



Estd.2008



INFLUX ELECTRIC 2023

**KLR COLLEGE OF ENGINEERING AND
TECHNOLOGY**

**DEPARTMENT OF ELECTRICAL AND
ELECTRONICS ENGINEERING**



NEWSLETTER

INFLUX ELECTRIC

KLR COLLEGE OF SCIENCE AND ENGINEERING TAKES STRIDE TOWARDS A GREENER TOMORROW WITH HARITHA HARAM INITIATIVE



Chairperson K. Naga Mani, known for her commitment to community service and environmental causes, played a pivotal role in steering the event. Her vision and dedication have been instrumental in fostering a culture of sustainability within the institution.

Dr. T. Rakesh, the Head of the Department, also actively contributed to the success of the Haritha Haram initiative. His expertise and passion for environmental science added an educational dimension to the event, ensuring that participants gained valuable insights into the importance of afforestation.

Tree Plantation Drive: One of the highlights of the event was a tree plantation drive on the college campus. Participants, including students and faculty members, planted a variety of saplings, contributing to the college's green cover. This hands-on activity not only promoted environmental conservation but also fostered a sense of collective responsibility among the participants.





NEWSLETTER

INFLUX ELECTRIC

INDUSTRIAL VISIT

KOTHAGUDEM THERMAL POWER PLANT (V&VI STAGES)



The tour began with an overview of the power plant's history, capacity, and different types of thermal power plants. We were then taken to the coal handling plant, where we saw how coal was received from mines and stored in large bunkers. We saw how the coal was fed into the boiler through conveyor belts and pulverized into fine particles to increase its surface area, allowing for efficient combustion.

As part of our electrical engineering course, we recently had the opportunity to visit a Kothagudem Thermal Power Station is located at palwancha, Telangana, India .the power plant has installed capacity of 1800MW with 4 units in operating of the coal base power plant of Telangana power generation corporation limited (TSGENCO).The tour was organized to provide us with practical knowledge about the different components and processes involved in the generation of electricity from thermal power plants. The power plant was located near the city outskirts and had a capacity of 500 MW.





NEWSLETTER

INDUSTRIAL VISIT

KOTHAGUDEM THERMAL POWER PLANT (V&VI STAGES)



SWITCHYARD:

We were then taken to the switchyard, where we saw how the electrical energy generated in the power plant was distributed to the transmission network. We saw the different types of transformers, circuit breakers, isolators, and busbars used in the switchyard. In a generating station, the switchyard is an essential component that helps to ensure the smooth and safe transmission of power from the power generating units to the distribution network. The switchyard acts as a hub where the power generated by various generating units is received and distributed to the transmission network. The switchyard also plays a crucial role in maintaining the reliability and stability of the power system.

INFLUX ELECTRIC

Next, we visited the boiler room where we saw the various components of the boiler such as superheaters, economizers, and air preheaters. We saw how the boiler generated high-pressure steam from the combustion of coal. The steam generated from the boiler was then used to run the turbines. We were then taken to the turbine room, where we saw the different types of turbines used in the power plant. We saw how the turbines were massive machines that converted the high-pressure steam into mechanical energy to drive the generators. After visiting the turbine room, we were taken to the generator room, where we saw the different types of generators used in the power plant. We saw how the generators were massive machines that converted the mechanical energy into electrical energy. The electrical energy was then transmitted to the grid through transformers.





NEWSLETTER

INDUSTRIAL VISIT

KOTHAGUDEM THERMAL POWER PLANT (V&VI STAGES)

INFLUX ELECTRIC



The switchyard is typically located adjacent to the generating units and consists of various equipment and components, including circuit breakers, transformers, isolators, busbars, and surge arresters. These components work together to ensure the efficient and safe transmission of power. One of the primary functions of the switchyard is to receive the generated power from the generating units and distribute it to the transmission network. This is accomplished through the use of transformers, which step up the voltage of the generated power to match the voltage of the transmission network. The transformers are connected to the generating units through busbars, which act as a conduit for the power.

Another critical component of the switchyard is the circuit breakers. Circuit breakers are designed to interrupt the flow of power in the event of a fault or overload, thereby protecting the equipment and the power system from damage. The switchyard also includes isolators, which are used to isolate specific sections of the power system for maintenance or repair.





NEWSLETTER

INDUSTRIAL VISIT

KOTHAGUDEM THERMAL POWER PLANT (V&VI STAGES)

INFLUX ELECTRIC



Surge arresters are another important component of the switchyard. These devices are designed to protect the power system from voltage surges that can occur due to lightning strikes or other external factors. Surge arresters are installed at strategic locations throughout the switchyard to provide maximum protection.

In addition to these components, the switchyard also includes various monitoring and control systems. These systems are used to monitor the voltage, current, and other parameters of the power system, and to control the operation of various components such as the circuit breakers and transformers. Overall, the switchyard is a critical component of any generating station. It plays a vital role in ensuring the efficient and safe transmission of power from the generating units to the transmission network. Without a properly functioning switchyard, the reliability and stability of the power system can be compromised, leading to power outages, equipment damage, and other issues. As such, it is essential that the switchyard is designed, installed, and maintained to the highest standards of safety and reliability.

The visit to the thermal power plant was an excellent learning experience for electrical engineering students. We were able to see the various components and processes involved in the generation of electricity from thermal power plants. We were also able to appreciate the importance of safety measures in such plants as we were required to wear safety gear throughout the tour.





NEWSLETTER

INFLUX ELECTRIC

PAPER PRESENTATION



paper presentation is an oral presentation reserved for completed projects for which results are reported as part of the presentation. Paper presentations are an essential part of academic life. They provide a platform for scholars and researchers to share their research findings and ideas with others in their field.

Presenting a paper is an opportunity to showcase one's work, engage with peers, and gain feedback on the research presented. In this article, we will explore the benefits of paper presentations, how to prepare for one, and tips for delivering a successful presentation.





NEWSLETTER

INFLUX ELECTRIC

PROJECT EXPO



Project Expo is an exciting event that showcases the innovative and creative work of students in various fields. It is an opportunity for students to display their skills, talents, and knowledge in front of a larger audience, including industry professionals, faculty members, and other students. In this article, we will discuss the importance of project Expo, how to prepare for it, and tips for a successful display.

Project Expo is an excellent platform for students to showcase their work and demonstrate their understanding of a particular subject. The event allows students to present their projects, research, and ideas to a larger audience, which helps in developing their confidence and public speaking skills.



It also provides an opportunity for students to receive feedback from industry experts and academic professionals, which can be used to improve their future projects and research. In conclusion, Project Expo is a valuable experience for students to showcase their work, gain feedback, and network with industry professionals and academic experts. Proper preparation, a clear presentation, and an engaging display are essential to making the most of the event. By participating in Project Expo, students can develop important skills and knowledge that will help them succeed in their future academic and professional endeavours.



NEWSLETTER

INFLUX ELECTRIC MART HOME WITH GOOGLE ASSISTANT & ALEXA USING NODEMCU ESP8266

This is a IoT project, in this project I have explained how to make Smart Home with Google Assistant and Alexa using NodeMCU ESP8266 and Sinric Pro. By this project we can control home appliances from anywhere in the world. You can control the relay module from the manual switches if there is no internet available. And you don't need any Google Nest or Amazon Echo Dot devices for this voice control home automation project.



We can directly control it through our mobiles with the help of Google Assistant and Alexa.

