

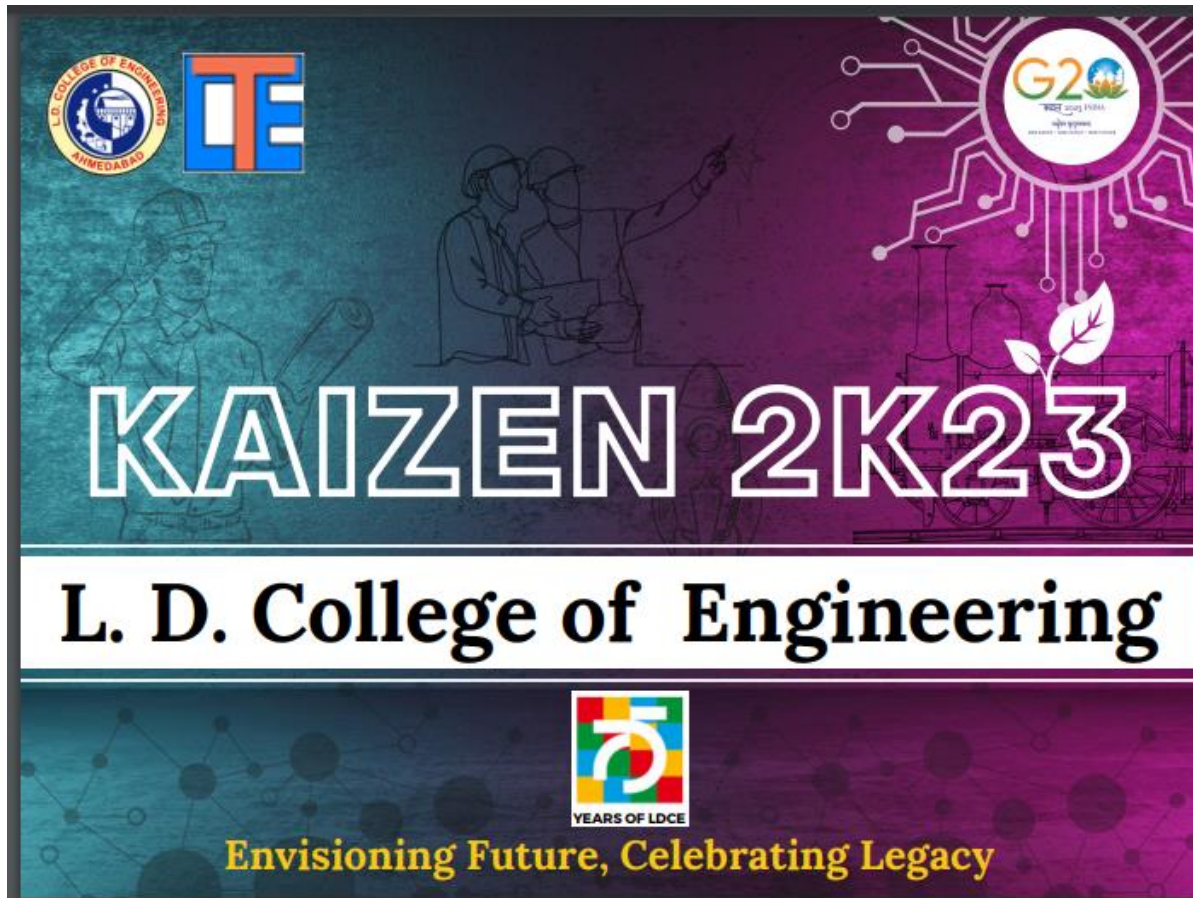


Report on Kaizen –2023

Electrical Engineering Department

L D College of Engineering, Ahmedabad

9-10 May 2023



1. Event Description

The event KAIZEN – 2K23 was organized by Electrical Engineering Department with great efforts and support by all faculty members and students under leadership of Head of the department, Dr.Ketan P Badgujar and Prof J R Iyer. Six parallel sessions were conducted at different venues. Well known experts from the industry came to guide and assess the student's work. Each jury member took keen interest in discussing each and every internship and project in detail.

- Number of students participated: 161
- Number of faculty members involved: 33
- Number of Internship presentations evaluated: 70
- Number of Projects evaluated: 02

2. List of Student Participants

Track 1, Time 11.00 am onwards, Venue 201

Expert: Mr Mayur S Parikh, Deputy Director, UGVCL

Team no	Enrollment No	Name of Student	Name of Industry /project
1	190280109040	Gamit Dipika D	GSECL UKAI
2	190280109132	Soladhra Raj Kamleshbhai	Om Power And Transmission Pvt.Ltd
	190280109007	Avinash Ranjitsinh Barad	
3	190280109144	Tarsariya parth hareshbhau	UNIVERSAL POWER SYSTEM
	190280109155	Vyas Jay Nileshbhai	
	190280109073	Nasit Divyeshkumar Kishorbhai	

4	190280109032	DABHI SACHIN B.	Utran Power Station
5	190280109109	Ratanpara Harmin Rasikkumar	Dakshin Gujarat Vij Company Limited
	200280109518	BHALALA DHARUV MAHENDRABHAI	
	190280109087	Patel Meet Rameshbhai	
	190280109104	PRAJAPATI RONAK KANUBHAI	DRASHTA POWER CONSULTANS PVT LTD
6	190280109114	Rathva Piyushkumar Virsingbhai	MGVCL
7	190280109147	Abhinandan Thakkar	Nuclear Power Corporation of India Limited, Kakrapar Gujarat Site
8	190280109084	Parmar Vipulkumar Punjabhai	Gsecl Sikka TPS
9	200280109524	NILESH KHODIAR	Adani Power Ltd.
10	200280109513	DHAMELIYA YOGESH	Bhavnagar lignite thermal power station
11	190280109063	MAKWANA SUNIL RAMNIKBHAI	POWERICA Ltd
12	200280109504	CHAUDHARI NIRANJANKUMAR RAKESHBHAI	THERMAL POWER STATION (GSECL)
	190280109152	VASAVA AKASH BHAVSINGBHAI	
	190280109022	Chaudhari Yashkumar Bipinbhai	

	190280109021	Chaudhari Vivekkumar Girishbhai	
	190280109019	Chaudhari Mihirbhai Narendrabhai	
13	190280109129	Sheth Dixit Sanjaybhai	EES VENTURES PVT LTD
	190280109057	KUKVAVA HARDIK SAGARBHAI	
14			Meditab
	190280109145	Tarbundiya Ravi Bharatbhai	Meditab Software (India) Pvt. Ltd.
	190280109055	Dhruv Dhirajlal Khokhani	

Track 2, Time 11.00 am onwards, Venue 207

Expert: Ms Dhaval Patel

Team no	Enrollment No	Name of Student	Name of Industry /project
1	190280109025	Chauhan Jahnvi Kiritkumar	Flotech Engineering Pvt Ltd
	190280109077	Pal Manishkumar Kaushalkumar	
	190280109119	RIBADIYA GAURAV	
	190280109058	Kumawat Priyank NarendraKumar	

2	190280109074	Nasit Vishal Rameshbhai	Surat Transformers
3	200280109519	Mori samat k.	Saurashtra cement limited
4	200280109523	Vadukar Prashant Pravinbhai	Nagmani Precision tool room
5	190280109156	Mohd Faizan	New Chenab Transformer LTD
6	190280109067	ABHAY MARKANA	Shochir Power PVT LTD
	190280109039	GAJERA BHAUMIK DINESHBHAI	
	190280109033	DADHANIYA BHAVESHKUMAR BHARATBHAI	
	190280109050	Kamani Ridham Bhaveshbhai	
	190280109123	Savsaviya Kevalkumar Jaysukhbhai	
7	190280109141	TANDEL JETAL DHARMENDRA	ALFA TRANSFORME
8	190280109113	RATHOD SAMEER B	POWERTRAC GROUP
9	190280109045	JADAV PINANK FALGUNBHAI	Karv Transformers & Wires
	190280109070	MORI PARTHIV BHARATBHAI	
10	200280109501	BARANDA BHARATKUMAR SOMAJI	Transformers & Rectifiers india Ltd

	190280109115	Rathva Suresh	
11	190280109051	Kapadiya Shubhrato (project)	Seven level inverter
12	190280109103	Prajapati Pradip Hareshbhai	Scaledge India Pvt Ltd
13	200280109510	Pathan Adil Khan Basir Khan	Shams enertech Pvt Ltd
14	190280109126	Jinay K. shah	A.M. Powers
15	190280109092	PATEL SOHAM JITENDRABHAI	HITACHI HI-REL POWER ELECTRONICS PRIVATE LIMITED.
	190280109097	PRAJAPATI AMISH JITENDRAKUMAR	
16	190280109002	Anu Sandipkumar Agrawal	IIT Gandhinagar
	190280109124	Het Bijalkumar Shah	
Track 3, Time 11.00 am onwards, Venue 208			
Expert: Mr Sachin Borisa, Associate Director, Hitachi Hi Rel Power Electronics Pvt Ltd			
Team no	Enrollment No	Name of Student	Name of Industry /project
1	190280109099	PRAJAPATI DEVIN JASVANTBHAI	Active Engineers Pvt Ltd

	190280109149	VAGHARI RAHULKUMAR GIRISHBHAI	
	190280109105	PRAJAPATI SAHIL RAMESHBHAI	
	190280109101	Prajapati Hasmukh Rameshbhai	
	190280109075	Ninama Miteshbhai Arvindbhai	
	190280109066	Mankad Afrin Arifbhai	
2	190280109016	Chandalia Khushi Ashwin	Voltas beko Ltd.
	190280109071	Nagdev Jayshree Maheshkumar	
	190280109135	Solanki Manali Rameshbhai	
3	190280109028	Pratik P. Chawda	Welspun.ltd
4	190280109080	PANCHAL VIVEKKUMAR DILIPBHAI	Mantra Softech Pvt.Ltd.
5	200280109512	Yadav Avinash Nathusingh	NIFA Electronics Pvt. Ltd
6	200280109521	Mistry Mannkumar Manojbhai	G SON POWER
	200280109506	LIMJE GANESH NARENDRABHAI	
7	190280109036	DHANJA SMIT RAJNIBHAI	GRYPHON CERAMICS PVT.LTD

	190280109011	Bhatiya Raj A.	
	190280109140	Talvaniya Pradipbhai Dineshbhai	
8	190280109088	PATEL MEETKUMAR RAMESHBHAI	Gufic Biosciences Ltd.
9	190280109116	Rathwa Nimishaben Natubhai	Ambilin Incorporate
	190280109015	Buval Ravinakumari Kamleshbhai	
	190280109041	Gamit DivyaKumari Bipinbhai	
10	190280109003	APARNATHI MAYURGAR VINODGAR	Darshinal Electromation
	190280109054	KHANT KUSH RAMESHBHAI	
11	190280109061	Makavana Deep Manojbhai	Swati Switchgears (India) Pvt Ltd
	190280109102	PRAJAPATI KUSHAL KANUBHAI	
	190280109081	Pandey Anirban Sukumar	
	190280109110	Rathod Chiragkumar Dasharathbhai	
	190280109136	SOLANKI SUMIT J	

Track 4, Time 11.00 am onwards, Venue 209 A

Expert: Mr Fenil Sabuwala, Director, PDF engineers PVT Ltd

Team no	Enrollment No	Name of Student	Name of Industry /project
1	190280109024	Chauhan Hirendrasinh Yashpalsinh	Kreative Technomation PVT. LTD.
	190280109904	Badgujar Deep Ranjitbhai	
2	190280109008	BARAIYA CHANDRESH V	Swati Switchgears (India) Pvt Ltd:(23 days), Arvind Ltd. :(67 days)
	190280109013	Bhetariya Mesur Maldebhai	
	190280109006	Bamrotiya Kishan Naranbhai	
	190280109010	BHARVAD SHAILESHKUMAR GOVINDBHAI	
	190280109133	SOLANKI AKSHAY HITESHBHAI	
	190280109046	JADAV RAVIKUMAR SAVDASBHAI	
	190280109053	KATARIYA CHIRAG LAXMANBHAI	
	190280109027	Chavda merubhai keshurbhai	

	190280109137	SOLANKI SUNILBHAI JAYSUKHBHAI	
3	190280109082	Pandya sanjana. S	Active Engineers Pvt Ltd
	190280109142	TANK JAYDEEP MANSUKHBHAI	
	190280109098	Prajapati Amitkumar Maheshbhai	
	200280109507	ZALA VIRENDRASINH SANJAYSINH	
4	190280109139	SORIYA YASH JAYANTILAL	Captiva Ceramic Industries
5	190280109118	Reshamwala Gautamkumar Rajendrabhai	Photom Technologies
6	190280109068	Mistry Bhavik Rakeshbhai	PTS Automation PVT. LTD.
7	200280109508	BALDANIYA DIVYESH SUKHLALBHAI	Relinquo Automation Pvt.Ltd
8	190280109151	Vala Karansinh Maheshbhai	Gujarat Heavy Chemical Limited
	190280109083	Parmar Bhavdip P	
9	190280109026	Chauhan Nilesh Rajendrabhai	Edunet foundation GTU-Center of Excellence
	190280109056	Kotadiya Prayagchandra Sureshbhai	

	190280109065	Malhotra Nikhilkumar Maheshbhai	
Track 5, Time 11.00 am onwards, Venue Chanakya Hall			
Expert: Mr. Sujeetsingh Rajput			
Team no	Enrollment No	Name of Student	Name of Industry /project
1	190280109128	SHARMA GHANSHYAM RAJESH	UNITED PHOSPHOROUS LIMITED (UPL LTD.)
	190280109100	HARDIKBHAI RAMESHBHAI PRAJAPATI	
	190280109146	DATT MANOJKUMAR THAKAR	
2	190280109154	Vora kirtan jatin	Creative engieers
3	190280109064	MALEK SHIFA MOHMMEDRAISH	SARK EPC Project Pvt. Ltd.
	200280109515	Patel Darshan DineshKumar	
	190280109043	GAMIT MITULKUMAR DINESHBHAI	
	190280109020	Chaudhari Praful Ganeshbhai	
	190280109089	Patel Pareshbhai Hakamabhai	

4	190280109106	PRAJAPATI VARSHIL HASMUKHBHAI	AATMAN CORPORATION
	190280109014	Bist Vishal Kamalsingh	
5	190280109049	JOSHI VISHAL MANOJBHAI	OPTIC LITING PVT. LTD.
6	190280109131	Sojitra Sahil Rameshbhai	Rajesh power services private limited
	190280109034	Desai Kushal Anand	
	190280109095	Pillai Jaydeep Rajubhai	
	190280109029	Chokshi Hardda Kaumilkumar	
	190280109012	Varun Yashavant Bhatt	
	190280109035	PARTH SHANTILAL DHAMAT	
	190280109121	Sapariya Om Jayeshbhai	
7	190280109079	Panchal Sahil Poonambhai	Sahajanand Electricals
	200280109502	BORADE RAJ SANJAY	
8	200280109502	BORADE RAJ SANJAY	IMEG CORP(INDIA) PVT LTD
9	190280109091	SHREYAS PATEL	JP TECHNOSOFT

10	190280109085	PATEL JAY RAJESHBHAI	TRANS ELECTRO
	190280109086	PATEL KAUSHALBHAI BHIKHUBHAI	
	190280109042	Kuldipsinh H. Gamit	
	180280109032	Halpati Yashkumar Nareshbhai	
	190280109060	MAHLA JAIMIK RAMCHANDRA	

Track 6, Time 11.00 am onwards, Venue T&R Lab

Mr Anil Gupta, Managing Director, B solar

Team no	Enrollment No	Name of Student	Name of Industry /project
1	190280109048	JOSHI JAY GAURISHANKAR	NESSA ILLUMINATION PVT LTD
	190280109107	PUROHIT JAYDEEPKUMAR PARSOTTAMBHAI	
	200280109514	SAMIR GWALIA	
2	190280109148	Sahil S Vadukar	Excel Electrical Infra

	190280109017	Deven S Chaudhari	
3	190280109059	Kurmi Manishaben Harendrabhai	Lipo Technology private limited
4	200280109517	Kinnari Hasmukhbhai Prajapati	Matter Energy
	200280109516	Tapan Dilipgiri Goswami	
5	200280109511	Ramesh Makwana	OMKAR POWER
6	190280109127	Shah Ratnam Bigenkumar (project)	Electric Vehicle Controller - CELER (SSIP LDCE FUNDED)
	190280109125	Shah Jay Vimalkumar (project)	
7	190280109009	BARAIYA DIPAK SUBHASHBHAI	Swap Automotive Pvt Ltd
8	190280109038	Gadhavi Jivraj Dhanrajbhai	Suzlon Energy ltd.
	190280109130	Sodha Rajdeepsinh Natvarsinh	
	190280109120	samad ramshibhai karasanbhai	
9	200280109503	Parmar RameshKumar Narshibhai	B-Solar Consultant & Engineer Pvt Ltd
	200280109505	SOHAM PIYUSHKUMAR MODI	
10	200280109520	Mungara Karan Ramnikbhai	NEWBIE TECHNOLOGY PVT. LTD.

11	190280109138	SOLANKI UMESHKUMAR NANJIBHAI	PDF ENGINEERS PVT LTD
	198280109153	VASAVA VINEETKUMAR KOTESINHBHAI	
	190280109018	CHAUDHARI GAUTAMIKUMARI DAHYABHAI	
	190280109030	CHOPDA AZIM SULEMAN	
	190280109134	SOLANKI MAHIN KAMLESHBHAI	
12	200280109509	Desai Shreyas Kanubhai	Luxus Lighting Solution
	200280109522	Joshi Dev Jigneshbhai	
13	190280109150	VAGHARI VISHALKUMAR	Electronic Quality development centre (EQDC)
	190280109078	PANCHAL RAJ VINODBHAI	
	190280109108	RANA KARANSINH DILIPSINH	

3. Review was done parallely in 6 tracks as below:

Tracks	Track name	Venue	Faculty mentor/coordinators	Expert Name
1	Power system . Software	201	JBM,FAM,HNR	Mr Mayur S Parikh, Deputy Director, UGVCL
2	Machine and Electronics	207	NVS, SMP, NDR	Mr Bhadresh Patel, Director Accumax Instruments Pvt. Ltd.
3	Automation	208	VNM,MNP,KAB	Mr Sachin Borisa, Associate Director, Hitachi Hi Rel Power Electronics Pvt Ltd
4	Automation	209 A	AMU, TRP,SNS	Mr Fenil Sabuwala, Director, PDF engineers PVT Ltd
5	Testing consultancy	Chanakya hall	KBK, MIS,MRV	Mr. Sujeetsingh Rajput
6	Renewables, Consultancy	T&R lab	BJS, JKC,BGC	Mr Anil Gupta, Managing Director, B solar

4. Winners of KAIZEN 2023

RANK	Name of Students	Enrollment no	Project/Internship Title	Name of Faculty mentor	Remarks of experts
1	Reshamwala Gautamkumar Rajendrabhai	190280109118	Photom Technolo gies	Prof T R Patel	
2	Shah Jay Vimalkumar	190280109125	Electric Vehicle Controlle r – CELER	Prof M R Vasavada	Good working model demostratio n
	Shah Ratnam Bigenkumar	190280109127			

3	NILESH KHODIAR	200280109524	Internship at Adani Power Ltd.	Prof S N Shivani	Very sound Technical knowledge
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5. Brief about Winner Projects

1st-- Internship at Photom Technologies

Abstract: During the tenure of internship, we worked upon developing the mesh network using various communication modules. In semiautonomous, human intervention was needed for controlling and in operation of machines. So, to reduce labor cost, increase efficiency, improve reliability, reduce maintenance cost and get access of controlling and monitoring from anywhere, we developed the system, which could help to connect and operate the device through network. This would help in reducing dependency over human and reduce the maintenance cost.

Name of the student: Reshamwala Gautamkumar Rajendrabhai

Guided by:

Internal Guide: Prof T R Patel

External Guide: Mr. Himmatt singh

Photos of Prototype:



2nd – Electric Vehicle Controller - CELER

Abstract : Our country India is moving towards electrification of automobile industry but there are still some problems holding us back. We need to solve these problems through our innovation and determination. As per our research, some major problems holding us back are incapability of EV controllers, loopholes in charging infrastructure and high prices of EV. To solve them, we have tried to design our own EV controller for conventionally used BLDC Motor such that it can be modified as per requirement of Indian conditions and unique feature of regenerative braking can also be applied for maximization of energy utility. The design of an universal OFF Board charging solution for EV Batteries is also done to possible extent to charge different Lithium batteries at their respective charging voltage and desired charging current to charge the battery in required time. This charger design can also be used as an ON Board Fast charging solution for EVs solving the problem of using OFF Board chargers

Team members

- i. Shah Jay
- ii. Shah Ratnam

Guided by

Internal Guide: M R Vasavada

Photos of the Prototype :



3rd – Internship at Adani Power Ltd.

Abstract :

Name of the student Nilesh Khodiar

Guided by:

Internal Guide: Prof S N Shivani

External Guide: Mr.Vijay Kumar A

Photos of Prototype:

Internship at ADANI POWER LIMITED

Prepared By: NILESH KHODIAR
(210220100524)
Department: Electrical Engineering
L.D. College of Engineering, Ahmedabad
Year- 2022-2023

ABSTRACT

During my electrical engineering internship at Adani Power Plant, I gained valuable learning experience in power generation and distribution systems. I assisted the electrical maintenance team with various tasks, conducting electrical testing, and supported the maintenance and troubleshooting of electrical systems. Additionally, I learned about safety protocols and attended training sessions. Overall, my internship provided me with hands-on experience and enhanced my understanding of electrical systems in a real-world setting.

INTRODUCTION

- The Adani Power Plant is a large and complex facility that requires a constant and uninterrupted supply of electricity. This internship provided an opportunity to learn about a wide range of electrical systems and equipment used in power generation.
- I had the opportunity to work on a wide range of electrical systems and equipment used in power generation, and gained valuable hands-on experience in maintenance, troubleshooting, and installation.

NOVELTY OR UNIQUENESS OF THE WORK

This internship focused on the learning about maintenance and operation of large-scale electrical systems and equipment, using the latest technologies and best practices in the field. Key features included the use of advanced protection systems to optimize performance and minimize damage and the implementation of rigorous safety protocols to minimize risks and ensure a safe working environment.

MAJOR OUTCOMES

1. Gained learning experience in maintaining, troubleshooting, and installing electrical equipment.
2. Acquired in-depth knowledge of the power plant's electrical systems and their operation, including the ability to troubleshoot and repair equipment malfunctions.
3. Developed technical skills in electrical engineering, including working with power systems, transformers, generators and switchgear.
4. Gained a deeper understanding of the challenges and opportunities facing the energy industry.
5. Developed the ability to work effectively as part of a team in a fast-paced and dynamic environment.

PROBLEM IDENTIFICATION

1. Developing and implementing robust protection schemes to prevent damage to equipment and ensure safe and reliable operation of the power system.
2. Adhering to environmental regulations related to emissions and waste management, including monitoring and controlling the emissions from power generation equipment and ensuring proper disposal of waste material.
3. Ensuring the safety of personnel working with high-voltage switchgear, including circuit breakers and protective relays, which are critical components of the electrical distribution system.
4. Maintaining and upgrading the switchyard equipment, which includes transformers, bus bars, and circuit breakers, to ensure efficient and reliable power transmission from the power plant to the grid.
5. Efficiently managing and maintaining large-scale power generation equipment, such as boilers, turbines, and generators, to maximize energy output while minimizing downtime and equipment failures.
6. The primary challenge of the power plant is to ensure a constant supply of electricity while adhering to strict safety protocols and environmental regulations.

OBJECTIVES

Preliminary objectives:

1. Gained learning experience in maintaining, troubleshooting, and installing electrical equipment.
2. Work collaboratively with a team of experienced professionals to address real-world challenges in the field of power industry.
3. Develop technical skills in power generation equipment, switchgear, switchyard, and protection systems.
4. Understand the challenges and opportunities facing the energy industry.
5. Familiarize with the latest technologies and best practices in the field of electrical engineering.
6. Learn about the electrical systems, safety protocols, and environmental compliance procedures at the power plant.

FIELD OF APPLICATION

1. The skills and knowledge gained during this internship are directly applicable to careers in the power generation and distribution industry.
2. The experience gained in troubleshooting and maintaining large-scale electrical equipment is relevant to a wide range of industries, including manufacturing and construction.
3. The understanding of environmental compliance and sustainability gained through this internship is valuable for careers in energy management and renewable energy development.
4. The communication and collaboration skills developed during this internship are essential for success in any team-based work environment.
5. The technical knowledge and analytical skills gained during this internship are directly applicable to careers in electrical engineering and related fields, such as automation and control.

CONCLUSION AND FUTURE SCOPE

1. The internship provided valuable learning experience in the field of electrical engineering.
2. Future scope includes the opportunity to continue learning about the latest technologies and best practices in the field and to apply this knowledge to real-world challenges and opportunities.
3. The internship provided a solid foundation for a career in electrical engineering and the energy sector.
4. The skills and knowledge gained during this internship will be invaluable in pursuing a career in the energy industry, and in contributing to the development of more efficient and sustainable power generation technologies.

REFERENCES

1. <https://www.adanipower.com/operational-power-plants/mandra-gujarat>
2. Standard Handbook of Power plant Engineering
3. <https://sambhavbhandari25.medium.com/internship-experience-at-thermal-power-plant-38627980-510-4141-8141-414141414141>

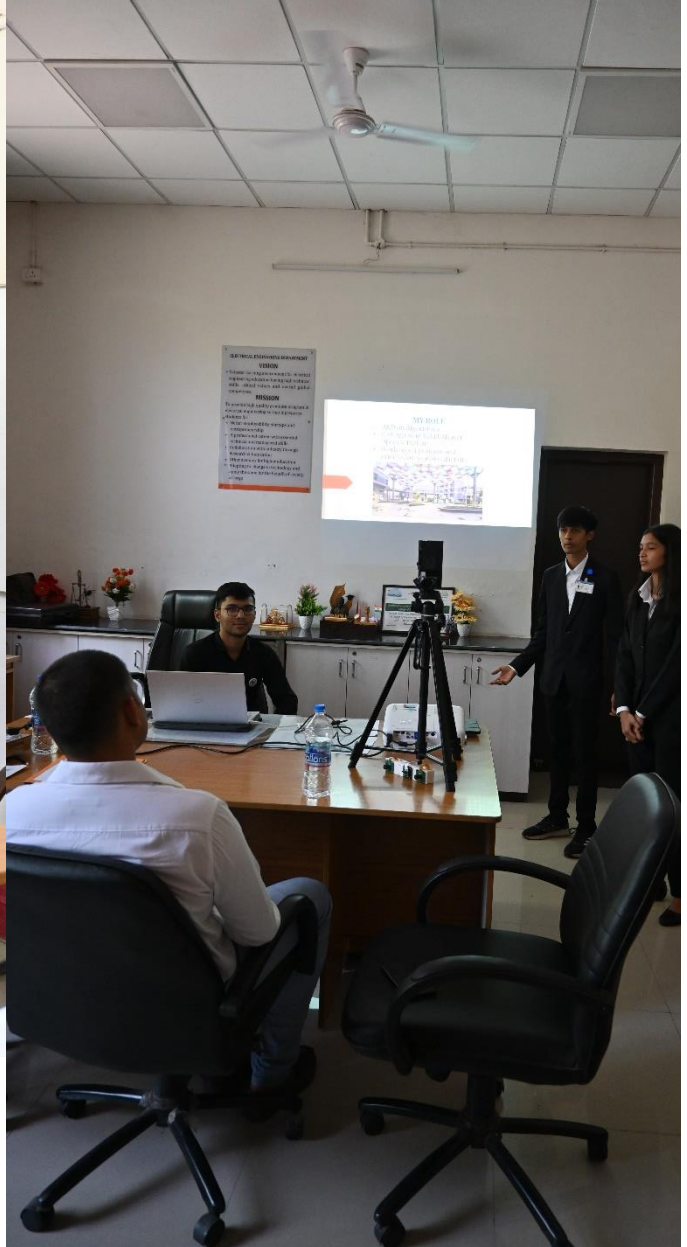
6. Glimpses from KAIZEN –



Welcome of judges



Inauguration speech by – Head of department and senior professors



Project demonstration to judges



Review is being done by experts



Department Decoration for KAIZEN



Student volunteer's team behind KAIZEN



Electrical family with final year (2018-2023 Batch) students