

ESTD : 1977



VELAGAPUDI RAMAKRISHNA
SIDDHARTHA ENGINEERING COLLEGE
(Autonomous)

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KANURU, VIJAYAWADA-520 007

(Sponsors : Siddhartha Academy of General and Technical Education)
Affiliated to Jawaharlal Nehru Technological Univeristy Kakinada
Approved by AICTE, Accredited by NAAC with 'A' Grade
An ISO 9001 : 2008 Certified Institution

e-mail : principal@vrsiddhartha.ac.in

web : www.vrsiddhartha.ac.in

Ref :

Dt :

Vijayawada,

Date 26-02-2020

To
The Chief Operating Officer,
K.C.P. Sugar and Industries Corporation Limited
Vuyyuru,
Anndhra Pradesh, India.

Respected Sir,

Subject: Permission for industrial visit-Request-Reg:

I submit the following few lines for your kind consideration and favorable orders please. It is hear with request to allow 120 students of III/IV B.Tech and 4 faculty members of E.I.E department from V.R. Siddhartha Engineering College, Vijayawada, on 3rd & 4th march 2020(60 students & 2 staff members per day). *6th & 7th*

As per academic schedule, we need to attend industrial visit, in this regard we request kind authority to issue favorable orders for visit of K.C.P. Sugar and Industries Corporation Limited, Vuyyuru.

We shall be ever grateful to your consideration and favorable action please.

Thanking you sir,

Yours Truly

G N Swamy
Dr.G.N.Swamy

HOD::EIE

HEAD

Dept. of Electronics & Instrumentation Engg
V.R Siddhartha Engineering College
VIJAYAWADA-520 007



V.R.SIDDHARTHA ENGINEERING COLLEGE
(Autonomous)
Department of Electronics & Instrumentation Engineering

Date:05-03-2020

CIRCULAR

The following staff members are deputed for the KCP Sugars and Industries Limited, VUyyuru on 6rd & 7th march 2020 to accompany the 3/4 B.Tech students as part of industrial visit.

Date	Name of the Faculty
06-03-2020	Dr.N Swathi, Dr S. Srinivasulu Raju <i>SSR</i>
07-03-2020	A.Sumalatha, G.Jalalu <i>GJS</i>

M. Srinivas
M.Srinivas

Industrial Tours Coordinator

G.N.Swamy
(Dr.G.N.Swamy)

Prof. & HOD, Department of EIE

HEAD
Dept. of Electronics & Instrumentation Engg
V.R Siddhartha Engineering College
VIJAYAWADA-520 007

REPORT ON INDUSTRIAL VISIT

K.C.P Sugar And Industries Corporation Ltd.(VUYYURU)

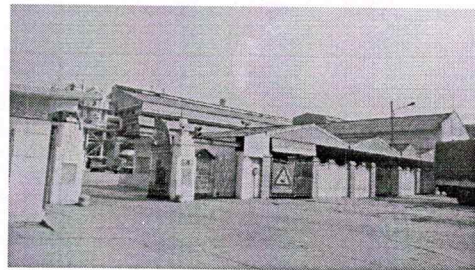
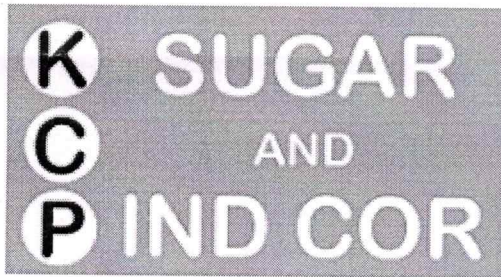
EIE-A

DATE:06/03/2020

INTRODUCTION

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 CO₂. Company has two sugar factories located in Krishna District , Andhra Pradesh having an aggregate crushing capacity of 11,500 tons per day.

The Company endeavor to give utmost satisfaction to its customers in all spheres of its business activities by achieving the highest standard of quality that meets its customer requirements.



PROCESS

The sugar cane brought from fields goes under two separate washes. The sugar cane should be clean for extracting clean juice. The sugar canes are separated and cutted into pieces using cutters and their structure is broken using crushers where rotating hammers break the cane into small pieces.

The small pieces of canes are loaded into milling tendon which are designed to extract the juice from the crushed sugar cane. In this stage the cane passes through 4 mills where big cylinders

compresses the sugar canes. The juice and the pulp are separated after this stage. A tank collects the juice extracted.

After some process like sulphatation which bleaches the juice, alkalization, sedimentation etc...

The processed juice now collected into an evaporator it increases the concentration of sugar. The juice passes through 3-4 evaporators. These process results in a brown solution having high concentration of sugar

Sucrose is added to the brown solution due to some chemical reactions which helps in separation of unwanted junk. The remained solution again boils in tanks to form sugar. Workers will monitor how the sugar is crystalizing.

It then passes through a high speed rotating machines. Where the solution is rotated with high speed ,due to centrifugal force generated sugar crystals from the brown solution is removed. Where molasses is completely separated. Water sprays are used to cleanup the sugar.

Even after this stage it contains molasses which is removed by some process then the sugar is moved into dryer. The dried sugar passes into packaging section. The sugar produced will be in three different sizes. According to their sizes they are categorized into different grades like L30, M30 and S30.

AUTOMATION

As in many other industries factory automation has been promoted heavily in sugar industries in recent decades. The production process is generally controlled by a central process control system, which directly controls most of the machines and components.

Only for certain special machines such as the centrifuges in the sugar house decentralized plcs are used.

Centrifuges are monitored and operated using scada , so that the workers/technicians can able to know what is happening without direct interaction with the system. emergency start/stop buttons are provided. All these operations are controlled by plc.

Flow and Pressure measurement plays an important role in sugar industry. As the juice and brown liquid flow is needed to be controlled for effective production of sugar. The controlling can be done using different electronic gauges and control valves connected to plc.



Thank you,

EIE-~~A~~

M. Srinivas

REPORT ON INDUSTRIAL VISIT

K.C.P Sugar And Industries Corporation Ltd.(VUYYURU)

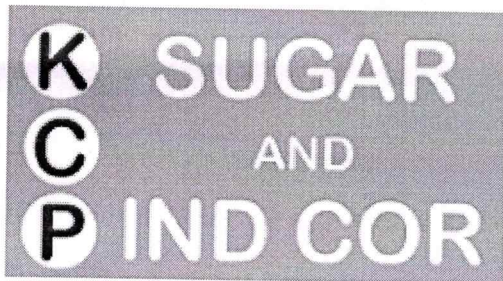
EIE-B

DATE:07/03/2020

INTRODUCTION

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Thank you,

EIE-B

M. Sarin