

THE SIRPUR PAPER MILLS LTD., SIRPUR KAGHAZNAGAR

Unit Profile

The Sirpur Paper Mills Limited (SPM) an integrated pulp and paper mill is one of the earliest mill in the country situated at Sirpur-Kaghaznagar in the district of Adilabad, Andhra Pradesh, commenced production in the year 1942.

The mill increased its production capacity in stages and reached the current capacity of 225 tpd from installed capacity of 14 tpd. The mill produces different varieties of paper like writing & printing, packing, paperboard, air mail, cheque paper and uses bamboo, eucalyptus, mixed hardwood, subabul etc as main raw material.

During the year 2003 –04 highest production achieved is 79170 tonnes. Capacity utilization is 94.76 % , By the help of R & D work we have developed many new products and released them into market. We have also improved the quality of pulp produced by in house R & D work with some upgrading technology. We have installed New Bleach plant for better quality improvement of pulp. In 2002-2003 one of the successful recent developments comprised of manufacturing of base paper for coated paper, well accepted among consumers and constituting of 35 % of New paper machine production in overall production.

In 2003 – 2004 we have developed new products such as plain paper ledger, coloured paper (cream wove) unbleached triplex board and base paper.

To meet the global competition we are modernizing the mill by acquiring new bleach plant, Paper machine no. 7 and New BHEL steam turbo generator. In the process of further modernization and reducing the specific energy consumption. We are acquiring 120 TPD of lime sludge reburning kiln and producer gas plant to reduce the energy consumption instead of furnace oil for burning the lime stone. We are also procuring 330 TPD and 120 m³ Digesters (indirect heating) to meet the increased production capacity of 350 TPD with new paper machine no. 8. We are also procuring 4 F evaporators to evaporate the water from black liquor 6.7 tonnes per tonne of steam so that we can save the steam and reduce the specific steam consumption by stopping old evaporators.

ENERGY CONSUMPTION

Day by day purchased energy cost is increasing drastically and now it has touched Rs. 4.80 per kWh therefore we are continuously increasing captive power generation. In 2001-2002 we have installed one 9.5 MW back pressure double extraction BHEL turbine to increase the captive power generation capacity. We have produced 1320 lakhs of kWh in 2002 – 2003 energy cost of self generation is Rs. 1.26 per kWh. 2003 2004 our power demand was on higher side due to increased production of 2250 TPD and our self generation increased to 1364 lakhs of kWh. We have reduced cost of power to Rs. 1.23 per kWh by using lower grade fuels in FBC Boiler efficiently burning. The specific energy consumption per ton of paper is 1834 kWh in 2001 – 2002. In 2003-2004 it come down to 1763 kWh per ton of paper at the same time we have reduced the specific thermal energy from 6.85 mcal per ton of paper to 6.2 mcal per ton of paper during 2001-2004.

ENERGY CONSUMPTION COMMITMENT, POLICY AND SETUP:-

During the implementation of energy conservation policy the following measures have been taken during 2003-2004

1. Replacement of old and obsolete MCCs and PCCs, inefficient motors and damaged cables in the mill.
2. Installation of capacitors for power factor improvement.
3. Installation of 9.5 MW double extraction turbine for efficient and economic co – generation.
4. Installation of cooling towers in place of open type spray pond there by reducing fresh water losses.
5. Installation of energy efficient luminaries for plant lighting and digital energy meters for improved accuracy.

ENERGY CONSERVATION ACHIEVEMENTS:-

The energy savings has been achieved by putting the major energy efficiency projects from 2001-2004 such as

1. Enmas Chemical recovery boiler capacity 160 TDS with this we have saved coal of 29866 tons per annum.
2. By installing New paper machine no. 7 of 68 TPD capacity steam consumption has come down from 5 ton per ton of paper to 3.5 tons per ton of paper. With this coal savings are 7933 tons per annum.

3. By reconditioning of both 7.5 MW turbine rotors specific consumption of steam per unit KWH power generated has been reduced and annual savings of coal is 1866 tons.
4. By installing new BHEL 9.5 MW steam turbo generator we have saved coal of 1120 tons per year because of higher efficiency and reduction of heat losses by using pressure-reducing valves.
5. By arresting of steam leakages, improvement of condensate recovery, proper coal sizing, improvement of evaporation ratio from 4.2 to 4.3 renewing of damaged thermal insulation to steam lines and header, digesters etc energy savings achieved in terms of coal is 8496 tons during the year 2003-2004.

ENERGY CONSERVATION PLANS AND TARGETS:

Specific energy consumption presently it is 6.2 to 6.8 mkcal per ton of paper. To achieve the national and international norms of 3.5 to 5.0 mkcal per ton of paper we continuously upgrading the equipments and reducing the process heat losses. We are reducing power consumption per ton of paper from 1834 KWH to 1763 KWH during 2002-2004 to achieve international norms of 1150 – 1200 kWH per ton of paper we are reducing the line power losses of paper as well as installing capacitors and energy efficiency motors and variable frequency drives etc our ultimate goal is best capacity utilization with min. specific energy consumption.