

Crystal Tissue finds its niche in gift wrapping

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This specialty mill has kept pace with changing times.

In the 100 years of operation Crystal Tissue will celebrate in 1994, the mill in Middletown, OH, has changed its product line several times. During the 1930s and 1940s, its mainstay was tea bag paper, said C. Robert Keener, chief operating officer and executive vice president. Tissue for wrapping new shoes was also an important business until so many of the footwear manufacturers moved their operations outside the United States.

Now the mill's main product is decorative tissue, the kind used in retail and gift packaging. The tissue is dyed at the mill; printing and stock print designs are added at the company's converting plant in Maysville, KY.

Years back, canals and the Miami River attracted mills to Middletown. The original home of Adam Dickey, who founded the company, is still on site. Other mills, such as Sorg, continue to operate in the area.

Part of staying in business has been adapting to change. Tissue was once an important element in plywood production. Manufacturing techniques changed and that industry's reliance on tissue vanished. Moving companies used to use a lot of tissue for packing, but have since switched to bubble wrap and foam. Chemical-impregnated fruit wrap was also a common use for tissue. But the problems of dealing with toxic chemicals and the common practice of waxing fruit combined to erode the market. Carbon paper, once essential for typing copies, has been largely replaced by photocopy machines, computer printers, and carbonless paper.

But tissue makers have also developed new products to stay competitive. A metallic paper coating, for example, transforms tissue gift wrap into a shiny alternative to foil or metallized film.

As might be expected, sales of Christmas wrapping have a significant impact on mill operations. Even before the Fourth of July, the mill had begun building its inventory of green and red tissue. Rolls are trucked to Maysville for converting. The company has also benefitted from the use of gift bags and tissue for wrapping presents.

Something of a symbiotic relationship has developed between the mill and Miami (Ohio) University. Graduate students from the school's paper and engineering programs have done studies at the mill. Some, such as Scott Walker, manager of technical services, have gone on to work at the mill. The university is also a ready source of technical expertise.



C. Robert Keener



Scott Walker

Unlike many paper companies, Crystal Tissue remains a privately owned company. It is one of only a few specialty tissue makers that have their own sales force, Keener noted. Sometimes they pass along ideas or requests for new products, sometimes requests come from paper distributors or customers. Walker then works on modifying an existing product or developing something new to meet the specifications.

As with bigger companies, Crystal Tissue is working to apply principles of continuous improvement and it's experimenting with team concepts. About five years ago, the mill began efforts to adopt some of the latest in management techniques, ranging from Just In Time to Total Quality Management. Training began with management and has been progressing through the ranks. A training room built at the mill provides space for various instructional activities. Training also keeps mill employees focused on corporate goals for the year, whether they are to increase sales by 10%, to save US\$ 1 million, or to provide on-time delivery.

Remodeling some of the offices to make them more open has improved communications between customer service representatives. Work groups have been reorganized by function and a continuous improvement steering committee was established.

The mill has three paper machines in operation, Nos. 4, 5, and 6. The oldest was built in the 1930s, one in 1956, and the newest in 1969. No. 6 was the first fourdrinier tissue machine over 100 in. built (it trims at 101 in.). The other two are 122-in. machines. The

Crystal Tissue's offices in Middletown, OH



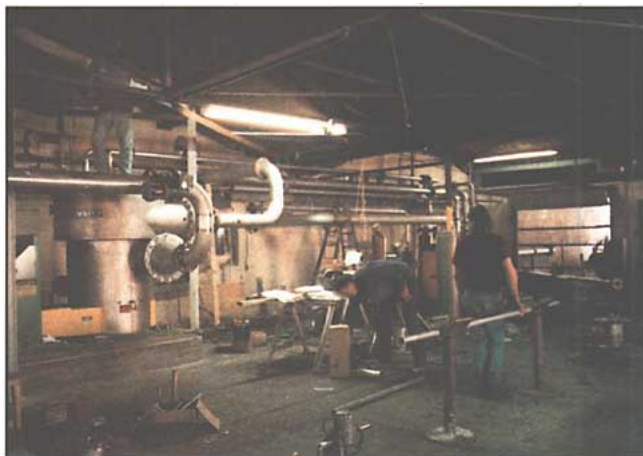
Open office space improves communications



One of Crystal Tissue's paper machines



Voith fine-slotted primary pressure screen being installed at Crystal Tissue



No. 7 machine is currently idle. The mill could now use the added capacity of a fourth machine. It's asked an engineering firm to suggest options for bringing the machine back into service.

About 75% of the furnish used by Crystal Tissue comes from secondary fiber. The mix includes scrap from other converters and envelope houses, computer paper, and unbleached kraft.

Each of the mill's paper machines has its own stock supply. Measurex DCS systems were being installed for the repulper. CD control was added to the Measurex 2090 scanner on the No. 4 paper machine in July.

One way the mill keeps effluent to a minimum is by recirculating process water and scheduling through a progression of colors. Beater dyes, added in the hydropulper, give maximum bleed resistance. Fresh water is used for white paper. The next color might be pale yellow. Later in the cycle orange or red might be

produced, then a darker color. The last color made, about a month after the cycle started, is black. Then it's time to wash out the system and start from the beginning.

Crystal Tissue, Sorg, Bay West, Champion, and other mills in southwestern Ohio often share concerns about environmental issues and noncompetitive technical interests, Walker said. They've even banded together to represent paper company interests on legislation affecting landfills in the state and clean air requirements.

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