INDUSTRY NEWS

LATIN AMERICA

MILLS AND CONVERTERS

ARGENTINA

Celulosa has suspended operations at its Puerto Piray plant because of an excessive buildup in stocks due to poor sales. The company did not indicate when production will be restarted.

MEXICO

Productora de Papel S.A. de C.V. selected Valmet to rebuild PM No. 3 at Monterrey. After the rebuild, Productora will be able to produce higher-quality grades such as coated multi-ply boxboard.

BRAZIL, CHILE

NEWS FROM CELSO FOELKEL

CLOSING THE WATER CYCLE

The pulp and paper industry is well known for the huge water volumes it requires in the manufacturing process. Environmental restrictions and the cost to treat effluents are changing this concept, and engineers are searching for ways to close the water cycle. This move is being noticed in leading pulp and paper countries worldwide. Brazil and Chile have world-class pulp and paper mills. They are using the latest technologies for these manufacturing processes. Some mills now have very low total water requirements (about 30 m^3/a.d. metric ton).

In Brazil, the next step in environmental legislation is the implementation of the "polluter user" and "payer user" concepts. This means that those mills using water from a stream must pay taxes according to the volume used. The next step is to pay for the COD load discharged into the recipient body. This is a new way to enforce environmental restrictions; it gives the economic factor important weight. The pulp and paper industry is facing the challenge to substantially reduce water consumption. To achieve this, changes in technology are required.

The Brazilian Technical Association of Pulp and Paper (ABTCP) and the Technical Association of Pulp and

INDUSTRY NEWS

LATIN AMERICA CONTINUED

Paper-Chile (ATCP-Chile) are very aware of this technological trend. To provide knowledge and incentive to talks on the subject, both associations held seminars on the concept of "closing the water." In Brazil, the seminar was held in September 1997 in Vitória, close to the Aracruz and Bahia Sul mills. In Chile, the seminar was held in Concepción, the heart of the Chilean pulp and paper industry, in October 1997. ABTCP reported over 100 seminar attendants; ATCP-Chile reported 55 in Chile.

The primary success of both events was the great flow of information from technology and equipment suppliers, pulp and paper mill personnel, and professors from distinguished universities (University of Viçosa and University of Sao Paulo, in Brazil).

From the supplier side, with the mission to show their new technological trends, experts from Union Camp (Doug Lazar), Beloit (Lew Shackford), and White Martins made presentations in the Brazilian seminar. At the same seminar, Riocell (Nei Lima), a Brazilian pulp and paper mill, discussed the technical and economic feasibility of partially closing the cycle using end-of-pipe technologies, by treating the effluents to a unique quality and recycling them to the system.

The universities also made important contributions. From the University of Viçosa-UFV, an interesting paper discussing new trends in bleaching was presented by Prof. Jorge Colodette and graduate student Marcelo Silva. The opening talk was also given by a professor from Viçosa, Hans Worster. He outlined the problem of closing water cycles in the industry, discussing the background of the trend and the technical and economic implications and associated risks. Professor Marcelo Nolasco (University of Sao Paulo) presented new findings in activated sludge wastewater treatment. The idea here is to reduce the amount of solid sludge generated by "explosion" of the microorganism cells. As a consequence, the sludge turns to a liquid residual material, which is easily handled.

The Brazilian seminar was closed by a talk given by Richard Albert, a renowned expert on this subject. He predicted that by the year 2020, bleaching plants will have no effluents. At the same time, the restrictions to discarding solid residues and air emissions will also be very demanding. Albert predicts that some companies will pay a high price to meet these new standards. Those who are too slow in meeting the challenge may lose market share or may be closed.

In Chile, the speakers were mainly from the supplier side: Kvaerner, Akzo Nobel, Sunds, AGA, and Beloit. The impact of the EPA Cluster Rules was presented by Debra Breed. She discussed the new technologies necessary to meet the latest requirements. Kvaerner and Sunds concentrated their talks on showing good examples of highly closed fiberlines already implemented worldwide, with effective reductions in water consumption. Akzo Nobel presented results about ECF bleaching and partial closure of the systems. The chairman of the Chilean seminar was Miguel Osses, an active member of ATCP-Chile. Those wishing more information about both events may contact ABTCP-Brazil (Norma Perez, fax +55 11 5716485) or ATCP-Chile (Marcela López or Ania Cerda, fax +56 41 331426).

BRAZIL'S 1997 INDUSTRY FIGURES

Despite the price crisis in force worldwide, the Brazilian pulp and paper industry continues to show considerable improvement. The growth is anticipated to continue through 1998. At the same time, trade is increasing—both domestically and overseas.

The Brazilian pulp and paper industry comprises 220 companies and 255 mills. Although mills are found throughout the country, the leading production states are São Paulo Parana Espírito Santo, Minas Gerais, Rio Grande do Sul, Santa Catarina, Bahia, and Pernambuco.

The pulp industry only uses wood from its plantation forests. The industry maintains 1.4 million hectares of forests for its own use, mainly eucalyptus (61%) and pines (36%). Brazil ranks seventh in pulp production and twelfth in papermaking. The country is highly modernized in its leading companies (Klabin, Aracruz, Suzano, Cenibra, Votorantin, Champion, Riocell, Bahia Sul, Ripasa, Rigesa, Igaras, Impacel, Jari, and Trombini). Continuous investments are being made to upgrade existing mills, and greenfield mills are being announced (Stora/Veracruz, Celmar, and Champion). To guarantee the performance of processes, products, and environmental equipment, several companies have been certified to ISO 9000 and ISO 14000 standards.

In developing countries such as Brazil, the pulp and paper industry plays an important social role. In 1997, the total taxes paid by the industry to the government reached US$ 700 million. The industry generated 67,000 direct jobs in mill sites and 38,000 jobs in the forests. Indirect jobs account for much more employment, but this employment is difficult to estimate. It involves farmers, recovered paper collectors, drivers, and subcontractors.

Since 1986, the average growth rate was 2.7% and 4.8% in paper production and pulp manufacturing, respectively. Capacity utilization has been 85% for paper and 92% for pulp manufacture.

Brazilian total paper production was 6.5 million tons in 1997; of this, 1.33 million tons were exported. The most-manufactured paper grades were packaging papers (2.85 million tons), printing and writing papers (2.0 million tons), tissue papers (565,000 tons), cartonboard (640,000 tons), newsprint (265,000 tons), and specialty papers (160,000 tons).

Brazilian pulp production reached 6.34 million tons. From this total, 2.39 million tons were exported. The dominant production was eucalyptus bleached kraft pulp (4.35 million tons). Unbleached softwood pulps for pack

INDUSTRY NEWS

LATIN AMERICA CONTINUED

aging papers ranked second (1.17 million tons). High-yield pulp (mechanical, thermomechanical, and CTMP) reached 450,000 tons. Total sales for the pulp and paper industry were US$ 7 billion, about 1% of Brazil's gross domestic product.

From the total production, the domestic market consumed 80% of the manufactured paper and 63% of the pulp. The per-capita consumption is still low (38 kg/person/year). However, because of its huge population (160 million), Brazil is seen as one of the most attractive markets in the coming years.

Pulp and paper imports are growing because of the open economy to global markets. In 1997, pulp imports were 270,000 tons (90% long fibers), and paper imports reached 978,000 tons (50% newsprint). The country typically imports about US$ 1 billion annually in paper and pulp products.

In 1997, the paper industry recycled 2.16 million tons of paper, a figure similar to the amount of pulp that is exported. This is an indication that paper recycling enables the country to have a fiber surplus, which it can export.

Recent recycling rates (considering paper production plus imports and less exports) reached 36%. Although it will be difficult, there is room for growth in the recycling rate, because 75% of the country's population lives in medium to large cities. Paper recycling and forestry are very important activities, generating jobs for a growing population. Every year, the country's population increases by 2.5 million. The pulp and paper industry (from forestry to the recycling) has an important role in generating jobs, taxes, and economic growth.

—Foelkel is director of technology at Riocell S.A. in Guaíba, Brazil.

ASIA PACIFIC

MILLS AND CONVERTERS

INDONESIA

APRIL Group announced that its subsidiary, APRIL Fine Paper Holdings Pte. Ltd., started up its first paper machine in Sumatra. With a design production capacity of 350,000 metric tons/year, April's Riau mill will produce a new generation of office papers.

AUSTRALIA

NEWS FROM HUNTLY HIGGINS

STRAW PULP MILL PROPOSED

Arisa Ltd., a company based in Adelaide, is planning to build a straw pulp mill near Horsham, Victoria, according to a report in the *Melbourne Age.* Estimated to cost A$ 85 (US$ 53) million, the mill will use wheat straw grown in the Wimmera district and will produce 35,000 tons/year of market pulp to supply Australian papermakers. Horsham