

INPACEL LOOKS TO EXPAND AS OWNERSHIP SHIFTS

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COATED PAPER MILL MAY ADD ROTOGRAVURE TO ITS PRODUCT GRADES

WHEN IT STARTED UP IN 1992, BRAZIL'S INPACEL mill was the most modern mill of its kind in South America. It had a design capacity of 140,000 tons/year of printing, writing, and coated papers. Until recently, it was owned by the Bamerindus Group, the third largest private bank in Brazil. Bamerindus had acquired the GWD sulfite pulp and paper mill the predecessor to the modern Inpacel mill in 1983. The older mill, referred to as the "mother" mill, still produces pulp and paper a short distance from Inpacel.

The ups and downs of the Brazilian economy delayed the completion and startup of the newer mill, noted Fabio Prudente, Inpacel's industrial director. The financial misfortunes of the Bamerindus Group

which was under government intervention this summer have resulted in the mill being put up for auction.

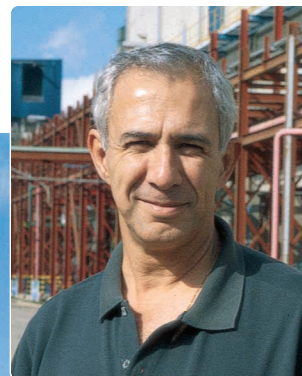
Before the intervention, Bamerindus had considered adding a second paper machine and possibly investing in a kraft mill for the site. Prudente expects the new owners will make some capital improvements, perhaps adding a second paper machine. The mill was built with space and support systems for a second machine of the same size, so there is a built-in redundancy to many of the processes, but Prudente would like to see a larger machine installed.

Who buys the mill will, of course, influence the mill's future production. A new owner may be announced by the end of the year, but Inpacel has been reluctant to say much about potential buyers.

In spite of the economic hurdles, Inpacel has continued making quality coated paper in grades of 51-70



The Inpacel coated paper mill in Arapoti, Brazil



Fabio Prudente

g/m². About half of the production is sold within Brazil. The mill exports most of the remainder by truck and from the port at Paranaguá to its neighbors in South

America, to Europe, and to North America.

A separate unit of the company maintains 50,000 hectares of forest and plantations.

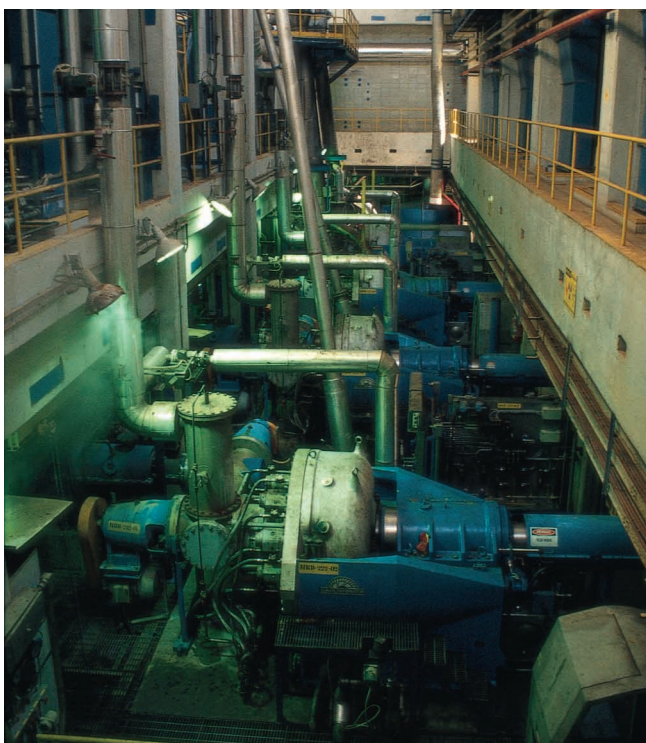
The mill is located in Arapoti, about 260 miles southwest of São Paulo, in the dairy region of Paraná State. Inpacel built 400 houses in the town for its employees and has provided a school, health service, shopping, and cultural centers for the community. (Just down the road from Inpacel, Brazil's largest forest products manufacturer, Klabin, operates one of the largest integrated mills in South America at Monte Alegre. That mill's annual capacity will hit 610,000 metric tons of paper following a recent expansion.)



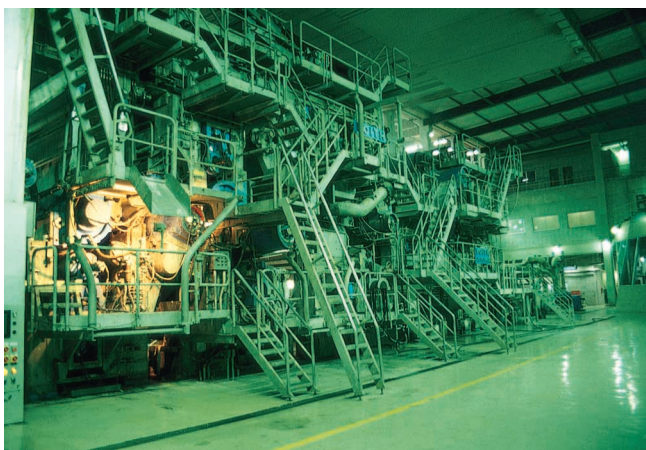
The drum debarker and chip storage



Baled pulp



Sunds refiners



The Voith Duoformer paper machine

Inpacel' mill has two chippers. Either can handle logs for thermomechanical pulping or to fuel the boiler. Inpacel normally keeps about a five-day supply of pine chips on hand for the TMP process, four-days worth of eucalypt chips for the boilers, and at least a month's worth of kraft pulp purchased from Canada and Chile. Inpacel can produce more steam in each of its boilers than it uses (about 100 tons/h vs. 60 tons/h), but it's low-pressure steam unsuited to driving turbines so the mill purchases electrical power. The mill runs one boiler for about 60 days, then switches to the other for the next 60 days.

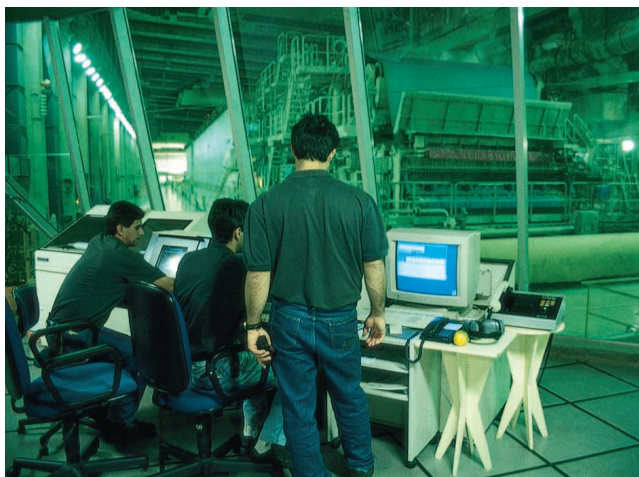
Currently, Inpacel buys bleached kraft pulp from Canada and Chile. It produces enough TMP to supply its own needs and could produce more, with a capacity of 10 tons/h on each of two lines.

The pulp is bleached using hydrogen peroxide in a two-stage MC-HC process. The plant includes two twin-wire dewatering presses for washing. Sunds Defibrator supplied the HC tower and Rotomixer.

The 420-tons/day TMP plant was delivered and installed by Sunds Defibrator. It has two refiner lines, each equipped with two RGP 76 CD refiners in a two-stage process. The screen room is equipped with two D12 Delta-screens and three M800 pressure screens.

After bleaching, the pulp is further refined at low consistency in two Conflo CF-82 refiners.

The mill's paper machine trims at 5.4 m and generally runs at about 1200 m/min. The twin-wire paper machine and speed sizer (currently deactivated) were supplied by Voith, as were the off-machine coater, the winder, and the sheeters. The coater is designed to run at 1400 m/min and is equipped with Thermo Electron dryers. In the finishing area, Kleinwefers supplied the two 5.4-m wide supercalenders designed to run at 800 m/min each. The mill's automatic wrapping system was built by Wrapmatic. A Yokogawa DCS and ABB-Accuray controls are used to monitor and control operations.



The process control room



Roll wrapping



The warehouse and shipping area for finished paper

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Inpacel has been conducting tests to produce rotogravure paper. The current market for rotogravure paper in Brazil is about 20,000 tons, which is being supplied from Finland, Prudente said. A modification of its calenders and winders might allow the mill to produce such paper. The addition of two nips and two calender rolls on the existing supercalender, plus some adjustment of the coating formula, is about all that's needed, Prudente figures.

Inpacel's "zero-effluent" treatment process for the TMP plant, developed by MoDo Chemicals AB-Sweden, was modeled after that of Millar Western's Whitecourt and Meadow Lake mills in Canada, Prudente said. The TMP liquor is concentrated and burned; none of it is discharged to the river, he said. Other mill effluent goes through an aerobic treatment process. **TJ**