By **MONICA SHAW,** Editor

Big things in small packages

Cellynne Corp., North America's largest independent tissue converter, looks for big opportunities in the private label market with startup of its compact tissue machine in Haines City, Fla.

Tucked away among orange groves in central Florida sits a new, state-of-the-art tissue machine owned by Cellynne Corp., a newcomer to tissuemaking that is set on carving a niche in the North American market. By expanding from major converter to a producer of quality tissue, Cellynne has set its future sights on the promise of a growing private label retail market (see sidebar, p. 40).

"Private label is a market segment that's growing tremendously here in the States, and it has great potential," says Cellynne vice president Marc Allegre, one of the company's founders. "In retail, private label only accounts for 15% of the market here, but it's over 50% of the market in Europe. We see a very good potential for us as a smaller company to get a market share in that segment."

Currently, about 75% of Cellynne's business is away from home (AFH) tissue and towel products and 25% retail. With the new tissue machine, the company hopes to transition to a 50% AFH/50% retail mix.

Cellynne has planned a regional strategy that takes advantage of its proximity to growing markets in the Southeast and Southwest (see sidebar, p. 41). Key to the Southeastern strategy is the new tissue machine in Haines City, Fla., a compact, competitively priced design by Metso known as an Advantage DCT 100. Intended for entry-level tissue producers such as Cellynne, the machine has been running very well since its startup this past April.

"As a converter, we were very careful about entering the retail market because we couldn't control the consistency and quality of paper," says Allegre. "The new machine's compact, standardized design has allowed us to do so at an acceptable price."

Within nine months of breaking ground at the Haines City site, the new tissue machine was running smoothly. According to Allegre, the machine has run grades ranging from 9-lb basis weight toilet tissue to 26-lb towel at 70-100 tpd, providing even more optimism for the future.

"We're still converting more here than we can produce, and this machine is only the first step toward a second one," Allegre says.

Situated on 40 acres in Haines City, Fla., Cellynne has room for further expansion.

High-end modular machine

While Cellynne approached all major tissue machine manufacturers, Allegre says the hope was to buy a Metso machine, although the fear was that the price would be prohibitive. "They are an extremely competent machine manufacturer," he explains, "and we knew they could provide the support here that many smaller European suppliers could not."

Fortunately, Metso had launched its Advantage DCT 100 dry crepe tissue machine, described by the supplier as a low-cost concept that is "not over-engineered" but built for steady performance at higher levels of speed and output of up to 130 tpd. The machine's compact footprint was also perfect for the Cellynne application.

"Because of the standardized manufacturing process for the DCT 100, Metso was able to be much more competitive in the bidding process," Allegre notes. "They came to the price we had in mind for one of their machines, and we are happy to have made that decision."

Jeff Hammonds, paper mill manager at Cellynne, points to other design advantages that fit the Haines City location in central Florida.

"The design uses very little fresh water and has little discharge to the sewer," he describes. "Big stock prep equipment wasn't required. It is basically a high-end modular

design that can be set in place and started without a great deal of engineering."

Cellynne's DCT 100 tissue machine features the following:

- Width: 102-in. trim
- Max speed: 6,600 fpm
- Length: 108 ft
- Height: 34 ft
- Capacity: 35,000 tpy
- SymFlo TIS headbox
- Crescent former
- Yankee dryer: 18-ft dia.

The tissue machine order included stock preparation equipment, including a bale pulper, refining, a deflaker, and screens, as well as broke handling equipment. A Metso Automation DCS/QCS system was also part of the package, for which the supplier provided process programming.

Accelerated construction

Cellynne opted for a turnkey project contract due to limited in-house resources for managing such a large endeavor. This approach also allowed more time for Cellynne to recruit an operating team.

After taking bids from four engineering companies, Spirit Construction of Green Bay, Wis., was awarded the contract in 2005, with Branch Banking & Trust (BB&T) providing project financing. That August, Spirit broke ground on the 20,000-ft^2 machine building with a full-size basement – a feature that might be unexpected in some parts of Florida, although the Haines City location is at one of the state's highest points.

Hammonds visited Sweden for pre-inspection of the tissue machine in November 2005. The machine arrived in January 2006, delivered at ports in Savannah, Ga., Jacksonville, Fla., and Manatee, Fla. The machine was assembled prior to completion of the building. Construction, says Cellynne general manager Kurt Schulze, "was very seamless, very easy."

On April 30, the tissue machine was operational, which was right on schedule. Hammonds credits Metso's on-site help and Spirit's startup specialists with completing the project within the nine-month timeframe.

The founders of Cellynne Corp. are company president Patrice Minguez (left) and vice president Marc Allegre.

Paper mill manager Jeff Hammonds (left) says the DCT 100 is "basically a high-end modular design that can be set in place and started without a great deal of engineering."

Smooth operations so far

As stated, Cellynne's new tissue machine has run grades ranging from 9-lb tissue to 28-lb towels. Speeds have been as high as 5,500 fpm and are expected to go higher as the learning curve progresses, topping out at 6,500 fpm – even for heavier weight towel.

"With a smaller machine like this, you don't often see such speed at heavy weights," Hammond notes. "This is possible by the installation of the 18-foot diameter Yankee dryer and a Metso high temperature hot air cap."

Several characteristics of the tissue machine make it easy to operate and maintain. The following sections describe these and other operational features.

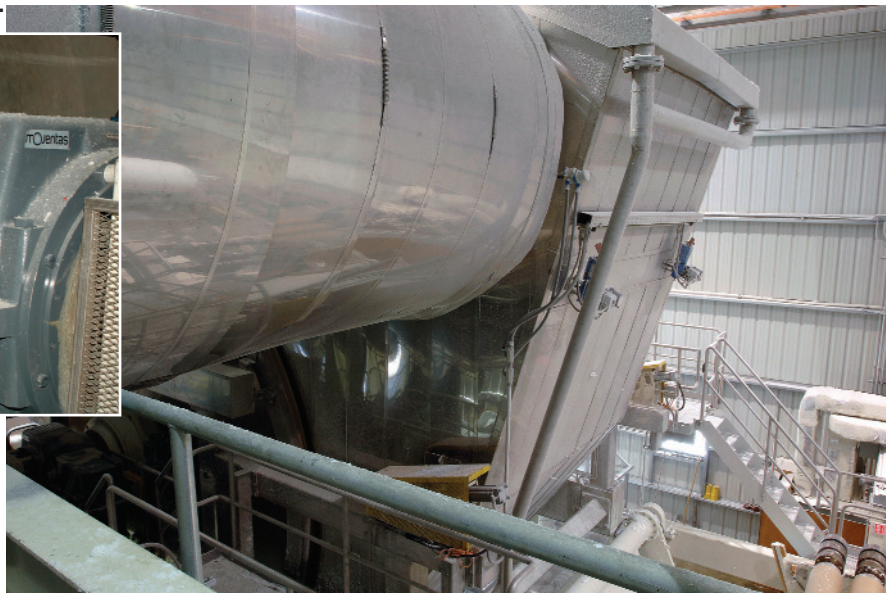
Stock preparation: Bleached hardwood (HW) and bleached softwood (SW) pulp are fed separately to the swing pulper, which sends the pulp to one of two stock lines: hardwood or softwood. The softwood pulp line features refining and screening only, while the hardwood line has screening and deflaking, since broke is sent back through the line.

The stock lines feed the machine chest, which functions as a blend chest. The HW/SW mix depends on which grade the tissue machine is running – tissue or towel.

Water supply and treatment: Cellynne has benefited from re-activation of an on-site well for its process water, although it can purchase municipal water from Haines City as backup. Effluent, however, is a particular issue for Cellynne.

"We don't have an option here with the city to discharge a lot of water, so we had to

Unique features of the Yankee dryer include a CARB bearing (left) that allows for axial expansion of the Yankee journal at high temperatures and an air cap wash down system (right).



design the machine to use and discharge very little of it, which the DCT 100 supported," Hammonds describes. "We have a very closed water loop, and the machine is adapting to it very nicely. To date, we are averaging less than 50-gpm discharge to the city sewer, a remarkable number, but with expectations to lower it even further."

About 96% of the tissue machine's showers use super-clarified water, while two high-pressure showers run off fresh water, according to Hammonds. Fresh water is brought into the loop for cooling of the machine's hydraulic units, and that water is recycled into a tank, which is then used by showers on the machine.

"We have the capability to close the incoming loop and recirculate that water until it heats up. Then, we bring fresh water in to cool it down," Hammonds describes.

Energy supply: A new Thermogenics 20,000 lb/hour, 250-psi gas-fired package boiler heats the Yankee dryer and condensate system. Additional energy is supplied by Progress Energy, which provides a dedicated substation to send 69,000 volts to the tissue machine.

Yankee dryer: The 18-ft-dia. Yankee dryer has a maximum operating pressure of 116 psi, and both the wet end and the dry

going retail

Current customers, future opportunities

Prior to installation of the new tissue machine, 25% of Cellyne Corp.'s converted tissue was for retail applications – a percentage it wants to grow. Cellynne has supplied private labels for the Dollar Stores, as well as convenience stores, including 7-11. The new tissue machine should open more doors for Cellynne in the private label world, but what about a broader retail reach?

On the AFH side, Cellynne has provided the majority of tissue and towels for Wal-Mart's in-store use since 2000, supporting the retail guru's expansion in the West and Southeast with its Nevada and Florida converting operations. Wal-Mart's purchasing group has pressed Cellynne to make a presentation for providing tissue and towels to Wal-Mart for retail sales, but executive vice president Marc Allegre says the timing must be right.

"For now, we are being very cautious about making an offer to a large company like Wal-Mart on the retail side," Allegre describes. "We must make sure that we have the capacity and don't burn ourselves out."

The retail strategy, for the time being at least, is to pursue private label market segments that demand a higher quality tissue and towel, as supported by Cellynne's new tissue machine. This strategy hinges on a regional approach supported by the company's converting operations, especially in the Southwest, where population is on the rise, and the Southeast.

"Many large tissue manufacturers are shipping their product from the Northeast and Midwest and there is less competition here in the Southeast," Allegre describes. "We also have a very good freight rate back to Georgia that's very attractive for customers."

market strategy

Tissue and the winds of change

It seems that Cellynne Corp. has charted its course by the winds of change in both a literal and figurative sense. In 1988, president and founder Patrice Minguez picked up on the need for center pull toweling and jumbo roll tissue (JRT) in the U.S. market and formed Cellynne to import those finished products from Europe.

Joined as an owner by executive vice president Marc Allegre soon afterward, the company purchased its first piece of converting equipment in 1991, locating it in Miami.

Then, in August 1992, Hurricane Andrew struck near Miami, and "south Florida was in turmoil," says Allegre. Cellynne began looking for a place to relocate and expand, and central Florida looked promising with its large Orlando airport, less expensive real estate, and easy shipment to the entire Southeast.

The new 45,000-ft^2 space in Orlando would come in handy. In the early 1990s, very few U.S. tissue companies were producing JRT and center pull toweling, although interest was growing. Cellyne offered the ability for these companies to try out the market.

"The first converting machines for jumbo products were not fully automated and very labor intensive, so the big companies were reluctant to make it themselves and began contracting with us," says Allegre.

Cellynne converted jumbo rolls for most major players. In 1995, a business opportunity with James River led Cellynne to open a converting facility in Green Bay, Wis., which it still operates. A converting facility near Las Vegas, Nev., was opened in 1996, but continuing change in the industry would require Cellyne to further alter its course.

"When the mergers and the acquisitions began, our client base started to shrink, so we decided to incorporate another company called Stefco Industries in 1996, which is the company that does our marketing," Allegre explains. "With Stefco, we started producing and marketing our own branded product."

For several more years, Cellynne's strategy focused on converting for contract products and for Stefco. However, the larger players soon began buying jumbo roll converting machines, which had become more automated and faster, thereby reducing their dependence on Cellynne for converting. By 2002, Cellynne wanted to move more into retail products, but space at the Orlando facility was limited.

"For retail products, we need more automated machinery, roll wrappers, case packers, and robots, so we purchased 20 acres in Haines City that had been a mobile home manufacturing site," Allegre describes.

Cellynne now owns 40 acres of land at the Haines City site, which has 260,000 ft^2 of manufacturing space for converting and tissue making. With around 140 employees, the facility has nine converting lines: small roll bath, small roll bath/towel, facial, napkin, multifold, and four for JRT.

Overall, Cellynne employs about 200 and converts about 60,000 tpy of tissue and towels. Today, only 5% of its converting work is by contract, with 95% dedicated to products it markets through Stefco Industries, including the Heavenly Soft AFH brand.

Cellynne's Heavenly Soft AFH branded products

end sections of the dryer hood are capable of nearly 1,000° F. The Yankee has several features that offer an operational advantage, including a CARB bearing on the tending side that allows for axial expansion of the Yankee journal during periods of high temperature stress.

The Yankee dryer's condensate removal system features soda straws offset in both directions to remove condensate from the bottom of the grooves, which causes less thermal stress than with straws all going the same direction, as in many designs. This feature is especially important when running heavier weight towel grades.

In addition, the Yankee's air cap is supplied with a wash down system for safer and cleaner operations. For corrosion resistance in the wet end hood section, the first 30° or 6 ft is made of Corten, acid proof steel.

Other features: With the DCT 100 tissue machine design, the gearbox and vacuum connection are all on the back side of the machine, which is atypical of tissue machines and offers distinct advantages.

"If, as is usual, the vacuum connection is on the front side, you have to undo it and thread the felt through when you change it," Hammonds explains. "With the gearbox and vacuum connection all in one unit on the back, you never have to loosen that connection. Combined with designed openings in the catwalk system, a wire or felt change is possible in less than an hour."

Staffing the crew: Cellynne's tissue machine runs with a four-person crew: machine tender, backtender, roll handler, and stock prep operator. All operators were completely new to the paper industry, save for one from Cellynne's converting operations. There is a four-person maintenance group, one person in shipping and receiving, and five managerial positions for a total of 26 additional employees at Cellynne supporting the new machine.

According to Schulze, Hammonds assembled a "top-notch" team of paper industry veterans to train the new crews, often having combined experience totaling over 100 years. The team included production manager Pierre Lebeau and machine superintendent Ron Cason. Metso also brought in excellent trainers for the startup as well as key suppliers, says Schulze. This made possible the on-time startup and saleable paper from day one.

Speeds have been as high as 5,500 fpm and are expected to go higher as the learning curve progresses, topping out at 6,500 fpm – even for heavier weight towel.

Focused on the future

Once at full speed, the new tissue machine will secure about 55% of Cellynne's needs for paper, so the company will continue purchasing products to convert. This will most likely come in the form of tissue to get a higher yield on the machine on towel, says Allegre. While the converting equipment will run a 50% tissue and 50% towel, the tissue machine will manufacture approximately 65% towel and 35% tissue.

The tissue machine is running bleached HW kraft and bleached SW kraft pulps for now, but Cellynne has spoken with various Brazilian eucalyptus pulp suppliers in anticipation of possibly making a more premium retail tissue.

Within two years, says Allegre, Cellynne will look to construct "a sister building" at the Haines City site to house a second paper machine. "Everything is already planned to put a second machine parallel to the new one and to add additional stock preparation," he describes.

Future plans also include addition of a deinking plant behind the tissue machines, although Cellynne has not decided which will come first — a new machine or the deink plant. In addition, the company plans a rail spur to run between the mill and a railway near the property. P&P