

Projects undertaken in 2003-04 at Aditya Cement

1. Replacement of existing Raw mill fan Impeller by high efficiency Impeller

Background of the project :

Originally the plant was designed for 1.0 MTPA, and after in-house modification the plant capacity increased to 1.5 MTPA. To meet this requirement, Raw Mill capacity was also enhanced from rated 300 ton per hour to 345 tph. This production was met at higher power

Observation made :

Earlier the Raw mill fan efficiency was 68% and power consumption was 2400 KW / hr

Technical & Financial Analysis :

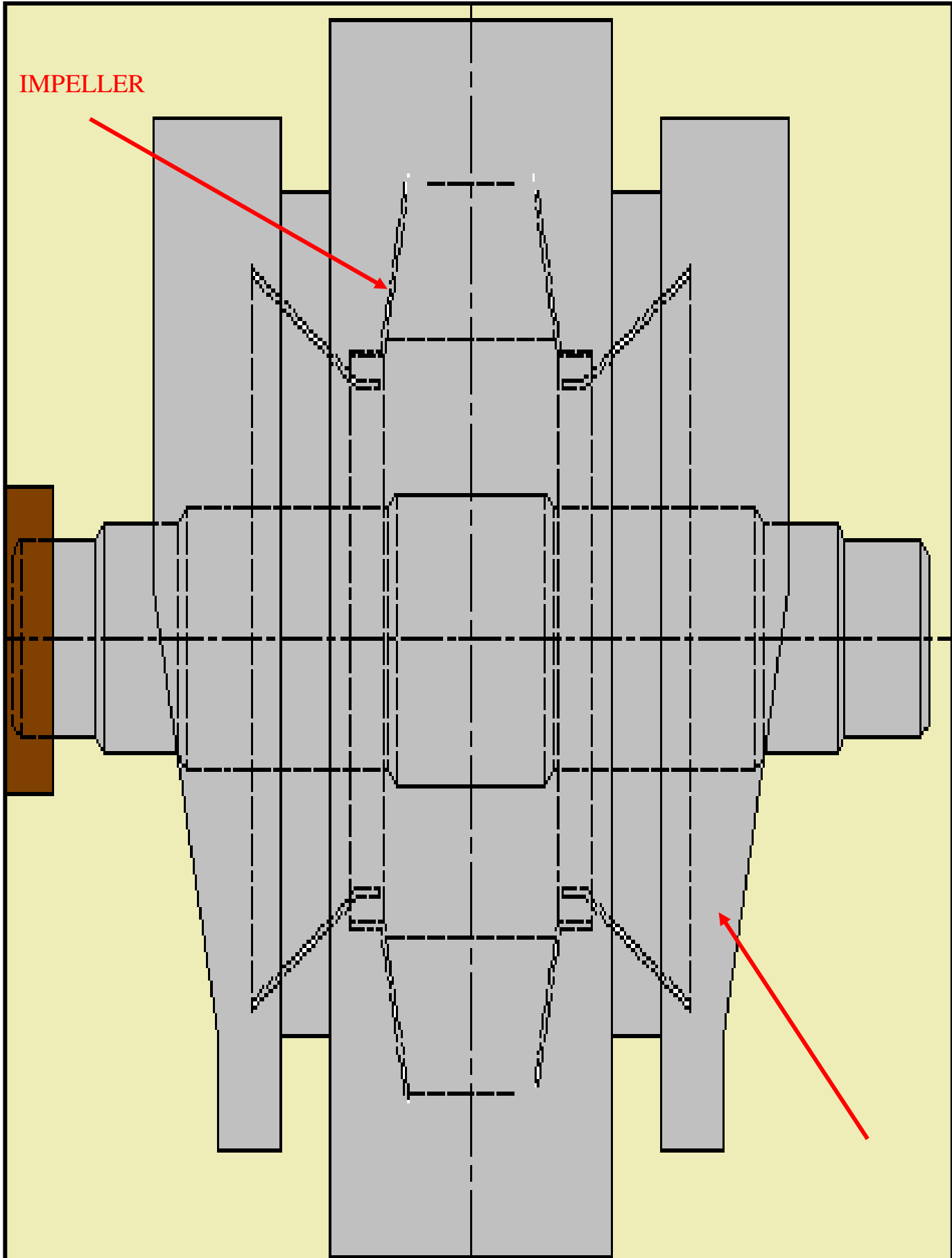
On technical analysis and considering site constraint, New Raw mill fan impeller was installed which resulted into increase in efficiency from 68% to 72% and a saving of approximately 350 KW (50.00 Lacs/year). With a financial investment of Rs 25.00 lacs , the net saving of Rs 50.00 lacs achieved, i.e. payback period of less than one year.

Implementation :

The scheme implemented in May-2004.

Encl : Sketch showing details of Modification.

RAW MILL FAN IMPELLER



2. V/F DRIVES FOR COOLER FANS

Background of the project :

In case of Fan the power is increase in cube of speed. Motors of our Clinker Cooler Fans were running in full speed (1500 rpm) with damper regulation, Our unit found potential to reduce the power consumption by removing dampers and providing V/F drives.

Observation made :

The earlier running total load was 500 kw which after using VFD, has reduced to 400 kw, resulting into net saving of 100 kw.

Technical & Financial Analysis :

At lower rpm, the required volume was met and removed the fans' damper. Hence with a investment of Rs 16 Lacs of Variable Frequency Drive, net saving of Rs 8.00 Lacs was annually achieved.

Implementation :

The scheme implemented in June-2004.

3. EXPERT SYSTEM FOR RAW MILL

Background of the project :

Optimization package for section was required for efficient operation of the Mill so as to increase output as well as to reduce power consumption. The package runs in close loop as per the optimum condition set.

Observation made :

The optimisation package purchased from M/s FLS and installed for our RAW Mill operation.

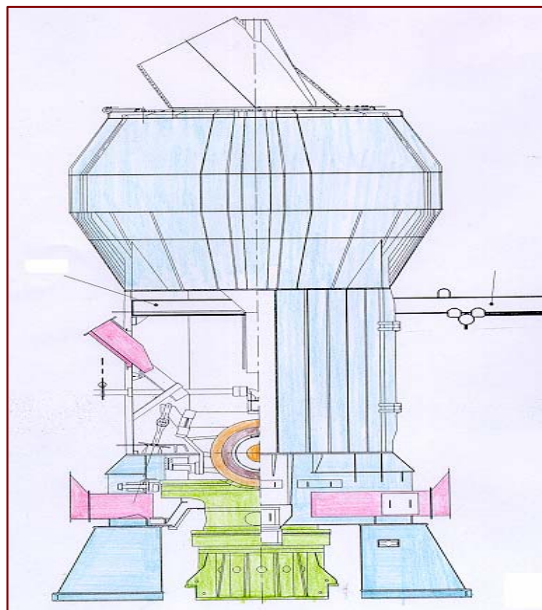
Technical & Financial Analysis :

Due to different Quality of Limestone Saving achieved is still under observation , However reduction in specific power consumption is found.

With a investment cost of Rs 7 Lacs of the optimization package, Saving of 0.5 kWh/ton of cement is achieved. Saving achieved is Rs 24.33 Lacs/annum.

Implementation :

The scheme was implemented in the month of Dec-03.



4. SLIDE GATE IN PLACE OF DAMPER AT P.H.FAN INLET

Background of the project :

We were operating P.H.Fan by opening damper at 100% and change the speed of fan by SPRS/GRR. Our unit found potential to reduce the power consumption if damper is removed.

Observation made :

By Installation of Slide gate in PH inlet, the Power consumption reduced to 0.5 Kwh/cement .

Technical & Financial Analysis :

The required pressure was met at lower rpm. Hence with an investment of Rs 10.00 Lacs of Slide gate, net saving of Rs 8.00 Lacs was annually achieved

Implementation :

The scheme implemented in the year 2003-04.