



ANHUI TIANDU PAPER COMPANY LIMITED

Increase Cooking Capacity and Efficiency by Improving Straw Feed

SUMMARY OF THE OPTION

Anhui Tiandu Paper Co. Ltd. is a medium size paper company in the Anhui Province, China and currently produces up to 50,000 tons of industrial paper per year for the domestic market, but expanding production capacity to 200,000 tons/year.

The following observations were made during the energy assessment of the pulp production department:

- Paper products are mainly made of straw. The straw purchased as raw material is of poor quality, with a high ratio of impurity and moisture, and the decay and deterioration are apparent.
- Few straw chips for feed preparation are acceptable. But the number of long straw chips (> 30 mm long) compared to short blades is too high. This results in uneven steam cooking, a high content of dregs in the pulp, and increase of energy demand due to the defibrination process.

The following options were implemented increase the capacity of the straw digester and the cooking capacity:

- Improve the quality of straw. Supply Department 1 is responsible for quality check, and Supply department 2 is responsible for the quality control of the straw purchased.
- Planting 8000 mu (about 533 hectares) of Pennisetum grass to supply enough high quality straw.
- Improve the rate of suitable straw chips (there shall be more than 85% straw chips with the size between 20~30mm)
- Changing the flying knives every worker batch and changing ledger knives twice or three times every week. More uniform movements of the feeding conveyer resulting in more uniform thick chips.

The increased cooking capacity method can save steam and coal, reduce chemical consumption and organic content in the wastewater, but benefits were not quantified.

KEY WORDS

Pulp and Paper, China, Cooking Process

FOR MORE INFORMATION

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