

The UltrTech CemCo Limited Andhra Pradesh Cement works

(i) Unit Profile

The UltrTech CemCo Limited, Andhra Pradesh Cement Works is located 360 kms south of Hyderabad in the state of Andhra Pradesh in South India. Along with the grinding unit at Arakonam. The plant is ideally suited to cater to markets in Andhra Pradesh, Karnataka, Tamilnadu and Kerala.

Andhra Pradesh Cement works (APCW) is situated in Tadpatri, an ancient temple town, which is located on the banks of river Penna. Tadpatri, comes under Anantapur district of Andhra Pradesh. Tadpatri is well connected by railway line and roads. The chennai-Mumbai railway line runs close to plant. Peculiarity of L&T's APCW is its mines fall in Kurnool district while the plant is in Anantapur district.

APCW has many firsts in the country to its credit:

The Cement plant has been engineered with world leaders in cement Technology from FLSmidth, Denmark. Critical Machinery have been imported. L&T have supplied majorities of the equipment. Cement plant is fully automated and is Centrally controlled by process Computers linked to the plant machinery to avoid manual intervention and resulting power conservation.



High efficiency Vertical Raw Mill ATOX 50 (2 Nos of 370 tph each), Vertical Coal Mill ATOX 27.5 (1 No of 71 tph), Double String Six Stage Preheater, Kiln 4.75 X 75 mtr 8000 TPD, CIS-CFG Coolax Cooler, Belt bucket elevators for Raw Meal & Kiln Feed in place of conventional pneumatic conveying system, Cement mills (2 Nos. of 161 tph each) with roller press, Fuel Efficient Captive power plant (2 x 11.87 MW) with waste heat recovery boilers are salient energy efficient equipment installed at APCW.

Total 85 Nos. V/F Drives and 7Nos Slip Power Recovery Systems are installed at APCW for saving of power on continuous basis.

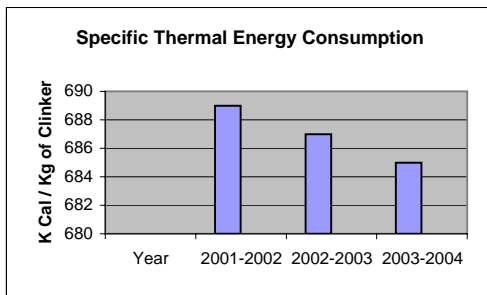
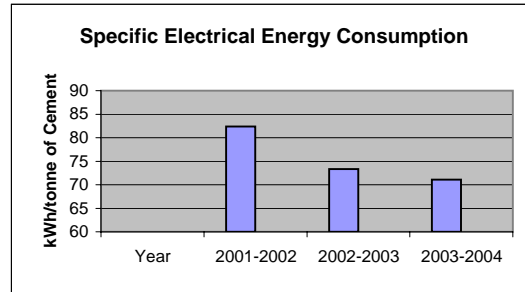
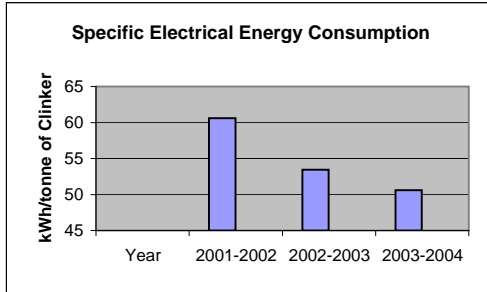
(ii) Energy Consumption

The several measures were taken for the reduction in the Energy Consumption as mentioned below:

Sl.No.	Particulars	Unit	2001-02	2002-03	2003-04
1	Electrical Energy	Kwh / Ton of Cement	#REF!	#REF!	#REF!
2	Thermal Energy	K Cal / Kg of Clinker	689	687	685
3	Total Manufacturing Cost	Rs. Lakhs	23135.34	24883.65	28911.16
4	Total Energy Bill	Rs. Lakhs	4620.79	5946.18	6380.13
5	Energy as % of Total Cost of Production	%	20	24	22

Year	Specific Electrical Energy Consumption		Specific Thermal Energy Consumption	
	kWh/tonne of Clinker	kWh/tonne of Cement*	K Cal/Kg of Clinker	K Cal/Kg of Cement
2001-2002	60.60	82.38	689	-
2002-2003	53.46	73.33	687	-
2003-2004	50.60	71.1	685	-

* Excluding Utility



(iii) Energy Conservation Commitment, Policy and Organizational Set up
(Please include a photo copy of unit's Energy Conservation Policy, if decided)

Energy Management at APCW - Tadpatri

The cross-functional personnel constitute the energy pillar team across the plant. They identify and implement various energy conservation projects.

The cost of the power is minimized by controlling the MD and optimum power consumption from APGPCL, Electricity board and DG sets.

The individual identifies and quantifies the energy losses in his section and takes suitable actions for optimum loading of the equipment and reduction of losses.

The power factor is continuously monitored and maintained above 0.97.

The fuel consumption is continuously monitored during power generation to maintain the generation efficiency.

The awareness is spread among the employees and residents for conserving the energy.

The various proposals are prepared such as renewable energy source for reduction in the green house gases and utilization of waste heat available in the exit gases.



The management has been striving to achieve the milestones in the Industry since the commissioning of the plant. We are achieving the best in a short span of time and we will achieve the various milestones in future with the total commitment from the top management and involvement of all the employees.

In view of management's excellent commitment for the conservation of Energy, the Management has been awarded "Quality, Environment & Safety Management System" in confirmation with ISO 9001 (2000), ISO 14001 (1996) and OHSAS 18001 (1999).

To Improve further, the management had set up, various committees like Energy Conservation Committee, Water Conservation Committee, Seva Committee, Small Group Activities, Suggestion Schemes, Shop Floor Committee, Improvement Steering Committee and conducts various meetings for involving all the people such as Area Effective Level Review Meetings, Pillar Level Meetings, Organizational Level Review Meetings etc...

(iv) Energy Conservation Achievements

Include one paragraph write-up on each major energy conservation project implemented during the year 2003-2004 only.--- **Mentioned in Point No 16**

(v) Energy Conservation Plans and Targets

Mentioned in Point No 16.

(vi) Environment and Safety

APCW is an ultra modern plant with a cutting edge technology in collaboration with FL Smidth, Denmark, world leaders in cement technologies .The salient features of APCW regarding pollution control are mentioned below:

20 Chambers reverse air bag house for raw mill and kiln dust to ensure the dust emission through stack, less than 50 mg/Nm³.

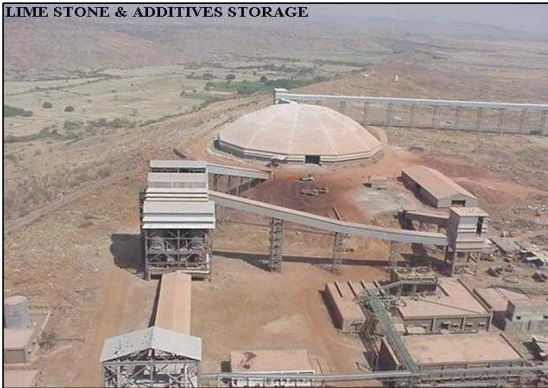
- (i) 16 chambers bag house for coal circuit to ensure dust emission less than 50 mg/Nm³.
- (ii) 99% efficient ESPs for cooler and cement mills
- (iii) Jet Pulse Filters and insertible dust collectors at various locations of the plant.
- (iv) Stack of 141.5 Mts. Height
- (v) Water spray systems at feeding and transfer points to absorb the dust.



The plant is located at a height of 351.5 from M.S.L. Though the state govt. limit for stack is 115 mg/ Nm³, APCW has gone for Reverse air bag house technology with special design of Imported bags to restrict the emission to below 50 mg/Nm³. The entire limestone stockpile is covered and capable of storing 60000 Mt.

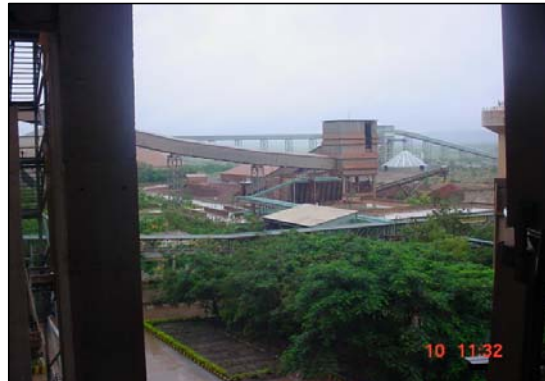


LIME STONE & ADDITIVES STORAGE



At the transfer points and vulnerable areas bag filters are provided to make the plant and surrounding hamlets dust free. We produce, market and sell cement of different grades with environment friendly technology. The finished product is packed in paper sacks, which is a biodegradable and environmental friendly product. Besides this on the request of customer cement is packed in bags also.

With the focus on reduction in fugitive emissions in all over the plant, the occupational health problems are negligible. Besides technological initiatives, there is a system of conducting the complete health check-up for all the employees including Spirometry (Lung test) with sophisticated equipment. This is being conducted once a year. The results of the studies show that there is no significant impact on their health.



LSS & ADDITIVE STORAGE



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Environmental protection is taken care through afforestation programs and water conservation programs. We have taken up plantation before the commencement of production. On our rolls we have one full time horticulturist who is a postgraduate in Agriculture Science. Every year we spend around one crore towards the environmental protection.



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The production processes take care of all the emergency situations with suitable electronic interlocks in the system. And also an On-site emergency plan is developed as a part of implementation ISO 14001, which takes care of any untoward eventuality. Till date no environmental incident/accident in the plant has taken place.



RABH ,MAIN CHIMNEY & PRE-HEATER

There have been no accidents, which has endangered surrounding villages in any aspect.

Burning of HFO sludge and waste mineral oil in kiln avoids circulation of the Hazardous waste.



The top most priority is given to the safety by all employees. The daily five minutes safety spreads the awareness among all.