

UltraTech Cement Limited
Hirmi Cement Works
Raipur (Chhattisgarh)

Unit Profile

The cement manufacturing unit at Hirmi Cement Works and has a capacity of 2.50 Million Tonne Per Annum (MTPA) of Clinker. Hirmi is located about 58 Km from Raipur and actually is a small village on Raipur-Baloda Bazar road. The cement plant has a township equipped with requisite civic facilities including a school and hospital. The construction started in February 1992 and was completed on 31st March 1994. Plant, requirement is met by the Chhattisgarh State Electricity Board Grid power and having stand-by Captive power of DG of 25 MW



Due to rising cost of HFO, the unit is about to commissioning of 2 x 25MW Coal based Thermal Power Plant, with provision to expand it to 4 x 25MW plant. The Plant is expected to be inducted in operation by December 2008.

Unit's major raw material requirement is met through its 4.2 MTPA Captive Limestone Mine. Clinker from this plant is sent to our two grinding unit one located at Jharsuguda (Orissa) and other at Durgapur (West Bengal). This Plant of UltraTech caters to cement requirement of Eastern India covering Chhattisgarh, Madhya Pradesh, Orissa, Jharkhand, West Bengal and North East states.

UltraTech Cement Limited

Hirmi Cement Works

Energy Management Policy

"We are committed to conduct our operations by utilizing various forms of energy in the most cost effective and efficient manner so as to conserve energy resources and to make cleaner environment for our future generation.

Our emphasis is to:

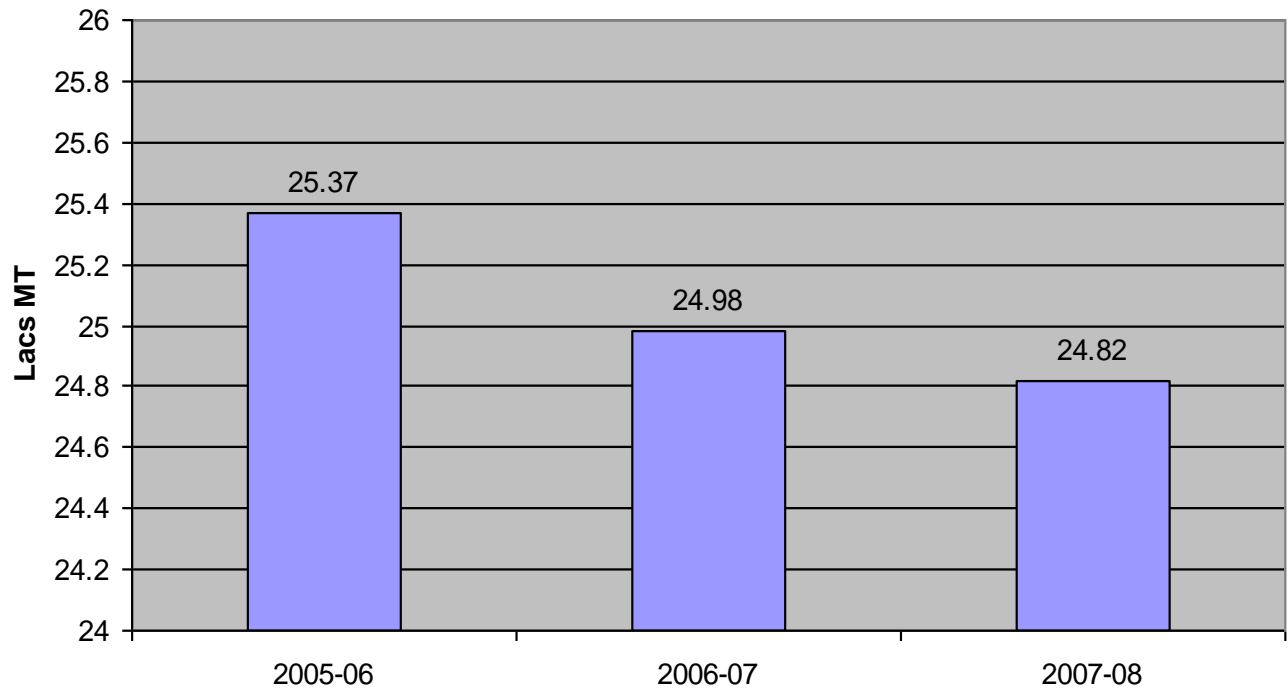
- Adopt energy conservation measures to enhance energy efficiency.*
- Monitor & control the consumption of energy through effective energy information system & through periodic reviews.*
- Create awareness through training amongst all Employees as part of Mass Energy Conservation Movement.*
- Carry out regular energy audits through internal / external resources / agencies to identify areas of improvement."*

Unit Head

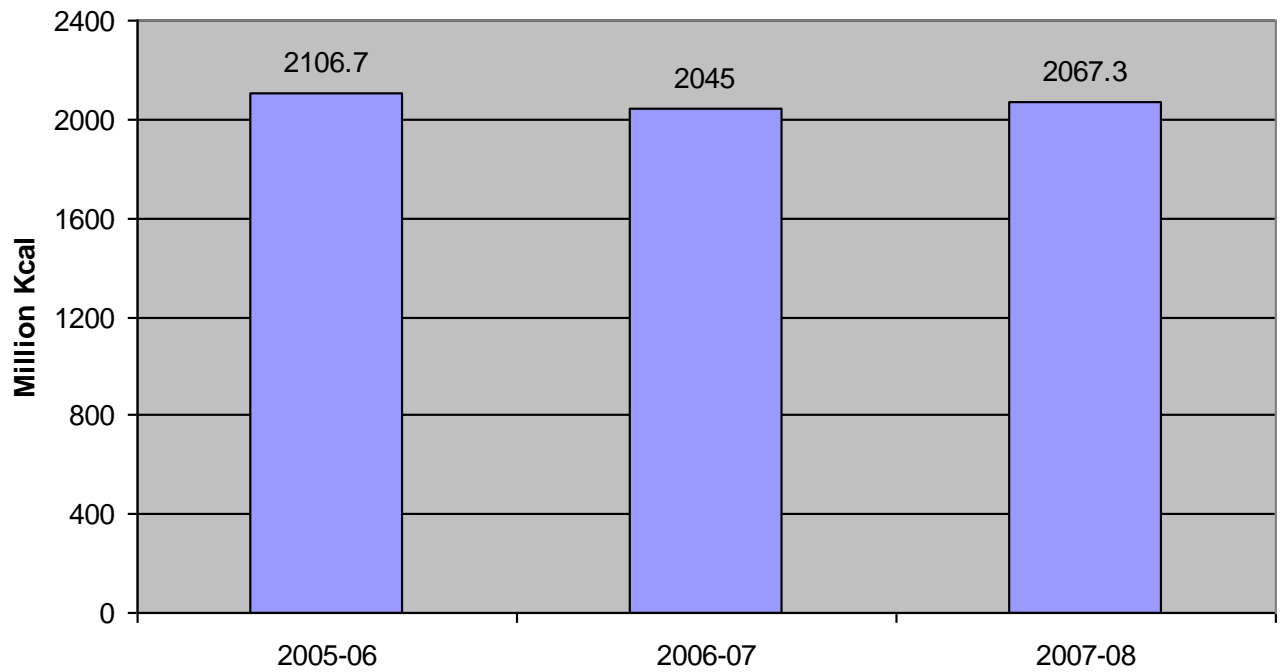
Energy Consumption

	Unit	2005-06	2006-07	2007-08
Annual Production	Lacs MT	25.37	24.98	24.82
Total Energy consumption per annum	KWH (Lacs)	2120.05	2153.53	2112.87
Total Thermal energy consumption	Million Kcal	2106.7	2045.0	2067.3
Total Manufacturing cost in Rs (Lacs)	Rs (Lacs)	28438	31160	31515
Total Energy cost in Rs (Lacs)	Rs (Lacs)	16146.7	16707.0	17326.3
Energy cost as % of Manufacturing cost	%	59%	55%	54%
Limestone Crushing power Consumption	kWh/MT	1.27	1.30	1.35
Raw Mill Grinding power consumption	KWh/MT	17.91	17.24	17.43
Kiln Power consumption	KWh/MT	25.02	24.63	24.40
Coal Mill power consumption	KWh/MT	20.75	22.51	22.60
Cement Grinding and packing plant power consumption	KWh/MT	35.93	33.26	31.45

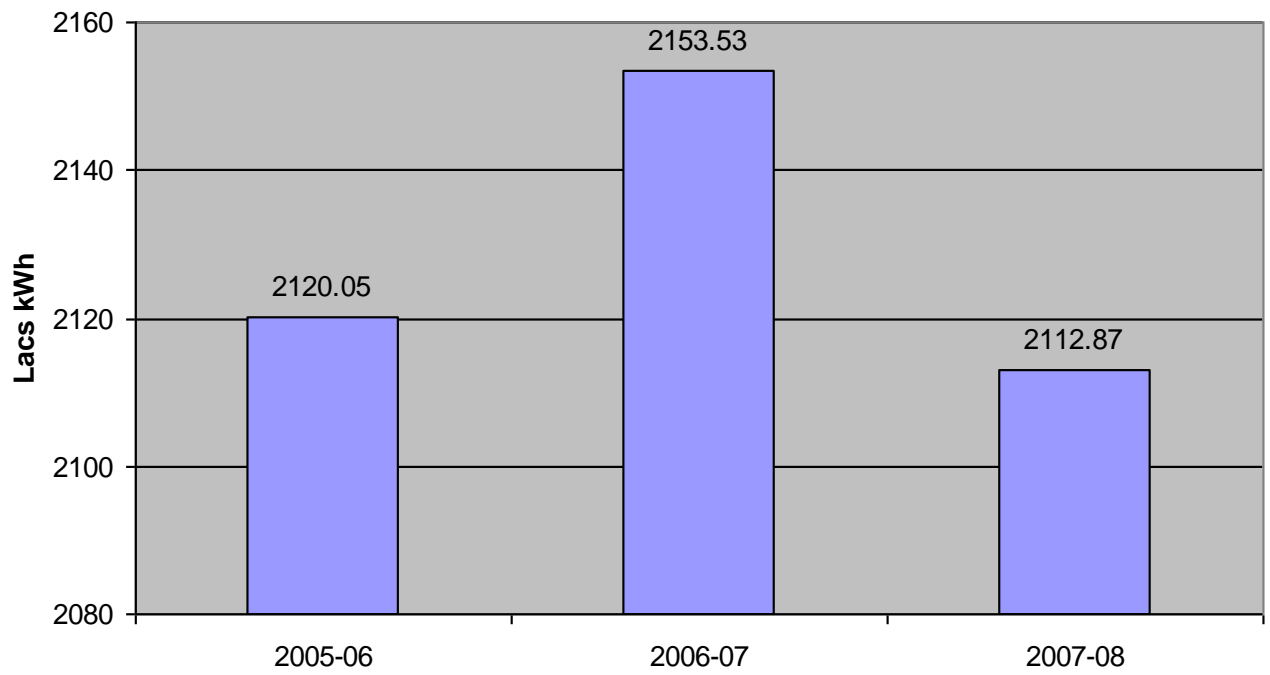
Annual Clinker Production



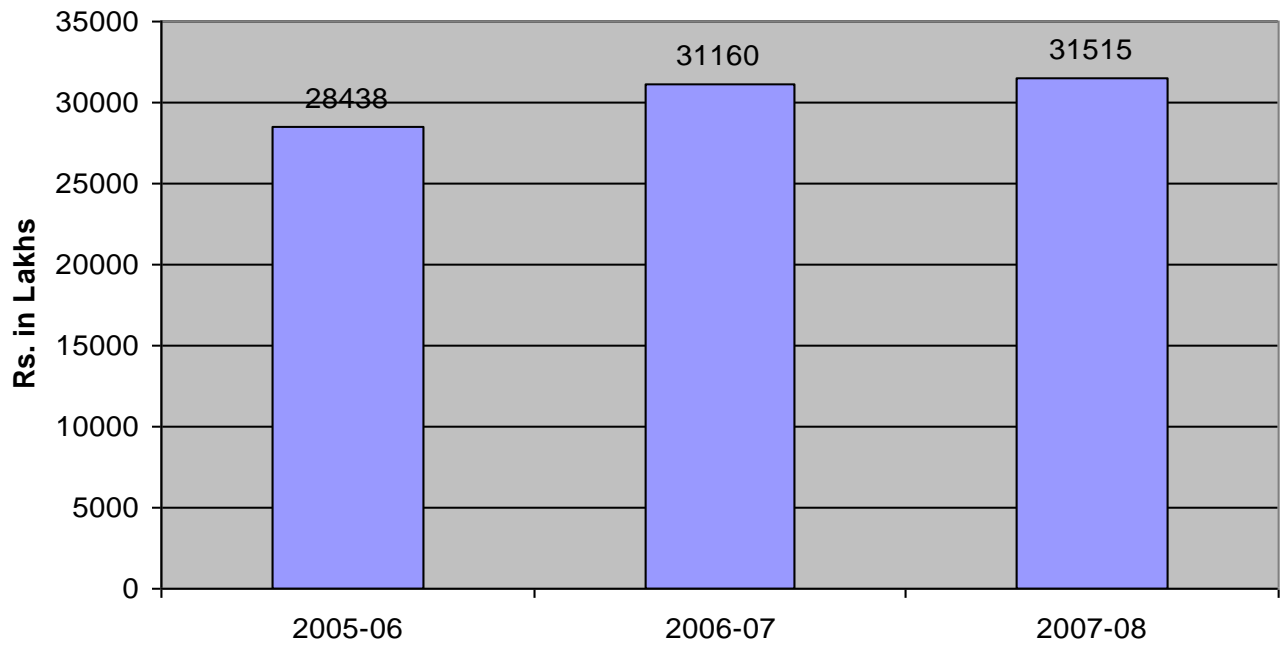
Thermal Energy Consumption



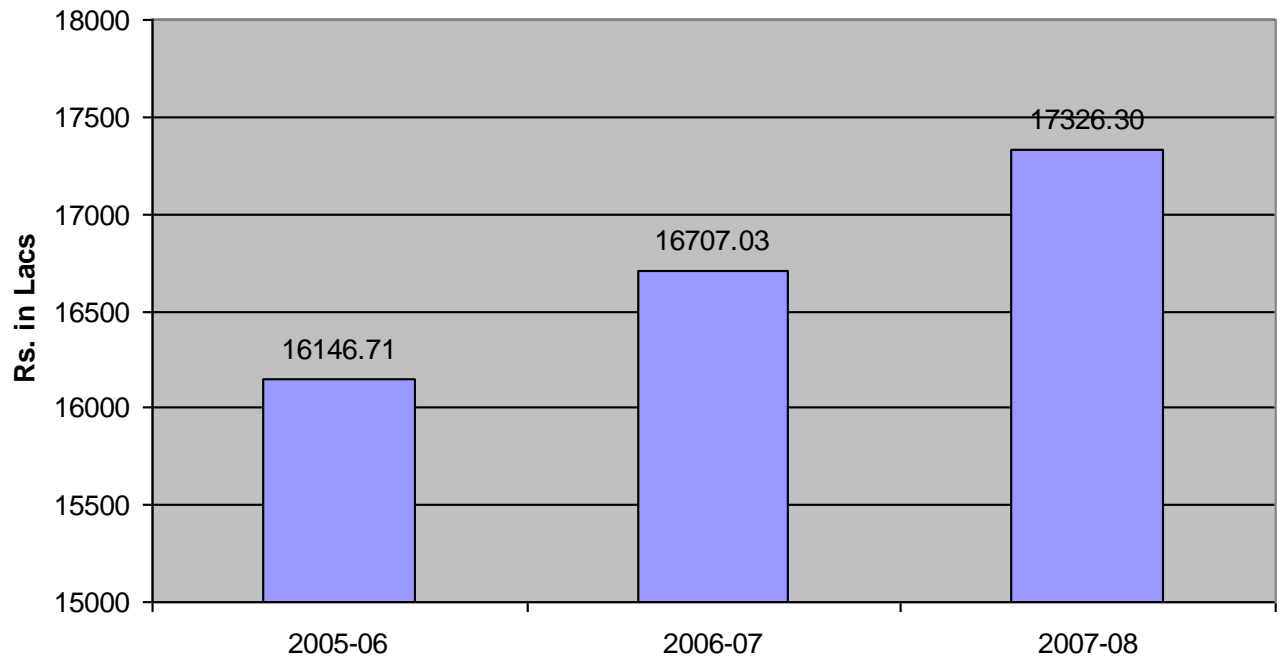
Electricity Consumption



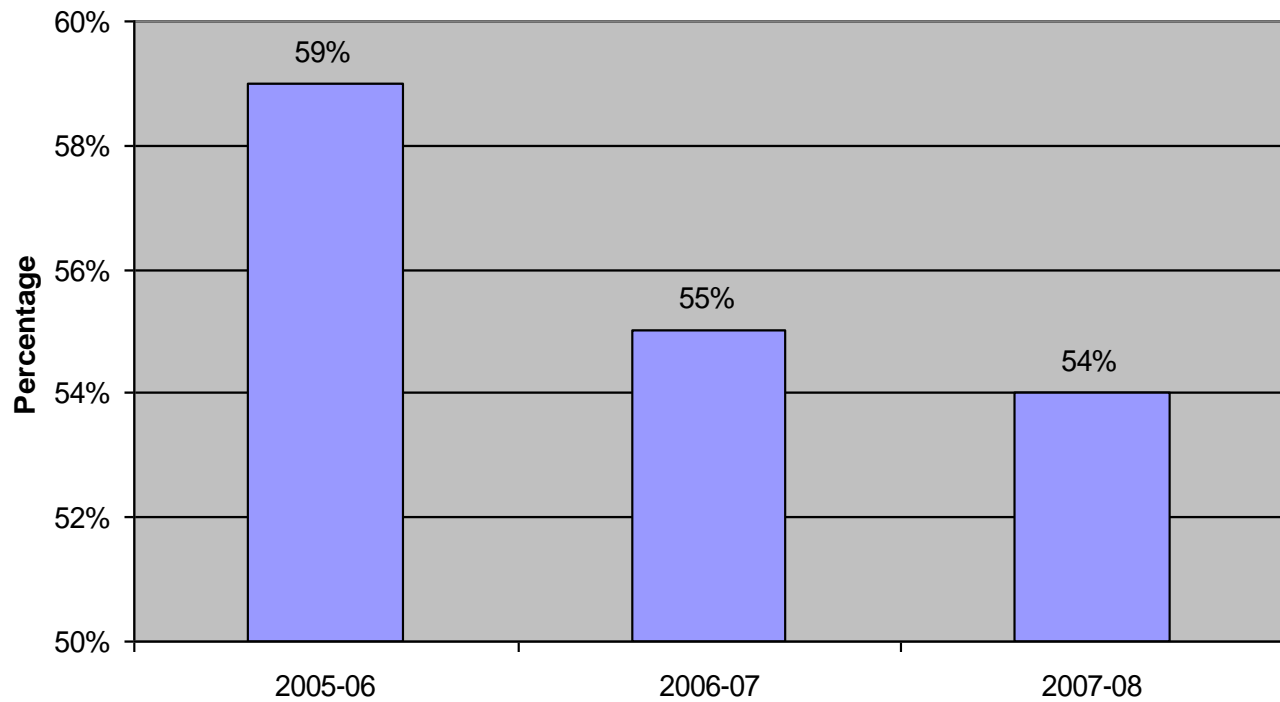
Manufacturing Cost



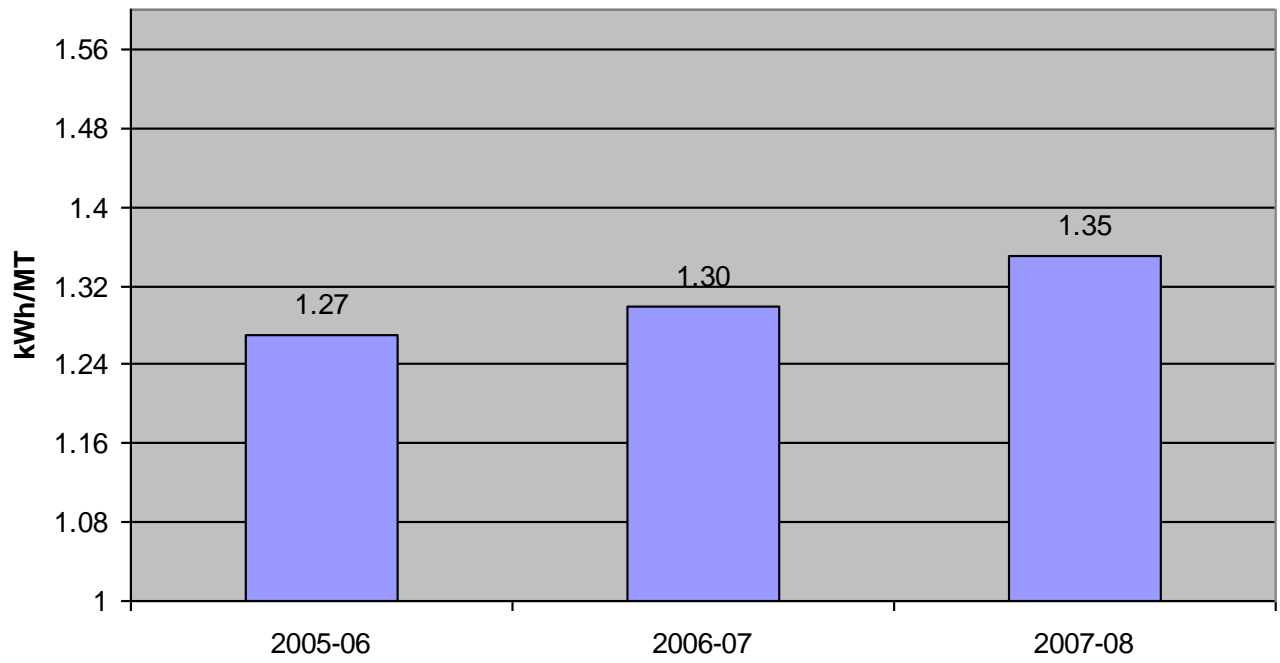
Energy Cost



Energy Cost as % of Manufacturing Cost



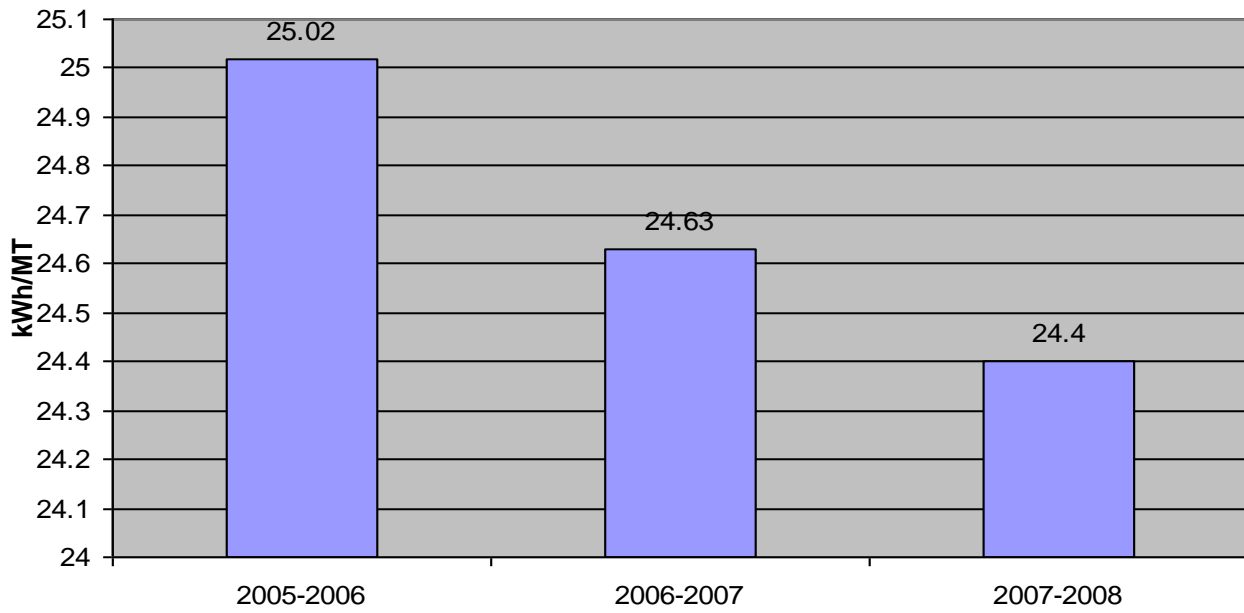
Crusher Power Consumption



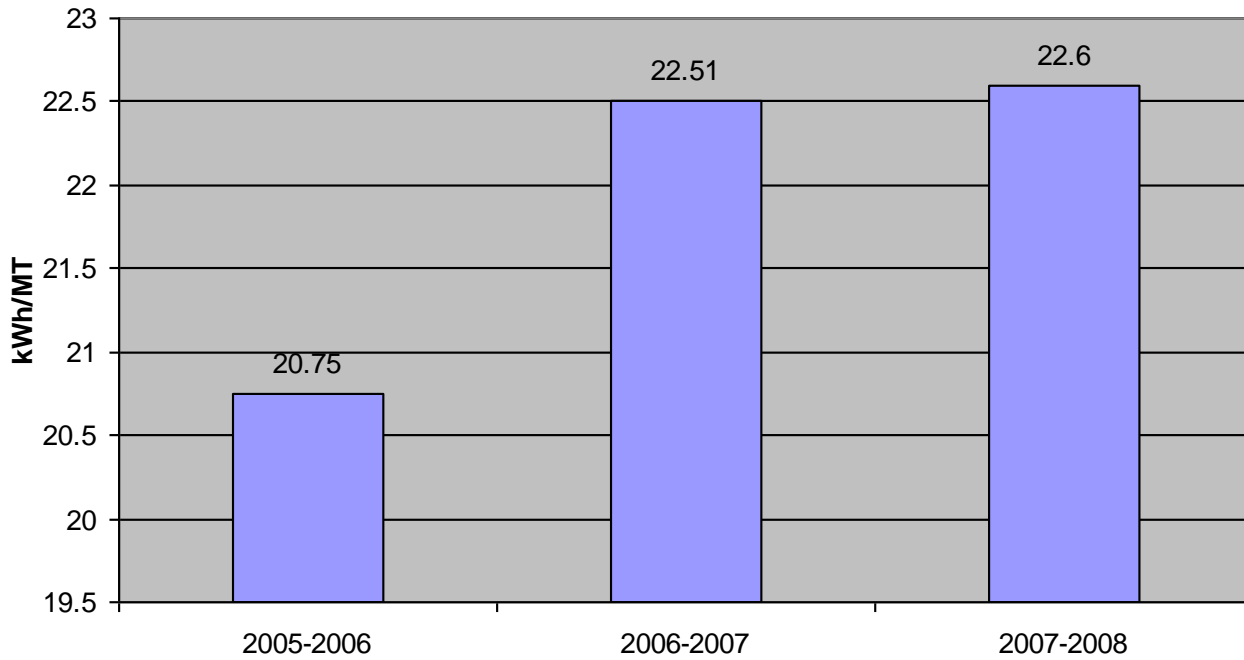
RawMill Grinding Power Consumption



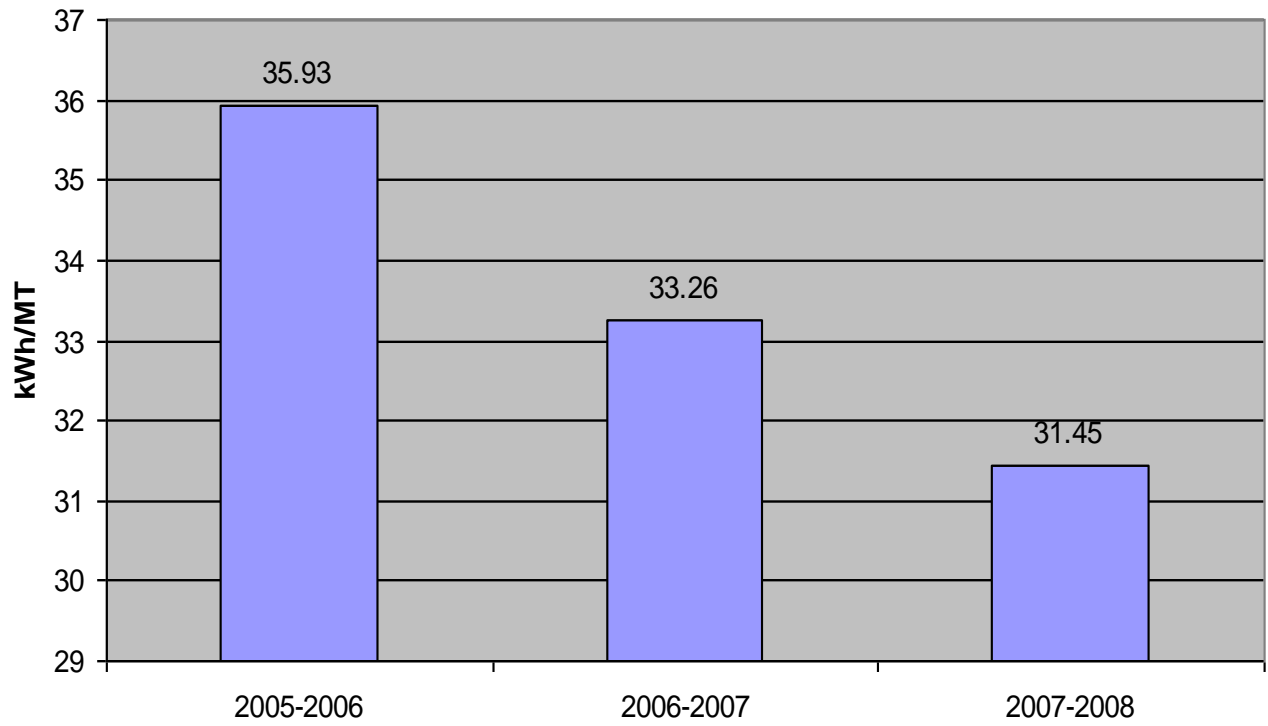
Kiln Power Consumption



Coal Mill Grinding Power Consumption



CementMill and Packing Plant Power Consumption



Salient Features of Energy Conservation Cell and steps taken to motivate employees for ENCON projects –

The management is fully committed to conserve energy accordingly measures for energy conservation have been followed from design stage itself. We have been continuously striving for reduction in energy consumption since inception of the plant. To achieve this goal, a daily Technical co-ordination meeting is held in which day to day energy parameters are monitored and analyzed. The Cross Functional teams for each section monitor and analyze energy consumption at major drive level every day and give feedback to Unit Head.

The concept of energy conservation is communicated down the line through Section heads. Workers/ Staff contribute in reduction in energy consumption through Suggestion / Kaizens scheme. Accepted / Good Suggestions are rewarded with Cash prize in a mass gathering in every month to motivate the employees. Cross functional teams are formed for implementation of the suggestion and the suggester's plays key role in the team. Energy Performance parameters are also reviewed by Unit Head every month in Technical MPR (Monthly Performance Review) meeting. Energy Audits are also conducted annually by agencies like CTC (Central Technical Center of our Group) and other competent agencies like NCBM etc. The energy audit observations are shares with all and actions are taken accordingly.

The Energy conservation team finds various energy saving potential in their working areas, brings the proposal to Energy Cell for elaborate discussions & brain storming sessions for finalization and implementation. The unit committed to fine tuning operations & maintenance continuously to achieve the goal, technology Upgradation with energy efficient process & equipments and motivating, training and encouraging employees to achieve a target of reducing the power by increasing blended cement production & by increasing proportion of fly ash and slag.

Review of energy consumption is done daily at section level (Middle Management level) and weekly at top management level. Energy conservation projects are reviewed monthly by top management during monthly performance review and master action plan review meeting.

For better monitoring, section wise teams have been formed. Section wise and drive-wise daily monitoring is being done by each team and the same is being discussed in daily technical coordination meeting headed by the team leader and information is conveyed to respective HOD who in turn appraises the Unit head. Specific areas are identified, studied and action plan made. Apart from this, Unit technical cell also carries out energy conservation studies in-house and through out-side agencies and submits its report to Unit head for further action. Heat energy consumption is also monitored daily and heat balancing exercise is carried out in-house, and through external experts periodically. Monthly Progress Review (MPR) meeting of plant is also being held which is chaired by the Unit head in which monthly operation & energy consumption performance of each and every section is presented and thoroughly reviewed. In addition to the above monitoring, the benchmark data are collected quarterly from CMA for national level and yearly for international level from Whitehoppleman. Also inter unit comparison is done from the cluster units and sister concerns. The best practices are collected from outside plant visits, seminars and other forums. These are used to prepare the new projects and modifications. Aim of all these exercise are to achieve the benchmark performance within a stipulated period and become a benchmark plant ultimately.

Financial resources for energy conservation projects are provided by the HO every year. Since, we had gone for energy efficient technology and equipment at the time of establishment of the plant,

therefore our main focus is on process optimization and waste elimination in order to reduce the energy consumption. However, we have been updating our plant with latest technology available in the market.

For every new project related to technological changes, a thorough techno-commercial study is carried out by our project department and CAPEX budget is submitted to head office for sanction. After approval from Head office the project execution is done by our Project department. New energy conservation projects worth Rs. 89.00 Lacs have already been sanctioned and are expected to be completed in year 2009-10.

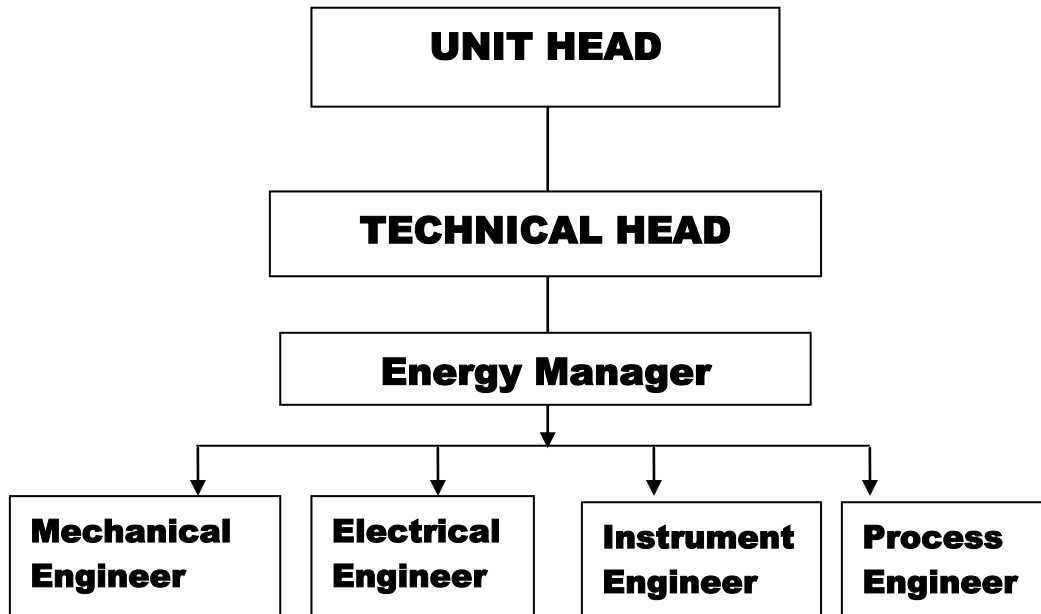
We are also maximizing production of blended cement and through process optimization we could achieve addition of fly ash upto 29% and targeting to reach 30 %. By the continuing efforts we would be able to achieve specific power consumption to 77 kWh/T cement.

Energy Audit (thermal) has been carried out in the month of January 2008 by the "National Council of Cement and Building Materials", Hyderabad and Energy Audit (Electrical) was carried by our in-house consulting agency 'Central Technical Centre" Baroda during the month of July 2008.

The frequency is depending on the management requirement.

The unit has Energy Conservation Cell at HCW headed by Manager (Electrical) assisted by Energy Manager & supported by two engineers from each department forming a team.

ENERGY CONSERVATION CELL STRUCTURE



Environment and Safety

The unit is committed to ensuring continual improvement in our occupational Health and Safety (OHS) performance of our employees and also ensures to preserve our environment.

It was accorded an ISO 9001-2000 Quality Management System and ISO -14001-2004 Environmental Management System certification and we are on path of implementation of certification of OSHAS 18001.

HCW has a safety department maintains stringent safety standards & insure that safety measures are being followed strictly.

HCW has a Medical Center in town-ship complex managed by team of Doctors round the clock. An Ambulance is readily available to shift the patient in case of emergency, besides having diagnostic equipments including a pathologic lab.

Achievement

Hirmi Cement Works has been declared as **Winner** of the '**National Safety Award**' for the performance year 2006 by Ministry of Labor and Employment, Govt. of India.

Environmental activities at unit level

As part of culture, it is units' endeavor to maintain all the plants with zero leakage of dust, as well as air & water. A special team in each area monitors & ensures housekeeping of the highest standard.

(1) Plantation

As a part of our commitment for the better environment, dense greenbelt has been developed at mines, plant and township. As per the schedule this monsoon we planted 48548 saplings in plant, mines, township and near by villages, which is regular yearly practice.

(2)**Water audit**- water audit was carried out by third party order to identify the areas of improvement and to reduce the consumption of water.

(3) **Rain water harvesting**-Looking in to potentiality of rain water harvesting, HCW constructed various recharge structures like Surface dyke, Roof water recharge pits, and dry bore well recharge pits.

(4) **Usage of waste**-We are using waste products like Fly ash, iron oxide and phosphor gypsum from different industries as raw material in cement manufacturing. We applied authorization for five hazardous wastes to use as an alternative fuel.

CSR activities at unit level

To fulfill the vision of Aditya Birla group in social activities and commitment towards economical development of the region, we established Village Development centre (Gramin Vikas) with well qualified officer. We are performing the social activities in near by villages through Gramin Vikas department. This department acts as a facilitator between various government programmes and the villages so that the villagers can avail the optimum benefits of the programmes. Our unit (HCW) is one of the biggest contributor for social and economical development in nearby villages. Our single-minded goal here is to help build model villages that can stand on their own feet. To fulfill our objectives towards rural development, we allocated funds to implement the activities

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