



SCA's First Greenfield Tissue Mill Comes Online at Alabama Complex

Mill produces parent rolls from 100% deinked furnish for brown and white napkins and towels made on 32 onsite converting lines at the new facilities.

— *By* **KEN PATRICK**, EDITORIAL DIRECTOR

Four months ago, SCA Tissue North America started up its new, \$240 million tissue and toweling facility at Barton, Ala. This is the first such greenfield facility for parent company Svenska Cellulosa Aktiebolaget (SCA) of Sweden, and the largest of its kind during the company's 75-year history. Prior to Barton, SCA has grown mainly through acquisitions.

Located in northwest Alabama near the "shoals" tricity area of Tuscumbia-Florence-Sheffield, the new mill, converting complex, and distribution center are situated in the Barton Riverfront Industrial Park, on the banks of the Tennessee River in the heart of the TVA reservoir and hydroelectric power system.

Construction of the Barton complex began in late-October 2002, with converting operations coming online the following April and the distribution warehouse opening in December 2003. The tissue mill and deinking plant started up in late March of this year, producing parent rolls for onsite converting of towel and napkin products.

The one-machine, single-fiberline mill has a nominal

production capacity of 110,000 tpy, depending on grades being produced (more for toweling and less for napkin grades). Production is aimed at the AFH (away from home) food service napkin market and products for commercial office buildings and industrial plants in the southeastern U.S.

Up the Ladder

Startup of the new mill also secures base tissue (mother reel) production for SCA, which is important in relation to the company's March 2001 acquisition of Georgia-Pacific's AFH business, which, in effect, gave birth to SCA Tissue N.A. In that transaction, prompted by the U.S. Dept. of Justice requirement that G-P sell certain assets in connection with its acquisition of Fort James in 2000, SCA acquired four tissue mills and five converting plants in all four regions of the U.S. for \$850 million.

The G-P acquisition brought 450,000 tpy of converted products into the SCA fold, along with 370,000 tpy of base tissue production capacity from the four mills.

Under terms of the acquisition agreement, G-P would supply the 120,000-tpy base tissue shortfall to SCA for a six-year period.

According to Joe Raccuia, president of SCA Tissue N.A, startup of the new tissue mill at Barton eliminates a “large majority” of this base tissue shortfall. “The new production capacity at Barton was heavily influenced by the fact that we did not want to be 120,000 tpy in the hole, which is not a desirable business position to be in,” Raccuia notes.

The G-P acquisition, along with SCA’s purchase of Encore Paper Co. of South Glens Falls, N.Y., later in 2001, vaulted the company into the No. 3 AFH position (sales dollar) in the U.S., behind Georgia-Pacific and Kimberly-Clark. Startup of the Barton mill solidifies that position and, in fact, pushes SCA into the No. 2 position in terms of overall production capacity.

The \$92 million acquisition of single-mill Encore Paper, with its three tissue machines and integrated deinking operations, brought SCA Tissue N.A. 85,000 tpy of production capacity, some 6 million cases of AFH converting capacity, and annual sales in excess of \$85 million. Today, with the startup of Barton, the division has some 500,000 – 550,000 tpy of base tissue production capacity, which is more closely balanced with its overall converted products capacity of around 531,000 tpy.

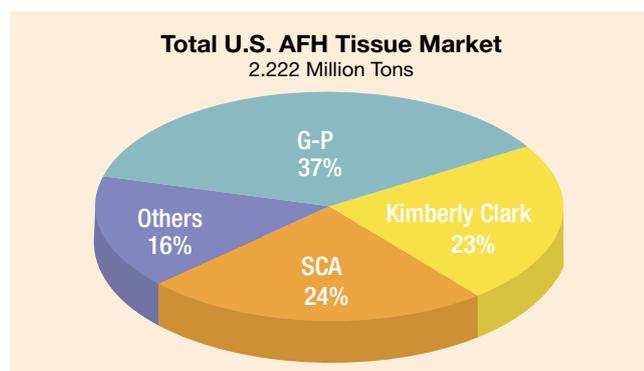


Figure 1. Top Producers in U.S. AFH Tissue Market, 2004 (forecast).

As shown in Figure 1, SCA currently maintains a 24% volume share of the 2.222-million-ton AFH tissue market in the U.S, which is second behind G-P’s 37% and just ahead of Kimberly-Clark’s 23%. Raccuia points out that as SCA continues to grow its business in North America, it will continue to need some additional base tissue from outside markets. “We will have to look at this strategically,” he says, noting that “we’ll also have to be very responsible in adding any new capacity in the future.”

Figure 2 breaks out the U.S. tissue volume mix by

product category, showing the industry’s 2.222 million tons of capacity in comparison with SCA Tissue N.A.’s 531,000 tons. As shown, SCA has assets heavily biased toward napkin and towel production, with little existing base in the wipers category. Raccuia says, however, that the company plans to focus more on the growing wipers market in the future.

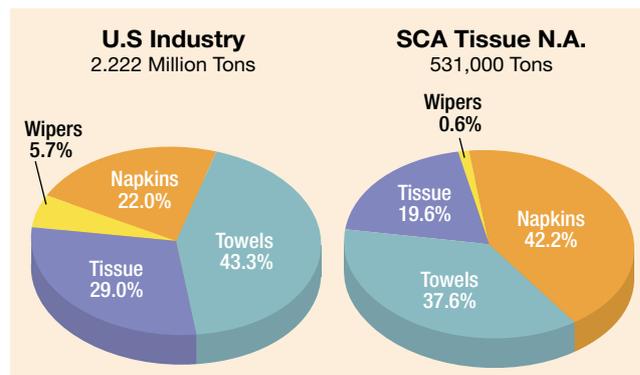


Figure 2. U.S. AFH Volume Mix: SCA Compared with the Industry, 2004 (forecast)

SCA Tissue N.A. currently has annual sales of around \$800 million and employs approximately 2,400 people in 11 locations in the U.S. The Barton operations employ some 270 people overall, including converting, distribution, deinking, papermaking, waste treatment, etc. The paper mill itself is operated by only 40 or so employees. Maintenance is contracted out to BE&K Engineers, bringing the total onsite employees to around 400 people. During construction, more than 1,000 workers were onsite.

Closing the Gap

As Ron Thiry, VP of manufacturing at SCA Tissue N.A., points out, the startup of a greenfield operation goes against recent paper industry trends in the U.S. of capacity consolidations, mill closings, etc. “In that regard, we’re swimming upstream to some degree,” he says.

“For us, the reasons to build a new mill were quite obvious. SCA Tissue N.A. was brought together by the acquisition of G-P’s assets, Encore Paper, and SCA’s hygiene business that was here prior to 2001 (goes back to the late 1970s),” Thiry explains. As the newborn division began extending its customer base and product offerings, it found itself in the strategically awkward position of having to ship large amounts of production around the country.

“It became evident that we had a gap in the southeastern U.S.,” Thiry continues. “We had some converting plants in this region but no papermaking capacity. “To service our growing customer base properly and profitably, we needed

to strengthen our position in this region “

A greenfield facility wasn't SCA's first and only option, according to Thiry. The company explored acquisition options and brownfield sites, before concluding that a greenfield facility was its best answer.

SCA began the initial search for a greenfield site knowing that it wanted to be in the southeastern part of the U.S. “We looked very carefully in the Carolinas, Georgia, and Alabama, with the major factors being availability of water resources, transportation access, quality of workforce, and a receptive environment. As we sorted through these factors and explored our options, it became clear that northwest Alabama was the best alternative.”

Efforts to better balance company assets and improve supply chain efficiencies in the U.S. involved more than building a new facility in Alabama. Last year, as 32 new converting lines were coming up at Barton, SCA was simultaneously closing converting plants in Brattleboro, Vt., Atlanta, Ga., and LaGrange, Ga., relocating much of the existing equipment to the new consolidated operations in Alabama and elsewhere. Among operations impacted by the “rebalancing” of assets were those at Neenah, Wis., and Greenwich, N.Y.

“About this time a year ago,” Thiry notes, “We had almost a third of our converting capacity on trucks going to new locations somewhere. It was a nervous time for us. But, overall, this was a bold and solid move to strengthen SCA's position in the U.S. going forward.”

Tissue Machine, Deinking

The new tissue machine and deinking operations were supplied by Voith Andritz Tissue. The machine, pre-assembled in Austria and reassembled onsite, is a 5.4 m (220-in.)-wide, semi-crepe unit producing brown and white grades for napkins and towels from a 100% recycled furnish. Production of the two grades will be split about 50/50, according to Jim Haeffele, director of Southeast Operations, SCA Tissue N.A.

The machine's 18-ft-dia. yankee dryer, shipped in by barge down the Tennessee River, is followed by a nine-unit, single-tier after-dryer section with a high velocity air cap, ahead of the parent reel winding station. Drives for the machine, as well as the mill's DCS and QCS systems, including scanners on the machine, were all supplied by ABB. The 250-ton house cranes were provided by Konecranes.

As noted above, depending on grades being produced, the tissue machine has a production capacity of some

110,000 tpy. Haeffele says that the product spectrum involves major grade changing. Four families of toweling and napkin grades are made on the machine, with sub-product categories in each family having various basis weights and other physical properties.

By mid-June the mill had gone through a complete grade cycle on the tissue machine, Haeffele points out. “We're doing well with the grade changes, but there's room to improve. A lot of discipline is required for centerlining when you're running many different grades on one machine,” he says, adding that the startup curve will extend well into next year.



Parent rolls for brown and white napkin and towel products are produced on the new machine from a 100% recycled furnish processed using a state-of-the art Voith Andritz flotation deinking line at the complex. (Photos in this article courtesy of SCA/Patrick Hood).

Furnish for the machine is supplied by a state-of-the art flotation deinking line with the capacity to process some 140,000 tpy of recovered papers, including OCC, residential mixed papers, sorted office papers, and coated book stock. Although the book stock puts coating minerals into the process, these are not necessary for the deinking technology used at Barton.

David Knight, director of fiber procurement for the tissue division, explains that wastepaper collections for the mill are focused on the Memphis-Nashville-Birmingham triangle as much as possible, but that “we are also working on collections in regions where we ship product, to take advantage of any wastepaper backhauling opportunities.

“We're just in the early stages of working with local communities, municipalities in particular, to develop a source of fiber,” Knight says. “Overall, the wastepaper collection rate in Alabama is probably lower than the



The mill's deinking line processes some 140,000 tpy of OCC, residential mixed papers, sorted office papers, and coated book stock.

national average, so we're looking forward to developing this source, which obviously will take some time, support, and cooperation to get moving."

SCA's fiber procurement team works mainly with companies and people that directly do the collecting, sorting, and baling. Although it does occasionally buy from wastepaper brokers "when it's necessary and makes sense," the company prefers to develop relationships and work directly with those closest to the source, who process the materials on a daily basis, Knight says.

Deinked sludge is landfilled in the nearby Tuscumbia municipal landfill site. The mill has a two-stage, onsite wastewater processing system for activated sludge treatment of effluent prior to release. Intake water from the Tennessee River goes through a clarification and filtering process before use in the process. An onsite package boiler produces steam and hot water for use in the process. Haeffele says the mill internally recycles as much of the process water as possible.

Finishing, Warehousing, Shipping

Parent rolls from the paper machine are delivered to a high-density storage area by a fully automated Material Flow HOW system by Pesimal of Finland. Automated shuttle carts deliver the rolls to a platform where a vacuum crane picks them up and places them in HD storage.

With the computer controlled select/retrieval system at Barton, a converting operator calls for a parent roll from a computer screen. The selected roll is retrieved by crane from HD storage, placed on a cart, and then transported to a lowerator that takes it to the converting area floor. An AGV (automated guidance vehicle) then delivers it to the specific converting machine.

Currently there are 32 separate lines at Barton for converting parent rolls into napkins and towels, according to customer specifications. As part of the converting process, some embossing is being done onsite. The converting operation at Barton is still being rationalized, according to Haeffele, who says there is room for one or two more converting lines if needed in the future.

Conveyors deliver finished product cases to a robotic palletizer (in full operation since the beginning of this year), from which AGVs then carry them to the distribution center, which has a 700,000-case capacity. The finished goods warehouse has 457,000 ft² of storage space. The complex also has 150,000 ft² of conventional warehouse space.

The fleet of 40 AGVs at Barton (with several more on the way) was supplied by Rocla/Swisslog of Finland/Switzerland. The totally automatic units are guided by control transmitters in the ceilings. They are totally unmanned and maintenance free. Each electrically-powered unit is self charging, i.e., it knows when its batteries are getting low, and stops automatically at one of several strategically located charge stations and recharges.



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Haeffele notes that some 20,000 trucks are expected in and out of the Barton complex per year. The facility also has full rail facilities and could develop and utilize river barging along the Tennessee Tombigbee Waterway if ever needed, though no river system trafficking is anticipated at this time.

The complex purchases 100% of its electrical power, being centrally located in the TVA power network. ■