

## PRISM CEMENT OVERVIEW



## BRIEF WRITE-UP ON PRISM CEMENT LIMITED SATNA

### 1.0 Company Profile:

With an objective of being an active participant – in the dynamics of future – of the Nations’ march towards total industrialization and energy conservation, Prism Cement Ltd has set up a state-of-art, energy efficient cement plant near Satna, in Madhya Pradesh. Most advanced machinery and technology imported from M/s FLSmidth Denmark and state-of-art processes lend it a futurist environment.

Company was initially incorporated under the name of *Karan Cement Limited* in March 1992 under the Indian Companies Act, 1956 as a joint venture between Raheja group of Mumbai, F.L.Smidth & Co. A/s Denmark and Industrialization Fund for Developing Countries (IFU), Denmark. The name of the Company subsequently changed to '*Prism Cement Limited*'. Prism cement’s manufacturing facility is at *Vill. Manakahari, Santa in M.P.*, Registered Office is at *305, Laxminivas apartments, Ameerpet, Hyderabad*, and Corporate Office is at '*Rahejas*', *Main avenue, V.P Road, Santacruz(W) Mumbai – 400 054*.

The main raw material for the plant i.e Limestone is being obtained from captive limestone mines situated at village Hinauti and Sijahatta. Prism cement has obtained clearances from MOEF covering leases for mining operation. The company has obtained MPPCB clearances and site clearances from industries department. Plant is connected to nearby railhead access of Central Railway linking of Satna, Rewa broad guage line and well connected to nearest cities by road.

Prism Cement Ltd. is ISO: 9000-2001 company and off-late bagged few awards such as First Prize for Energy Conservation in Cement Sector from Government of India , Ministry Of Power in 2006 and 2007, Best 3<sup>rd</sup> Green plant in India by Centre for Science & Environment New Delhi in 2004-05, 2<sup>nd</sup> best energy efficient plant (FLS energy awards) in MP & CG by MPCMA,CGCMA in 04-05, best (Ist) plant in ‘safety education’ by Director General of Mines and safety, Jabalpur and best(Ist) plant in “Noise, Vibration & Aesthetic beauty” awards by IBM Jabalpur, Environmental Management award for 2004-2005 from MP Government, National Safety Award 2006 from Ministry of Labour and Employment Govt. Of India.

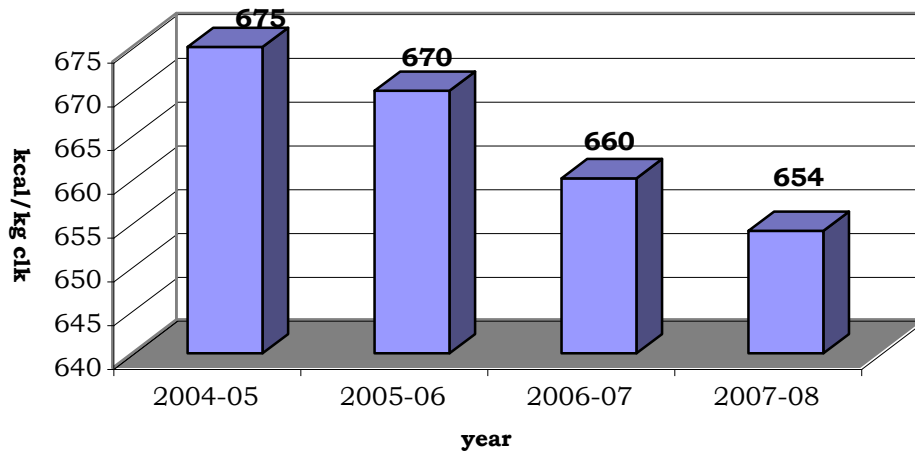
### 2.0 Energy Consumption:

Prism Cement Limited firmly believes in attaining, retaining and reforming its' energy conservation initiatives time to time. Originally installed efficient equipments and system, gives glare to our energy conservation drive.

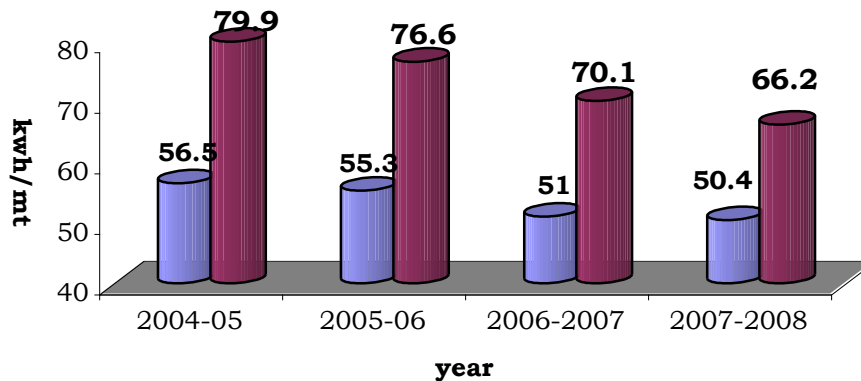
Year-by-year increasing production demand is associated with decreasing the specific energy consumption. Our thermal energy consumption (million Kcal/year) during last 4 years is as below

2004 – 05	1334425 million Kcal/year
2005 – 06	1477333 million Kcal/year
2006 – 07	1401314 million Kcal/year
2007 – 08	1537567 million Kcal/year

The increase in absolute heat consumption is a reflection of increasing production capacity. However, the specific energy consumption is at reducing trend.



The above fact is accompanied with better electrical energy conservation also. Kwh/Mt of clinker and cement witnesses' result of energy initiatives.

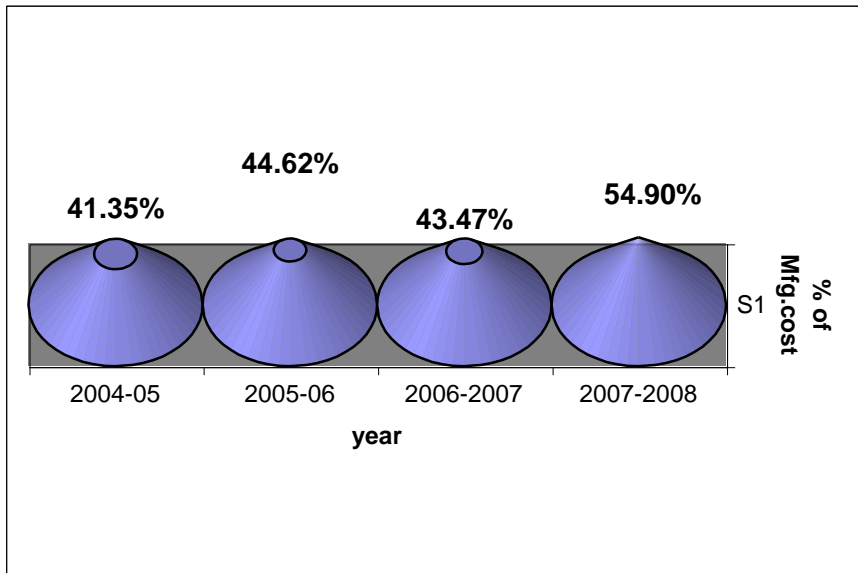


Perhaps, these achievements have opened broad road to move ahead in coming years.

**2.1 Sources and Cost of Energy:**

Right from the inception of the plant, Prism’s electrical energy source was our HFO based DG captive power plant till July’05. In Aug’05, we switched over completely to state grid MPEB. Power generation cost of DG was obviously dependent on inflating HFO cost. Coal we procure from SECL. In this scenario, the energy cost incurred by us as below

Energy cost as % of manufacturing cost:



**2.2 Energy Planning:**

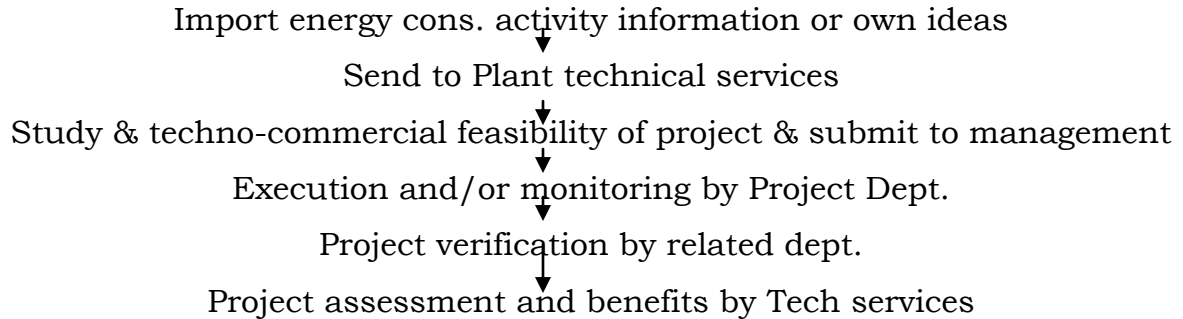
Energy planning for next 3 years with 2005-06 as base year is as follows.

Year	Kwh/MT cem	Kcal/Kg clk.
2007 – 08	66.2	654
2008 – 09	65	650
2009 – 10	64	650

**2.3 Energy Conservation Commitment & set up:**

Our energy conservation mission is committed to explore available potential and to adopt technology advancements extending also to upcoming projects of company.

We have firm internal set up for execution of new energy initiatives. Normal process of this set up is as below.



Besides, periodic meeting on energy conservation will be held to organize the planning & review of activities. Unit head holds the meeting.

#### **2.4 Energy Conservation Achievements:**

- a) Conversion of PA fan, RABH RA fan, cooler seal air fan, speed regulation by damper control to V/F control.
- b) Elimination of LS crusher compressor by optimizing air requirement.
- c) Replacement of belt conveyors
- d) Installation of advanced energy management system
- e) Modification of belt conveyors in packing plant
- f) Modification of stacker boom belt.
- g) Complete replacement of water pipelining and optimization of water management for plant use.
- h) Committed process optimization i.e cooler and fan efficiency, false air reduction, secondary & tertiary air optimization, cooler recuperation efficiency optimization and bag filters optimization.
- i) Upgradation and optimization of flyash system
- j) Installation of expert control system in Cement Mill
- k) Installation of IGBT based SPRS in Calciner and Kiln String fans

#### **2.5 Energy Conservation Plans:**

- a) Installation of VFC system to all plant compressors.
- b) Installation of new water spray system to cooler
- c) Project for Co-generation plant
- d) Replacement of process fans by higher efficiency
- e) Up gradation of bag house
- f) Up gradation of Limestone crusher and cooler hammers from existing design to energy efficient design.
- g) Installation of IGBT based SPRS system for RABH Fan

### **3.0 Environment and safety:**

Environment management is an approach of resource conservation and minimization of impact by human activities on the physical and ecological environment. Prism cement limited has a competent technical team taking care of the operation and maintenance of equipments efficiently.

The major pollutants of air in cement plant for the suspended particulate matter are from the various stacks and fugitive emission due to material handling. The following pollution control equipments have been installed at section of the plant.

- |                    |   |
|--------------------|---|
| 1) Kiln/Raw mill   | ABB 14 module Reverse air bag house 1 no. |
| 2) Cooler          | ABB ESP of 6 fields 1 no.                 |
| 3) Cement mill     | ESP of 3 fields – 2 nos.                  |
| 4) Coal mill       | Bag filter 1 no.                          |
| 5) Transfer points | bag filters no.65.                        |

Pollution control equipments at Prism Cement are designed for emission standard of only 50 mg/nm<sup>3</sup> for all the main stacks, which is relatively lesser than standards given by the state pollution control board for other stacks. Prism is committed to maintain this stringent standard.

We have our own environment policy.

***"We are committed to conduct our operations for the manufacturing of clinker and cement including power generation and limestone mining in the most environmentally benign manner.***

***We underline our commitment towards:***

***Minimizing the impact on various components of the environment particularly on air,water,noise,land and natural resources through conscious and concerted efforts.***

***compliance with applicable environment legislation and regulation***

***continual improvement of our environmental performance through involvement of our***

***employees, use of appropriate economically viable technology and participation of business associates"***

We don't have any legal disputes and issues of violation of acts.

### **3.1 Plantation and greenery:**

Prism cement has developed extraordinary green belts in plant, colony and mines premises. Around 33000-sq.m bare lands has been converted into green belt.

95,000 plantations have been done in last 8 years and their survival rate is 94%.

### **3.2 Safety**

We maintain the stringent the EHS practice. We have also internally established safety regulations. Our safety and health policy is:

“ Healthy and safe work environment for employees is the prime concern of the company. Our commitment to create and maintain the safe and

healthy work environment for employees against hazardous and risks shall be achieved by,

- a) Continuously developing and maintaining safe work practice.
- b) Focusing on operational and occupational hazards and risks
- c) Creating awareness about preventive health and safety measures.”

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