

# “Tissue Watch” 2003

## The Economics of Tissue, New Capacities, TAD Impact & the Global View

— BY SHAW SHAHERY

To some in the paper industry, 2002 appeared to be another year that “we just made it through.” But to many of us, it was actually a very good year, even a strong year. Given the current weak state of the economy and all the uncertainties surrounding us, the tissue industry has remained the most consistent performer in the paper industry as a whole. The significant and seemingly ominous changes on the surface of our industry—consolidations, closures and even bankruptcies—have actually opened up new opportunities for both the small and large manufacturers and converters.

As the divergence between the smaller and larger companies in the tissue business continues on its seemingly unalterable course, the possibilities for the independent converters are actually increasing due to economies of scale. The net effect is that independent converters will have more opportunities as the larger players, having become even larger, may have less interest in servicing the relatively smaller customers.

When you factor in the combination of a weak global pulp market with a slow-growing U.S. economy, one can understand why the larger mills will likely respond by trying to hold pricing where it is through controlling inventory. Over the past year—a year of multiple consolidations and closures—capital has become limited and cost cutting has been the key phrase.

While some economists are predicting that slightly better times may lie ahead, the only thing we know for certain is that nothing is certain. So prices within our industry may rebound slightly, or not at all. A lot depends on world events that are beyond our control. For example, the possibility of war aside, some economists are concerned that the economy may be softening again, which would undercut consumer confidence and possibly send us back toward recession.

### The Dollar Signs

Paper industry economists tell us that, despite a sluggish economy, tissue demand actually grew 2% in 2002 and is expected to grow by 3% in 2003. Not stunning numbers, but unarguably positive. Tissue demand in the U.S. came in just over 7 million tons in 2002, which is close to the 2.1% 30-year average growth rate.

What’s on the horizon? Both Procter & Gamble (P&G) and Kimberly-Clark (K-C) have been spending millions advertising and promoting pre-moistened toilet tissue, and Through-Air Drying (TAD) technology continues to be the leading product in the premium market.

Here’s the key: while capital spending in the pulp and paper industry taken as a whole has been going downhill for a few years now, the tissue market segment has been going in the other direction. The reason is obvious: consumer demand. According to Pulp & Paper, of the 12 new paper machines and rebuilds planned for North America during 2002-04, the majority will produce tissue.

### The New Capacity

Georgia-Pacific (G-P), P&G, SCA, Kruger (Scott Paper), and Potlatch have all announced new tissue mills and paper machines for North America.

- G-P started their new 80,000 tpy TAD machine at Port Hudson, Louisiana during the fourth quarter of 2002. As part of the announced \$250 million expansion on tissue operations, G-P will start up another 80,000 tpy TAD line at their Wauna site in Oregon. In addition, G-P will be further expanding tissue operations at Halsey, Oregon and Palatka, Florida.



- P&G in their \$350 million expansion project added two new TAD machines in Mehoopany, Pennsylvania. The first 75,000 tpy addition started in 2001, followed by the second 75,000 during the second half of 2002. In addition, P&G has announced they'll be installing another 80,000 tpy TAD machine at Cape Girardeau, Missouri in 2004/2005.
- SCA, as part of their \$240 million expansion project, announced an 110,000 tpy wet crepe machine for their green field site in Barton, Alabama that will produce paper towels, tablecloths, napkins and toilet tissue. This project is aimed at securing SCA's position in the southeastern U.S., in addition to improving overall papermaking cost, increasing converting efficiency and reducing dependency on outsourcing of parent rolls. Start up is planned for mid-2004. The company expects to consolidate the operations of three other converting facilities in Barton: Brattleboro, Vermont by March, 2003; Atlanta, Georgia by Q3 2003, and the LaGrange, Georgia facility in Q4 2003.
- In the Kimberly-Clark family, K-C US started two new UCTAD lines back in 2001. Combined, K-C US introduced approximately 140,000 tpy between Junks, Oklahoma and Loudon, Tennessee sites. South of the border, K-C de Mexico brought a 90,000 tpy UCTAD online in 1Q02. K-C Mexico has also been operating another 35,000 tpy TAD line in Mexico since mid 90's.
- Potlatch will spend some \$66 million to construct their new 102 inch, 30,000 tpy TAD tissue machine in Las Vegas, Nevada to service the western markets, as well as their national accounts. Startup is planned for early 2004.
- Kruger and their Scott Paper Canada group, as part of their C\$120 million expansion project, is installing a new 33,000 tpy tissue machine at its Crabtree, Quebec mill with a Metso machine designed for speeds of 2,000 m/min, using a furnish of virgin and de-inked fiber. The upgrade in Crabtree includes two winders, automation of a wrapping line and robotics for unitization of cases. Scott Paper will also upgrade and add a new wet end to their No. 5 paper machine at their Lennoxville mill, also in Quebec.
- In addition, Scott Paper is due to re-start the 110,000 tpy Memphis, Tennessee tissue plant, which they purchased from bankrupt American Tissue in August of 2002. Scott Paper is the No. 1 tissue producer in Canada with close to 40% market share. Scott Paper also invested C\$12 million in Alberta in the first expansion phase of the Calgary tissue converting facility. These investments are expected to satisfy Scott's future needs for their Canadian market, as well as improving their efforts to increase Scott's share of the American market.
- Cascades Tissue Group is the other Canadian company to watch for with growing interest for the US market. While they have not added any new tissue machines in recent years, they have assembled a sizable capacity by buying other tissue assets. In September of 2001 they purchased two tissue mills from bankrupt Plainwell. This increased their production capacity by approx. 110,000 tpy and moved Cascades ranking in North America from seventh to fifth. Then in 2002, from bankrupt American Tissue they acquired St. Helens tissue machine lease at the Boise, Idaho facility, and the wet crepe towel machine in Mechanicsville, NY. With these two sites, Cascades added another 85,000 tpy, thus becoming the number 4 player in North America with total capacity of approx. 430,000 tpy.
- On the horizon, we have a newly formed and privately held company, First Quality Tissue LLP that has announced a \$250 million project to enter the consumer tissue market. Their plans include a brand new "state-of-the-art" 70,000 tpy TAD machine and a complete line of converting equipment for consumer tissue, towel and napkin products. This new plant will be located in Lock Haven, Pennsylvania, at the former International Paper manufacturing facility. Startup is planned for 2004.

### The TAD Impact

It is obvious that most of these new machines are expected to be equipped with TAD technology, the new standard for premium tissue. Hence, the drive for higher quality is fueling much of the growth. TAD has played an

important role in improving tissue quality for added softness, volume and absorbency. A TAD sheet is stronger than traditional Yankee dried tissue or towel, and can have as much as 50% higher absorbency. TAD machine installations require 30-40% higher capital investment, in addition to higher energy consumption costs. However, some of these increased costs are offset by lower fiber consumption in manufacturing, improved product quality and higher pricing of TAD substrate sheets.

TAD has been closely, although invisibly, tied to branded tissue products, creating consumer interest in and loyalty to specific premium products. With the technology being more readily available, we can expect more independents to add TAD production to their product lineup.

*“The question to ask is, will the market be able to absorb all these new machines, a total of more than 400,000 tons in TAD alone, and what impact will they have on our conventional tissue market?”*

We need to watch the impact of all these new machines, in particular the TAD lines, to overall tissue capacity. A significant part of these new capacity announcements will hit the market between now and the end of 2004. The question to ask is, will the market be able to absorb all these new machines, a total of more than 400,000 tons in TAD alone, and what impact will they have on our conventional tissue market? Will we go through another extended period of excess supply versus demand? If so, will that be in TAD or in conventional tissue? Simple mathematics will tell us that we only need the addition of about 150,000 tpy in new capacity to cover our average projected growth of 2% per annum in a maturing market of 7.5 million tons. The one thing we know for certain is that we still have another year or so to figure that out!

### **The Global View**

Worldwide, the tissue industry is a \$30 billion business with volume of approximately 25 million tons. North America makes up half of that, followed by

Europe, Asia and other markets. In total, we have had an average global growth of nearly 4% per year in the past decade. Fifty-seven new machines are expected to start up during the four-year period going through 2004, adding almost two million tons of new capacity worldwide.

At 22 kg per capita consumption, North America is still close to twice the size of the next two largest, Japan and Western Europe at roughly 13 kg. China, Asia and Africa, at below 2 kg per capita, illustrate the potential for global growth in a westernized world. World overall average per capita consumption of tissue is at approx. 3.4 kg. Some forecasters predict that world tissue demand will grow at 3.2% per year through 2010. With that in mind, we could exceed 30 million

tons in just seven years. The largest growth is expected in China and parts of Asia where the economies are expected to improve as standards of living are raised and businesses grow.

While toilet paper demands the highest consumption rates in all regions, with the exception of the Near and Middle East, demand for toilet tissue is expected to grow slightly below average. Toweling, including kitchen towel rolls, industrial towels (both bleached and kraft) and wipes, along with napkin grades, will remain the fastest growing products lines.

In the Away-From-Home (AFH) category, North America still leads the world in tissue consumption, with 38% versus Europe's 35%. And, as consolidation has continued, it is ironic to note the high level of concentration among the top three producers in both AFH and At-Home (AH) market segments in the US.

In the AFH (industrial and commercial) market, the top three, GP (40%), Kimberly-Clark (27%) and SCA (21%), control more than 85% of the 2.5 million tons and nearly \$ 4 billion in sales. Food service represents

# “I get the performance I need and the results I expect... with doctoring solutions from Kadant Web Systems.”

**G**eorgia-Pacific recently partnered with Kadant Web Systems to manufacture the world's largest creping doctor... a partnership based on G-P's confidence in Kadant's technology, manufacturing, and support.

“We put our trust in Kadant's reputation, experience, and ability to manufacture a doctor that would meet our production requirements. The system was installed within our tight schedule and started up without any problems.”

“Kadant delivered.”

Kadant's Proprietary Hi-efficiency Doctoring (PHD™) solutions enhance quality and performance with:

- **Industry-leading R&D and engineering experience**
- **70-year history of excellence and innovation**
- **Commitment to maximizing customer value**
- **24/7 worldwide service**

Find out how Kadant Web Systems can deliver for you!



*World's largest creping doctor  
— 25,000 lbs.*

**KĀDANT**  
AN ACCENT ON INNOVATION

[www.kadant.com](http://www.kadant.com)

Kadant AES Canada  
ph: +1-514-695-7110  
fax: +1-514-695-4863

Kadant AES Mexico  
ph: +52-33-3812-22-15  
fax: +52-33-3812-43-03

Kadant Lamort  
ph: +333-26-74-8080  
fax: +333-26-72-0833

Kadant UK  
ph: +44-161-764-9111  
fax: +44-161-797-1496

Kadant Web Systems  
ph: +1-508-791-8171  
fax: +1-508-757-1507

40% of this segment and is projected to bring the fastest growth of 3-4% in the coming years. This is followed by healthcare with 15% of the market, office buildings with 12%, education with 10%, and lodging and all others accounting for the remainder.

*Some forecasters predict that world tissue demand will grow at 3.2% per year through 2010.*

Similar concentration is prevalent in the At Home (retail and consumer) market led by the prominent brand leaders, KCC with 34%, GP 32% and P&G 22%. Another significant observation is that in the nearly \$12 billion USA tissue industry, the above group of four leading producers have concentrated control of more than 85% of all sales and production capacity of the US market. Talking about concentration, the same group of four also controls more than 50% of world capacity.

In terms of market share for private label versus brands, it's been a known fact that brand leaders have played a much more dominant role in the US. Branding in the US has always been valued as a vital part of any marketing campaign. In the European markets, this figure varies widely from country to country. However, in all cases, store brands in the European markets have commanded an equal or higher share than the brand leaders. One dominant factor contributing to consumer preferences and branding difficulties between the US and European markets in general is the diversity of cultures, languages, consumer habits and other regional differences among the European nations.

Another noteworthy observation is that the integrated tissue producers in general have been leaving the pulp business in order to keep pace with changes in consumer's demand, preferences, and their continuous need for improved products value. While pulp is a more readily available commodity, fiber cost and pulp prices will remain the dominant factors in cost and profitability for all tissue producers. Hence, producers of tissue would easily feel the pinch when increases in fiber cost are not offset by adjusting the prices of converted products.

Common expectation is that prices should go up when fiber prices and other manufacturing cost increases—like any other industry. The distinction in the tissue industry is that there is no direct correlation between fiber cost, price of parent rolls, or the converted products. Each has its own supply and demand equilibrium and behave independently of one another. In the event of an adjustment, there could be a lag period of as much as six months before the impact of one is felt on the chain of command.

### **In Conclusion**

The year 2003 holds as many questions as answers. As this is being written, we are all holding our breath on the question of war with Iraq—while we know that the people of Iraq are largely oppressed and would welcome a new regime, no one knows what the cost will be to any of us. But we certainly can't stand still waiting for something to happen. We must continue working to build the strong, global business sector that tissue has become, to the best of our abilities. In the short term, the slowdown that began in the final quarter of 2002 seemed to have continued in Q1 of 2003. However, it definitely looks as if things will pick up, especially as the AFH market kicks in during the spring.

In the longer term, manufacturing technology, raw material cost, inventory control, new and improved product development, branding, product segmentation, proper logistics, outsourcing management, strong supply chain, and development of strong strategic alliances will be the key characteristics to maintain the competitive edge in the tissue industry. So, as we expect good things from a business point-of-view, we also hope and pray for peace and good things on the global front. ■

*About the Author:*

**Shaw Shahery** is the founder and president of Convermat Corporation in Great Neck, New York. Convermat specializes in sales of parent rolls of tissue, napkins, towels, wipers and specialty paper in more than 80 countries. Contact Shahery by phone at 516-487-7100 or by email at: [shaw@convermat.com](mailto:shaw@convermat.com).

Originally published in AF&PA Paper Week Convention Daily™, March 11, 2003.