



ALTA PROCESS SOLUTIONS

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INDUSTRIAL PROJECTS

Project No.: 14

Industry: Pulp & Paper

Project Subject:

Energy Saving Analysis using Pinch Technology in Pulp & Paper Production

Challenge:

In this project, a Pulp & Paper production plant was studied and by using the most modern Pinch Technology a 13,000,000 \$/yr energy saving in company was realized.

Proposed Solution:

1. Maximize natural light utilization in order to reduce energy intensity consumption for electric power generation in saloons (needed investment: \$140,780).
2. Optimization of plant's air conditioning (needed investment: \$1,835,000).
3. Install a bubbling fluid bed boiler (BFB) to burn plant's produced sludge and crust (needed investment: \$700,000).
4. Install a thermo-compressor to recover unused steams of unit (needed investment: \$81,000).
5. Install a thermo-compressor to recover exiting dead steams of unit (needed investment: \$81,000).
6. Install Gravity Strainer filter to treat paper machines' wastewater and fiber extraction (needed investment: \$67,865).
7. Install six new high-efficiency motors for water wells (needed investment: \$40,000).
8. Install two VFD controllers instead of current DS controllers of Mill Water motors (needed investment: \$30,000).

Results:

			
Energy Saving (%)	OPEX Saving (\$/yr)	Investment (\$)	Payback Period (month)
19	14,562,593	36,963,645	30