Well ahead of the curve in Barton

Starting up in October 2008, the new deink plant and tissue machine in Barton, Alabama are well on their way to full production.

"Perhaps it wasn't as exciting as the greenfield mill in 2004, but it sure feels good to have a successful start-up," says Jim Haeffele, Project Director for the expansion project at SCA Tissue's Barton operations and the company's VP of Tissue Technology.

Haeffele is talking about the new 350 t/d ANDRITZ deink plant and 5.5 m wide ANDRITZ PrimeLine CrescentFormer tissue machine that have added considerably to the capacity and capabilities of the Barton mill. The USD 145 million expansion boosts production capacity at Barton by 70,000 tons to 180,000 t/a.

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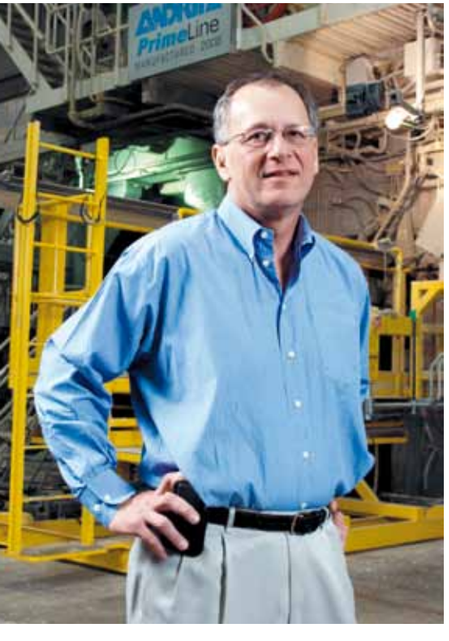
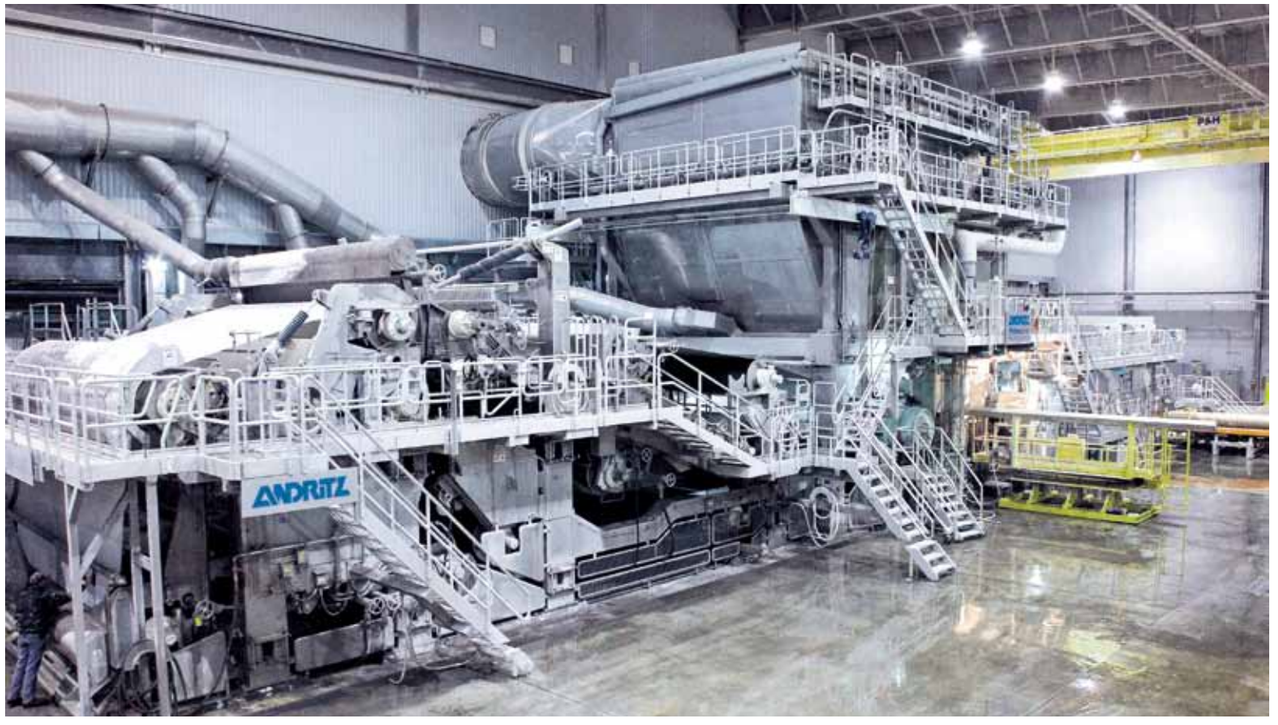
Jim Haeffele, SCA Tissue's Project Director





▲ "With the PrimeLine CrescentFormer, you get a very nice, filled-in sheet for lightweight grades," Jim Haeffele says. Shown above is the new PM 14 – a 5.5 m wide, 2000 m/min ANDRITZ tissue machine.

"The design is proven, the technology tested, and the ramp-up has been impressive," Haeffele says. "Sheet formation is perfect, and product quality is excellent."

Mark Phiscator, VP of Engineering and Maintenance, adds that the mill is "way ahead of the start-up curve. The production line is beating plan by about 20% per month. We're almost double where we planned to be in terms of efficiencies."

Filling a void

When Barton first opened, it was SCA's first full-scale greenfield paper mill start-up in the world *(see the story "From cotton field to greenfield" in FiberSpectrum Issue 2-2005)*. The Barton operations were home to PM12 – the first ANDRITZ PrimeLine tissue machine in North America. PM12 produces heavier toweling and dispenser-type napkins from 17-53 gsm. Trim is 5.5 m and top machine speed is about 1800 m/min.

"We are very pleased with the start-up and performance of PM12," says Phiscator. "We didn't have to travel very far to get a good reference for ANDRITZ."

According to Marty Ferguson, SCA Tissue's Operations Director for the Southeast, the new PM14 "fills a void" in SCA Tissue North America's Tork® brand tissue and two-ply dinner napkins in the 14-25 gsm range. "The driving force was that we had a 70,000 t/a shortfall in lightweight tissue production," Ferguson says. "We were purchasing a high percentage of parent rolls and wanted to become more balanced between papermaking and converting. PM14 is part of our closer-to-the-customer strategy. We can now produce about 95% of our products in-house. We are basically running to order now. This helps us optimize our scheduling, keeping inventories low while increasing our service level."

"PM14 fills a void in our lightweight Tork® brand tissue and two-ply dinner napkin products. We can now produce about 95% of our products in-house, close to our customers."

Marty Ferguson, SCA Tissue's Operations Director for the Southeast

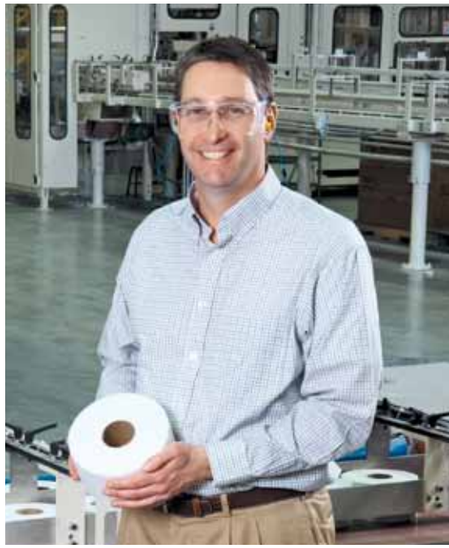
Following the plan

"The main justification was to improve our ability to support our customers in the Southeast. The Board approval for the project came in February 2007, construction began in August 2007, and the machine started up in October 2008."

Actually, the new production line was planned for from day one, says Phiscator. "The PM14 project followed the same basic design philosophy as for PM12," he says.

"The start-up was uneventful. I say that as a high compliment."

Mark Phiscator, SCA Tissue's Vice President of Engineering and Maintenance



"From the outset, this mill was designed for expansion. Extra piping tees, tie-ins, lines, etc. were installed so that new equipment and systems could be added."

The overall design for PM14 follows that of the existing line in that the deink plant and tissue machine are considered as one unit. "PM12 has its own deink plant and tissue machine, and one team runs the entire operation," Phiscator says. "We did exactly the same thing for PM14."

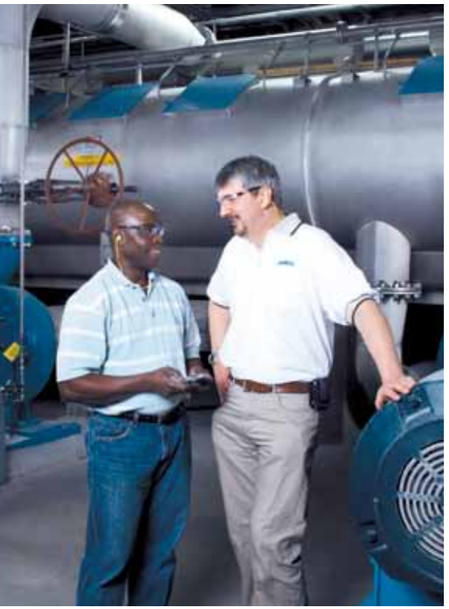
Andy Chorney of SCA Tissue took the mechanical lead on the project team. "We spent time up-front to get this right," Chorney says. "The project took 18 months from engineering to start-up. In the project business, time costs money. The sooner we get the machine producing revenue for us, the better we are."

Chorney was pleased with the transition from engineering drawings to reality. "Everything looks good on paper," he says. "It's not until you get into the field that you see how good your design really is. In this

"The quality of wastepaper is a moving target. Wastepaper today is more contaminated and the adhesives are more troublesome."

Tony Epie, Assistant Superintendent

Tony Epie (left), Assistant Superintendent for PM 14's deink plant, with Richard Turnbull (ANDRITZ Regional Representative) in front of the deink cells. ▼



case, we did a lot of things right. We had to make some modifications in real-time, but really these were minimal. We had very good cooperation and coordination from everyone involved."

Performance guaranteed

SCA Tissue chose one supplier, ANDRITZ, to deliver both the deink plant and the tissue machine. Haeffele explains: "By limiting the number of suppliers we get better performance guarantees and better performance. It is easier to manage the project with fewer interfaces and the suppliers become actual partners in your success."

"ANDRITZ was very flexible in working with us to tweak the process and the machine the way we wanted," says Sarah Freeman, Assistant Superintendent responsible for PM14. "For example, we asked for some enhancements to the showering system and the reel section. We had a very good experience with ANDRITZ on PM12. This machine is like the first one, very high quality and sturdy construction."

According to Haeffele, "We made some enhancements that make this CrescentFormer machine ideal for producing lightweight tissue at high speeds. PM14 has a two-layer headbox compared with the single-layer headbox on PM12. The excellent CD profile is achieved through dilution profile control (weight) coupled with moisture control via a steambox located at the suction pressure roll. With the PrimeLine CrescentFormer, you get a very nice, filled-in sheet for lightweight grades. When you're making a sheet that's only about a fiber and a half thick, it's got to be filled in. You also have no wire-to-felt transfer, which dramatically improves performance at very high speeds."

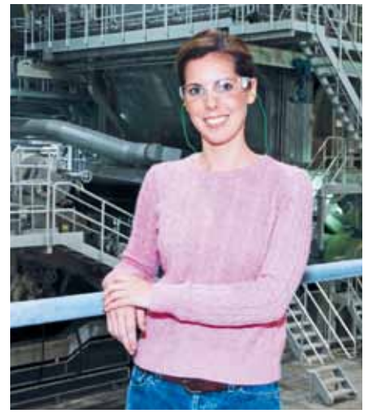
Waste stream challenges

"We make products that are 100% recycled from more than 250,000 tons of wastepaper per year," says Tony Epie, Assistant Superintendent responsible for PM14's deink plant. "PM14 does not swing from brown to white grades like PM12, so we chose the FibreFlow® drum pulper. This gives us better yield and screens out the main contaminants early in the process," Epie says.

The quality of wastepaper is a moving target. "Wastepaper today is more contaminated and the adhesives are more troublesome," Epie says. "MOW is mainly shredded, and generally contains a lot of paper clips, compact disks, various plastics, and sometimes a high percentage of groundwood. We teach our technicians to visually identify and remove the key sources of stickies before the waste ever gets into our system."

Tim Fulmer (left), SCA's Electrical Lead, consults with Andy Chorney, SCA Tissue's Mechanical Lead, on the deck of an ANDRITZ disc filter in the stock prep area. ▶

◀ The ANDRITZ Mixed Office Waste (MOW) DIP system for SCA Barton is rated for 350 bdst/d production for PM14. In the first loop, accepts from the FibreFlow® drum pulper go through two stages of high density cleaners, three stages of coarse screening, three stages of forward cleaners, and three-stage fine cleaning. The second loop is the bleaching loop, which has flotation and two stages of bleaching.



"ANDRITZ was very flexible in working with us. We had a very good experience with them on PM12. The start-up on PM14 went very smoothly."

Sarah Freeman, SCA's Assistant Superintendent for PM14

In addition, SCA runs the first loop much cooler than on PM12. "This gives us a better chance of removing the stickies before the heat of the process makes this more difficult," Epie says.

Flexible and robust

"The ANDRITZ deink plant has a high degree of flexibility and robustness built in," Epie says. "It can handle a wide variety of waste steams. The main target is to deliver a low-ash furnish to the machine without compromising yield. Our target is under 4% ash in the HD towers. We chose aggressive washing to remove the ash, clay, and inks. The furnish is 100% bleached, ranging from 68 to 75 ISO. The yield is about 70% at the deink plant and 67% overall."

Uneventful?

"The start-up at SCA Barton was uneventful," Phiscator says. *Uneventful – for a USD 145 million expansion project?*

"I say that as a compliment."

"I'd say it went very smooth," Freeman contributes. "We selected four of our top technicians to prepare the training for PM14. They developed the materials, coordinated the sessions with suppliers, and cross-trained all the operators. We were very well prepared for the start-up in October."

Ferguson notes that one of SCA's primary measurements is what they call Top Speed Non Stop (TSNS). "If we could run at full speed all the time, the score would be 100," he says. "Our TSNS scores are improving – and we have seen very good numbers from the PM14 line."

"The ANDRITZ machine is very well built and has excellent quality," says Phiscator. "It is capable of achieving high speeds and is stable. The machine is definitely operating ahead of plan at this point in time."

Tim Fulmer, electrical lead for the project, was responsible for the selection of process controls, automation, and machine controls. "We had our normal issues that we have in all projects," Fulmer says. "But the start-up was excellent. We all did a good job of commissioning the systems."

"The start-up was smooth," says John Schamell, Project Director for ANDRITZ and head of the company's paper machine business in North America. "I attribute this to three main factors. First, you have a well-designed standardized machine. Second, on site we had extremely qualified people to commission the machine and resolve any issues. And probably most important, we have a customer who knows its business. The operators and supervision here are highly trained and qualified. SCA is one of the best customers to work with. They are reasonable and fair and very open to constructive discussions."