

KCP Limited Cement Unit Macherla

The KCP Limited, incorporated on 3rd July, 1941 and belonging to the V. Ramakrishna group started commercial production in the Cement Unit located at Macherla, Guntur District, Andhra Pradesh in 1958 with the commissioning a dry process kiln line of 400 TPD capacity, the first of its kind in India. The capacity was augmented by a 600 TPD line in 1962.

This plant was conceived with the Chief objective of supplying all the Cement requirements for the multi purpose Nagarjuna Sagar Dam Project 25 KM away, and after completing all the contracted supply requirements for the Dam, it continued to produce and supply Premium Quality Cement, chiefly to other projects such as Srisailem Project and retail outlets in South India under a comprehensive funding agreement with the World Bank and consortium of Indian Financial Institutions, a new and state-of-art, energy efficient kiln line of 1200 TPD capacity with recirculating feed Calciner and five stage Pre-heater and vertical roller mills for Raw Meal and Coal grinding, centrally controlled and monitored through a comprehensive scheme of Instrumentation and Computers, went on stream in December, 1989 at the same location and the capacity of plant re-evaluated to 5,00,000 TPA for the year 2001-2002, and the old lines were scrapped. The production level of the unit for the year 2004 - 2005 are 4,21,515 MTs of Clinker; 4,84,551 MTs of Cement Produced and 4,86,844 MTs of Cement Packing, which denotes 97% in cement, of capacity utilisation

(ii) Energy Consumption

Include information on total energy consumption (i.e. coal, oil, gas, electricity and money value). Information on energy consumption in terms of percentage of manufacturing cost should also be presented. Also, it should highlight the specific energy consumption for the period 2001-2002, 2002-2003 & 2003-2004. Good Computer Graphic Presentation related to Specific Energy Consumption may also be incorporated.

The electrical energy consumption in the plant for the year 2004 - 2005 is about 404.37 lakhs KWH /year.

The Fuel / Coal consumption of the Plant for the year 2004- 2005 is 15.686 on Clinker Production.

iii) ENERGY CONSERVATION COMMITMENT, POLICY AND SET UP:

Cement Industry is energy intensive plant. As energy costs are going high day by day, its conservation is given more thrust. At the same time due to imbalance of hydel power generation particularly during summer seasons, captive power generation is also vigorously utilised through it is costly. Because of all way of optimising the through puts, improving the machinery efficiencies by way of modifications and replacements, etc., besides a close monitoring of consumption trends. For the above said purpose, our unit has constituted an energy conservation cell to study, suggest and implement the various schemes with the coordination of operating personnel.

In addition to periodical meetings of the cell on day to day basis, the power consumption trends are elaborately discussed by every section in charge explains the reasons and remedial actions taken / proposed for immediate implementation. If any modification is suggested, the same is discussed in the meeting and the project / Engg. Section is entrusted the job. We could eliminate the system defects by modifying suitably which are the bottlenecks in smooth / optimum level of operation of equipments.

For the thermal energy conservation an equal Thrust is given to minimise / eliminate the wastage's (direct / indirect losses) and to reduce the false air ingress in the system. These things

are practiced / monitored on day to day basis all the times. Any deviation observed is immediately attended to it.

Energy performance of the plant are prepared on daily, weekly, monthly and yearly basis and these reports are instantly available in computers of all departments for their ready reference, and are reviewed.

-- Daily by section incharges.

-- Weekly and Monthly by General Manager in the production meetings.

-- Weekly and Monthly at Corporate level.

With all round efforts the consumption levels of electrical and thermal energy could be brought down and still the efforts are on to reduce these levels further.

iv) ENERGY CONSERVATION ACHIEVEMENTS:

The specific energy consumption of the plant in last six years has been in steady decreasing trend .

The specific Electrical Energy consumption of the plant per ton of Cement is 97.67 KWH in 2001 - 2002, which is lower by 13%. The specific electrical energy consumption of the plant for the year 2004 – 2005 is 84.79 KWH/Ton of cement.

v) ENERGY CONSERVATION PLANS AND TARGETS

The Company has set up a challenging target of reducing Specific Electrical Energy to below 80 KWH/Ton of Cement and Specific Fuel Consumption to 15.0 % on clinker for the year 2005 - 2006

The following projects are under implementation to conserve Energy and to operate the equipments at maximum efficiencies and are expected to complete in 2 years on stage wise.

-- Instalation of Waste Heat Recovery Plant

- Replacement of Old Conventional cement mills with new Energy Efficient Cement Mill.

- Modifying the Existing Classifiers with High Efficiency Classifiers.

--Replacing the Rawmill and kiln bag house fiberglass bags with PTFE membrane bags.

By implementing the above energy conservation measures, the Electrical energy consumption is expected to reduce from 84.79 KWH/Ton of cement to below 80 KWH/Ton of Cement.