PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

(Approved by AICTE & Affiliated to Anna University, Chennai)

Madurai - Sivagangai Highway, Arasanoor, Thirumansolai Post, Sivagangai Dt. - 630 561, Tamilnadu
Mobile : 9842102628, 7373002628 Email : info@psyec.edu.in Website : www.psyec.edu.in

City Office : 10, Pandian Saraswathi St, Sivagami Nagar, Narayanapuram, Madurai - 625 014. Telefax- 0452 2682338, Mobile : 98423-02628

1.3.2 Number of Electrical and Electronics Engineering Students undertaken the project/internship/field work during the academic year 2022-2023

PROGRAMME NAME & CODE: EEE & 105

SI NO	Register no	Name of the students	year	Industrial visit
1	912021105001	AJAI G	II	*
2	912021105002	AJITH N	II	*
3	912021105003	AKASH T	II	*
4	912021105004	ARCCHANA B A	II	*
5	912021105005	AROCKIA SIBI RAJA X	II	*
6	912021105006	CHANDRU K	II	*
7	912021105008	DHINESH B	II	*
8	912021105009	GOBINATH K	II	*
9	912021105010	GOWTHAMAN S	II	*
10	912021105014	MUTHU GOKUL V	II	*
11	912021105017	RAM KUMAR K	II	*
12	912021105018	SANJAY S	II	*
13	912021105019	SARUMATHI K	II	*
14	912021105021	SIBI CHAKKARAVARTHY A	II	*
15	912021105022	SOLAIMUTHU T	II	*
16	912021105023	SURYA PRAKASH S	II	*
17	912021105024	THANGA MUTHU S	II	*

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Dr. R. RAJA M.E., Ph.D.,
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Arasanoor, Thirumansolai P.O-630 56
Sivagangai Dist, Tamil Nadu

18	912021105025	VAISHNAVI K	II	*
19	912021105026	VARUNKUMAR MS	II	*
20	912021105027	VASANTHAKUMAR A	II	*
21	912021105029	VIGNESH M	II	*
22	912021105030	YOGESHWARI M	II	*
23	912021105701	VEERAMANITHASAN M	II	*
24	912021105702	RAMAN P	II	*

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2022-2023

INDUSTRIAL VISIT DETAILS

SI NO	EVENT DATE	YEAR/SEM	COMPANY NAME	STRENGTH
1	29.08.2022	II/IV	Thoothukudi Power Station/TANGEDCO, Thoothukudi-4	24 STUDENTS + 2 FACULTIES

Pandian Saraswathi Yadav Engineering College Arasanoor Thirumansolai P.O 630561 Sivagangai Dist.

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Ref: PSYEC/PRL/EEE/II/2023-24 10.08.2022

To

The Superintending Engineer,Operation
Thoothukudi Power Station/TANGEDCO,
Thoothukudi-4

Respected Sir,

Sub: Industrial Visit Permission-Regards

I am writing this letter to seek your permission for one day Industrial Visit at your Thermal Power Plant on 29.8.2022 As a part of our curriculum, we have planned this visit to give an opportunity for the students to know more about generation of Electricity at your Plant.

I assure you that our students will abide by your rules and regulations during the visit. I request you to grant permission to visit your Plant for a batch of 35 students along with 2 faculty members.

Thank you and I will be looking forward for your positive response.

Thanking You

Regards,

Principal

Dr. R. RAJA M.E., Ph.D.,
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ENGINEERING COLLEGE
Arasanoor, Thirumansolai P.O-630 56
Sivagangai Dist, Tamil Nadu

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TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LTD

TUTICORIN THERMAL POWER STATION

From,

Dr.P.Nelson Vinotha Kumar Xavier.,

M.Tech., B.O.E., M.B.A.,F.I.E.,

Superintending Engineer,Operation,

Tuticorin Thermal Power Station,

Tuticorin-4.

To,

The Principal,

Pandian Saraswathi Yadav Engineering College,

Arasanoor, Thirumansolai Post,

Sivagangai Dist-630 561.

Lr. No:SE/O/EE/AEE/JE/TRG/TTPS/F. 21/ D.No. /2022 Dated:20 .08.2022

Sir,

Sub:TTPS – Industrial Visit-Visit to TTPS by the studentsofPandian Saraswathi Yadav Engineering College,Arasanoor, Thirumansolai- 630 561-PermissionGranted–Regarding.

Ref:1. Memorandum (per) No.16608/B11/B112/2019-1, Dated: 29.08.2019.
2. (Per) CMD TANGEDCO Proceedings No.102 Dated 10.06.2020.
3. Pandian Saraswathi Yadav Engineering College,Thirumansolai - 630 561 Letter dated: 10.08.2022.

****

Permission is hereby accorded to the Engineering College Students to Visit Tuticorin Thermal Power Station on 29.03.2022 subject to payment of Rs.100/- +GST 18% per student by Cash or Demand Draft Drawn in favour of "SE/P&A/TTPS" payable at Tuticorin to the conditions specified in the reference (1) & (2) cited, as follows.

1. Name of the College :Pandian Saraswathi Yadav Engineering College, Thirumansolai - 630 561.
2. Department/year of the Student : EEE /II &IIIYear

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Arasanoor, Thirumansolai P.O-630 56
Sivagangai Dist, Tamil Nadu

3. No.of.Students :35 Nos
4. No. of Faculty Members :02 Nos

SUPERINTENDING ENGINEER

OPERATION/TTPS/TUTICORIN-4.

Copy to the Executive Engineer/Training/TTPS.

(It is informed that a maximum numbers of students shall not be exceed for industrial visit. Camera and Mobile phone will not be allowed & Wearing of face mask for all student is compulsory during industrial visit. It is requested to furnish a list regarding name, age, address etc., of the students and hand over the same to the security office at the time of visit).

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27.08.2022

From

The HOD
Department of Electrical and Electronics Engineering
Pandian Saraswathi Yadav Engineering College
Arasanoor-630561

To

The Principal
Pandian Saraswathi Yadav Engineering College
Arasanoor-630561

Respected sir,

Sub: **Requisition Letter-Permission request for on duty-Reg**

The Department of Electronics and Communication Engineering has arranged the Industrial Visit at Tuticorin Thermal Power Station, for Second year students on 29.08.2022 as per the instructions. So, I request you to grant OD Second year students and below mentioned faculties.

Faculties Accompanied:

1.Mr.S.SenthilKumar, AP,EEE

2. Mrs.K.JeyaPriya, AP/EEE

Thanking you

Yours sincerely

HOD/EEE

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Sivagangai Dist, Tamil Nadu

Pandian Saraswathi Yadav Engineering College

Arasanoor-630561

A REPORT ON INDUSTRIAL VISIT AT

TUTICORIN THERMAL POWER STATION

SCHEDULED ON 29.08.2022

II YEAR

Submitted to

The Principal

Pandian Saraswathi Yadav Engineering College

Arasannor-630561

Prepared by

Students of Department of Electrical and Electronics Engineering

Second Year

Pandian Saraswathi Yadav Engineering College

Arasannor-630561

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Arasanoor, Thirumansolai P.O-630 561
Sivaganga Dist. Tamil Nadu

Organized by: Department of EEE
Participants: Second-year Electrical and Electronics Engineering Students
Location: Tuticorin Thermal Power Station
Date: 29.08.2022
Accompanied by: Mr.S.Senthil Kumar and Mrs.K.JeyaPriya

On August 29, 2022, the Department of EEE organized an industrial visit for the second-year students to Tuticorin Thermal Power Station, located in Tuticorin. The visit was led by, Mr.S.Senthil Kumar and Mrs.K.JeyaPriya who accompanied the students throughout the tour.

Overview:

During the visit, the students were given a comprehensive overview of the operations at Tuticorin Thermal Power Station, an automotive component manufacturing company. The tour covered various aspects of the manufacturing process, welding methods, industrial safety practices, and the latest trends in automotive technologies.

Key Highlights:

1. Basic Principle

Conversion of Energy: **Thermal power stations convert heat energy into electrical energy. This is typically done by burning fossil fuels (such as coal, oil, or natural gas) to produce steam that drives a turbine connected to a generator.**

2. Main Components

- ***Boiler:*** Burns the fuel to generate heat, which heats water to produce steam.
- ***Turbine:*** Steam from the boiler turns the turbine blades.
- ***Generator:*** Connected to the turbine, it converts mechanical energy into electrical energy.
- ***Condenser:*** Cools the steam coming out of the turbine and converts it back into water.
- ***Cooling Towers:*** Helps in cooling the water that is used to condense the steam.
- ***Fuel Handling System:*** Manages the supply and processing of fuel.

3. Types of Thermal Power Plants

- ***Coal-fired:*** Uses coal as the primary fuel.
- ***Oil-fired:*** Uses oil as the primary fuel.
- ***Gas-fired:*** Uses natural gas as the primary fuel.
- ***Combined Cycle:*** Uses both gas and steam turbines to improve efficiency.

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4. Efficiency and Heat Rate

- **Thermal Efficiency**: A measure of how well the power station converts heat into electricity, typically ranging between 30% to 50%.
- **Heat Rate**: The amount of energy used by an electrical generator/power plant to generate one kilowatt-hour (kWh) of electricity.

5. Environmental Impact

- **Emissions**: Produces CO2, NOx, SOx, and particulate matter.
- **Waste Management**: Ash disposal and handling.
- **Cooling Water Requirement**: Large quantities of water needed for cooling purposes.

6. Operational Aspects

- **Base Load vs. Peak Load**: Thermal power plants can operate as base load (constant output) or peak load (high demand periods).
- **Maintenance**: Regular maintenance is required to ensure efficient and safe operation.
- **Safety Measures**: Includes measures to handle high-pressure steam, high temperatures, and emissions control.

7. Advancements and Future Trends

- **Supercritical and Ultra-supercritical Technology**: Higher efficiency through higher pressure and temperature.
- **Carbon Capture and Storage (CCS)**: Reducing carbon emissions by capturing and storing CO2.
- **Integration with Renewable Energy**: Hybrid systems combining thermal and renewable sources for cleaner energy production.

8. Economic Aspects

- **Cost of Construction**: High initial investment.
- **Operational Costs**: Fuel costs, maintenance, and labor.
- **Economic Life**: Typically ranges from 30 to 50 years

Conclusion:

Thermal power stations play a crucial role in electricity generation, especially in regions with abundant fossil fuel resources. However, the shift towards sustainable and renewable energy sources is impacting the future role and development of thermal power stations.

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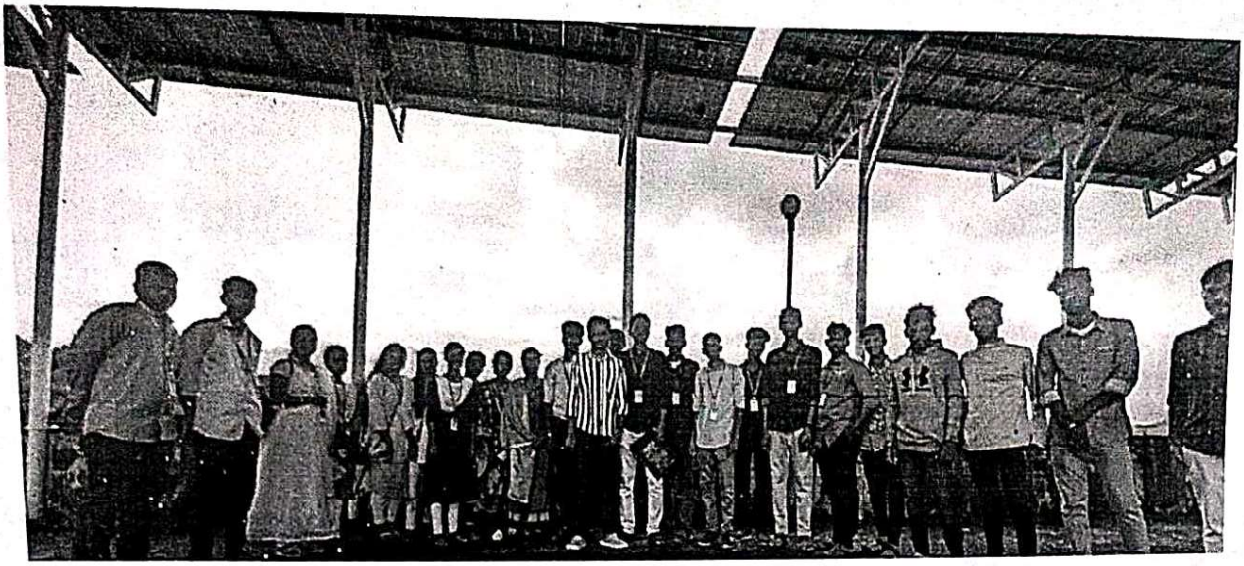
INDUSTRIAL VISIT PHOTOGRAPHS



Industrial Visit to Tuticorin Thermal Power Station, Tuticorin on 29.08.2022

Prepared by

Verified by

Approved by

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