
- Parts of articulated robot
- Specification & Parameters of Robotic welding





ROBOT & ITS PARTS :

Teaching Pendant



Welding Torch



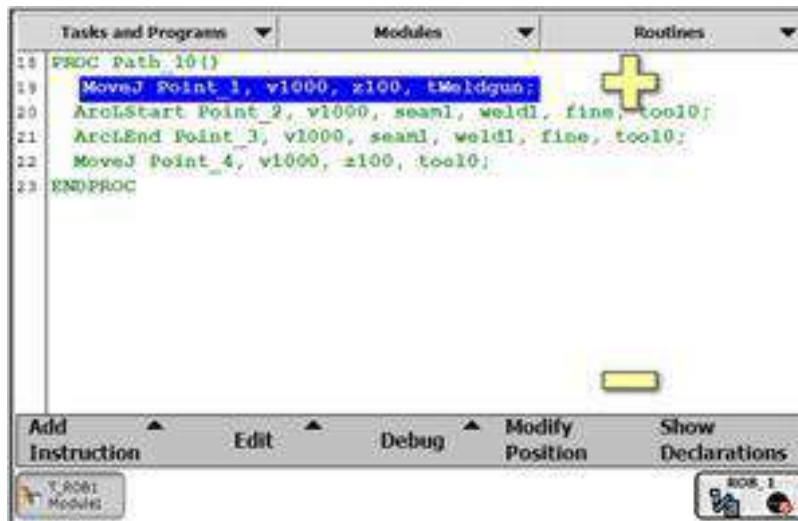
DAY 7:

- Basics of Robot programming
- Robot's axis of movement
- Linear movement & welding of arm
- Curved movement & welding of arm
- Teaching program to move in linear and curved path



DAY 8 :

- Types of weaving in welding
- Wire arc additive manufacturing (merits, demerits, application, properties, material used)
- Circular welding and liner welding
- Types of pulses in welding



```
5  PROC Routine1()  
6  MoveJ *, v100, z50, tWeldgun;  
7  MoveJ *, v1000, z50, tWeldgun;  
8  MoveJ *, v1000, z50, tWeldgun;  
9  ArcLStart *, v1000, seam1, weld1, fine, tWeldgun;  
10 ArcLEnd *, v1000, seam1, weld1, fine, tWeldgun;  
11 MoveJ *, v1000, z50, tWeldgun;  
12 MoveJ *, v1000, z50, tWeldgun;  
13 MoveJ *, v1000, z50, tWeldgun;  
14 MoveJ *, v1000, z50, tWeldgun;  
15 ENDPROC
```



DAY 9:

- Fabrication of sample using WAAM method.
- Metal arc welding using functionally graded material
- Analysing the structure of the sample
- Analysing the properties



DAY 10:

- Revising the concept of robot welding
- Hands-on practical on movement & welding of arm
- Attended assignment based on basics of metal additive manufacturing.