

**A REPORT  
ON  
INDUSTRIAL VISIT**

**TO**

**KCP SUGAR FACTORY, VUYYURU**

**DATE OF VISIT:2/11/2019**



**By**

**DEPARTMENT OF ELECTRONICS & COMMUNICATION  
ENGINEERING**

**K L E F** Deemed to be University

**Greenfields, Vaddeswaram, Guntur – 522 034**

## **INDUSTRIAL VISIT**

### **KCP SUGAR FACTORY, VUYYURU**

**DATE** : 2<sup>nd</sup> November 2019  
**SECTION** : **II YEAR – S7 & S6**  
**TOTAL STUDENTS** : 34 + 67  
**EVENT** : Industrial Tour

#### **Faculty Coordinators:**

- 1) Vaibhav Nema, Asst.Prof.
- 2) Deepak Kumar Nayak, Assoc.Prof.

#### **EVENT DESCRIPTION:**

An industrial visit has been organized by department of electronics and communication engineering for II-year I semester students on 2nd November 2019. The main objective of the visit was to provide a technical exposure to the students about the manufacturing process and technology.

Totally 101 students of II-year ECE of KLEF visited Efftronics, Vijayawada.

#### **SESSION ACTIVITIES:**

The students were accompanied by 2 faculty members. The buses with students have started from our college at 11:30 AM on 2/11/2019 and reached the KCP Sugar Factory, Vuyyuru by 12:00 PM.

#### **EFFTRONICS VISIT:**

Students visited KCP Sugar factory and learnt about

#### **Cane Carrier**

This is used to transport cane to the milling tandem and consists of chains and slats. Its width is normally equal to the mill size. Mill cane-crushing unit having normally consisting of three rollers in a heavy steel housing. Cane first passes between the top and front rollers, then between

the top and back rollers, to extract the juice. Cane Crushing unit, preceding the first mill to crush the cane prior to extraction of juice, for the purpose of improving the quantity of juice extracted. Normally consists of two rollers. Shredder has the same purpose as the crusher, but a different principle. Consists of a drum, with a concentric shaft, on which hammers are mounted on arms.

### **Mill Tandem**

A complete mill is complex, consisting of crusher (or shredder) and all mills, together with drives and reducing gears.

### **Cane Knives**

These are mounted on cane carriers prior to entrance to mills, for preventing entire cane stalks from entering the mills, straightening and precutting the cane, for the purpose of improving juice extraction and saving driving power at the same time.

### **Intermediate Carriers**

These transport the milled cane (bagasse) from one mill to the next. Baggage Carrier, this carries the bagasse from the last mill to the boilers, and its excess to storage.

### **Power Plant**

This produces electricity by means of non-condensing steam turbines, which drive generators. For the off-season diesel-driven generators are mainly used, to produce a limited quantity of electricity.

### **Juice Heater**

A heat exchanger in which juice is heated by using steam as a medium, normally a multi-pass system. Juice flows through tubes, while steam passes along the outside of the tubes, in the cylindrical body. They can be used horizontally as well as vertically.

**Clarifier**

It is a large vertical cylindrical tank, where juice is given time for decantation, to separate the clear juice from the turbid, which still contains the mud. Juice flow is continuous.

**Filter**

A device to separate the mud from the turbid juice; normally of the rotary vacuum type. Can also be any kind of pressure filter, provided with filter cloth, to let the juice pass and retain the mud on its surface.

**Evaporator**

A series of vessels, in which excess water from the juice is evaporated to form a more concentrated liquid, now called syrup. The vessels work in series under increasing vacuum conditions, to reduce the boiling temperature gradually as the concentration increases step-wise. This prevents overheating of juice and loss of sucrose. The vessels together form a triple-, quadruple- or quintuple-effect evaporator.

**Vacuum Pan**

Like an evaporator vessel, a continuation of the evaporating process, but carried so far that crystallization occurs. Also boils under vacuum for reduced boiling temperature. The syrup is now transformed into massecuite (fill mass-strike-skipping), which is a mixture of grain (crystals) and mother liquor (molasses).

**Crystallizer**

A strike receiver in which the charge from the vacuum pan is stored before going to the centrifugals. Its purpose is cooling, to increase grain size and reduce sucrose left in molasses.

**Centrifugal**

A machine with a fast spinning drum and a screen, inside, through which the molasses can pass while the crystals are retained. Separation is based on the difference in specific gravity, amplified by centrifugal force.

## **Dryer**

A long drum-like rotating cylinder, where sugar is brought in contact with heated air, to reduce its moisture content.

## **Cooler**

Same as a dryer, but air is dry and cooled to reduce temperature of sugar, heated by the dryer. This is to prevent caking during storage. The combination of dryer and cooler into one body is often called a Granulator.

The below picture had been taken during the visit. All over India KCP has manufacturing and marketing of Rectified Spirit, Extra Neutral Alcohol, Ethanol, Incidental Cogeneration of Power, Organic Manure, Mycorrhiza Vam, Calcium Lactate and CO<sub>2</sub>. Company has two sugar factories located in Krishna District Andra Pradesh having an aggregate crushing capacity of 11,500 tons per day.



## **ABOUT KCP SUGAR FACTORY:**

K.C.P Sugar and Industries Corporation Ltd is one among the leading sugar manufacturing companies in India . Its allied business consists of manufacturing and marketing of Rectified Spirit, Extra Neutral Alcohol, Ethanol, Incidental Cogeneration of Power, Organic Manure, Mycorrhiza Vam, Calcium Lactate and CO<sub>2</sub>. Company has two sugar factories located in Krishna District Andhra Pradesh having an aggregate crushing capacity of 11,500 tons per day.

Late Shri. Velagapudi Rama Krishna ICS, a top bureaucrat and civil servant had conceived the idea of promoting agro based industries, when he was director of industries, Madras state. By virtue of his position as director of industries, he had exposure to the industrial sector which prompted him to take over the sugar industry in 1941 at Vuyyuru which was not doing well. The sugar factory was of 600 TCD and it was christened as The K.C.P Limited. He was a source of inspiration to many entrepreneurs to setup sugar industries in Andhra Pradesh. Some of them are Andhra Sugars, Sarvaraya Sugars and Deccan Sugars. The K.C.P Ltd never looked back from the year 1941 and gradually by stages it had expanded to 7500 TCD which is the present capacity. The K.C.P Ltd., consequent to diversified operations had, over the years became a conglomerate with multi locational and multi product units, each the size of an independent company. The company has also envisaged plans to setup different projects which required focused attention and substantial resources. Therefore, it had been decided to reorganize The K.C.P Ltd., into two companies. With this objective a new company, under the name and style of K.C.P. Sugar and industries corporation Ltd., has been incorporated in the year 1995. Through a scheme of arrangement duly approved by the Hon'ble High Court of Madras the following manufacturing units along with certain corporate assets and liabilities of The K.C.P Ltd

have been vested with the K.C.P.Sugar and Industries Corporation Ltd., with effect from 1st April 1996.

Late Shri. V.M. Rao a visionary had taken over the reins of K.C.P. Sugar and Industries Corporation Ltd., as the first Chairman and Managing Director. He was instrumental in revamping the company with his foresight by introducing technological innovations and right sizing the man power for increasing the production and productivity in the organization. He took several bold steps to start allied products like Bio-Products, Acetic Acid and several other projects viz. Co-Gen, Calcium Lactate, Bio-Fertilizers, Ethonal and Mycorrhiza. The legacy of late Shri.V.Ramakrishna and Late Shri.V.M. Rao is being arduously followed by Smt. Irmgard Velagapudi M. Rao Managing Director, Shri. Vinod Sethi Executive Chairman and Smt. Kiran Rao. Executive Director.

K.C.P. Sugar and Industries Corporation Ltd., is all through with there continued unrelenting efforts of all the three stewards striving to excel the predominant and eminent position enjoyed over years among share holders and business associates.

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