

DALLA CEMENT FACTORY

Dalla, Distt. Sonebhadra (Uttar Pradesh)

Unit Profile

The Jaiprakash Associates Ltd. is 15,000 Crores well diversified infrastructural conglomerate in India. Over the decades it has maintained its salience with leadership in its chosen line of business like Engg. and Constructions, Cement, Power, Real Estates, Expressway & Highways, Casting, Agro Products and Education. India's first F-I Race track has been developed and organized by Jaypee Group.

Jaypee Group is the 3rd largest cement producer in the country. The group produces special blend of Portland Pozzolona Cement under the brand name 'Jaypee Cement' (PPC). Its cement division currently operates modern, computerized process control cement plants with an aggregate capacity of 26.20 MnTPA. The company is in the midst of capacity expansion of its cement business in Northern, Southern, Central, Eastern and Western parts of the country and is slated to be 35.90 MnTPA by FY12 (expected) with Captive Thermal Power plants totaling 672 MW.



Dalla Cement factory was one of the Units of erstwhile Uttar Pradesh State Cement Corporation Ltd. (UPSCCL) and taken over through global bidding Under the Management of Jaiprakash Associates Ltd., Dalla Cement Factory has rehabilitated an old unit of 1200 MTPD to 1500 MTPD supplied by Polysius having four stage suspensions preheater, Kiln of Dia. 4.2 M X 68.0 M Length. Pyrosection is rehabilitated by high efficiency top cyclone and IKN step grate Cooler. In this plant company has installed "State of Art" technology of ESP and Bag Filters design for <50 mg/Nm³ dust emission. Old central discharge Raw Mill and Coal Mill is revived by High efficiency separator and classifying liners along with weighing arrangement for catering the requirement of raw meal and fine coal. Plant is commissioned on 28th March 2008 and meeting all requirement of pollution control and emission level.

Plant has also installed new 4500 MTPD plant with Raw Mill and Coal Mill supplied by M/S Polysius. The plant is equipped with high efficiency preheater, eight tracks Polytrack Cooler with intermediate crusher. All process fans and FD fans are equipped with Variable speed drives. Multichannel burner is provided for high flame momentum. Raw Mill Gear Box is Equipped with DALOG System for online monitoring form supplier premises at Germany. This state of art technology plant is commissioned on 27th March 2009 and meeting all requirement of pollution control and emission level.

In a very short span of time unit has not only rehabilitated an old plant but also installed and commissioned a new unit and rejuvenate life of the region and uplifting the society.

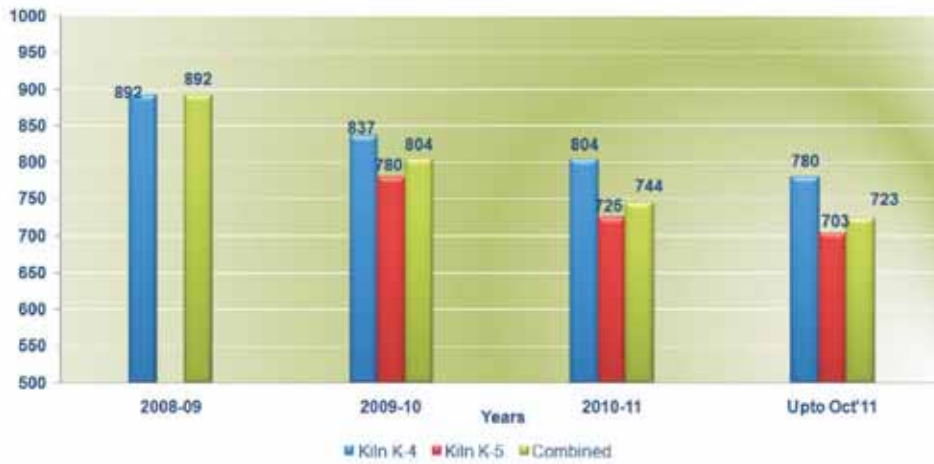
Apart from above, various innovative efforts have been made for further improving energy efficiency in last 3 yrs in units. In this short span of time, approximately three years, Unit has not only started plant but also started and established various socioeconomic activities to uplift the level of people living nearby areas.

Energy Consumption

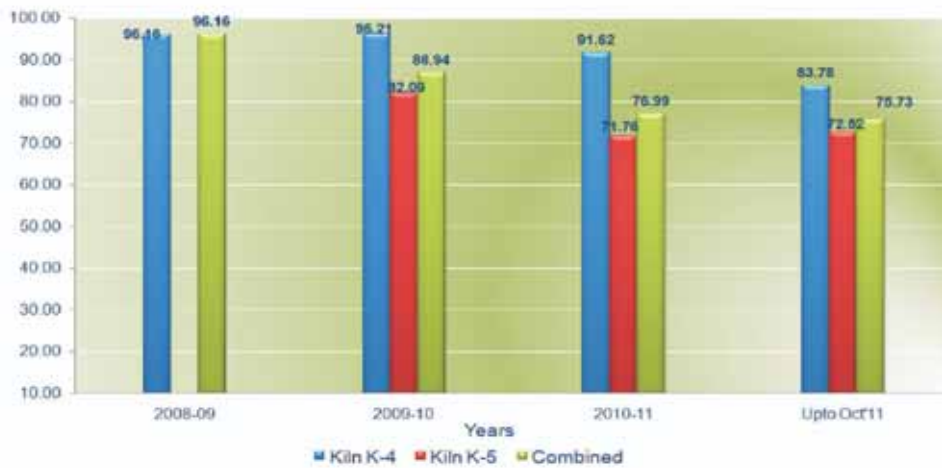
Energy Consumption (2008-09 to 2011-12)

Year	Specific Energy Consumption (Unit/ton of Clk.)			Specific Energy Consumption (Unit/ton of			Specific Thermal Energy Consumption (Kcal/Kg		
	Kiln K-4	Kiln K-5	Total	Kiln K-4	Kiln K-5	Total	Kiln K-4	Kiln K-5	Total
2008-09	96.16	-	96.16	-	-	-	892	-	892
2009-10	96.21	82.09	86.94	106.41	96.12	99.66	837	780	804
2010-11	91.62	71.76	76.99	95.79	82.09	85.69	804	725	744
Upto Oct'11	83.78	72.52	75.73	88.76	80.97	83.19	780	703	723

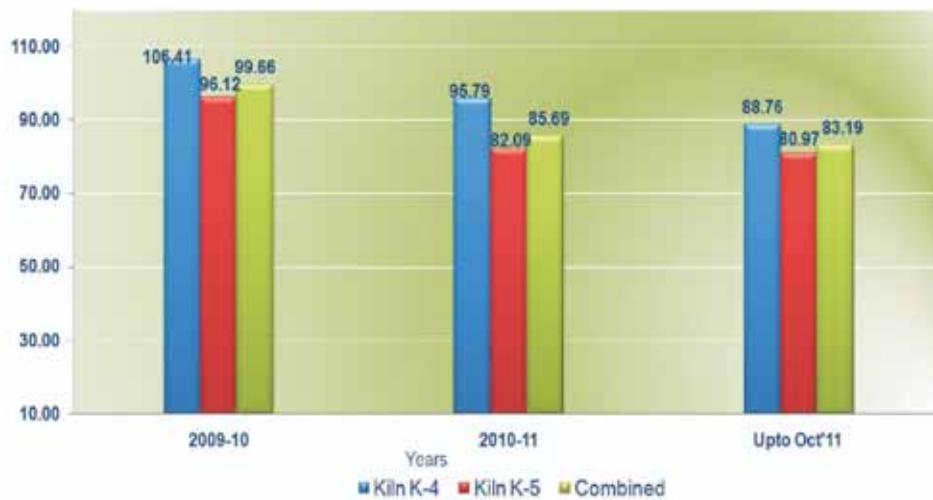
Thermal SEC Pattern in Kcal/Kg Clinker



Electrical SEC Pattern in kWh/MT of Clinker



Electrical SEC Pattern in kWh/MT of Cement



Energy Conservation Achievement

Process Optimization and Maximization of Production from all sections of cement Plant have been exercised by comprehensive process studies and its implementation of outcome in the plant. This has improved in production of clinker from 1407 TPD to 1477 TPD in Kiln K-4 and 3448 TPD to 4290 TPD in Kiln K-5 on an annual Average basis in 2010-11 over 2009-10

Unit has carried out following installations, modifications and Optimization work in plant which has resulted in reduction of Thermal and Electrical SEC.

1. Installation of Roller Press (RP-10) has increased Raw Meal availability in turn achievement of above production in 2010-11 over 2009-10.

Investment: 20.75 Cr.

Benefits:

- Power Saving of 5 kWh/MT of Clinker
- Thermal Energy Saving of 27 Kcal/kg Clinker
- Saving of Rs. 480 Lacs per year

Payback Period: 4.33 Yrs

2. Installation of Variable Frequency Drive in Reverse Air Fan in Kiln K-5 bag House to reduce power consumption.

Investment: Rs. 7.76 Lacs

Benefits:

- Power Saving.
- Saving of Rs. 34.87 Lacs per year

Payback Period: 0.25 Yrs

3. Modification in Kiln K-4 and Kiln K-5 PH top Cyclones horizontal portion to eliminate frequent material surging from Preheater.

Investment: Rs. 4.90 Lacs

Benefits:

- Frequent material surging problem solved.
- Saving of Rs. 200.35 Lacs per year as 4745 MT Coal Saved

Payback Period: 0.24 Yrs

4. Inlet louver dampers of 7 out of 9 Cooler FD Fans are removed in Kiln K-5 for Power Saving.

Investment: NIL (In-House)

Benefits:

- Power saving.
- Saving of Rs 61.91 Lacs per year.

5. Optimization of Output Voltage of distribution transformers to reduce Power Consumption in Kiln K-5 by reducing operating voltage from 432 V to 410 V.

Investment: NIL (In-House)

Benefits:

- Power Saving in Kiln K-5.
- Saving of Rs. 44.95 Lacs per year.

6. Three blowers of 7.5 KW stopped after increasing the slope of Raw Mill Reject Air Slide to avoid jamming in Kiln K-4 Plant.

Investment: Rs. 0.20 Lacs

Benefits:

- Power Saving in Kiln K-4.
- Saving of Rs. 2.21 Lacs per year.

Payback Period: 0.09 Yrs

7. Manual blending of coal due to inadequate facility of blending of various types of coal for consistency in quality of coal, in turn efficient operation of Pyrosection and consistency in product. SD (Standard Deviation) of Coal Ash reduced from 1.9 to 1.6 in 2010 to 2011.

Investment: NIL (In-House)

Benefits:

- Saving of Rs. 2061 MT of coal per annum.

8. Raw Mix Optimization by reduction in Lime Saturation Factor from 112 to 110.

Investment: NIL (In-House)

Benefits:

- 16 Kcal/Kg Clinker of Thermal Energy save by optimization of Raw Mix.

9. Installation of Hi Chrome classifying liners with Controlled flow diaphragm in Cement Mill No.2 to increase the productivity from 32 TPH to 40 TPH.

Investment: Rs. 100 Lacs

Benefits:

- Productivity increases by 8 TPH.
- Power Saving of Rs. 40.15 Lacs per year.

Payback Period: 2.5 Yrs

Energy Policy

**JAIPRAKASH ASSOCIATES LIMITED
(CEMENT DIVISION)
DALLA CEMENT FACTORY**



ENERGY POLICY

While ensuring continual efforts for the manufacture of quality cement we also strive to achieve business excellence through responsible and efficient use of Energy – both Thermal & Electrical to :-

1. Achieve excellence in performance in the production of cement as enshrined in "Indradhanush"- The Jaypee Culture
2. Reduce specific energy consumption wherever possible to reduce wastage of energy and fissile fuels.
3. Reduce Green House Gas (GHG) emission for better sustainability.

"SAVE ENERGY TO BE LEAN AND GREEN"

August 15, 2010

 
Executive President