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OCC Pulp Quality Improvement Realized at Simpson Tacoma Kraft Company

Simpson Tacoma Kraft Company, an integrated producer of bleached and unbleached linerboard, has been operating an OCC repulping system since 1995. The system is common to many others, both in the United States and worldwide. They had three screening optimization objectives:

- Increase their OCC system capacity without a large capital investment,
- Supplement the kraft pulp to the Paper Machines without sacrificing strength properties or cleanliness, and
- Adjust to market conditions more effectively.



Aerial view of Simpson Tacoma Kraft Mill

The objectives were met and significant operating advantages were achieved at Simpson Tacoma by running full speed screen rotors (25 m/s) with high strength wire type screen cylinders.

Compared to operation of the screens at rotor speeds of 18 m/s, Simpson Tacoma found an increase in screen capacity and lower fiber loss. The throughput of the OCC system has increased by over 20% since the speed up of the screen rotors, and the amount of fiber rejected by the tertiary stage screen has decreased by over 50%.

In addition, the strength properties of the OCC increased dramatically. On average, the Canadian Standard Freeness (CSF) of the screened OCC going to the paper machines increased by 50 ml. Having a higher freeness enabled the paper machine to run faster due to better drainage while also improving the strength characteristics of the sheet. The higher strength OCC has permitted a reduction in the concentration of virgin softwood kraft pulp required in the linerboard, enabling the use of the virgin kraft pulp elsewhere in the mill.

The increased rotor speed and use of high strength wire type screen cylinders gave Simpson Tacoma the flexibility to meet the needs of the market more effectively.

To request a full copy of the paper presented at a TAPPI conference held August 2005, feel free to give us a call!

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