

Amaravathi Sri Venkatesa Paper mills Ltd

UNIT PROFILE

Amaravathi Sri Venkatesa Paper Mills Ltd is a medium sized, 100% waste paper recycled paper manufacturing unit. The unit is located in the eastern banks of Amaravathi river at Palani Road, Swaminathapuram, Dindigul district, Tamil Nadu. The plant was commissioned on 1964 with initial plant capacity of 10 tpd.

The unit has grown gradually and now it has installed capacity of 24000MT/Annum. It is manufacturing the following varieties of papers.

- 1) Newsprint Paper.
- 2) Cultural varieties like manifold, white and color varieties.

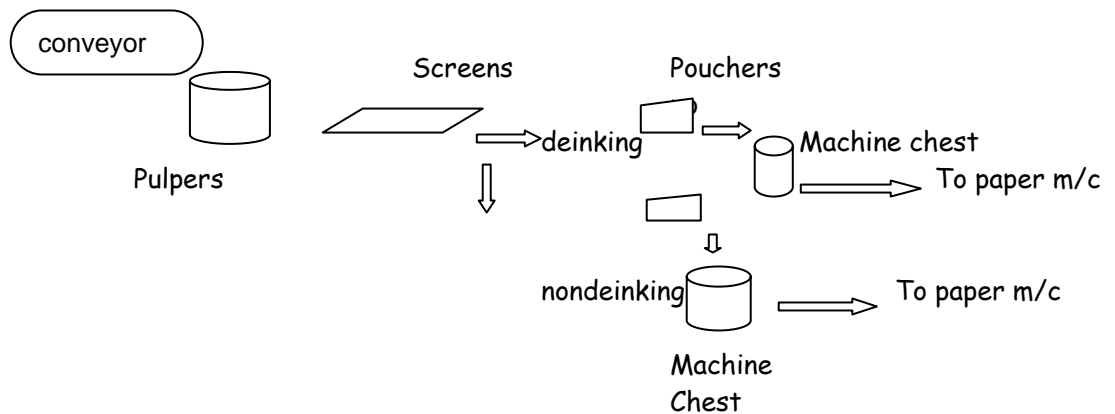
The paper is manufactured by Deinking and Non Deinking process according to the variety of wastepaper. The fresh water consumption for the unit is 3500cu.m/day and the backwater is reused wherever necessary.

The plant is utilizing a maximum demand of 3440 KVA from State Electricity Board Grid. The unit don't have the co-generation plant for power generation at present. This Unit has one no of 250kw wind mill and supplying power to grid. The generated steam from the boiler is completely utilized for the process and the boiler has the capacity of 13.5TPH.

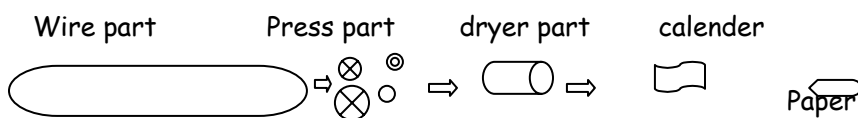
The plant has a full fledged effluent treatment plant and the treated effluent is discharged into the own land for irrigation to raise agricultural crops.

Process flow sheet

Waste paper



Paper machine



Energy Consumption

Description	Unit	2001-02	2002-03	2003-04
Annual production	MT	23651	21123	22037
Total electrical energy Consumption/annum	KWh	204.95	174.55	157.03
Specific energy Consumption/annum	KWh	866	823	715
Total Thermal (fuel) Consumption/annum	MKcal	684.24	562.56	570.80
Specific energy Consumption-Thermal	Mkcal	0.0289	0.0266	0.0261

Year	Electricity		Thermal(Fuel)	
	Consumption (KWh)	%reduction over2001-02	Consumption (Mkcal)	%reduction over 2001-02
2001-02	866	-----	0.0289	-----
2002-03	823	4.96	0.0266	7.96
2003-04	715	17.4	0.0261	9.68

Energy Conservation policy and setup

 III)ENERGY CONSERVATION COMMITMENT, POLICY AND SETUP

Commitment

The unit is committed to conserve the electrical and thermal energy so as to reduce the manufacturing cost and to compete and survive in the paper manufacturing field.

Policy

Even though there is no specific energy conservation policy has set up in this unit.it has always realized the importance of energy conservation.The Management has given so liberty in identifying and implementing the specific energy conservation programme.

SetUp

The plant has individual department like electrical, mechanical ,utility and instrumentation to maintain and support the paper manufacturing process.

Each department is maintained and controlled by the Head of the department.They are reporting to the Deputy General Manager(Technical).

The Deputy General Manager is well educated and so much experience in the paper manufacturing field.He is guiding each department in obtaining the energy conservation. Every one has the right to identify the specific energy conservation areas and ideas are rewarded suitably.

Energy Conservation projects 2003-04

1) Flow box pressurization in no:1 machine

Power consumption before pressurization /ton of paper = 820 kwh

Power consumption after pressurization / ton of paper = 775 kwh

Savings in energy(electrical)/annum = 4,50,000 kwh.

Savings /Annum = 18.9 lakhs.

2) Increase in production in paper m/c no:3

I)Background of the project

To increase the production and efficiency of the m/c in order to Achieve power savings.

ii)Observation made

The dewatering effect was very low in paper machine press side.

iii)Technical & financial analysis made

It was decided to change the II nd press roll of higher diameter to Increase the nib width and increase the machine speed. Suitable modifications Were done in the pulp mill plant to cater the need of the paper machine.

The cost of the project was worked out as 6 lakhs.

iv) Impact of implementation

The dewatering effect was improved considerably and the machine speed Was increased by 10%.

Power consumption after modification = 650kwh/ton of paper.

Power savings in lakhs = 6 lakhs/annum.

3) Material handling System for no:1 machine pulper

Before commissioning of conveyer in pulper

Power consumption in pulper /ton of paper = 55 kwh

After commissioning of conveyer in pulper

Power consumption in pulper/ton of paper = 39 kwh

Savings in Energy(electrical) = 153600 kwh

Savings /Annum = 6,60,080 lakhs/Annum.

4) Replacement of new 'Kakati' vaccum pump in no:1 machine

Power consumption with old vaccum pump/ton of paper = 56 kwh

With new 'kakati' vaccum pump power/ton of paper = 26.7 kwh

Savings in energy(electrical) /annum = 2,81,280 kwh.

Savings /Annum = 12.09 lakhs.

5) Thermal Energy Conservation

Flash Steam Recovery System in no:1 machine

Thermal energy consumption before recovery/ton of paper = 0.0263mkcal

Thermal energy consumption after recovery/ton of paper = 0.0250mcal

Savings in energy(thermal)/annum = 0.0013 mkcal.

Savings / Annum = 5 lakhs.

Other projects implemented during 2003 - 04.

- Installation of automatic level control valve in water storage tank thereby unnecessary overflow and reduction in pumping time.
- * stoppage of idle running of pulper and pouchers
- Arresting unnecessary air leakages in air lines.
- Arresting steam leakages.
- Change of pulper impeller for quick pulping.
- Installation of motor for exact requirement and removal Of higher size

V)ENERGY CONSERVATION PLANS AND TARGETS

Targets

This unit has high target of reducing the electrical energy consumption from 823kwh/tonne (02-03)to 600kwh/tonne at the end of next three financial years. This unit has also target of reducing of thermal power consumption from 0.0261mkcal/tonne to 0.0245 mkcal/tonne of product.

Plans

- 1)Excess power consumption in certain specific areas can be identified and rectified.
- 2)The existing process can be modified with latest technology to cope with the present scenerio.
- 3)The condensate recovery system can be improved and insulation of steam and condensate will be done to conserve the thermal energy.

VI)ENVIRONMENT AND SAFETY

This unit is eco friendly and 100% waste paper recycled paper manufacturing unit. There is no hazardous or toxic chemicals are used in the paper making process. More over in boiler thefuels used are agro waste fuels like groundnutshell,paddy husk and Deoiled bran(DOB).This won't generate toxic gases in the flue gas. The effluent generated from the plant is treated in full fledged effluent treatment plant.The effluent after treatment is satisfying the norms prescribed by the Tamilnadu pollution control board.

As safety point of view , the workers handling the chemicals are made to wear safety apparatus like hand gloves,leather apparatus and goggles wherever necessary.All safe guards like fire fighting equipments are Provided in all areas.

- 21) There is no dispute pertaining to the statutory requirements of safety and pollution control is pending in government. We have valid pollution control board clearance certificate for the current year.