

BOYER MODERNIZATIONS IMPROVE PRODUCTION AND TRANSPORT SYSTEMS

DONALD G. MEADOWS

WRAPPED WITHIN COCOONS of heavy plastic, train- and truckloads of paper heading north through the heart of Tasmania are easily identified as coming from the mill at Boyer. Similarly wrapped loads of wetlap pulp head south to the mill down the same route, passing sheep farms and villages, eucalypt forests, and craggy mountains along the way.

The wetlap pulp comes from Albury, Boyer's sister mill on the mainland of Australia. Sometimes a hot, dry wind follows the load down across the Bass Strait, fanning occasional brush fires that remain a persistent threat in Tasmania. The two mills work in tandem. Pulp produced at Albury helps feed the paper machines at Boyer.

Both mills—Boyer in south central Tasmania and Albury, at the border of Victoria and New South Wales in Australia—are owned by Australian Newsprint Mills, founded in 1938 and presently co-owned by Fletcher Challenge and News Corporation Ltd. (For more on Albury, see next month's *TAPPI JOURNAL*.) The company is Australia's only newsprint producer, claiming about 70% of the country's market for newsprint and related grades.

The Boyer mill is "a bit off the beaten path," admits Ernie Hacker, the mill's operations manager. In fact, it takes a "major detour" to get there for people visiting Australia. Visitors do occasionally stop by, mostly from other Fletcher Challenge mills or neighboring countries. The relative isolation can have some positive results, however.

"Down here we have a little bit different situation where sometimes we have to improvise and make adjustments," Hacker continued.

AUSTRALIAN NEWSPRINT MILLS' SITE RECOGNIZED AS A LEADER AMONG TASMANIAN INDUSTRIES

Information-gathering trips will just as likely include stops in North America, Europe, and Asia because "once you leave, you may as well keep going." Consequently, the range of information gathered is that much greater. That can also lessen the potential for technological in-breeding that can result when mill visits are limited to one country or region.

"As far as this mill's concerned, it's an old mill, but you'll find we have very modern technology and the place operates at good efficiencies because of that," Hacker said.

TRANSPORT

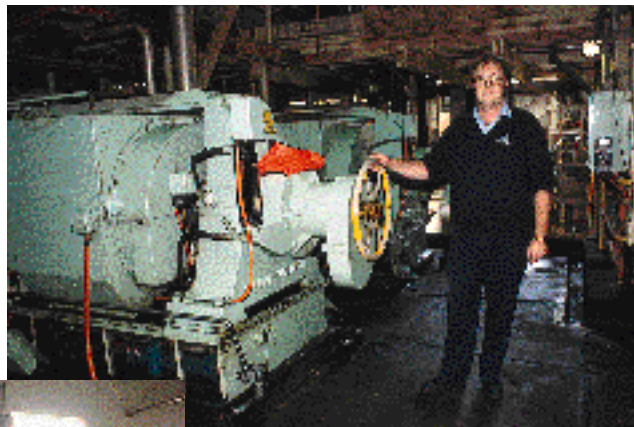
During the past year, ANM has devoted a lot of attention to materials transport. A new rail and sea link through Burnie for paper produced at the mill started up in Janu-



ANM's Boyer mill in Tasmania

(right) *Ernie Hacker, mill's operations manager*

(below) *The mill's control room*



(left) *Unloading wetlap pulp*



ary. Deliveries have increased to six days a week instead of one or two. Customers can expect to receive their orders within three or four days generally, down from six to 14 days previously.

An innovative feature of the new system is the use of unitized paper modules (UPMs). The system allows paper rolls to be stacked on a flat base. The entire unit is then wrapped in plastic to hold the rolls in place and protect them from moisture. Corner struts allow other UPMs to be stacked on top. Each UPM carries about 15 tons of newsprint when loaded. The Albury mill uses the same system to ship wetlap pulp to Boyer.

The Boyer mill produces standard newsprint in 40-, 45-, and 48.8-g weights, plus a high-brightness (74 ISO), 52-g grade called "Image," and telephone directory paper. Furnish used is a combination of thermomechanical pulp (TMP) from *radiata* pine, kraft pulp, cold caustic soda (CCS) pulp from eucalypts, and recycled fiber. The mill does not use old growth wood, Hacker emphasized, only regrowth and plantation trees.

Trials are being conducted to possibly convert the mill's PM 2 to produce coated papers. Australia imports all the lightweight coated and supercalendered grade papers used there, Hacker said. He estimates the current potential market for LWC/SC papers in Australia to be 140,000 tons/year.

PM 2 is a Dominion machine built in 1952. It's been upgraded as a gap former with a Valmet horizontal HHS former. It produces about 115,000 tons of newsprint and other grades a year. PM 3 is a Beloit machine that has been fitted with a horizontal Bel Baie III, which was one of the first installed, Hacker noted.

Back in January, combined weekly production on PM 2 and PM 3 hit a new high of 5992 metric tons for the week. Derek Oseman, general superintendent of development, said the overall increase in production rates can be attributed to ANM's emphasis on training and career development.

The mill began a A\$ 2.5 million (US\$ 2 million) rebuild of PM 2's third press in November 1994. The goal was to increase production and provide a more uniform sheet. The project included installation of a Valrok

roll with ceramic covering for enhanced sheet release and longer service life.

About A\$ 2.9 million (US\$ 2.3 million) was spent at the mill to expand the existing pulp slushing plant and make other changes to begin using recycled pulp from Albury. Boyer is receiving 46,000 o.d. metric tons/year of recycled pulp, beginning late last year, allowing it to produce newsprint with 20% recycled content.

Two major projects were approved in 1995. The "PM 3 Efficiency Improvement" which intended to increase the speed of the paper machine to 1080 m/min and increase the efficiency to 87%, at a cost of roughly A\$ 3.4 million (about US\$ 2.7 million). This has been achieved with the machine running at 87.2% efficiency and 1095 m/min for the 1995/96 financial year. The project includes rebuilding the dryer and press sections.

The other project included construction of a new warehouse and a reel conveyor system, at a cost of A\$ 10 million (US\$ 7.9 million). The conveyor system carries finished rolls of paper over an enclosed bridge to the new warehouse.

TEAMS

Among all industrial sites in Tasmania, Boyer is recognized as one of the best of corporate citizens. The mill is one of the few large industries in Tasmania that complies

with all of the state's environmental regulations, Hacker noted. During 1994, the Boyer mill was recognized as the Tasmanian Employer of the Year. Later that year, it was singled out as the Australian Employer of the Year by the Australian National Training Authority.

Boyer has been developing a team-based organizational structure that should be completed within the next year or two. The overseeing body for that effort has been the Boyer Improvement Team, Hacker said. Teams are organized around functional areas such as the paper mill, the pulp mill, finishing, and core process/customer support.

Team goals reflect mill and corporate goals. The teams develop "key performance indicators" based on "key result areas" identified by the mill, which are based on corporate "critical success factors," Hacker explained.

Trade groups such as electrical fitters and welders have been amalgamated within operator groups that report to the pulp mill manager or steam plant manager, for example.

The mill has set up a career structure for operators and provides on-site training. All Boyer employees are paid an annual salary with no overtime paid at the mill. An on-call roster is set up with employees responding to breakdowns, sickness, etc. About 5% of Boyer's operating budget goes to training. Incremental pay increases are

dents start the three-year training program in 12th grade, during which their studies focus on process industries. They continue their studies at a technical school and work at the pulp or paper mill during the second and third years. Boyer currently has five trainees in the pulp mill and six in the paper mill, Hacker said. At the end of the program, the students are certified within the industry and, where possible, end up with a job at Boyer. **TJ**

Meadows is editor of TAPPI JOURNAL



(above) The finishing area



A load of paper ready for shipment



(left) A detailed view of PM 3

(below) Boyer's specially designed machine for plastic wrapping

awarded based on training. As mill workers progress through the prescribed training levels and gain skills, they also gain flexibility. A machine tender could rise to take over complete machine coordination, Hacker noted.

Boyer is an accredited training center for the newsprint industry in Australia. Hacker and other company employees have even helped develop some of the training modules.

Along with the training for employees, Boyer serves as a training ground for high-school students who are interested in the pulp and paper industry as a career. Stu-

