

Brief Description of Implemented Schemes-2006-07

Scheme-I

Proposal for installation of VAHP unit in HAS plant, CEP.

To reduce Chilled Water temperature, Vapour Absorption Heat Pump (VAHP) working on excess waste steam was installed. This resulted in to stoppage of running of refrigeration compressors. Reduction in power consumption realized is 18.96 Lacs units/year.

Cost of the scheme: Rs. 80 Lacs

Saving: Power equivalent to Rs. 52.71 Lacs/Yr.



Scheme-II

Replacement of Cooling Water pumps by high efficiency and high capacity units.

The Cooling Water pumps in Caprolactam-I Plant were of low efficiency. Moreover there was a gradual increase in demand for CW due to increase in the plant capacity. Replacement of pumps carried out with higher capacity & efficiency, which resulted into power saving of 12.72 Lacs units/year.

Cost of the scheme: Rs. 166 Lacs.

Saving: Power equivalent to Rs. 35.36 Lacs/Yr.



Scheme-III

Vapor NH₃ supply from Mel-1 plant to DAP.

Byproduct ammonia is compressed, reliquified & supplied to NH₃ network. A system to supply vapor ammonia from Melamine plant to DAP lined up bypassing compressor / liquefaction. This resulted into Power saving of 1.32 Lacs units/year (Rs. 3.69 Lacs/year) and steam saving of 333 MTPY.

Cost of the scheme: Rs. 2.49 Lacs.

Saving: Power equivalent to Rs. 3.69 Lacs/Yr, Steam equivalent to Rs.1.71 Lacs/Yr. Total saving Rs.5.41 lacs/Yr.



Scheme-IV

Energy saving by replacement of 2.5K CT pumps in Urea plants.

In Urea plant, CT pumps in hot & cold well basins were replaced in phased manner by higher efficiency one. Power saving realized is 3.76 Lacs units/year.

Cost of the scheme: Rs. 15.75 Lacs.

Saving: Power equivalent to Rs. 10.45 Lacs/Yr.



Scheme-V

Elimination of Bucket Elevator (XUT-403) in Urea-II plant.

Belt conveyor was installed to eliminate the Bucket Elevator in order to minimize maintenance cost & to save power. Power saving realized is 0.56 Lacs units/year.

Cost of the scheme: Rs. 9.70 Lacs.

Saving: Power equivalent to Rs. 1.56 Lacs/Yr.



Scheme-VI

Provision of a separate flash steam line for saving steam in hot water tank in Urea-1 plant.

Steam generated from flashing of condensate is diverted to hot water system replacing boiler steam. Steam saving of 7200 MTPY is achieved.

Cost of the scheme: Rs. 0.44 Lacs.

Saving: Steam equivalent to NG saving of Rs. 37.03 Lacs/Yr.



Scheme-VII

Power saving by stopping transfer pumps and using circulation pumps for the dual purpose, in different columns of Lactam P&B, Capro- 2 plant.

In Original system two pumps were operating – one for withdrawal and another for circulation. Change in system and in operation practice carried out to run only circulation pump for both the purpose and to stop withdrawal pump. Such changes in three columns resulted in to power saving of 0.29 Lacs units/year.

Cost of the scheme: Rs. 0.71 Lacs.

Saving: Power equivalent to Rs. 0.80 Lacs/Yr.

(a)



(b)



(c)



Scheme-VIII

Replacement of Cooling water pumps in Sulphuric acid – III plant.

Replacement of existing old and inefficient pumps with higher efficiency pumps carried out. Such modification resulted in to power saving of 1.00 Lacs units/year.

Cost of the scheme: Rs. 15.89 Lacs.

Saving: Power equivalent to Rs. 2.78 Lacs/Yr.

