EB curing teams with offset printing at Elopak's Montreal plant

Pure-Pak converter Elopak teams PCT's EB-curing technology with Komori Chambon web-offset press at Montreal plant.

By Contributing Editor Barb Axelson -- Converting Magazine, 11/1/2008 12:30:00 AM

Norway's Elopak is a liquid-packaging converter that has made juice and milk cartons for more than 50 years. Dan Mize, director of converting operations for Elopak Americas Region based out of New Hudson, MI, wanted to get electron-beam (EB) curing technology into his North American plants where Pure-Pak cartons roll off the presses to fulfill ever-increasing market demand.

Mini Diamond Pure-Pak cartons are only one of several kinds of liquid-packaging containers printed and converted by Norway's Elopak in plants worldwide.

With facilities in Montreal (St. Leonard, Quebec), Mexico, and recently, the Dominican Republic, Elopak's growth has been remarkable. The company, known as an innovator, has seen production in Montreal grow 70 percent over the last year, and Mize says Elopak's Dominican Republic plant will double its production from a year ago.

Elopak has lots of experience in Europe with ultraviolet (UV) curing, but in North America, EB is a much more accepted approach. Mize's customers had been asking that he introduce EB, a drying method that incorporates many benefits, including the health benefit of reportedly preventing ink migration on the food and beverage cartons.

The customer knows best

"Our customers," says Mize, "are North American, and they are more comfortable with EB-cured products. Our competitors use it, and some of our larger customers and potential customers buy products cured with EB. More than one has told us that's what they want.

Elopak production manager Loren Arteberry oversees output on the new Komori Chambon web-offset printing press at the Montreal facility.

For its EB-curing application, Elopak's Montreal facility chose the new BroadBeam® LE Series system from PCT Engineered Systems, LLC (www.teampct.com). PCT acquired existing EB technology in 2003, and last year was producing the LE Series specifically for the printing market. "Elopak found us when we were in the final stages of development of

this product, and we were able to agree on what was needed, taking the order before the equipment was released," explains PCT sales and marketing manager Karl Swanson. The new model was formally introduced in May, and Elopak is the first commercial installation of the BroadBeam LE.

Along with a smaller footprint, the LE uses a new power supply technology that they claim is 40-percent more efficient than other EB units, and it operates at higher speeds than UV, Swanson says. The BroadBeam also reportedly features lower taint, odor and substrate-heating temperatures. Applications include web-offset and CI-flexo printing, laminating and specialty cross-linking.

Total in-line operation

At Elopak, in-line production is the rule. Carton substrate (typically poly-coated paperboard) is first printed in seven colors and one clearcoat on a 7+1-station Komori Chambon (www.komori-america.us) web-offset press, then EB-cured via the BroadBeam LE, and finally die-cut. The 120-ft-long line yields carton blanks ready for finishing.

The Montreal plant's first run of EB-cured cartons came off the line in July, and the operation achieved a top press speed of 1,150 fpm. Mize describes the BroadBeam LE as "operator-friendly."

The printed paper web enters the PCT BroadBeam® LE Series electron-beam curing system at Elopak Canada.

The line runs with five operators now, but plans are to reduce this to four by adding automation to the delivery section. Mize describes the EB-curing-equipped Komori Chambon as "the most technologically advanced printing press in North America in our industry."

He also has only good things to say about PCT's professionalism. The supplier hosted the Elopak team for two days of operational and maintenance classroom training at their site. "There's a lot of technology, high-voltage electric, a vacuum system, nitrogen-inerting supply—it's a new experience for operators," Swanson explains.

"Our guys on the machine feel like Stealth bomber pilots," Mize says, "because they get to run the latest and greatest equipment. The successful startup is attributed to the teams at PCT, Komori Chambon and the Elopak team, including project manager Aristoteles Noronha; our top expert in North America on the Komori Chambon production manager Loren Arteberry; press operators Daniel Auger and Francisco Costa; material-rolls shafter Claude Huneaulp and three takeoff staffers Mathieu Alamy, Hyman Valentin and Jean Claude Baril."

Mize is currently qualifying at least two of three prominent companies that provide Elopak with EB-curing inks—Wikoff Color, Sun Chemical and Arets Graphics—during what has been designated as a testing period.

And Elopak is already thinking of buying another carton printing/converting line. "We're modernizing to state-of-the-art equipment," says Mize, "and growing that way towards South America, and all through Canada and the Caribbean."

MORE INFO:

CONVERTER:

ELOPAK, 514/326-0350, www.elopak.com

SUPPLIERS:

PCT ENGINEERED SYSTEMS LLC, 563/285-7411, www.teampct.com

KOMORI CHAMBON, 847/806-9000, www.komori-america.us

WIKOFF COLOR CORP., 803/548-2210, www.wikoff.com

SUN CHEMICAL, 866/786-7276, www.sunchemical.com

ARETS GRAPHICS, 513/469-0400, www.arets.com

SPECIFICS:

ELOPAK: St. Leonard, Quebec, Canada

OPERATIONS: Web-offset printing, EB-curing, in-line diecutting, off-line finishing

PLANT SIZE: 150,000 sq ft (in several buildings)

EMPLOYEES: 200

MAJOR EQUIPMENT: 7+1-station Komori Chambon web-offset press; PCT BroadBeam® LE Series EB-curing system