

K.C.P. SUGAR AND INDUSTRIES CORPORATION LIMITED

Lakshmipuram, Krishna District (Andhra Pradesh)

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. K.C.P 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.

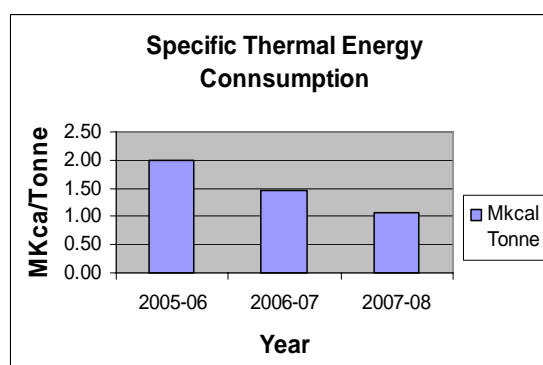
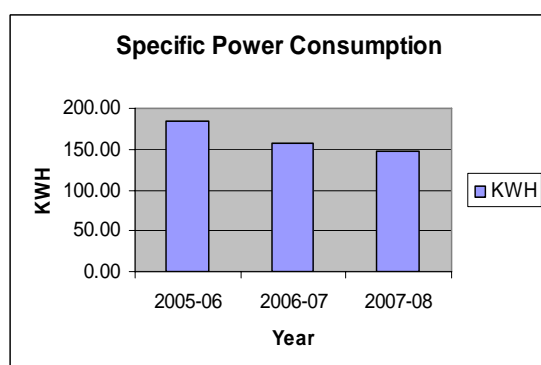
This unit is producing the following products and by products.

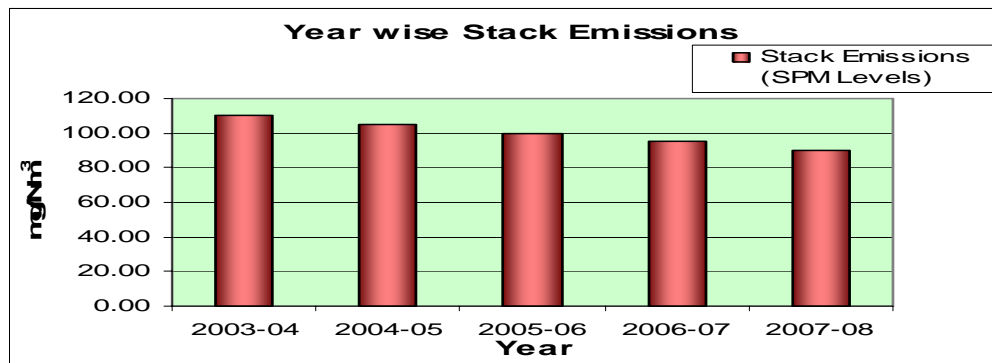
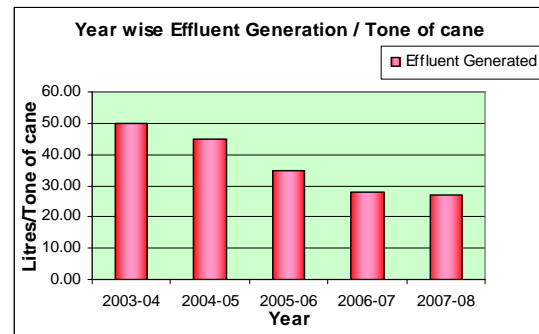
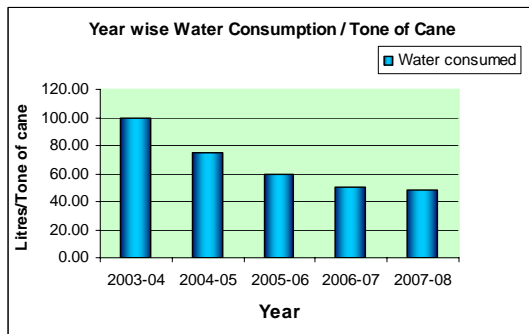
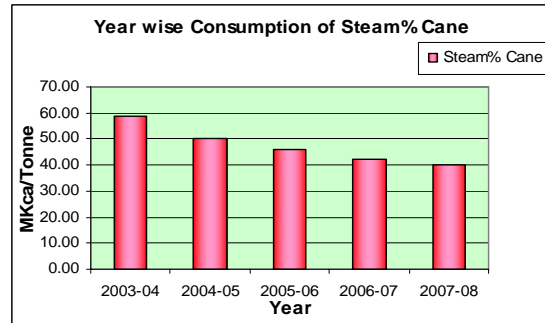
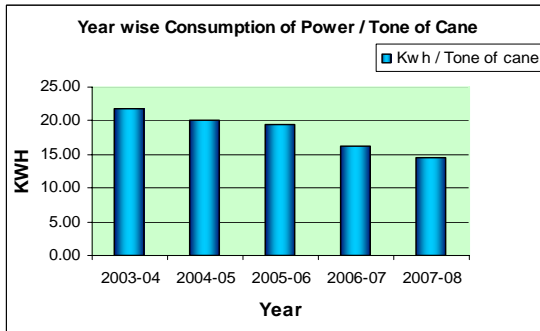
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|----------------------------|--------------------------|
| 1. Sugar | – Main product, 2500 TCD |
| 2. Molasses | – By product |
| 3. Bagasse | – By product |
| 4. Filter cake / Press mud | – By product |
| 5. Fly ash | – By product |
| 6. Power -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

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.

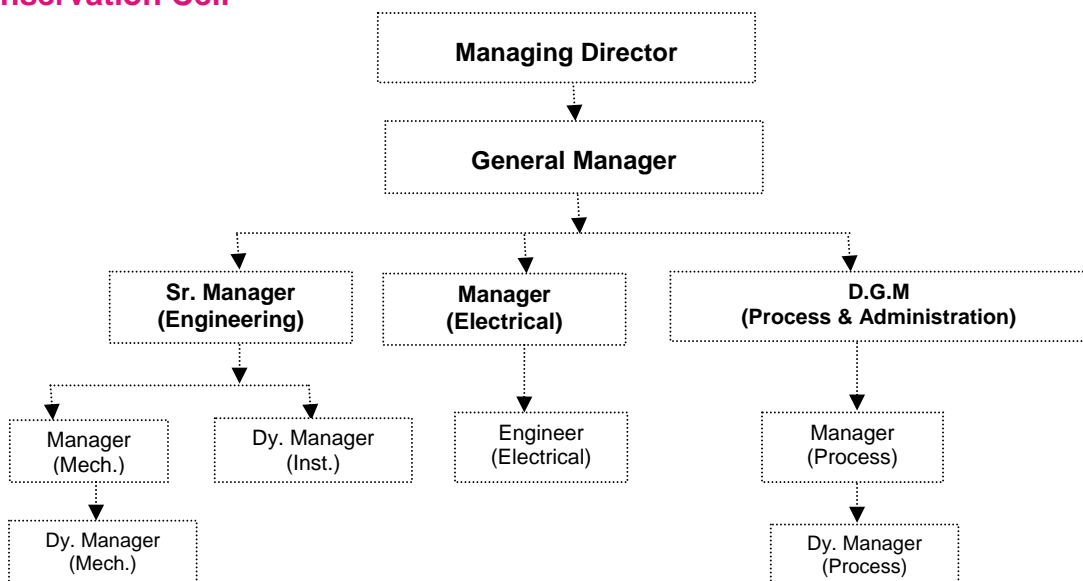
Energy Consumption

	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





Energy Conservation Cell



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.

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

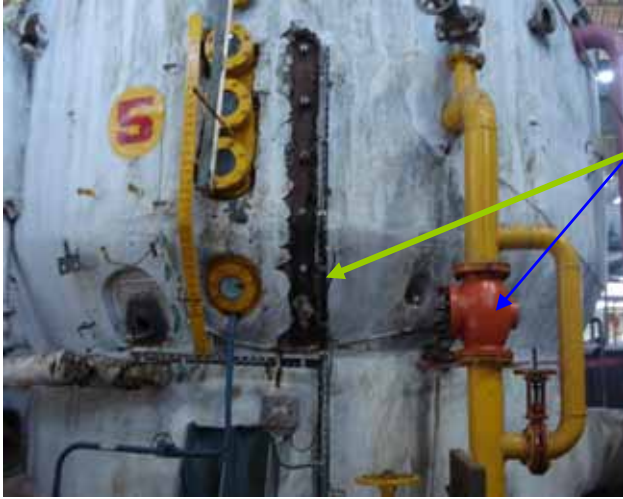


Modification to A-CVP feed lines for effective distribution of liquor and enhancing the pan capacity.

Modified Feed box

Investment in Rs: 1.50 Lakhs

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 bodies' 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

Environment and Safety

The unit of *M/s. KCP SUGAR AND INDUSTRIES CORPORATION LIMITED*, Lakshmipuram (V), Krishna (Dist) of Andhra Pradesh, one of the progressive Sugar Company in India manufacturing Crystal White Sugar. Effluents generated are effectively treated in their Effluent Treatment Plant. The unit is having its own Safety Health & Environmental (SHE) Policy. A team is also constituted for achieving an overall continual Environmental performance for which it is committed in its SHE Policy.

The unit is an ISO 9001: 2000 QMS, ISO 14001: 2004 EMS & OHSAS 18001: 2007 certified company. The treated wastewater is meeting the standards prescribed by A.P Pollution Control Board.

The Management of K.C.P.S & I.C LTD is worried more about the Ecology preservation in and around the factory premises. Their efforts towards energy conservation i.e. Steam, Power and Water management are giving fruitful results and are taking necessary steps for continual improvements.

The river water is abundant in the project area and it is observed that the quality of water in and around the project site is satisfactory for drinking purpose. Stand by generators have catalytic converters and silencers to reduce the pollution load and noise. The green belt is unique and the industry has given top priority to green belt development. The treated wastewater is used for on-land irrigation and green belt development in the factory's own land. To conclude, this industry is functioning effectively and abating the pollution to a far lower level than specified by the statutory authorities.