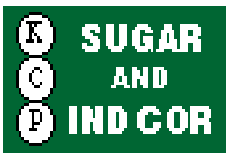


K.C.P SUGAR AND INDUSTRIES CORPORATION LIMITED

LAKSHMIPURAM E 521 131

ANDHRA PRADESH



K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED
Lakshmipuram, Krishna District (ANDHRA PRADESH)
National Energy Conservation Awards 2008

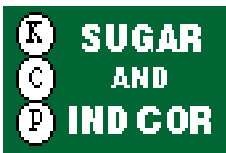
UNIT PROFILE:

K.C.P SUGAR AND INDUSTRIES CORPORATION LIMITED is one of the oldest sugar factories of India. The organization is a public limited company and also one of the largest producers of sugar in India, manufacturing nearly 1.7 million tones of sugar from cane. With the recent liberalization of sugar industry and the increase in demand of sugar, the unit is poised for tremendous growth

M/s. KCP SUGAR AND INDUSTRIES CORPORATION LIMITED has set up their Sugar plant at Lakshmipuram, Krishna district of Andhra Pradesh in the year 1996 for manufacturing of White Sugar with a capacity of 2500 TCD. The unit has been performing consistently well, through periodic up gradation and modernization of the production facilities.

This unit is producing the following products and by products.

- | | |
|----------------------------|--------------------------|
| 1. Sugar | . Main product, 2500 TCD |
| 2. Molasses | . By product |
| 3. Bagasse | . By product |
| 4. Filter cake / Press mud | . By product |
| 5. Fly ash | . By product |
| 6. Power - Co generation | . By product |



K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED
Lakshmipuram, Krishna District (ANDHRA PRADESH)
National Energy Conservation Awards 2008

UNIT PROFILE:

This is an Agro based industry and Sugarcane is the raw material. The crushing operation of this mill will be for about five months, between November and April and the remaining period will be utilized for overhauling of the machineries

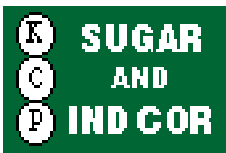
Main features of the Unit:

Crushing Capacity	:	2500 TCD
Power generation Capacity	:	7.25 MW
Boiler Capacity	:	64 TPH at 42 kg/cm ² & 20 TPH at 21 kg/cm ²

The bye product, bagasse obtained after crushing the sugarcane is used as fuel for the boilers. We have captive power generation of 5 MW capacity. The exhaust obtained from the power turbines is used for boiling the sugar juice to produce sugar.

The unit has achieved the certifications of ISO 9001:2000, ISO 14001: 2004 in the year 2007 and OHSAS 18001: 2007 in the year 2008.

The unit was also registered for evaluation of Carbon credits in the year 2008.



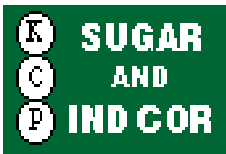
K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED
Lakshmipuram, Krishna District (ANDHRA PRADESH)
National Energy Conservation Awards 2008

OUR MISSION

- “ Strive to achieve excellence in manufacturing sugar through our dedicated, loyal and committed workforce to enhance customer satisfaction.
- “ Strive for continual improvement at all levels by enhancing our skills, knowledge and enthusiasm to meet the needs of the changing world
- “ Strive to achieve maximum value addition through the most effective use of resources.

OUR VISION

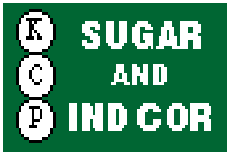
- “ To become a leader among all sugar factories in the state in all aspects
- “ Empower employees for shouldering higher responsibilities resulting in job enrichment and job satisfaction
- “ Aim to grow in business and to make the senior managers of today to head plant operations at a future date by grooming and motivating them.
- “ All employees to aim for deriving maximum benefits from all operations.



K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED
Lakshmipuram, Krishna District (ANDHRA PRADESH)
National Energy Conservation Awards 2008

CORPORATE OBJECTIVES

- ◆ To become the preferred employer of personnel by offering highest quality of work life in the industry.
- ◆ To be the most outstanding supplier in the industry by meeting customer expectations
- ◆ To be in first place among locations in the company in $\pm \wedge \text{æ! } \} \text{p}\tilde{\text{a}}\text{r}\}^{\wedge} \{ \bullet \} \mid [\wedge \wedge$ ratio in the industry during the present decade.
- ◆ To achieve at least 10% growth every year in turn over, profits and value addition.
- ◆ To implement measures to ensure minimum losses, maximum quality parameters will be achieved.



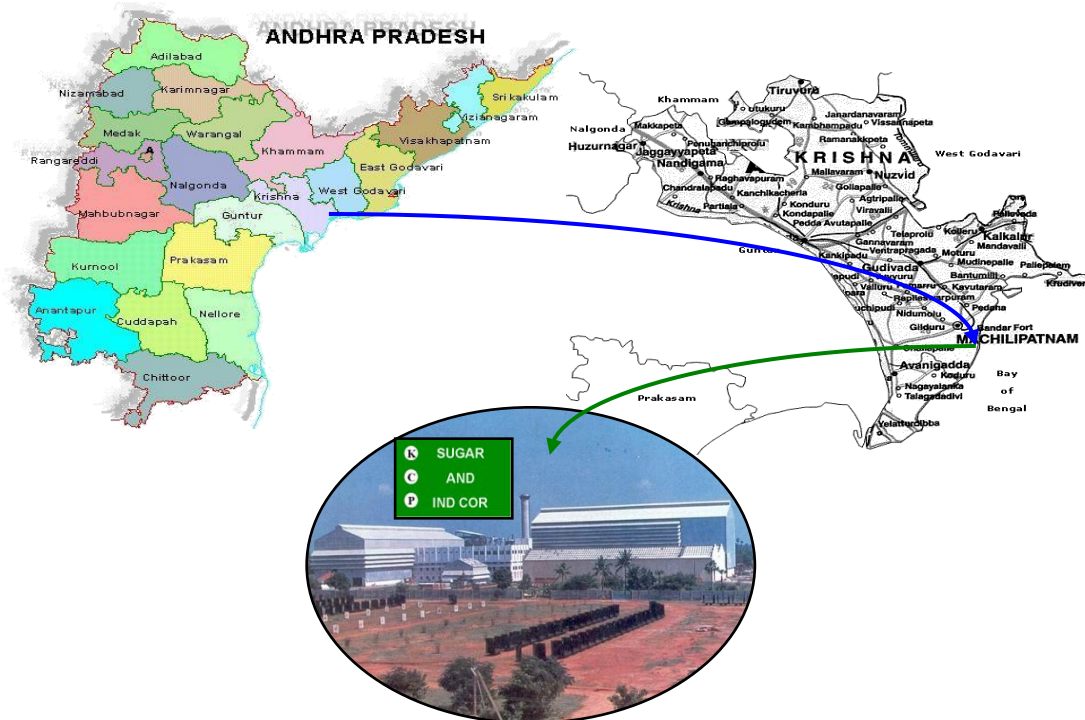
K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED

Lakshmipuram, Krishna District (ANDHRA PRADESH)

National Energy Conservation Awards 2008

Site Location of the Unit:

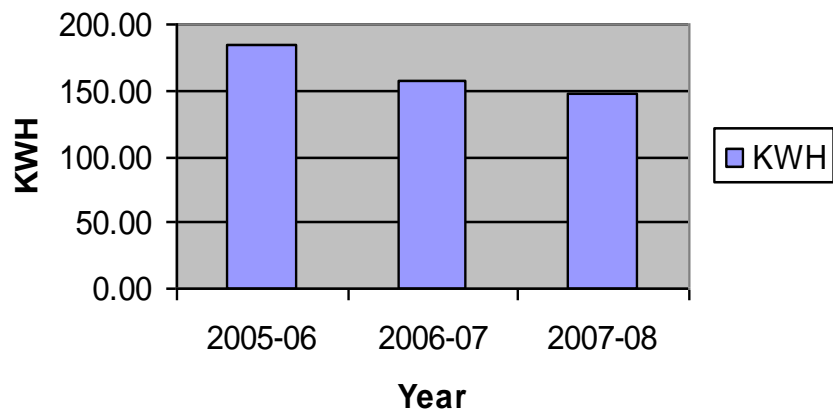
M/s. KCP SUGAR AND INDUSTRIES CORPORATION LIMITED is located in 118 acres area of Lakshmipuram, Krishna District in Andhra Pradesh. The predominant soil is black soil. The average annual rainfall in the area is 948 mm, the maximum ambient temperature is 48oC & minimum is 17oC. There is no forest area within the radius of 10 kms around the project site.



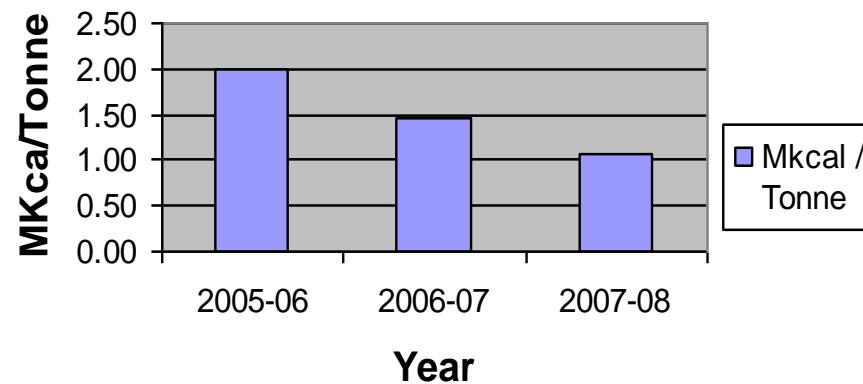
Energy Consumption

	Units	2005-06	2006-07	2007-08
Annual production	MT	46298.5	46791.9	26874
Electrical Energy Consumption	kWh (Lakhs)	183.71	156.77	148.25
Thermal Energy Consumption	Mkcal/Tonne	2.01	1.47	1.08

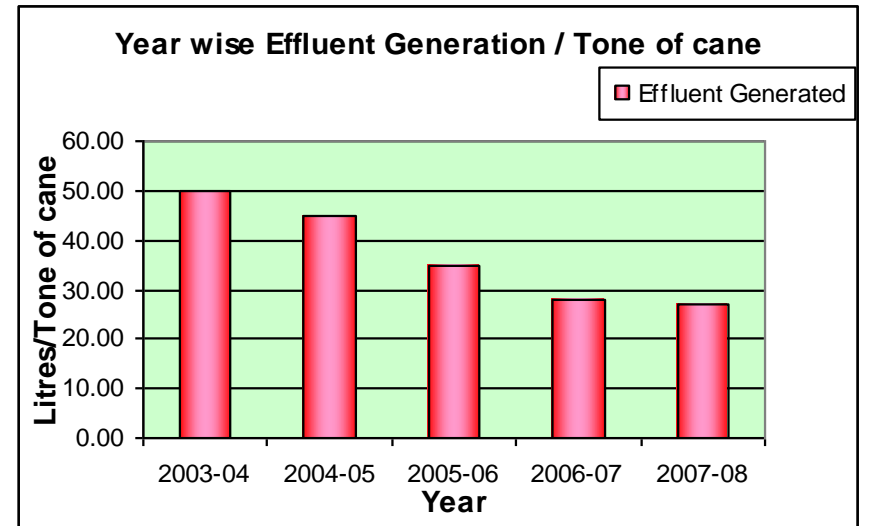
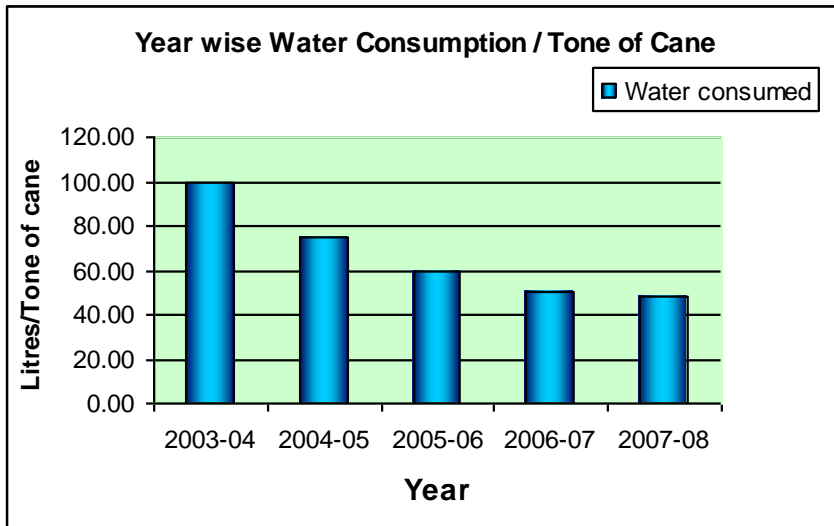
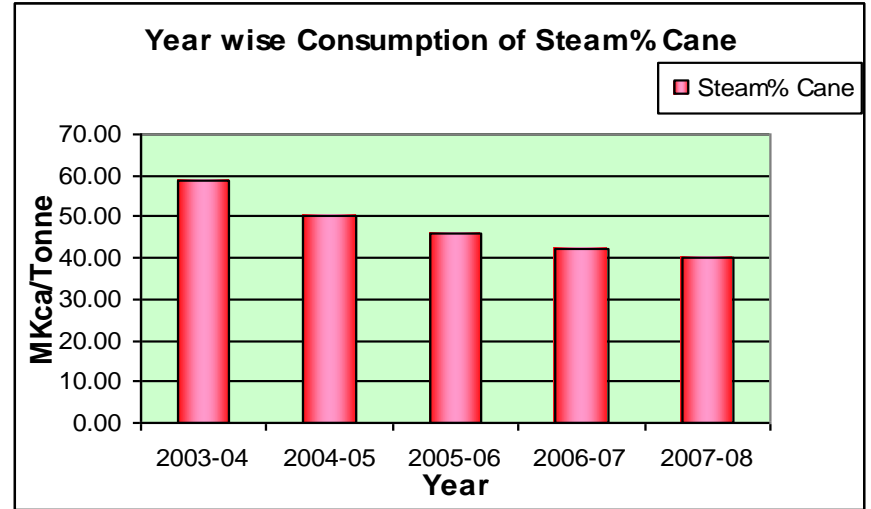
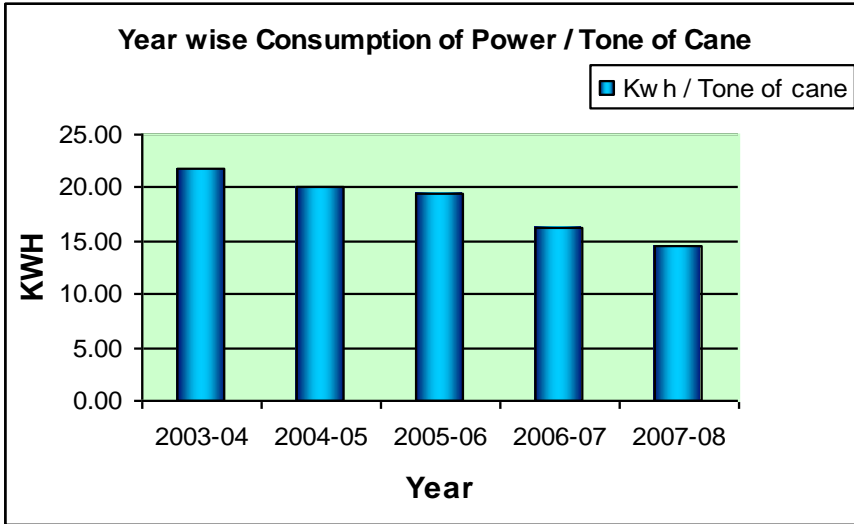
Specific Power Consumption

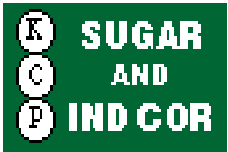


Specific Thermal Energy Consumption

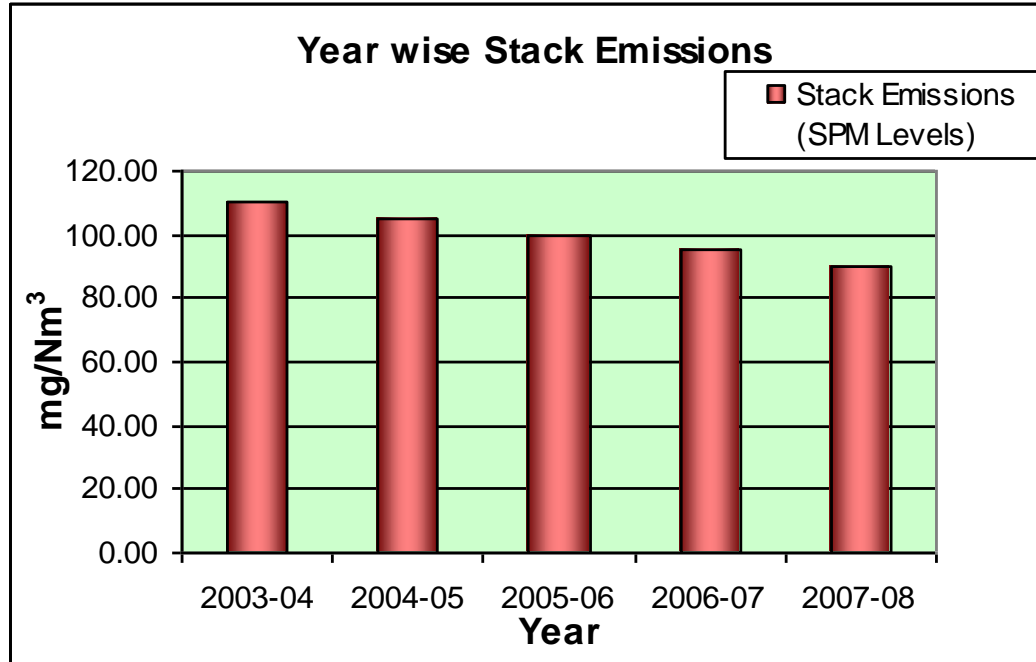


K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED
Lakshmipuram, Krishna District (ANDHRA PRADESH)
National Energy Conservation Awards 2008

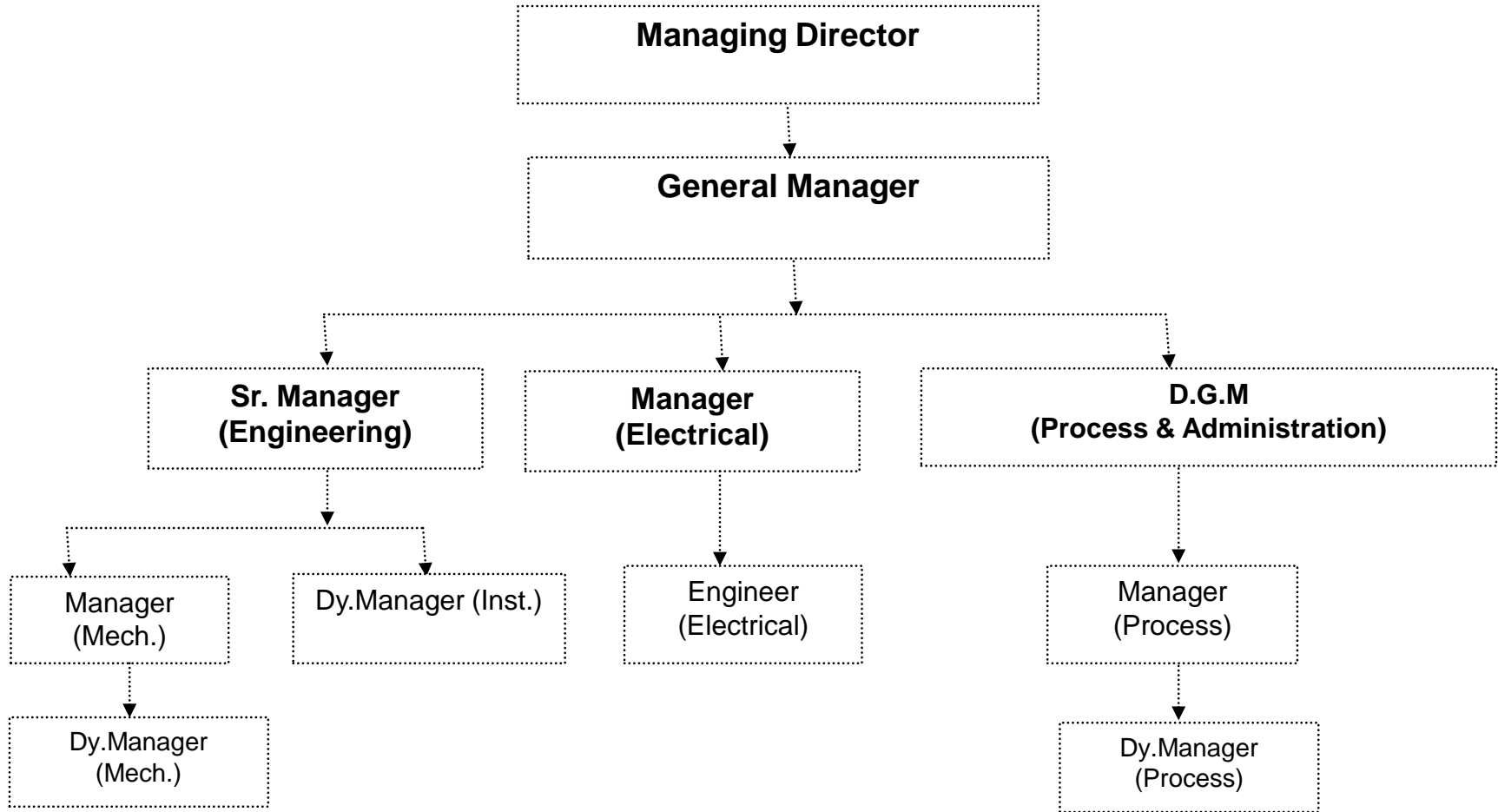


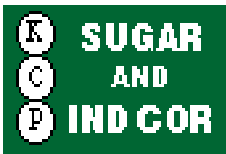


K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED
Lakshmipuram, Krishna District (ANDHRA PRADESH)
National Energy Conservation Awards 2008



Energy Conservation Cell:





K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED
Lakshmipuram, Krishna District (ANDHRA PRADESH)
National Energy Conservation Awards 2008

Functions of EC cell:

1. Implementing steps to reduce the power consumption and saving energy.
2. Analyzing the energy consumption every year.
3. Planning for usage of waste heat.
4. Plans to increase saving of fuel.
5. Innovating the scope for recycling of process rejects.
6. Implementing the pinch technologies for reduction in water consumption.
7. Creating awareness to employees in the field of energy conservation measures



K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED

Lakshmipuram, Krishna District (ANDHRA PRADESH)

National Energy Conservation Awards 2008

ENERGY MANAGEMENT POLICY

We, at K.C.P Sugar And Industries Corporation Limited are totally committed to continuously improve our energy performance in all our activities, products and services.

To meet the above goals we:

- 3 Manage energy efficiently and effectively to achieve lowest specific energy consumption in all our manufacturing operations.
- 3 Upgrade and innovate using new trends and technology to enhance the energy efficiency of all equipments.
- 3 Maximizing the usage of Renewable energy and right energy fuels in operation.
- 3 Bench marking of energy consumption, by comparing within the group and other similar industries.
- 3 Plan and carryout regular internal / external audit to identify areas for improvement and monitor the benefits realized.
- 3 Train employees, upgrade their skills and assign key tasks on energy conservation to enhance performance.
- 3 Recognizing the efforts of employees in energy conservation initiatives and suitably rewarding them.

GENERAL MANAGER

Energy Conservation Achievements

In an ongoing process of energy conservation K.C.P S & I C LTD has been implementing many energy conservation steps from several years, some of the measures undergone in the crushing season 2007-08 are highlighted

1. Recovery of Waste heat from incondensable gasses:



Incondensable gas connections for succeeding bodies to recover thermal energy from vapours carrying along with incondensable gasses.

Investment in Rs: 0.50 Lakhs
Thermal Savings: 0.25% on cane
Annual Savings in Rs. 3.43 Lakhs

2. Modification of Feed Lines for CVP:



Modification to A-CVP feed lines for effective distribution of liquor and enhancing the pan capacity.

Modified Feed box

Investment in Rs: 1.50 Lakhs
Thermal Savings: 0.20% on cane
Annual Savings in Rs. 2.74 Lakhs

3. Batch pan Automation:



Auto liquor feeding system to batch pans, thus saving the boiling time in turn reducing the steam consumption.

Conductivity probes & level sensors

Investment in Rs: 1.00 Lakhs

Thermal Savings: 0.20% on cane

Annual Savings in Rs. 2.74 Lakhs

4. Utilization of Soda vapours for Juice heating:



DEVC à [à ã vapours diverted for Sulphured Juice I / II heating during soda boiling.

Investment in Rs: 0.20 lakhs
Thermal Savings: 0.10% on cane
Annual Savings in Rs. 1.37 Lakhs

5. Exhaust condensate Flash recovery system:



Self designed Flash recovery unit for Exhaust condensate water.

Investment in Rs: 2.00 Lakhs
Thermal Savings: 0.50% on cane
Annual Savings in Rs. 6.85 Lakhs

6. Vapour condensate Flash recovery system:



Self designed Flash recovery unit for vapour condensate water.

Investment in Rs: 2.00 Lakhs
Thermal Savings: 0.2% on cane
Annual savings in Rs. 2.74 Lakhs

7. Utilization of vapour condensate for Raw Juice heating:



Utilization of Vapour Condensate water for Raw juice stage I heating

Investment in Rs: 0.50 Lakhs
Thermal Savings: 1.00% on cane
Annual savings in Rs. 13.71 Lakhs

8. Utilizing II effect condensate water for SHWW system:



Utilizing II effect condensate water to Super Heated Wash Water system instead of Hot water.

Investment in Rs: 0.25 Lakhs
Thermal Savings: 0.20% on cane
Annual savings in Rs. 2.74 Lakhs

9. Addition of clear juice to Melter & A-CVP:



Utilizing clear juice with auto control valve for sugar melting instead of hot water and
Utilizing clear juice for A-Continuous Vacuum Pan Periodical cleanings instead of hot water.

Investment in Rs: 0.25 Lakhs
Thermal Savings: 0.20% on cane
Annual savings in Rs. 2.74 Lakhs

10. Installation of Electrical motor in place of Steam turbine:



Installation of Electrical motor for cane cutter replacing the Steam driven turbine.

Investment in Rs: 5.00 Lakhs
Thermal Savings: 0.75% on cane
Annual savings in Rs. 10.28 Lakhs

11. Elimination of Raw juice transfer pump:



Addition of rotary juice screen at an elevated height for Raw juice screening. Raw juice diversion to Boiling house through gravity flow with magnetic flow meter measurement avoiding pumping of 40 kwh.

Investment in Rs: 0.50 Lakhs
Electrical Savings: 0.25 kwh/T of cane
Annual savings in Rs. 0.25 Lakhs

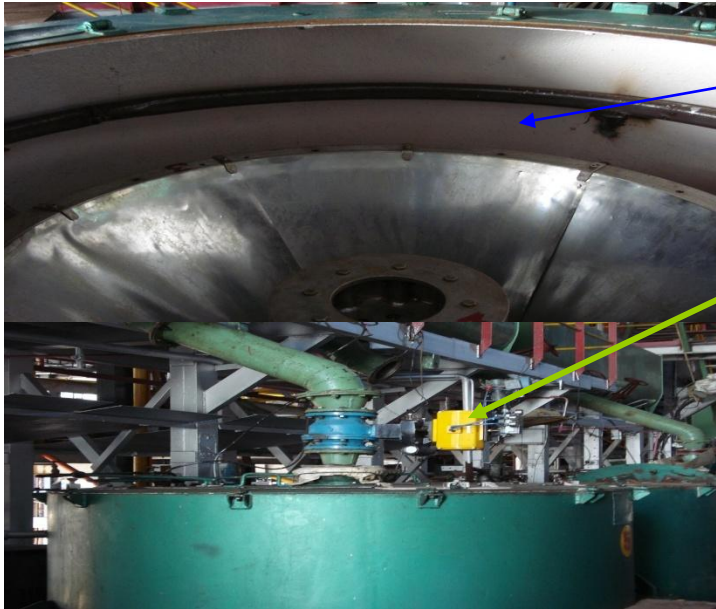
12. Elevation of Sugar Graders above 20 Meters:



Elevated sugar graders to 20 meters height by eliminating secondary conveying thereby reducing power.

Investment in Rs: 0.50 Lakhs
Electrical Savings: 0.2 kwh/T of cane
Annual savings in Rs. 0.54 Lakhs

13. Enhancement of Continuous centrifugal efficiency:



Utilizing 1st effect vapour for Continuous centrifugal basket cleaning purpose.

Installation of auto feed control valves for feed regulation into continuous centrifugals.

Investment in Rs: 2.00 Lakhs
Electrical Savings: 0.05 kwh/T of cane
Annual savings in Rs. 0.18 Lakhs

14. Installation of VFD for Injection water system:



Installation of Variable Frequency Drive for Injection water pumps.

VFD control panels

Investment in Rs: 5.50 Lakhs

Electrical Savings: 0.3 kwh/T of cane

Annual savings in Rs. 1.10 Lakhs

15. Installation of VFD for Clear juice pumping:



Installation of Variable Frequency Drive for Clear Juice pump.

Investment in Rs: 2.00 Lakhs

Electrical Savings: 0.2 kwh/T of cane

Annual savings in Rs. 0.73 Lakhs

16. Installation of VFD for Clear juice transfer pump at evaporators:

Installation of Variable Frequency Drive for Clear Juice transfer pump.

Investment in Rs: 2.00 Lakhs

Electrical Savings: 0.05 kwh/T of cane

Annual savings in Rs. 0.18 Lakhs