C-28

MINUTES OF MEETING HELD ON 8TH Aug 2000 REGARDING ENERGY SAVING PROJECTS AT ADITYA CEMENT & VIKRAM CEMENT

Members Present (S/Shri)

MC Agrawal - Sr. Vice President
M.M Tiwari - Asst. Vice President
Sanjay Agrawal - General Manager

Following major points were discussed:

AC and VC intends to implement following energy saving projects.

1. AC Retrofitting of Static grate cooler.
2. VC3 Retrofitting of Static grate cooler.

AC and VC III – Retrofitting of Static Grate Cooler

AC intends to retrofit in grate part of the cooler. Presently the grate is jet ring cooler grate, which is to be replaced by the static grate .

Presently the clinker is deposited as uniform bed, due to which the heat transfer is relatively poor between the clinker and the cooling air. In the new grate system initial portion of grate is fixed so that the layer of clinker deposition is non-uniform, which increases the heat transfer between air and clinker.

In the new system clinker discharged from the rotary kiln drop down on the static primary grate will form an angle of repose adapted to grain size distribution of clinker and then slides to grate 1 of cooler. This way cooler achieves higher heat recuperation, optimum secondary air temp and lower ultimate clinker temp.

These advantages lead to conservation of thermal and electrical energy in the cement manufacturing process.

VC intends to go for redesigning of the grate system with IKN plate type system, which will increase the cooler recuperation efficiency from 61% to 64-65%. This IKN type system works on the principle of coanda effect. The coanda nozzles turn the cooling air strong horizontal air jets with high velocity into clinker bed. The narrow slots inclined in the direction of transport produce sharp air jets with high dynamic pressure. This pressure keeps the jets adjacent to surface of coanda nozzles. The air velocity at

nozzle is 40 m/Sec. The technology employed is advanced with only few such applications in cement plants of India.

- The technology supplier for AC project is identified as KP and at VC is IKN, . The cost of project is about Rs 1.2 Crs at AC and VC each.
- Such projects are not commonly implemented in cement plant is India but have many proven credentials in other countries e.g. Germany. The project can be viewed as one of the main initiatives to reduce cost of production in order to generate competitive edge.
- The ROI of AC and VC projects will work out in the range of 10%, which is likely to go up with increased cost of fuel.
- The project, though financially not attractive, has sufficient chances of qualifying for funds under CDM, which will further improve the viability of the project. It is expected that the project will reduce emission of CO_2 by about 13000 Tons at AC and 12000 Tons per year, which may fetch additional Rs. 2.8 Crs in 10 years, if the rates of carbon credit is considered to be $2.5/Ton of CO_2. This will improve the viability of project.
- Follow-up with M/s IKN and KP needs to be done on detailed time schedule for VC and AC projects.

(M.C Agrawal) **(M.M Tiwari)** **(Sanjay Agrawal)**