



Department of Mechanical Engineering

Industrial Visit Report – KCP Sugar and Industries Corporation Ltd, Vuyyuru

III/IV B.Tech Students of Mechanical Engineering Department were taken to KCP Sugar and Industries Corporation Ltd, Vuyyuru for industrial visit on 22-02-2024 to acquire knowledge by seeing practically the things happening in KCP Sugar and Industries Corporation Ltd. Initially the Supervisory team explained demo lecture on Preparation of Sugar from Sugar cane. As a part of visit 85 students and 2 faculty (Dr. K Sai Sarath and Dr. Priyaranjan Sharma) have visited.



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K.C.P Sugar and Industries Corporation Ltd is a prominent sugar manufacturer in India with diverse operations including Rectified Spirit, Alcohol, Ethanol, Power Cogeneration, and more. Originating from the vision of late Shri. Velagapudi Rama Krishna ICS, the company grew from a struggling 600 TCD sugar factory in 1941 to its current capacity of 7500 TCD, inspiring other sugar industries in Andhra Pradesh. In 1995, the company reorganized into K.C.P. Sugar and Industries Corporation Ltd. under the leadership of late Shri. V.M. Rao, who revamped operations, introduced innovations, and expanded product lines. Today, under the stewardship of Smt. Irmgard Velagapudi M. Rao, Shri. Vinod Sethi, and Smt. Kiran Rao, the company maintains its prominent position in the industry.



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All the students were briefed about the plant layout and process of making sugar with the help of prototype.



The cane processing involves several steps: cane is weighed and unloaded onto a carrier, then pre-leveled and fed into a cutter for pieces. These are shredded for juice extraction in four mills, with water added for maximum sugar extraction. The extracted juice is strained and weighed before heating and treatment with lime and sulfur dioxide. Clarification removes impurities, and evaporation produces syrup, further treated and stored. Syrup is concentrated, crystallized, and centrifuged to separate sugar and molasses. This process repeats for higher-grade sugar. Molasses, unsuitable for further crystallization, is stored separately. The final products, sugar and molasses, are weighed and stored accordingly.

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The following equipment were physically observed by students when they are in working condition.

1. Cane Carrier
2. Mill (Crusher/Shredder)
3. Cane Knives
4. Intermediate Carriers
5. Bagasse Carrier
6. Power Plant (Steam Turbines/Generators)
7. Juice Heater
8. Clarifier
9. Filter (Rotary Vacuum/Pressure)
10. Evaporator (Triple-, Quadruple-, or Quintuple-Effect)
11. Vacuum Pan
12. Crystallizer
13. Centrifugal
14. Dryer
15. Cooler (Granulator)

Finally, Dr. Priyaranjan Sharma, Associate Professor and Dr.K Sai Sarath, Assistant Professor thanked management of KCP Sugar and Industries Corporation Ltd, Vuyyuru for accepting and providing guidance during the industrial visit.



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Campus: Green Fields, Vaddeswaram - 522 302, Guntur District, Andhra Pradesh, INDIA.

Phone No. 08645 - 350200; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 - 3500122, 2577715, 2576129.

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Prepared by

Dr. Priyaranjan Sharma

Approved by

Dr. B. Kiran Kumar

Authorized by

HOD-ME