SRINIVASAINSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi, Affiliated to JNTUK, Kakinada)
(An ISO 9001:2015 Certified Institute, Accredited by NAAC with 'A' Grade)
NH-216, Amalapuram-Kakinada Highway, Cheyyeru (V), AMALAPURAM, E.G.Dt.-533216

INDUSTRIAL VISIT REPORT

1. GS Electricals at autonagar, Kanuru, Vijayawada
2. Senthur Power Services, Surampalli village, Vijayawada

A complete report on industrial visit organized by **Srinivasa institute of engineering and technology**, for the students of **Electrical and Electronics Engineering [III B.TECH, I SEM, SR21]** in order to get the practical knowledge about manufacturing of wide range of Transformers and Electrical control panels for various applications.





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Srinivasa institute of engineering and technology had organized an industrial visit on 10 August, 2023 to GS Electricals at autonagar, Kanuru, Vijayawada and Senthur Power Services, Surampalli village, Vijayawada, for the students of **Electrical and Electronics Engineering**

The visit was organized by HOD of EEE branch A.V.C.Janaki Ramayya, & IQAC Head Dr B. Ratna Raju.

P.SriKavitha, K.Satyanarayana and V.Satish Kumar were the co-ordinators Faculty for the industrial visit.

We started travelling from the Amalapuram at 02:00am via private travells bus. Totally 60 **students** along with 3**coordinators faculty** were there in the journey.

Company Profile

G.S.Electricals established factory located in the Industrial area Autonagar,Vijayawada-7, A.P. G.S.E Brand Instrument Transformers and Distribution Transformers of different rating to international standards are manufactured are manufactured in our factory since more than a decade. We are suppliers and Repairers of transformers in APTRANSCO connected discoms with quality assurance system.

Senthur Power Services is in its operation since 2014. We have already established ourselves as reliable suppliers of Critical Packages along with Engineering and Consultancy services. We have had the privilege of providing services to a wide range of industry, viz., Power, Process, Sugar and Chemical Industries. our niche service to the industry includes Testing and Commissioning of Steam Turbine Generators up to 150MWe and EBOP (Electrical Balance of Plant) up to 220KV Switch yard system spread across India. We also provide AMC services for packages supplied by us our service is appreciated and authenticated by repeat orders from our clients.

Group Observation

Interaction with Employees: Throughout the visit, students had the opportunity to interact with various employees, from entry-level staff to senior management. These interactions allowed students to gain firsthand knowledge about the challenges and rewards of working in the G.S.Electricals & Senthur Power Services. Employees were forthcoming in sharing their experiences and insights, providing valuable career guidance to the students.

Learning's and Takeaways: The industrial visit proved to be an enriching experience for the students, and they gained several valuable takeaways, including:

- Understanding the practical applications of theoretical concepts learned in the classroom.
- Insight into the functioning of a well-established Transformer manufacturing company and its various departments.
- Exposure to the latest technologies and practices in the industry.
- Appreciation for the importance of quality control and safety measures in communication processes.
- Awareness of the company's commitment to sustainability and corporate social responsibility.

Conclusion:

The industrial visit to GS Electricals & Senthur Power Services was a resounding success and achieved its objectives of providing students with real-world exposure to the transformer manufacturing and Electrical control panel manufacturing. It not only enriched their knowledge but also inspired them to explore potential career paths within the Electrical Engineering. The experience garnered during the visit will undoubtedly prove beneficial in their academic and professional journeys. We extend our gratitude to the management and staff of GS Electricals & Senthur Power Services for their warm hospitality and valuable insights shared during the visit.

We hope to get more chances further to have such an informative & wonderful experiences of visiting different industries.

Sincerely,

P.Srikavitha
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INDUSTRIAL VISIT REPORT

- Dr.Narla Tata Rao Thermal Power Station, Ibrahimpatnam, Vijayawada.

A complete report on industrial visit organized by **Srinivasa institute of engineering and Technology**, for the students of **Electrical and Electronics Engineering [III B.TECH, II SEM, SR21]** in order to get the practical knowledge about Generation of Electrical Power by Thermal Station.



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Srinivasa institute of engineering and Technology had organized an industrial visit on 21 February, 2024 to Dr.Narla Tata Rao Thermal Power Station, Ibrahimpatnam, Vijayawada for the students of **Electrical and Electronics Engineering**

The visit was organized by HOD of EEE branch Mr. A.V.C.Janaki Ramayya, & IQAC Head Dr B. Ratna Raju.

Mr.S.Basavaiah, Ms.K.Deepthi Bhargavi, Chandra Sekhar were the Faculty co-ordinators for the industrial visit.

We started travelling from the Amalapuram at 05:00AM via private travels bus. Totally 56 **students** along with 3 **faculty coordinators** were there in the journey.

Company Profile

Dr. Narla Tata Rao Thermal Power Station or Vijayawada Thermal Power Plant is located at Vijayawada in Andhra Pradesh. It is named after, Narla Tata Rao, the erstwhile chairman of the Andhra Pradesh State Electricity board. The power plant is one of the coal-based power plants of APGENCO. It is well placed between Ibrahimpatnam and Kondapalli villages.

Group Observation

Interaction with Employees: Throughout the visit, students had the opportunity to interact with various employees, from entry-level staff to senior management. These interactions allowed students to gain firsthand knowledge about the challenges and rewards of working in the **Dr. Narla Tata Rao Thermal Power Station**. Employees were forthcoming in sharing their experiences and insights, providing valuable career guidance to the students.







Learning’s and Takeaways: The industrial visit proved to be an enriching experience for the students, and they gained several valuable takeaways, including:

- Understanding the practical applications of theoretical concepts learned in the classroom.
- Insight into the functioning of a well-established Turbine, Alternator, Transformer operation and its various departments.
- Exposure to the latest technologies and practices in the industry.
- Appreciation for the importance of quality control and safety measures in communication processes.
- Awareness of the company's commitment to sustainability and corporate social responsibility.

Conclusion:

The industrial visit to **Dr. Narla Tata Rao Thermal Power Station** was a resounding success and achieved its objectives of providing students with real-world exposure to the Thermal Power Generation. It not only enriched their knowledge but also inspired them to explore potential career paths within the Electrical Engineering. The experience garnered during the visit will undoubtedly prove beneficial in their academic and professional journeys. We extend our gratitude to the management and staff of **Dr. Narla Tata Rao Thermal Power Station** for their warm hospitality and valuable insights shared during the visit.

We hope to get more chances further to have such an informative & wonderful experiences of visiting different industries.



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Sincerely,

S.Basavaiah

Asst.Prof

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INDUSTRIAL VISIT REPORT

1. 132/33 KV SUBSTATION, MUMMIDIVARAM

A complete report on industrial visit organized by **Srinivasa institute of engineering and technology**, for the students of **Electrical and Electronics Engineering [IV B.TECH, I SEM, R20]** in order to get the practical knowledge distribution substation and control.





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Srinivasa institute of engineering and technology had organized an industrial visit on 3rd November, 2023 to 132/33 KV Substation, Mummidivaram of **Electrical and Electronics Engineering**

The visit was organized by HOD of EEE branch A.V.C.Janaki Ramayya, & IQAC Head Dr B. Ratna Raju.

SK.Shakeenabhi and K.Satyanarayana were the co-ordinators Faculty for the industrial visit.

We started travelling from the Amalapuram at 11:00am via college bus. Totally 32 **students** along with 2**coordinators faculty** were there in the journey.

Substation Profile

The 132/33 KV substation at mummidivaram receives 132KV incoming from amalapuram and ramachandrapuram. The substation step downs the 132KV to 33KV by using step down transformer and supplies to the different feeders to different places. The deputy engineer at the substation explained the components related to the substation and instructed the students to draw the single line diagram of the 132/33KV substation. The components are lighting arrester, isolator, circuit breaker, step-down transformer, bus bars, feeders, station transformer and small components. After that students were taken into yard by deputy engineer along with staff members to the yard. The incoming supply of 132kv is from amalapuram and ramachandrapuram. First we went to lighting arresters and we have gained some knowledge about it and sir explained the working and construction of it. And also we came to know that the lighting arrester is made up of zinc oxide material and it contains a surge monitor in it. The surge monitor consists of two parts one is surge counter and leakage current monitor. The students asked different questions like what is the purpose of both the components and the deputy sir explained working it. After that students moved to cvt. The CVT stands for capacitive voltage transformer which is used to measure the voltage rating. When a 132KV is fed to the CVT it step downs to 110V.It is also used for communication purpose between the substations by using a wave trap. But we didn't observed the wave trap their as the wave trap at that substation is not in use. And next we moved to the isolator. It is a switch which can make or break under no load condition. If it is operated under on load condition then the equipment causes severe damage and also the equipment gets spoiled because the incoming supply is 132KV it is a high voltage and it needs high insulation with more dielectric strength but the isolator doesn't contain any dielectric strength, so it should be operated only under no load condition due to this reason.

And next we moved to the circuit breaker and it is also a switch which can make or break the circuit under on load conditions. And the circuit breaker consists of dielectric medium called SF6 gas. And the questions asked by the students are why only SF6 gas is only used in the circuit breaker. Why not remaining used and working condition of circuit breaker. The cost of SF6 breaker is high expensive so they will check the properties of gas for every six months. And then we moved to transformer which is a step down transformer of 132/33KV and to feeders and also to station transformer.

Group Observation

Interaction with Employees: Throughout the visit, students had the opportunity to interact with various employees, from entry-level staff to senior management. These interactions allowed students to gain firsthand knowledge about the challenges and rewards of working in the 132/33 KV Substation. Employees were forthcoming in sharing their experiences and insights, providing valuable career guidance to the students.

Learning's and Takeaways: The industrial visit proved to be an enriching experience for the students, and they gained several valuable takeaways, including:

- Understanding the practical applications of theoretical concepts learned in the classroom.
- The dielectric medium used in the circuit breaker at incoming feeder is SF6 gas.
- The dielectric medium used in the circuit breaker at outgoing feeder is vacuum.
- Exposure to the latest technologies and practices in the substation.
- Appreciation for the importance of quality control and safety measures in communication processes.
- Awareness of the substation commitment to sustainability and corporate social responsibility.

Conclusion:

The industrial visit to 132/33 KV Substation was a resounding success and achieved its objectives of providing students with real-world exposure to the transformer manufacturing and Electrical control panel manufacturing. At finally we have completed the visiting of yard and went to the office. All the components in the yard can be operated at office itself. At the office there will be a control room and battery backup storage. When substation is at off condition then the batteries will work for the rest of the while. In battery backup there will be 110 cells which are connected in series. And there will be panels of circuit breaker transformer and station transformer etc. The operation of the components will be observed for 24 /7 regularly. So the staff members will exchange their shifts and work there. And the software used in the office is SCADA. By monitoring in the systems at office they are easy to control the equipment and components.

It not only enriched their knowledge but also inspired them to explore potential career paths within the Electrical Engineering. The experience garnered during the visit will undoubtedly prove beneficial in their academic and professional journeys. We extend our

gratitude to the management and staff of 132/33 KV Substation for their warm hospitality and valuable insights shared during the visit.

We hope to get more chances further to have such an informative & wonderful experiences of visiting different industries.

Sincerely,

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