

Environmental Friendly Techniques in Recycle Paper Sector of Gujarat

INTRODUCTION

Vapi is one of the biggest industrial estate of Gujarat. In and around VAPI there are about 40 Small and Medium scale PAPER & PAPER BOARD Manufacturers making KRAFT PAPER, DUPLEX BOARD, NEWSPRINT & WRITING PRINTING materials All these Companies are based on 100% waste paper recycling process i.e they do not use any wood, bamboo or any other conventional raw-material for the making the paper. Hence, such industries are called as Eco-friendly Industries wherein they are helping to save the Environment by not using the virgin pulp which is generated by the processing of wood. Here, the raw material is the waste paper collected from different sources such as Offices, Household and from the Paper & Board Converting Plants such as Printers, etc from India as well as foreign countries.

Plastic Waste

The waste paper of different type as mentioned above is subjected for disintegration into the pulping unit which is called as the pulper along with the water. During disintegration which is a continuous process poly coating is separated from pulp and is removed as waste plastic. Till September 2012, the plastic waste generated during the manufacturing was sent to TSDF site of VWEMCL for land filling.



GPCB Initiatives For Plastic Waste Through Co-processing

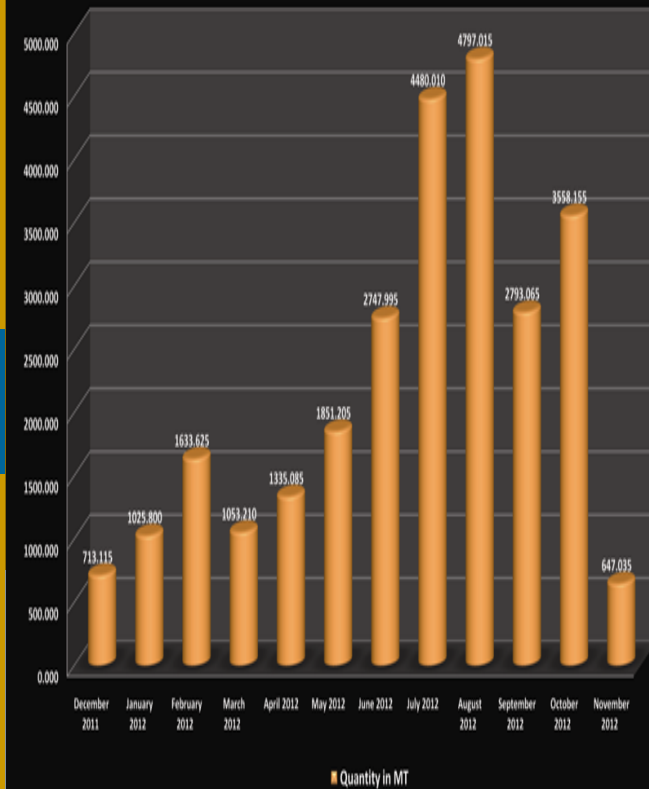
Co-processing of plastic waste has also been explored in the following cement plants in Gujarat and Outstate.

- (1) Ultratech Cement Ltd., Jafarabad unit (Gujarat).
- (2) Ultratech Cement Ltd., Kovaya unit (Gujarat).
- (3) Sidhee Cement Ltd., Sidheegram (Gujarat)
- (4) Lafarge Cements Ltd., Sonadhi Plant, Chattisgarh.
- (5) Lafarge Cements Ltd., Arasmeta Plant, Chattisgarh.
- (6) Vikram Cement Works (Ultratech Cement Ltd), Madhya Pradesh.
- (7) Aditya Cement Works, Unit-1 (Ultratech Cement Ltd), Rajasthan.

Benefits of Co-processing

Through Co-processing of Plastic Waste to Cement Industries, environmental pollution load in all recycle paper industries in Vapi has tremendously reduced. Cement Industry use Plastic Waste as a fuel in the modified cement kilns under norms of Gujarat Pollution Control Board..

Plastic Waste Dispatch to Ambuja Cement Ltd - Kodinar Works



GUJARAT CLEANER PRODUCTION CENTRE

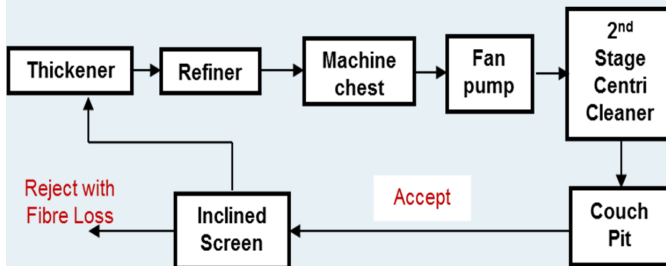


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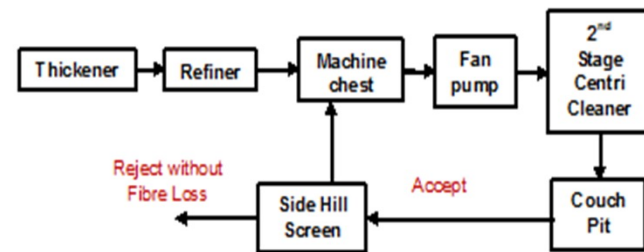
Case Studies of Pulp & Paper Sector

Recovery of fibre from Couch Pit & 2nd Stage Centricleaner

Before CP



After CP



Cost Benefit Analysis :

Total Capital

Investment : Rs. 1,17,000

Total Saving : Rs. 14,17,000

Pay back : 1 month

Energy Saving Through Insulation To The Both Ends of Cylindrical Dryers

Before CP



After CP



Cost Benefit Analysis:

Capital Investment : Rs. 5,00,000

Operating Cost : Nil

Total Savings : Rs. 28,78,000

Simple Payback : 2 months

Broke & Trimming Reprocessing Optimisation

Problem:

- Broke & trimmings 5% (3 Ton/Day) generated
- Collected and directly fed to the Hydro Pulper
- Resulting reprocessing entire process steps



Pilot measure:

- Broke & trimming are now directly fed to the Machine Chest through fan pump
- Avoiding reprocessing of material through 8 to 9 process steps

Cost Benefit Analysis:

Capital Investment : Rs. 10,000

Operating Cost : Nil

Total Savings : Rs. 3,60,000

Simple Payback : 10 days